

Waste Acceptance Guidelines

Revision 1
AUTHOR

Department	Printed Name	Signature	Date
Logistics	Eeva Valentine	Signature on File	12/28/16

REVIEWERS

Department	Printed Name	Signature	Date
Management	Randall Richardson	Signature on File	1/18/17
Logistics	Steve Bakken	Signature on File	1/19/17
Operations	Chad Tipton	Signature on File	1/5/17

AUTHORIZED USER

Department	Printed Name	Signature	Date
Rad Safety	Justin Fox	Signature on File	1/19/17

APPROVER/OWNER

Department	Printed Name	Signature	Date
Logistics	Robert Brotemarkle	Signature on File	1/19/17

 Non-Proprietary

 New

 Proprietary

 Title Change

 Restricted Information

 Revision

 Safeguards Information

 Rewrite

 Sensitive Security Information

 Cancellation

If Cancellation Specify Reason: _____

Table of Contents

Section	Page
1. PURPOSE AND SCOPE.....	4
2. REFERENCES AND FORMS	4
2.1. References.....	4
2.2. Forms	4
3. GENERAL.....	4
3.1. Definitions.....	4
3.2. Responsibilities.....	4
4. ACCEPTANCE OF RADIOACTIVE WASTE.....	7
4.1. General Acceptance	7
4.2. Acceptance Limitations	8
5. WAG FORM	8
5.1. ER-WM-WAG-001-F1, Waste Profile Form WAG-01	8
6. GENERAL WASTE ACCEPTANCE GUIDELINE	8
6.1. Applicability	8
6.2. Radiological Guideline	8
6.3. RCRA/TSCA Guidelines.....	9
6.4. Packaging	10
6.5. Receipt Guideline.....	11
6.6. Disposition of Non-Conforming Waste.....	11
7. ACCEPTANCE GUIDELINE FOR RESINS AND OTHER SLUICEABLE FILTER MEDIA.....	11
7.1. Applicability	11
7.2. Waste Acceptance Guideline	11
7.3. Receipt Guideline.....	11
8. ACCEPTANCE GUIDELINE FOR AQUEOUS LIQUIDS.....	12
8.1. Applicability	12
8.2. Waste Acceptance Guideline	12
8.3. Receipt Guideline.....	12
9. ACCEPTANCE GUIDELINE FOR CONTAMINATED OILS.....	12
9.1. Applicability	12
9.2. Oil Acceptance Guideline.....	12
9.3. Receipt Guideline.....	13
10. ACCEPTANCE GUIDELINE FOR PROCESSING OF SLUDGES.....	13

10.1.	RCRA/TSCA Guidelines	13
10.2.	Listed Hazardous Wastes	13
10.3.	Characteristic Hazardous Wastes	13
10.4.	Toxic Metals	14
10.5.	Organics	14
10.6.	Packaging.....	14
10.7.	Receipt Guideline	15
10.8.	Disposition of Non-Conforming Waste	15
11.	PLASTIC/ORGANIC MATERIALS NOT ACCEPTABLE FOR PROCESSING.....	15
12.	ATTACHMENTS	15
12.1.	Generator Certification of pH – Example 1	16
12.2.	Generator Certification of pH – Example 2	17
12.3.	Generator Certification of Oils – Example 1.....	18
12.4.	Generator Certification of Oils – Example 2.....	19

1. PURPOSE AND SCOPE

Erwin Resin*Solutions*, LLC (ERS) will accept low-level radioactive waste and radioactive material which meet the waste acceptance guidelines of this document, can be safely processed, and meet the ERS Radioactive Material License (RML) and permit guidelines. Waste/material which does not meet the acceptance guidelines of this document may be accepted after a comprehensive pre-approval review, as long as the waste/material does not conflict with the facility licenses and permits. ERS reserves the right to refuse approval of any shipment based on regulatory, environmental, health, or safety concerns.

