

Waste Specification Records (WSRds)

Overview

Waste Specification Records (WSRds) were developed to categorize waste by the treatment, storage and disposal methods used at the Hanford site. The WSRds are based on current Hanford waste storage and disposal capabilities, the land disposal restrictions treatment standards of 40 CFR 268, and anticipated future treatment and disposal methods (e.g., private treatment contracts and the Waste Isolation Pilot Plant).

Waste generators must know the appropriate WSRds for their waste streams for the following reasons:

- Waste streams must be segregated by WSRd so that Hanford can effectively treat and dispose of the waste (see HNF-EP-0063, Section 2.6.3).
- Some WSRds identify waste stream specific acceptance requirements. The generator must understand and comply with these requirements for the waste stream to be accepted at Hanford TSD units.

This document describes the rationale behind the WSRd segregation scheme, provides a flow chart (the WSRd Assignment Matrix) for selecting the correct WSRd for a given waste stream, and includes all current routine WSRds.

Basis of the WSRds

The Waste Specification Records were originally developed in 1995 and published in WHC-EP-0846, Waste Specification System. The WSRds were based on existing DOE and Hanford-specific waste groupings for treatment and disposal. Since 1995, the set of WSRds has been revised extensively as regulations and treatment requirements have changed. In 1998, many of the WSRds were consolidated and the first WSRd Assignment Matrix was created to provide a more disciplined approach to selection of WSRds.

The WSRds are derived from three sets of criteria, presented briefly below in order of importance.

1. Final disposal location. The anticipated final disposal location is the first-tier criterion for development of WSRds. Sheet 1 of the WSRd Assignment Matrix identifies the types of waste that can be disposed directly in the Hanford Low-Level Burial Grounds (LLBG). Sheet 2 identifies the transuranic waste groups, which are anticipated to be disposed at the Waste Isolation Pilot Plant. The remaining sheets identify waste groups that will be disposed at Hanford's LLBG, but must be treated prior to disposal.
2. Treatment methods. The second-tier criteria for WSRd development is the anticipated treatment requirements for the waste. Treatment methods are based on several sources: Federal Land Disposal Restrictions regulations (40 CFR Part 268); PCB disposal requirements (40 CFR 761); Washington State land disposal restrictions (WAC 173-303-140); and radiological stabilization requirements derived from the LLBG performance assessment.
3. Interim storage segregation. Among the more heavily-used classes of mixed waste WSRds (e.g., 400, 500 and 600 series), the WSRds also segregate waste into primary hazard class for storage. This segregation helps ensure compatibility during storage.

The WSRd Assignment Matrix

The WSRd Assignment Matrix is a flow diagram for determining the correct WSRd for a given type of waste. The exact meaning of each decision box is critical to determining the correct WSRd. The following definitions must be used to determine the meaning of the decision boxes in the WSRd Assignment Matrix. Where a regulation is cited, the regulation itself identifies the precise criteria used for making the decision.

1. *Acid*: an aqueous liquid that is designated with waste code D002 because it has a pH less than or equal to 2 (WAC-173-303-090(6)); and a non-aqueous liquid that has strong acid properties.
2. *Beryllium dust*: waste that is assigned waste code P015 as specified by WAC 173-303- 081.
3. *Cadmium battery*: waste that meets the definition of the "cadmium containing batteries subcategory" of 40 CFR 268.40.
4. *Caustic*: an aqueous liquid that is designated with waste code D002 because it has a pH greater than or equal to 12.5 (WAC-173-303-090(6)); and a non-aqueous liquid that has strong caustic (basic) properties.
5. *Elemental mercury*: waste that meets the definition of the "elemental mercury contaminated with radioactive materials subcategory" of 40 CFR 268.40.
6. *Extremely hazardous waste*: extremely hazardous waste as defined by WAC 173-303- 040.
7. *Hazardous debris*: waste that meets the definition of hazardous debris in 40 CFR 268.2(g).
8. *High mercury waste*: waste designated with waste codes P065, P092, U151 and D009 that have a treatment standard of IMERC or RMERC in 40 CFR 268.40. In general, this refers to waste with ≥ 260 mg/kg mercury, but certain LDR subcategories require IMERC or RMERC regardless of the mercury concentration.
9. *Ignitable solid*: non-liquid waste that is designated with waste code D001 in accordance with WAC 173-303-090(5)(a)(ii).
10. *Lead acid battery*: waste that meets the definition of the "lead acid batteries subcategory" of 40 CFR 268.40.
11. *Meets LDR treatment standards*: waste that meets all land disposal restrictions treatment standards of 40 CFR 268; and is not prohibited from disposal under WAC 173-303-140.
12. *Organic/carbonaceous*: waste that contains combined concentrations of greater than 10 weight percent organic/carbonaceous constituents as defined by WAC 173-303- 140(3)(c).
13. *Oxidizer*: waste that is designated with waste code D001 because it is an oxidizer as defined in WAC 173-303-090(5)(a)(iv).
14. *PCBs eligible for disposal in a RCRA Subtitle D landfill*: TSCA regulated PCB waste types that are authorized for disposal under 40 CFR 761 "in a facility permitted, licensed, or registered by a State as a municipal or non-municipal nonhazardous waste landfill". (Note: this type of PCB/radioactive waste can be disposed of without regard to the PCB content as specified in 40 CFR 761.50(b)(7).)
15. *PCBs eligible for disposal in a RCRA Subtitle C landfill*: TSCA regulated PCB waste types that are authorized for disposal under 40 CFR 761 "in a hazardous waste landfill permitted by EPA under section 3004 of RCRA or by a State authorized under section 3006 of RCRA".
16. *Radioactive lead solids*: waste that meets the definition of the "radioactive lead solids subcategory" of 40 CFR 268.40.
17. *Radiological stabilization*: waste that must be placed in a high integrity container or processed to a stable waste form to meet the Category 3 waste and mobile radionuclide requirements of HNF-EP-0063, Section 3.4.1.
18. *Reactive (cyanide and sulfide)*: waste that is designated with waste code D003 because of cyanide or sulfide content (WAC 173-303-090(7)).
19. *Regulated for PCBs under TSCA*: waste that is subject to regulation for PCBs under 40 CFR 761, regardless of PCB concentration.

20. *Regulated:*

- waste that is designated as a dangerous or extremely hazardous waste (WAC 173-303-070 through 100);
- waste that has been treated to remove waste codes D001 through D043 but requires additional treatment for underlying hazardous constituents;
- and waste that contains PCBs regulated by 40 CFR 761.

21. *Solid acid:* a solid that is designated with waste code WSC2 due to a pH less than or equal to 2 when tested as specified in WAC 173-303-090(6).

22. *Solid caustic:* a solid that is designated with waste code WSC2 due to a pH greater than or equal to 12.5 when tested as specified in WAC 173-303-090(6).

23. *Thermal treatment required:* waste that must be treated by a thermal treatment process. Note that this definition is based on the Hanford site baseline waste treatment planning and includes some waste subcategories that might not be restricted to thermal treatment under the applicable regulations. The following criteria are used to determine whether thermal treatment is required:

- RCRA listed waste designated with a P or U waste code when the listed constituent is organic;
- RCRA listed waste with waste codes F001-F005, F020-F023, F026-F029, or F039;
- waste that is designated with organic toxicity characteristic constituents, waste codes D012 through D043 (WAC 173-303-090);
- waste that must be treated for organic underlying hazardous constituents (40 CFR 268.48);
- PCB waste that is regulated under 40 CFR 761 or WAC-173-303, and that cannot be disposed without prior treatment (i.e., does not meet the definitions above for “PCBs eligible for disposal in a RCRA Subtitle D landfill” or for “PCBs eligible for disposal in a RCRA Subtitle C landfill” ;
- waste that contains combined concentrations of greater than 10 weight percent organic/carbonaceous constituents as defined by WAC 173-303-140(3)(c).

24. *Toxicity characteristic (TC):* waste that is designated with waste codes D004 through D043 (WAC 173-303-090).

25. *Transuranic:* waste that exceeds 100 nCi/g TRU radionuclides (HNF-EP-0063 definitions).

26. *Water reactive:* waste that is designated with waste code D003 because it reacts violently with water (WAC 173-303-090(7)).

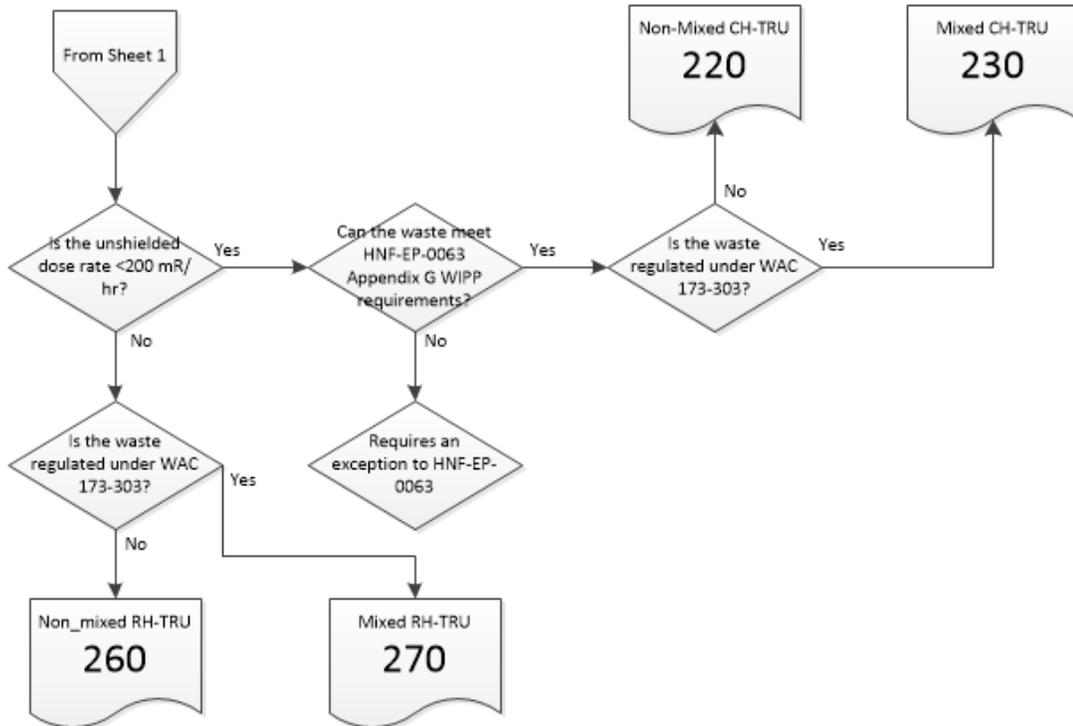
WSRd Assignment Matrix

Sheet 1
Disposal
 Waste Specification Record Assignment Matrix



Transuranic Waste

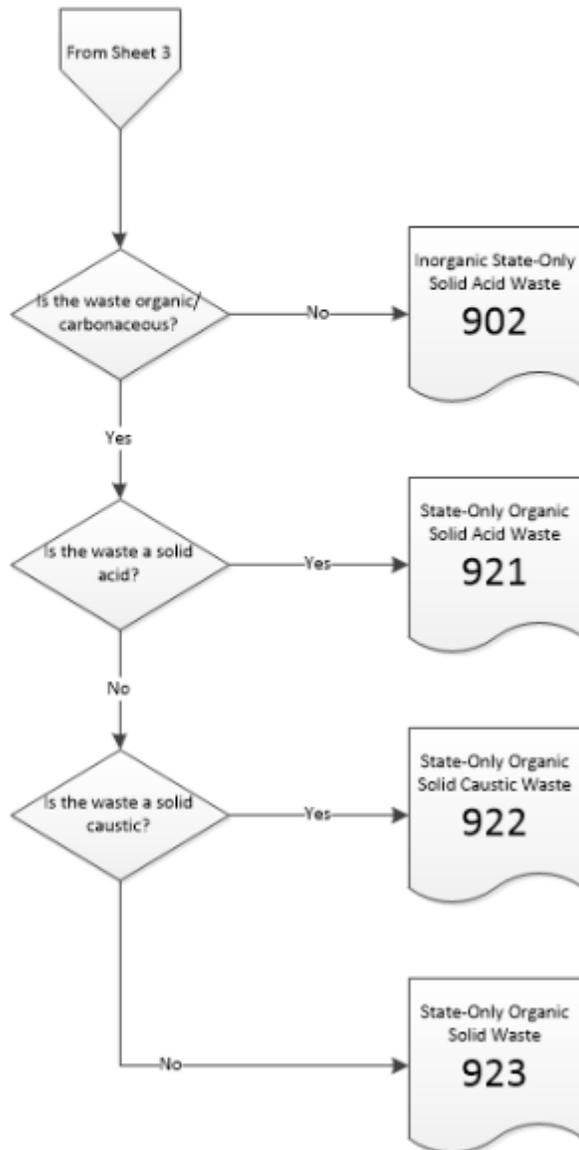
Waste Specification Record Assignment Matrix



Treatment: Specific LDR Treatment Standards
Waste Specification Record Assignment Matrix



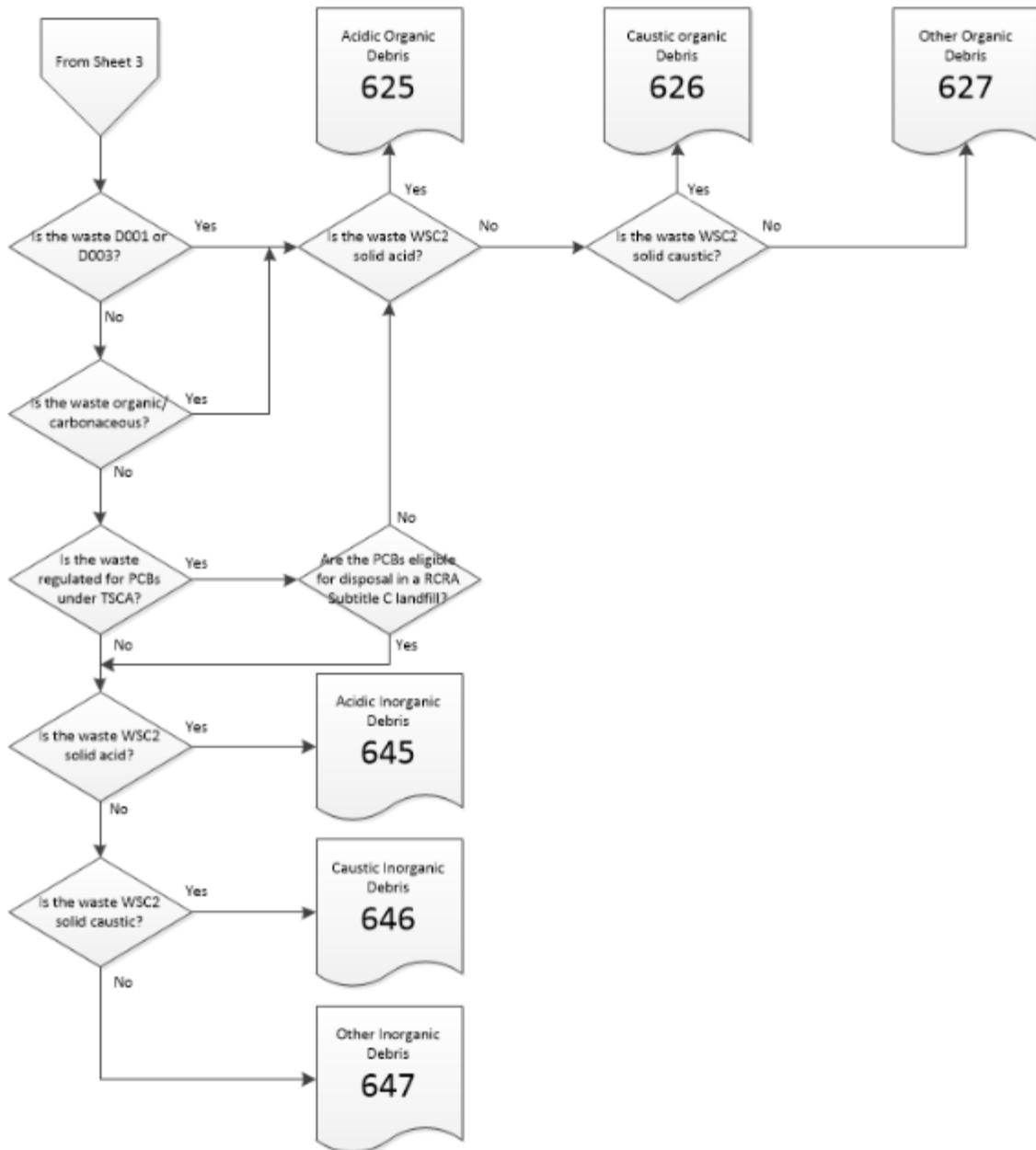
Treatment: Washington State-Only Mixed Waste
Waste Specification Record Assignment Matrix