2. REFERENCES AND FORMS

2.1. References

- 2.1.1. Erwin Resin*Solutions*, LLC Radioactive Material License
- 2.1.2. Waste Control Specialists Radioactive Material License
- 2.1.3. Waste Control Specialists Waste Acceptance Criteria
- 2.1.4. Energy*Solutions*, Utah, Radioactive Material License
- 2.1.5. Energy*Solutions*, Utah, Containerized and Bulk Waste Facility Waste Acceptance Criteria
- 2.1.6. TN SRPAR 0400-20-05
- 2.1.7. Waste Control Specialists CWF Generator Handbook

2.2. Forms

- 2.2.1. ER-WM-WAG-001-F1, Waste Profile Form WAG-01
- 2.2.2. ER-WM-WAG-001-F2, Customer Sampling Summary Form

3. GENERAL

3.1. Definitions

- 3.1.1. *DOT* – Department of Transportation
- 3.1.2. *Dry Active Waste (DAW)* - Dry, contaminated waste consisting primarily of paper, plastic, cloth, rubber, wood, metal, etc.
- 3.1.3. *EPA* – Environmental Protection Agency
- 3.1.4. *ERS* - Erwin Resin*Solutions*, LLC
- 3.1.5. *Radioactive Waste* - Radioactive material intended for processing by ERS
- 3.1.6. *RML* – Radioactive Material License
- 3.1.7. *WAG* – Waste Acceptance Guideline
- 3.1.8. *Wet Waste* - Sluiceable waste comprised of or containing liquids with or without solids. Includes bead or powdered resins, powdered filter media, activated carbon, aqueous liquids, oils, etc.

3.2. Responsibilities

- 3.2.1. ERS Pre-Approval Review

Waste Acceptance Guidelines

The review covers the following:

- 3.2.1.1. Determining that input waste and processed waste material will meet regulatory and burial site criteria (ref. 2.1.1 - 2.1.6 as applicable) by evaluating the customer submitted ERS Waste Profile Form.
- 3.2.1.2. Determining that the proposed shipment can be stored and processed in accordance with facility licenses and permits.
- 3.2.1.3. Determining how input waste can be safely processed, and establishing radiological guidelines to ensure that ERS can receive and process waste in accordance with all applicable licenses, permits and regulations based on a typical waste container.
- 3.2.1.4. Determining that the proposed shipment will not cause any environmental or occupational dose limitations to be exceeded while stored waiting processing.
- 3.2.2. ERS Logistics Department
The Logistics Department is responsible for:
 - 3.2.2.1. Evaluating the submitted Waste Profile Forms to assure the proposed shipments comply with the ERS Waste Acceptance Guidelines.
 - 3.2.2.2. Maintaining and updating the radionuclide inventory.
- 3.2.3. Generator (Client)
 - 3.2.3.1. The Generator shall have a valid purchase order, contract, or other legal document with ERS, including a properly executed Waste Services Contract unless otherwise agreed by ERS. A valid purchase order, contract, or other legal document must be in ERS's possession prior to shipment of any waste to ERS.
 - 3.2.3.2. The Generator is responsible for submitting to ERS a Waste Profile Form ER-WM-WAG-001-F1 that accurately describes the waste/material to be processed. Waste must be characterized in accordance with the requirements of the Nuclear Regulatory Commission Low-Level Waste Licensing Branch Technical Position on Radioactive Waste Classification. In addition, the Generator will provide an isotopic report and, if applicable, the container survey (see 3.2.3.3). The Generator will also supply Part 61 analytical data from samples for B/C waste only, measured by an accredited laboratory, per reference 2.1.7, and other information as required in Form ER-WM-WAG-001-F2.
 - 3.2.3.3. Waste containers proposed for shipment to ERS with dose rates greater than 50 R/hr may at ERS's discretion require a container survey prior to acceptance.
 - 3.2.3.4. Upon request, the Generator will provide ERS with the completed manifest.
 - 3.2.3.5. Waste Profile Forms and supporting data should be submitted a minimum of 48hours prior to desired shipping date to allow enough

time for the review process. Later submissions may result in shipments being delayed.