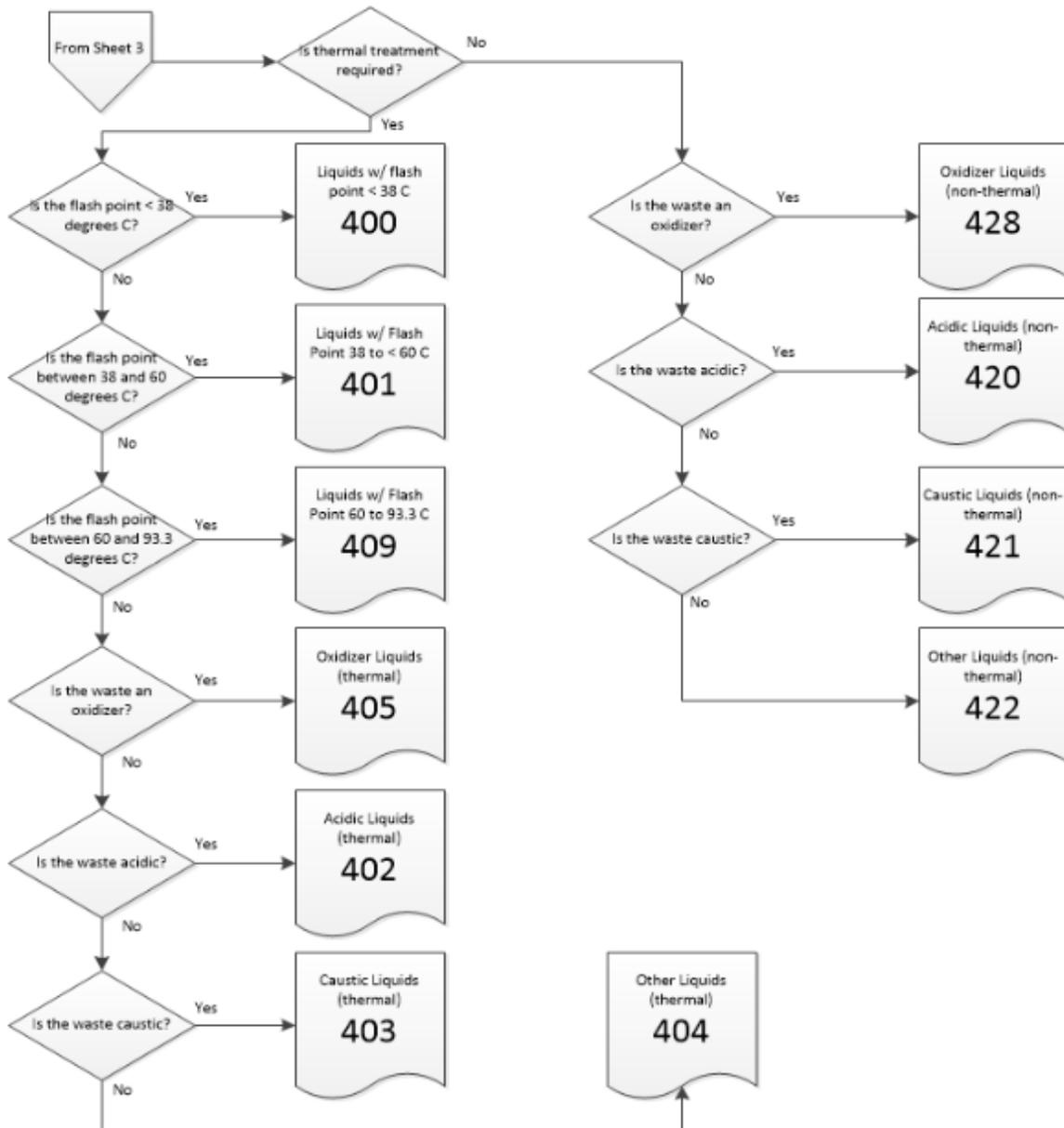
Sheet 5

Treatment: Mixed Waste Debris

Waste Specification Record Assignment Matrix

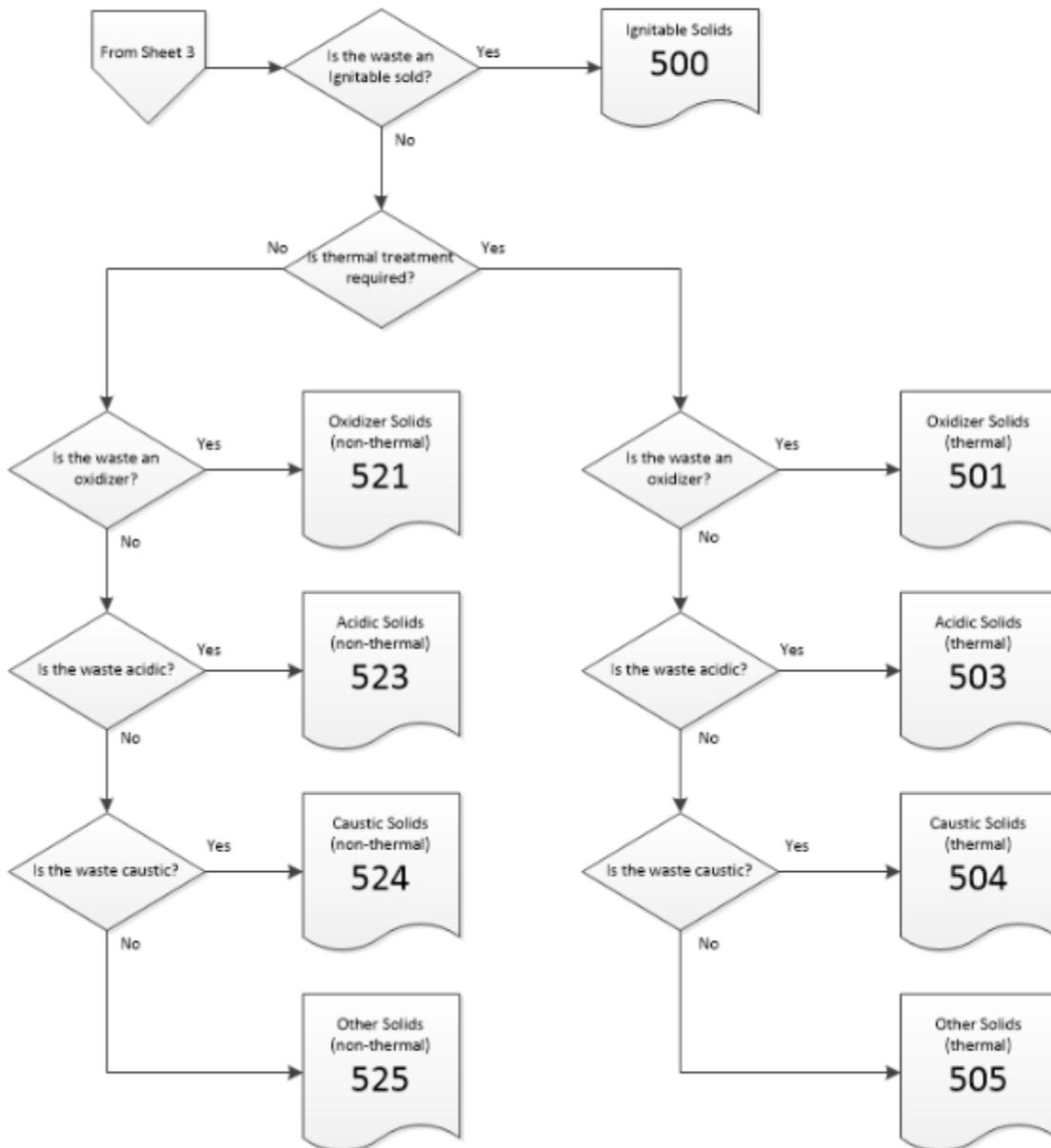


Treatment: Mixed Waste Liquids
Waste Specification Record Assignment Matrix



Treatment: Mixed Waste Solids

Waste Specification Record Assignment Matrix



Active Waste Specification Records

Waste Specification Record

100-4

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| Direct disposable low-level waste | |
| <i>B) Waste Matrix Description</i> | |
| Miscellaneous compactible and non-compactible solids: solid compactible and non-compactible waste materials such as paper, plastic, rubber, debris, cloth, leather, vinyl, equipment, metal, concrete, glass, ceramic or brick materials, roofing debris, rocks/gravel, soil, wood, plastic, rubber, sludges or absorbed liquids (<1% organic), stabilized organics (>1%), animal carcasses, and asbestos. | |
| <i>C) Radiological Description</i> | |
| Low-level waste that does not require radiological stabilization or has been radiologically stabilized in accordance with HNF-EP-0063 Chapter 3. | |
| <i>D) Regulatory Classification</i> | |
| Waste that is not regulated in accordance with WAC 173-303, 40 CFR 261, and not prohibited from disposal under 40 CFR 761 in a RCRA Subtitle D landfill. | |
| Radioactive lead shielding must be macroencapsulated to meet EPA best management practice | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| N/A | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum, 122x122x244 cm (4x4x8 ft) metal box, or smaller box. Required Packaging: Must be void filled to meet HNF-EP-0063 Chapter 3 requirements. | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| N/A | Direct Disposal |
| <i>J) Restrictions</i> | |
| None | |

Waste Specification Record

120-4

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Low-level waste requiring stabilization | |
| <i>B) Waste Matrix Description</i> | |
| Miscellaneous compactible and non-compactible solids: solid compactible and non-compactible waste materials such as paper, plastic, rubber, debris, cloth, leather, vinyl, equipment, metal, concrete, glass, ceramic or brick materials, roofing debris, rocks/gravel, soil, wood, plastic, rubber, sludges or absorbed liquids (<1% organic), stabilized organics (>1%) , animal carcasses, and asbestos. | |
| <i>C) Radiological Description</i> | |
| Low level waste that requires radiological stabilization in accordance with HNF-EP-0063 Chapter 3 | |
| <i>D) Regulatory Classification</i> | |
| Waste that is not regulated in accordance with WAC 173-303, 40 CFR 261, and not prohibited from disposal under 40 CFR 761 in a RCRA Subtitle D landfill. Note that lead shielding that is being used for its intended purpose (radioactive shielding) is not a solid waste and is not subject to dangerous waste designations. | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| N/A | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum, 122x122x244 cm (4x4x8 ft) metal box, or smaller box. | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| N/A | Stabilization Required |
| <i>J) Restrictions</i> | |
| None | |

Waste Specification Record

220-03

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| Non-mixed contact handled (CH) Transuranic (TRU) waste that complies with HNF-EP-0063 Appendix G. | |
| <i>B) Waste Matrix Description</i> | |
| Miscellaneous solid waste. | |
| <i>C) Radiological Description</i> | |
| CH TRU - Waste in which the unshielded dose rate does not exceed 200 millirem per hour. Waste cannot be shielded except for ALARA concerns. | |
| <i>D) Regulatory Classification</i> | |
| Waste that is not regulated in accordance with WAC-173-303 and 40 CFR 261. PCB's in any concentration are allowed, but there can be no free flowing liquids in the PCB waste. Waste treated to remove a characteristic code (D001, D002, D003) may be acceptable under this WSRD depending on treatment. | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 2 < pH < 12.5 | >= 60 degrees C |