- 3.2.3.6. Upon approval of the Waste Profile Form, the Generator will be placed on ERS's waste receiving schedule and a shipment approval will be provided by returning the signed Waste Profile Form with an approved shipment receipt date, time, and shipment ID number.

NOTE:

The ERS approval for shipment is valid for 30 days. After 30 days the client needs to contact customer service for instructions on obtaining a new approval for shipment.

- 3.2.3.7. The guidelines specified in this document are based on a typical isotopic distribution in consideration of a conservative input waste volume, such that ERS will not exceed license possession or air emission limits. These guidelines are for guidance only. Waste exceeding the guidelines incorporated herein may still be acceptable for receipt as determined by ERS SRC.
- 3.2.3.8. The Generator is responsible for possessing a valid Tennessee Radioactive Waste-License-for-Delivery, as required. This permit number will be recorded in the user permit number block of the manifest.
- 3.2.3.9. Each bulk container or individual package **MUST** be individually identified by a unique number, which appears on the Waste Profile Form, isotopic data, and manifest (unless otherwise approved, in writing, by the ERS Logistics Manager).
- 3.2.3.10. The uniform manifest NRC forms 540, 541, and 542 (as applicable), or an ERS approved equivalent, shall be used for waste shipments to ERS.

The manifest shall include the necessary information required by applicable NRC instructions.

ERS issues a shipment ID number for every incoming waste shipment (see "ERS Use Only" section of profile). This number should be entered in the Shipment ID block of the manifest.

- 3.2.3.11. Receipt of SNM requires prior approval from ERS. ERS is limited to 200 grams or 2 Ci of Plutonium whichever is less, 200 grams U-233, and 350 grams U-235, in combination, at any one time. Specific schedules may need to be established to control receipt and processing of SNM.
- 3.2.3.12. Generator shall provide written assurances indicating that the Generator will accept return of all radioactive waste/material, processed or unprocessed, as required by the ERS RML. In addition, for states outside the Southeast Compact, the state or appropriate compact must be a signatory to the Interregional Access Agreement for Waste Management or assurances shall be obtained from the

- appropriate state governor's office, the state radiation control program, and the appropriate compact official, if any.
- 3.2.3.13. Generator shall ensure that contractual obligations exist with ERS relating to the ability to return radioactive waste/material, processed or unprocessed, to the Generator as required by the ERS RML.
- 3.2.3.14. Generator is to maintain an active RML that allows the Generator to receive returned radioactive waste/material as required in the ERS RML.
- 3.2.3.15. Generator shall ensure that the type of shipping cask to be used is correctly identified on the Waste Profile Form.
- 3.2.3.16. Generator shall ensure that there are no outstanding contractual issues, items of non-compliance, or notices of violation issued under its name which would affect ERS's ability to accept, process, package, ship, and dispose of the client's waste at any of the commercially available burial sites.

NOTE:

It is the Generator's responsibility to notify ERS in writing immediately if the above status (sections 3.2.3.12 – 3.2.3.16) changes prior to sending any additional waste to ERS.

- 3.2.3.17. Radioactive waste/material to be shipped to ERS for processing (except for materials covered by sections 10 and/or 11) must not contain debris, particles, etc. which exceed 5/32", e.g. the material must pass through 5/32" (0.156") diameter hole, unless specifically approved in writing by ERS.
- 3.2.3.18. Radioactive waste/material with dirt, inorganic content, debris, zeolites, and/or metal oxide weight greater than 5% or soluble inorganics greater than 1% require special pricing and process review.

NOTE:

Estimated percentage of inorganics refers to the combined weight percentage of metal oxides, dirt, inorganics, debris, zeolites, etc. versus the entire waste components including the weight of dewatered resin.