| <i>G) Packaging</i> | |
| Required container: 55 gallon drum, Waste Isolation Pilot Plant (WIPP) Standard Waste Box (SWB), or an SLB2. Required Venting: Vented with filters that meet the WIPP Hazardous Waste Facility Permit and the TRUPACT-II SARP. Maximum layers of confinement: Four. | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| WIPP | TRU Storage |
| <i>J) Restrictions</i> | |
| Sorbents must be listed in Table E-2 in HNF-EP-0063. Containers must conform to all applicable limits specified in HNF-EP-0063 (e.g., weight, FGE, DE-Ci, etc.). | |
| <p>PROHIBITED WASTE:</p> <p>Non-Defense Waste</p> <p>Explosive, Shock-Sensitive, Pyrophoric, and Class IV oxidizer waste</p> <p>Infectious waste</p> | |

Waste Specification Record

230-03

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| Contact Handled (CH) Transuranic (TRU) Mixed waste that complies with HNF-EP-0063 appendix G. | |
| <i>B) Waste Matrix Description</i> | |
| Miscellaneous solid waste. | |
| <i>C) Radiological Description</i> | |
| CH TRU Mixed - Waste in which the unshielded dose rate does not exceed 200 millirem per hour. Waste cannot be shielded except for ALARA concerns. | |
| <i>D) Regulatory Classification</i> | |
| Limited to waste codes allowed for TRU waste in Appendix G of HNF-EP-0063 Hanford Site Solid Waste Acceptance Criteria. Wastes exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003) must be treated to remove the characteristic prior to being shipped. Corrosives must be neutralized prior to adsorption/absorption. PCB's in any concentration are allowed, but there can be no free flowing liquids in the PCB waste. | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 prior to treatment | Any – prior to treatment |
| <i>G) Packaging</i> | |
| Required container: 55 gallon drum, Waste Isolation Pilot Plant (WIPP) Standard Waste Box (SWB), or an SLB2. Required Venting: Vented with filters that meet the WIPP Hazardous Waste Facility Permit and the TRUPACT-II SARP. Maximum layers of confinement: Four. | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| WIPP | Segregate according to hazards. |
| <i>J) Restrictions</i> | |
| Sorbents must be listed in Table E-2 in HNF-EP-0063. Containers must conform to all applicable limits specified in HNF-EP-0063 (e.g., weight, FGE, DE-Ci, etc.). | |
| <p>PROHIBITED WASTE:</p> <p>Non-Defense Waste</p> <p>Explosive, Shock-Sensitive, Pyrophoric, and Class IV oxidizer waste</p> <p>Infectious waste</p> | |

Waste Specification Record

260-01

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Non-mixed Remote Handled TRU (RH-TRU) waste that complies with HNF-EP-0063 appendix I. | |
| <i>B) Waste Matrix Description</i> | |
| Miscellaneous solid waste. | |
| <i>C) Radiological Description</i> | |
| Remote Handled TRU: shielded waste or waste in which the unshielded dose rate exceeds 200 millirem/hour. Note: RH-TRU must be shielded to CH TRU levels in order to be stored in CWC. | |
| <i>D) Regulatory Classification</i> | |
| Waste that is not regulated in accordance with WAC-173-303 and 40 CFR 261. PCB's in any concentration are allowed, but there can be no free flowing liquids in the PCB waste. Waste treated to remove a characteristic code (D001, D002, D003) may be acceptable under this WSRD depending on treatment. | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 2<pH<12.5 | >= 60 degrees C |
| <i>G) Packaging</i> | |
| Package in accordance with appendix I of HNF-EP-0063. Maximum layers of confinement: Four. | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| WIPP | TRU storage |
| <i>J) Restrictions</i> | |
| <p>Sorbents must be listed in Table E-2 in HNF-EP-0063. Containers must conform to all applicable limits specified in HNF-EP-0063 (e.g., weight, FGE, DE-Ci, etc.).</p> <p>PROHIBITED WASTE: Non-Defense Waste Explosive, Shock-Sensitive, Pyrophoric, and Class IV oxidizer waste Infectious waste</p> | |

Waste Specification Record

270-01

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| Mixed Remote Handled TRU (RH-TRU) waste that complies with HNF-EP-0063 appendix I. | |
| <i>B) Waste Matrix Description</i> | |
| Miscellaneous solid waste. | |
| <i>C) Radiological Description</i> | |
| Remote Handled TRU: shielded waste or waste in which the unshielded dose rate exceeds 200 millirem/hour. Note: RH-TRU must be shielded to CH TRU levels in order to be stored in CWC. | |
| <i>D) Regulatory Classification</i> | |
| Limited to waste codes allowed for TRU waste in Appendix I of HNF-EP-0063 Hanford Site Solid Waste Acceptance Criteria. Wastes exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003) must be treated to remove the characteristic prior to being shipped. Corrosives must be neutralized prior to adsorption/absorption. PCB's in any concentration are allowed, but there can be no free flowing liquids in the PCB waste. | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 – prior to treatment | Any – prior to treatment |
| <i>G) Packaging</i> | |
| Package in accordance with appendix I of HNF-EP-0063. Maximum layers of confinement: Four. | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| WIPP | Segregate according to hazards |
| <i>J) Restrictions</i> | |
| Sorbents must be listed in Table E-2 in HNF-EP-0063. Containers must conform to all applicable limits specified in HNF-EP-0063 (e.g., weight, FGE, DE-Ci, etc.). | |
| PROHIBITED WASTE: Non-Defense Waste Explosive, Shock-Sensitive, Pyrophoric, and Class IV oxidizer waste Infectious waste | |

Waste Specification Record

400-06

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| Liquids with flashpoint less than 100 degrees F (38 degrees C) | |
| <i>B) Waste Matrix Description</i> | |
| Liquids/Slurries - Includes organic liquid/slurry waste or aqueous liquids/slurries requiring thermal treatment. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WPCB, listed P or U, and/or F001-F012, F019-F028, F039 and/or D001 (ignitable liquid), D002, D003 (sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 | <38 degrees C |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Thermal Treatment | Low-Flashpoint Storage |
| <i>J) Restrictions</i> | |
| 1. NFPA class 1 flammable liquid is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

401-05

| | |
|---|-----------------------------|
| A) General Description | |
| Liquids with flashpoint between 100 to less than 140 degrees F (38 to <60 degrees C) | |
| B) Waste Matrix Description | |
| Liquids/Slurries - Includes organic liquid/slurry waste or aqueous liquids/slurries requiring thermal treatment | |
| C) Radiological Description | |
| Low level waste (LLW), contact handled, category 1 or 3 | |
| D) Regulatory Classification | |
| WPCB, Listed P or U, and/or F001-F012, F019-F028, F039 and/or D001 (ignitable liquid), D002, D003 (sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D043, and/or TSCA PCBs, and all other applicable state waste codes. | |
| E) pH Ranges | F) Flashpoint Ranges |
| 0-14 | 38 to <60 degrees C |
| G) Packaging | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| H) Treatment Path | I) Segregation |
| Thermal Treatment | Combustible Storage |
| J) Restrictions | |
| 1. NFPA class 2 combustible liquid is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

402-03

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Acidic liquids (thermal treatment) | |
| <i>B) Waste Matrix Description</i> | |
| Liquids/Slurries - Includes organic liquid/slurry waste or aqueous liquids/slurries requiring thermal treatment. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WPCB, listed P or U, and F001-F012, F019-F028, F039 and D002, D003 (sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| <=2 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Thermal Treatment | Acid Storage |
| <i>J) Restrictions</i> | |
| 1. Acidic liquid is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

403-03

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Caustic liquids (thermal treatment) | |
| <i>B) Waste Matrix Description</i> | |
| Liquids/Slurries - Includes organic liquid/slurry waste or aqueous liquids/slurries requiring thermal treatment. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WPCB, Listed P or U, and F001-F012, F019-F028, F039 and D002, D003 (sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| >= 12.5 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Thermal Treatment | Caustic Storage |
| <i>J) Restrictions</i> | |
| 1. Caustic liquid is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

404-03

| | |
|--|-----------------------------|
| A) General Description | |
| Other liquids (thermal treatment) | |
| B) Waste Matrix Description | |
| Liquids/Slurries - Includes organic liquid/slurry waste or aqueous liquids/slurries requiring thermal treatment. | |
| C) Radiological Description | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| D) Regulatory Classification | |
| WPCB, listed P or U, and F001-F012, F019-F028, F039 and, D003 (sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| E) pH Ranges | F) Flashpoint Ranges |
| N/A | N/A |
| G) Packaging | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| H) Treatment Path | I) Segregation |
| Thermal Treatment | Other MW Storage |
| J) Restrictions | |
| None | |

Waste Specification Record

405-03

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| Oxidizer liquid (thermal treatment) | |
| <i>B) Waste Matrix Description</i> | |
| Liquids/Slurries - Includes organic liquid/slurry waste or aqueous liquids/slurries requiring thermal treatment. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WPCB, listed P or U, and/or F001-F012, F019-F028, F039 and/or D001 (ignitable oxidizer), D002, D003 (sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Thermal Treatment | Oxidizer Storage |
| <i>J) Restrictions</i> | |
| 1. Oxidizer liquid is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

409-03

| | |
|--|---------------------------------------|
| A) General Description | |
| Liquids with flashpoint between 140-200 degrees F (60-93.3 degrees C) | |
| B) Waste Matrix Description | |
| Liquids/Slurries - Includes organic liquid/slurry waste or aqueous liquids/slurries requiring thermal treatment | |
| C) Radiological Description | |
| Low level waste (LLW), contact handled, category 1 or 3 | |
| D) Regulatory Classification | |
| WPCB, Listed P or U, and/or F001-F012, F019-F028, F039 and/or D002, D003 (sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D043, and/or TSCA PCBs, and all other applicable state waste codes. | |
| E) pH Ranges | F) Flashpoint Ranges |
| 0-14 | 60 - 93.3 C |
| G) Packaging | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| H) Treatment Path | I) Segregation |
| Thermal Treatment | Requires storage in 2404-W facilities |
| J) Restrictions | |
| 1. NFPA class 3A combustible liquid is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

420-02

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Acidic liquids (Non-thermal treatment) | |
| <i>B) Waste Matrix Description</i> | |
| Liquid/Slurries | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| All applicable state waste codes, listed inorganic P or U, and, D002, D003 (sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D011 | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| <=2 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Stabilization | Acid Storage |
| <i>J) Restrictions</i> | |
| 1. Acidic Liquid is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

421-02

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Caustic liquids (Non-thermal treatment) | |
| <i>B) Waste Matrix Description</i> | |
| Liquid/Slurries | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| All applicable state waste codes, listed inorganic P or U, and, D002, D003 (sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D011 | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| >= 12.5 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Stabilization | Caustic Storage |
| <i>J) Restrictions</i> | |
| 1. Caustic Liquid is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

422-02

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| Other liquids (Non-thermal treatment) | |
| <i>B) Waste Matrix Description</i> | |
| Liquid/Slurries | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| All applicable state waste codes, listed inorganic P or U, and D003 (sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D011 | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| N/A | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Stabilization | Other MW Storage |
| <i>J) Restrictions</i> | |
| None | |

Waste Specification Record

428-02

| | |
|---|-----------------------------|
| A) General Description | |
| Oxidizer liquids (Non-thermal treatment) | |
| B) Waste Matrix Description | |
| Liquid/Slurries | |
| C) Radiological Description | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| D) Regulatory Classification | |
| All applicable state waste codes, listed inorganic P or U, and, D001(ignitable oxidizer), D002, D003 (sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D011 | |
| E) pH Ranges | F) Flashpoint Ranges |
| 0-14 | N/A |
| G) Packaging | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| H) Treatment Path | I) Segregation |
| Stabilization | Oxidizer Storage |
| J) Restrictions | |
| 1. Ignitable oxidizer is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