4. ACCEPTANCE OF RADIOACTIVE WASTE

4.1. General Acceptance

Waste acceptance guidelines have been established for individual waste categories which are permitted by the ERS's RML. Waste streams which exceed the guidelines of their respective waste type category may still be acceptable, as determined by ERS, providing the facility's RML inventory limits will not be exceeded, and the waste can be processed within the allowed RML timeframe. Waste types, which do not fall into any of the defined categories, will be evaluated on a case-by-case basis by ERS to determine if they are permitted by ERS's licenses and permits. The following sections provide the acceptance guidelines for various specific waste forms:

- Processing of Resins and Other Filter Media (Section 7)

- Processing of Aqueous Liquids (Section 8)
- Processing of Oils (Section 9)
- Processing of Sludge (Section 10)

4.2. Acceptance Limitations

Waste meeting these guidelines may be accepted by ERS if sufficient storage space exists, the facility's licensed radionuclide inventory will not be exceeded, the waste can be processed within the allowed license time frame and the projected air emissions are less than permit limits.

5. WAG FORM

The WAG form is generally self-explanatory; however there are some areas which require guidance.

5.1. ER-WM-WAG-001-F1, Waste Profile Form WAG-01

In the block **Container Type** we are looking for model information such as ES-210, EL-210, and material of construction such as poly, carbon steel, stainless steel, etc.

In the block **Type Dewatering Internals** we are looking for information such as:

BEAD	POWDEX
Cartridge	Sludge cartridge
Sheet	Pdx laterals
PVC	Sheet bottom and sides
Sludge Cartridge	FEDX/ECODEX

NOTE:

Due to the difficulty of removing resins from containers with FEDX internals, sheet filters and sludge internals, containers with these types of internals will only be accepted on a case-by-case basis.

In the block **If Charcoal specify size** we are looking for information such as the mesh size which is typically found on the charcoal vendor's cut sheet.

In the block **Container Disposition** enter the applicable letter from below:

- | | |
|---|--------------------|
| A – refurb/return | B – inspect/return |
| C – dispose (method at ERS discretion) | D – THOR Liner |
| E - other (attach documents explaining) | |

6. GENERAL WASTE ACCEPTANCE GUIDELINE

6.1. Applicability

These general acceptance guidelines are applicable to all radioactive waste/material received at ERS and acceptable according to the ERS's RML. The waste shall also comply with the specific guidelines established for each type of waste.

6.2. Radiological Guideline

Below are the radiological guidelines applicable to all radioactive waste received for processing at ERS.

Waste Acceptance Guidelines

Where radiation levels are specified, they refer to unshielded waste container (on contact with container outside wall) exposure dose rates in mR/hr.

6.2.1. Radiation/Contamination Levels:

Radiation Level per Package:

≤ 100,000 mR/hr (contact) for resin/filter media

≤ 10,000 mR/hr (contact) all other

6.2.2. Removable External Contamination:

< 1,000 dpm beta-gamma/100cm²

< 20 dpm alpha/100 cm²

6.2.3. Radionuclide Guidelines:

The radionuclide concentration per package shall not exceed the following group or individual guidelines without specific written approval, provided by return of customer submitted Waste Profile Form with approval number, approved date and time of receipt, and the signature of the ERS Logistics Manager, or designee.

Radionuclide	Average Concentration
Total of all mixed activation and fission products with atomic numbers 2 – 92 not listed below:	≤ 1500.0 mCi/ft ³ (< 53.0 μCi/cc) resin/filter media ≤ 150.0 mCi/ft ³ (< 5.3 μCi/cc) all other
C-14	≤ 2.5E-2 μCi/cc
H-3	≤ 1.0E-1 μCi/cc
I-129	≤ 1.0E-4 μCi/cc
I-131	≤ 4.6E-4 μCi/cc
Sr-90	≤ 1.0E-2 μCi/cc
Tc-99	≤ 1.0E-1 μCi/cc
Transuranics (excluding plutonium)	≤ 5.0 nCi/cc resin/filter media ≤ 0.1 nCi/cc all other
Other Special Nuclear Material (SNM)*	Prior Approval Required
<i>* Includes: Pu 239, Pu 241, Pu 242, U-233, U-235, or uranium enriched in the isotopes U-233 or U-235.</i>	

6.3. **RCRA/TSCA Guidelines**

ERS is not a permitted Treatment, Storage, or Disposal Facility (TSDF) under RCRA regulations. Waste received at ERS shall not be listed or characterized as hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) or the Toxic Substances Control Act (TSCA).