450-01

| | |
|--|-------------------------------------|
| <i>A) General Description</i> | |
| Remote Handled liquids shielded to contact handled levels | |
| <i>B) Waste Matrix Description</i> | |
| liquid waste | |
| <i>C) Radiological Description</i> | |
| Low level waste (LLW), Category 1 or 3; remote handled waste shielded to contact handled levels on outer container | |
| <i>D) Regulatory Classification</i> | |
| WPCB, listed P or U, F001-F012, F019-F028, F039 and/or D004-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum or 122X122X244 cm (4X4X8 ft) box | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| M-91 | Segregate according to hazard class |
| <i>J) Restrictions</i> | |
| none | |

Waste Specification Record

500-03

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| Ignitable solids (not water reactive) | |
| <i>B) Waste Matrix Description</i> | |
| Organic and/or Inorganic Ignitable Solids - Organic and/or Inorganic solids that meet the definition of WAC 173-303-090 5(a)(ii). | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, WPCB, Listed P or U, and/or F001-F012, F019-F028, F039 and/or D001 (ignitable non-liquid), D002, D003 (sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Thermal Treatment | Low Flashpoint Storage |
| <i>J) Restrictions</i> | |
| 1. Ignitable solids generally do not have flashpoint; however the waste is still managed as marked in section I for storage at CWC. 2. Ignitable solid is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

501-03

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| Oxidizer solids (thermal treatment) | |
| <i>B) Waste Matrix Description</i> | |
| Inorganic solids and/or sorbed liquids - Includes inorganic solids and/or sorbed liquids requiring thermal treatment. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, WPCB, Listed P or U, and/or F001-F012, F019-F028, F039 and/or D001 (ignitable oxidizer), D002, D003 (Sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Thermal Treatment | Oxidizer Storage |
| <i>J) Restrictions</i> | |
| 1. Non-liquid oxidizer is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

503-04

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Acidic solids (thermal treatment) | |
| <i>B) Waste Matrix Description</i> | |
| Solids or sorbed liquids - Includes inorganic solids or sorbed liquids requiring thermal treatment. | |
| <i>C) Radiological Description</i> | |
| Low level waste (LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, WPCB, listed P or U, and/or F001-F012, F019-F028, F039 and/or D003 (Sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| <=2 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Thermal Treatment | Acid Storage |
| <i>J) Restrictions</i> | |
| 1. Non-liquid Acid is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

504-3

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Caustic solids (thermal treatment) | |
| <i>B) Waste Matrix Description</i> | |
| Solid and/or sorbed liquid - Includes inorganic solids and/or sorbed liquids requiring thermal treatment. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, WPCB, listed P or U, and/or F001-F012, F019-F028, F039 and/or D003 (Sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| >= 12.5 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Thermal Treatment | Caustic Storage |
| <i>J) Restrictions</i> | |
| 1. Non-liquid caustic is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

504-4

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Other solids (thermal treatment) | |
| <i>B) Waste Matrix Description</i> | |
| Solids and/or sorbed liquids - Includes inorganic solids and/or sorbed liquid requiring thermal treatment. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WPCB, listed P or U, and/or F001-F012, F019-F028, F039 and/or D003 (Sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| N/A | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Thermal Treatment | Other MW Storage |
| <i>J) Restrictions</i> | |
| None | |

Waste Specification Record

521-00

| | |
|--|-----------------------------|
| A) General Description | |
| Oxidizer solids (non-thermal treatment) | |
| B) Waste Matrix Description | |
| Solids and/or sorbed liquid - Includes >90% inorganic solids and/or sorbed liquid requiring stabilization. | |
| C) Radiological Description | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| D) Regulatory Classification | |
| WSC2, listed inorganic P or U, and/or D001 (ignitable oxidizer), D002, D003 (Sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D011, and all other applicable state waste codes | |
| E) pH Ranges | F) Flashpoint Ranges |
| 0-14 | N/A |
| G) Packaging | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| H) Treatment Path | I) Segregation |
| Stabilization | Oxidizer Storage |
| J) Restrictions | |
| 1. Non liquid oxidizer is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

523-03

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Acidic solids (non-thermal treatment) | |
| <i>B) Waste Matrix Description</i> | |
| Inorganic solids and/or sorbed liquids - Includes >90% inorganic solids and/or sorbed liquid requiring stabilization. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, listed inorganic P or U, and/or D003 (Sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D011, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| <=2 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Stabilization | Acid Storage |
| <i>J) Restrictions</i> | |
| 1. Non liquid acid is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

524-02

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Caustic solids (non-thermal treatment) | |
| <i>B) Waste Matrix Description</i> | |
| Inorganic solids and/or sorbed liquid - Includes >90% inorganic solids and/or sorbed liquid requiring stabilization. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, listed inorganic P or U, and/or D003 (Sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D011, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| >=12.5 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Stabilization | Caustic Storage |
| <i>J) Restrictions</i> | |
| 1. Non liquid caustic is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

525-01

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Other solids (non-thermal treatment) | |
| <i>B) Waste Matrix Description</i> | |
| Inorganic solids and/or sorbed liquids - Includes >90% inorganic solids and/or sorbed liquid requiring stabilization. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| All applicable state waste codes, listed inorganic P or U, and/or D003 (sulfides and cyanide only), D004-D008, D009 (low-mercury subcategory only), D010-D011 which DO NOT MEET LDR. Also, any listed or characteristic organic codes on CWC Part A permit application for which the LDR treatment standard has been met. | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| N/A | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Stabilization | Other MW Storage |
| <i>J) Restrictions</i> | |
| None | |

Waste Specification Record

550-00

| | |
|--|-------------------------------------|
| <i>A) General Description</i> | |
| Remote Handled homogeneous solids shielded to contact handled levels | |
| <i>B) Waste Matrix Description</i> | |
| homogeneous solids (non-debris) | |
| <i>C) Radiological Description</i> | |
| Low level waste (LLW), Category 1 or 3; remote handled waste shielded to contact handled levels on outer container | |
| <i>D) Regulatory Classification</i> | |
| WPCB, listed P or U, F001-F012, F019-F028, F039 and/or D004-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum or 122X122X244 cm (4X4X8 ft) box | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| M-91 Macroencapsulation | Segregate according to hazard class |
| <i>J) Restrictions</i> | |
| none | |

Waste Specification Record

625-04

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Acidic organic debris | |
| <i>B) Waste Matrix Description</i> | |
| Organic Debris: Debris estimated to be > 10 % by weight organic debris (per 40 CFR 268.2 (g) definition). Examples of organic debris include plastic, rubber, wood, paper, cloth, plexiglass, protective clothing, and rags or wipes. | |
| <i>C) Radiological Description</i> | |
| Low level waste (LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, WPCB, listed P or U, and/or F001-F012, F019-F028, F039, and/or D001, D003, D004-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| <=2 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum, 122X122X244 cm (4X4X8 ft) box | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Thermal Treatment | Acid Storage |
| <i>J) Restrictions</i> | |
| None | |

Waste Specification Record

626-04

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| Caustic organic debris | |
| <i>B) Waste Matrix Description</i> | |
| Organic debris: Debris estimated to be > 10 % by weight organic debris (per 40 CFR 268.2(g) definition). Examples of organic debris include plastic, rubber, wood, paper, cloth, plexiglass, protective clothing, and rags or wipes. | |
| <i>C) Radiological Description</i> | |
| Low level waste (LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, WPCB, listed P or U, and/or F001-F012, F019-F028, F039, and/or D001, D003, D004-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| >=12.5 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum, 122X122X244 cm (4X4X8 ft) box | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Thermal Treatment | Caustic Storage |
| <i>J) Restrictions</i> | |
| None | |

Waste Specification Record

627-05

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Other organic debris | |
| <i>B) Waste Matrix Description</i> | |
| Organic debris: Debris estimated to be > 10 % by weight organic debris (per 40 CFR 268.2(g) definition). Examples of organic debris include plastic, rubber, wood, cloth, plexiglass, protective clothing, and rags or wipes. | |
| <i>C) Radiological Description</i> | |
| Low level waste (LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WPCB, listed P or U, and/or F001-F012, F019-F028, F039 and/or D001, D003, D004-D043, and/or TSCA PCBs, and all other applicable state waste codes. | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| N/A | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum, 122X122X244 cm (4X4X8 ft) box | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Thermal Treatment | Other MW Storage |
| <i>J) Restrictions</i> | |
| None | |

Waste Specification Record

645-04

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| Acidic inorganic debris | |
| <i>B) Waste Matrix Description</i> | |
| Inorganic debris: Waste estimated to be $\geq 90\%$ by weight inorganic debris (per 40 CFR 268.2 definition). Examples of inorganic debris include scrap metal, concrete chunks and blocks from decontamination, glass, glass bottles, ceramic or brick materials, rocks that meet the EPA debris classification, etc. Waste solidified with cement or other stabilization agents are not allowed. | |
| <i>C) Radiological Description</i> | |
| Low level waste (LLW), contact handled, Category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, WPCB, listed P or U, F001-F012, F019-F028, F039, and/or D004-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| ≤ -2 | N/A |
| <i>G) Packaging</i> | |
| Recommended packaging: 208 liter (55 gallon) drum, 122x122x244 cm (4x4x8 ft) box | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Debris Macroencapsulation | Acid Storage |
| <i>J) Restrictions</i> | |
| None | |

Waste Specification Record

646-04

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Caustic inorganic debris | |
| <i>B) Waste Matrix Description</i> | |
| Inorganic Debris: Waste estimated to be >= 90% by weight inorganic debris (per 40 CFR 268.2(g) definition). Examples of inorganic debris include scrap metal, concrete chunks, and blocks from decontamination, glass, glass bottles, ceramic or brick materials, rocks that meet the EPA debris classification, etc. Waste solidified with cement or other stabilization agents are not allowed. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, WPCB, listed P or U, F001-F012, F019-F028, F039 and/or D004-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| >=12.5 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum, 122x122x244 cm (4x4x8 ft) box | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Debris Macroencapsulation | Caustic Storage |
| <i>J) Restrictions</i> | |
| None | |

Waste Specification Record

647-04

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Other inorganic debris | |
| <i>B) Waste Matrix Description</i> | |
| Inorganic Debris: Waste estimated to be >= 90% by weight inorganic debris (per 40 CFR 268.2(g) definition). Examples of inorganic debris include scrap metal, concrete chunks, and blocks from decontamination, glass, glass bottles, ceramic or brick materials, rocks that meet the EPA debris classification, etc. Waste solidified with cement or other stabilization agents are not allowed. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WPCB, listed P or U, F001-F012, F019-F028, F039 and/or D004-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| N/A | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum, 122x122x244 cm (4x4x8 ft) box | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Debris Macroencapsulation | Other MW Storage |
| <i>J) Restrictions</i> | |
| None | |

Waste Specification Record

650-01

| | |
|--|-------------------------------------|
| <i>A) General Description</i> | |
| Remote Handled debris shielded to contact handled levels | |
| <i>B) Waste Matrix Description</i> | |
| Organic/Inorganic debris | |
| <i>C) Radiological Description</i> | |
| Low level waste (LLW), Category 1 or 3; remote handled waste shielded to contact handled levels on outer container | |
| <i>D) Regulatory Classification</i> | |
| WPCB, listed P or U, F001-F012, F019-F028, F039 and/or D004-D043, and/or TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum or 122X122X244 cm (4X4X8 ft) box | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| M-91 Macroencapsulation | Segregate according to hazard class |
| <i>J) Restrictions</i> | |
| none | |

Waste Specification Record

800-03

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Radioactive lead solids LDR subcategory | |
| <i>B) Waste Matrix Description</i> | |
| Radioactive Lead Solids: Waste items such as lead bricks, sheets, and pipes. (Note: these lead solids include, but are not limited to, all forms of lead used as shielding and other elemental forms of lead. These lead solids do not include treatment residuals such as hydroxide sludges, other wastewater treatment residuals, or incinerator ashes that can undergo conventional pozzolanic stabilization, nor do they include organo-lead materials that can be incinerated and stabilized as ash. This subcategory consists of nonwastewaters only) | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, WPCB, listed P or U, F001-F012, F019-F028, F039, D004-D008, D008 (Radioactive Lead Solids Subcategory), D009 (low-mercury subcategory only), D010-D043, and TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Macroencapsulation | Other MW Storage |
| <i>J) Restrictions</i> | |
| 1. Radioactive lead solids subcategory is the primary hazard. All subsidiary hazards require segregation for compatibility. 2. Debris that contains co-generated lead which cannot be readily segregated, is less than 50 % lead in the total waste weight, and is still primarily RCRA debris is not considered Radioactive Lead Solids. This waste should be managed under the applicable 600-series WSRd. | |

Waste Specification Record

802-03

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Lead acid batteries LDR subcategory | |
| <i>B) Waste Matrix Description</i> | |
| Lead Acid Batteries: Lead acid batteries which meet the Lead Acid Batteries treatment subcategory description in 40 CFR 268.40 and can not be decontaminated and released as nonradioactive waste. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, WPCB, listed P or U, F001-F012, F019-F028, F039, D002, D004-D008, D008 (Lead Acid Battery Subcategory), D009 (low-mercury subcategory only), D010-D043, TSCA PCBs, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum, 122x122x244 cm (4x4x8 ft) box | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Thermal Recovery of Lead | Acid Storage |
| <i>J) Restrictions</i> | |
| 1. Lead Acid Battery subcategory is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

810-2

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| Elemental mercury LDR subcategory | |
| <i>B) Waste Matrix Description</i> | |
| Elemental Mercury: Waste with >260 mg/kg of elemental mercury wastes , such as found in vacuum pumps, manometers, thermometers, etc. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, WPCB, Listed P, U, U151(Elemental Mercury Contaminated with Radioactive Materials), F001-F012, F019-F028, F039, D002, D004-D008, D009 (Elemental Mercury Contaminated with Radioactive Materials), D010 - D043, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Amalgamation | Other MW Storage |
| <i>J) Restrictions</i> | |
| 1. Elemental mercury contaminated with radioactive materials subcategory is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

810-3

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| High Mercury (organic and inorganic) LDR subcategories | |
| <i>B) Waste Matrix Description</i> | |
| Inorganic / Organic Mercury Compounds: Waste that requires or permits retorting for recovery of mercury (RMERC) as a specified technology treatment per 40 CFR 268.40; this includes high mercury batteries | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, WPCB, Listed P, U, U151(High Mercury Organic or Inorganic Subcategory), F001-F012, F019-F028, F039, D002, D004-D008, D009 (High Mercury Organic or Inorganic Subcategory), D010 - D043, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| RMERC | Other MW Storage |
| <i>J) Restrictions</i> | |
| 1. High Mercury Organic or Inorganic Subcategory is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

820-02

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Water reactive metals and compounds | |
| <i>B) Waste Matrix Description</i> | |
| Reactive Metal Waste - Reactive metal (e.g. sodium, lithium, calcium), metal hydrides, borohydrides and related compounds packaged in a form that is sufficiently stable for extended storage. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, WPCB, Listed P.U, F001-F012, F019-F028, F039, D001(ignitable non-liquid), D002, D003 (sulfide, cyanides and water reactive), D004-D008, D009 (Low Mercury Subcategory), D010-D043, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 7-14 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| DEACT | Alkali Metal Storage |
| <i>J) Restrictions</i> | |
| 1. Water reactives is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

821-02

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| Beryllium dust | |
| <i>B) Waste Matrix Description</i> | |
| Beryllium dust waste: Waste that is regulated per WAC 173-303-081 for the waste code P015. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| PO15, WSC2, WPCB, Listed P.U, F001-F012, F019-F028, F039, D001, D002, D003 (sulfide and cyanides only), D003, D004-D008, D009 (Low Mercury Subcategory), D010-D043, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| RMETL or RTHRM | Other MW Storage |
| <i>J) Restrictions</i> | |
| 1. Beryllium dust is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

822-01

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Other water reactive compounds | |
| <i>B) Waste Matrix Description</i> | |
| Reactive Waste - Water reactive compounds (other than water reactive metals and related compounds) packaged in a form that is sufficiently stable for extended storage. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, WPCB, Listed P.U, F001-F012, F019-F028, F039, D001(ignitable non-liquid), D002, D003 (sulfide, cyanides and water reactive), D004-D008, D009 (Low Mercury Subcategory), D010-D043, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| DEACT | To be determined |
| <i>J) Restrictions</i> | |
| 1. Water reactives is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

823-01

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| Osmium Tetroxide (P087 waste code) | |
| <i>B) Waste Matrix Description</i> | |
| Osmium tetroxide and any mixture of P087 waste with other waste matrices. | |
| <i>C) Radiological Description</i> | |
| Low level waste (LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| P087, WPCB, listed P or U, and/or F001-F012, F019-F028, F039 and/or D004-D043, and/or TSCA PCBs, and all other applicable state waste codes. | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum, 122X122X244 cm (4X4X8 ft) box | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| RTHRM | Segregate according to hazards |
| <i>J) Restrictions</i> | |
| None | |

Waste Specification Record

830-04

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Cadmium containing batteries LDR subcategory | |
| <i>B) Waste Matrix Description</i> | |
| Cadmium Containing Batteries: Cadmium containing batteries which meet the Cadmium Containing Batteries treatment subcategory description in 40 CFR 268.40 and can not be decontaminated and released as nonradioactive waste. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WSC2, WPCB, Listed P.U, F001-F012, F019-F028, F039, D002, D003 (sulfide and cyanides only), D004-D008, D009 (Low Mercury Subcategory), D010-D043, D006 (cadmium containing batteries subcategory), and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| 0-14 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Thermal Recovery | Other MW Storage |
| <i>J) Restrictions</i> | |
| 1. Cadmium containing batteries subcategory is the primary hazard. All subsidiary hazards require segregation for compatibility. | |

Waste Specification Record

902-03

| | |
|---|-----------------------------|
| A) General Description | |
| State only inorganic solid acid waste | |
| B) Waste Matrix Description | |
| Inorganic Sorbed Liquids, Sludges, Other Solids: Waste that contains < 10% organic/carbonaceous constituents [as defined in WAC 173-303-140 (3) (c)]. | |
| C) Radiological Description | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| D) Regulatory Classification | |
| WPCB, WT02, WP02, WSC2, and all other applicable state waste codes | |
| E) pH Ranges | F) Flashpoint Ranges |
| <=2 | N/A |
| G) Packaging | |
| Recommended Packaging: 208 liter (55 gallon) drum, 122x122x244 cm (4x4x8 ft) box | |
| H) Treatment Path | I) Segregation |
| Deactivation by Non-thermal | Acid Storage |
| J) Restrictions | |
| NONE | |

Waste Specification Record

921-02

| | |
|---|-----------------------------|
| A) General Description | |
| State only organic solid acid waste | |
| B) Waste Matrix Description | |
| Organic Sorbed Liquids, Sludges, Other Solids: Waste that contains > 10% organic/carbonaceous constituents [as defined in WAC 173-303-140 (3) (c)]. | |
| C) Radiological Description | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| D) Regulatory Classification | |
| WPCB, WT01, WT02, WP01, WP02, WP03, WSC2, and all other applicable state waste codes | |
| E) pH Ranges | F) Flashpoint Ranges |
| <=2 | N/A |
| G) Packaging | |
| Recommended Packaging: 208 liter (55 gallon) galvanized drum, 122x122x244 cm (4x4x8 ft) metal box | |
| H) Treatment Path | I) Segregation |
| Thermal Treatment | Acid Storage |
| J) Restrictions | |
| None | |

Waste Specification Record

922-02

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| State only organic solid caustic waste | |
| <i>B) Waste Matrix Description</i> | |
| Organic Sorbed Liquids, Sludges, Other Solids: Waste that contains >10% organic/carbonaceous constituents [as defined in WAC 173-303-140 (3) (c)]. | |
| <i>C) Radiological Description</i> | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| <i>D) Regulatory Classification</i> | |
| WPCB, WT01, WT02, WP01, WP02, WP03, WSC2, and all other applicable state waste codes | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| >=12.5 | N/A |
| <i>G) Packaging</i> | |
| Recommended Packaging: 208 liter (55 gallon) drum, 122x122x244 cm (4x4x8 ft) box | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| Thermal Treatment | Caustic Storage |
| <i>J) Restrictions</i> | |
| None | |

Waste Specification Record

923-00

| | |
|--|-----------------------------|
| A) General Description | |
| State only organic solid waste | |
| B) Waste Matrix Description | |
| Organic Sorbed Liquids, Sludges, Other Solids,: Waste that contains > 10% organic/carbonaceous constituents [as defined in WAC 173-303-140 (3) (c)]. | |
| C) Radiological Description | |
| Low level waste(LLW), contact handled, category 1 or 3 | |
| D) Regulatory Classification | |
| WPCB, WT01, WT02, WP01, WP02, WP03, and all other applicable state waste codes | |
| E) pH Ranges | F) Flashpoint Ranges |
| N/A | N/A |
| G) Packaging | |
| Recommended Packaging: 208 liter (55 gallon) drum, 122x122x244 cm (4x4x8 ft) box | |
| H) Treatment Path | I) Segregation |
| Thermal Treatment | Other MW Storage |
| J) Restrictions | |
| None | |

Waste Specification Record

930-08

| | |
|---|------------------------------------|
| <i>A) General Description</i> | |
| Federal and State LDR compliant waste | |
| <i>B) Waste Matrix Description</i> | |
| Miscellaneous Solid Waste | |
| <i>C) Radiological Description</i> | |
| Low Level waste that does not require radiological stabilization or has been radiologically stabilized in accordance with HNF-EP-0063 | |
| <i>D) Regulatory Classification</i> | |
| <p>Waste that complies with all applicable treatment standards of 40 CFR Part 268 Subpart D and WAC 173-303-140. TSCA PCB waste eligible for disposal in a RCRA Subtitle C landfill. WPCB, WT01, WT02, WP01, WP02, WP03, WSC2, listed P and/or U, F001-F012, F019, F028, F039 and/or D001-D043, and all other applicable state waste codes. Note that lead shielding that is being used for its intended purpose (radioactive shielding) is not a solid waste and is not subject to dangerous waste designations.</p> <p>Radioactive lead shielding must be macroencapsulated to meet EPA best management practice.</p> | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| >2 | N/A |
| <i>G) Packaging</i> | |
| Required Packaging: Each container must be void filled to at least 90% full. | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| N/A | MW Disposal |
| <i>J) Restrictions</i> | |
| 1. All RCRA/EPA Regulated Waste must have a Land Disposal Restriction Notification/Certification form. State only waste requiring disposal in a RCRA permitted disposal facility must comply with WAC 173-303-140 prior to disposal. | |

Waste Specification Record

931-06

| | |
|--|------------------------------------|
| <i>A) General Description</i> | |
| Federal and State LDR compliant waste | |
| <i>B) Waste Matrix Description</i> | |
| Miscellaneous Solid Waste | |
| <i>C) Radiological Description</i> | |
| Low Level waste that does require radiological stabilization in accordance with HNF-EP-0063 | |
| <i>D) Regulatory Classification</i> | |
| Waste that complies with all applicable treatment standards of 40 CFR Part 268 Subpart D and WAC 173-303-140. TSCA PCB waste eligible for disposal in a RCRA Subtitle C landfill. WPCB, WT01, WT02, WP01, WP02, WP03, WSC2, listed P and/or U, F001-F012, F019, F028, F039 and/or D001-D043, and all other applicable state waste codes. Note that lead shielding that is being used for its intended purpose (radioactive shielding) is not a solid waste and is not subject to dangerous waste designations. | |
| <i>E) pH Ranges</i> | <i>F) Flashpoint Ranges</i> |
| >2 | N/A |
| <i>G) Packaging</i> | |
| Required Packaging: Each container must be void filled to at least 90% full. | |
| <i>H) Treatment Path</i> | <i>I) Segregation</i> |
| N/A | MW Disposal |
| <i>J) Restrictions</i> | |
| 1. All RCRA/EPA Regulated Waste must have a Land Disposal Restriction Notification/Certification form. State only waste requiring disposal in a RCRA permitted disposal facility must comply with WAC 173-303-140 prior to disposal. | |