It is the Generator's responsibility, through testing, as required, to assure that hazardous waste is not shipped to ERS. Listed below is a general guideline for interfacing analytical results in the Generator's waste with ERS's acceptance guideline. ERS's acceptance guideline is based on EPA regulations contained in 40 CFR 261/279, 40 CFR 761, and the State of Tennessee regulations, where appropriate.

6.3.1. Type of Analysis

Toxicity Characteristic Leaching Procedure (TCLP)

- Toxic Metals (40 CFR 261.24) ERS Acceptance Guideline

Arsenic	< 0.20 mg/l
Barium	< 4.0 mg/l
Cadmium	< 0.04 mg/l
Chromium	< 5.0 mg/l
Lead	< 0.20 mg/l
Mercury	< 0.008 mg/l
Selenium	< 0.04 mg/l
Silver	< 0.20 mg/l

- Organics

See list of organic compounds and their respective regulatory levels listed in 40 CFR 261.24. Any compounds which cannot be certified by the generator to be absent from the waste to be processed must be tested using EPA approved methods and standards.

Total Halogen (TOX)	≤ 1,000 ppm unless rebutted*
Polychlorinated Biphenyls	< 2.0 ppm
Flashpoint	≥ 140°F

*EPA has specified a limit of 1,000 ppm as the level at which they presume mixing with spent halogenated solvents has occurred. The waste can contain up to 4,000 ppm total halogens if the presumption of mixing can be successfully rebutted. To successfully rebut the mixing presumption, analysis must be performed to demonstrate that the waste contains less than 100 ppm of any individual halogenated solvent listed as an F001 or F002 waste and certify that there has been no intentional mixing of hazardous constituents with the waste. Additional volatile organic analysis would be required to analyze for these individual compounds.

6.4. Packaging

6.4.1. All waste shall be packaged in metal (carbon or stainless steel) or plastic containers, which are compatible with the waste and are authorized for the transportation of radioactive material in accordance with U.S. Department of Transportation (DOT) regulations.

6.4.2. All containers that are not provided by ERS will remain the responsibility of the Generator even after the waste media has been removed. Advance arrangements, including pricing, shall be made to allow ERS to disposition the emptied waste containers as a convenience to the Generator.

6.4.3. No Foreign Material Clause (does not apply to material covered by sections 10 and/or 11) - No foreign material is allowed in the container, without specific Logistics Manager approval, that would otherwise hinder the remote sluicing of the waste from its packaging for processing (i.e., duct tape, gloves, herculite, plastic, tie-wraps, or other trash/debris that will not pass through a 5/32" (0.156") diameter hole). Presence of such material will result in additional fees and possible container rejection and return at the Generator's expense. Each situation will be evaluated on a case-by-case basis taking into account container exposure rates, type and amount of foreign material, etc. This requirement is necessary to ensure that ERS personnel exposure is kept as low as reasonably achievable.

6.5. Receipt Guideline

All requirements of the Generator Responsibilities (Section 3.2.3) shall be met prior to receipt of waste at ERS.

6.6. Disposition of Non-Conforming Waste

Waste, which does not meet the requirements in ERS's RML, will be dispositioned as required by regulations and/or returned to the Generator at the Generator's expense.

7. ACCEPTANCE GUIDELINE FOR RESINS AND OTHER SLUICEABLE FILTER MEDIA

7.1. Applicability

These guidelines are applicable to the receipt of sluiceable organic resins and filter media for processing.

7.2. Waste Acceptance Guideline

Processing can be performed on a wide variety of organic waste media including bead resin, powdered resin, activated carbon (charcoal), and other powdered filter media. Waste media must meet the following specific guidelines for processing unless written approval is provided by ERS. No exceptions will be granted for hazardous waste.

- Inorganics (i.e. dirt, metal oxides, etc.) ≤ 5 wt%
- Soluble inorganics < 1%
- Particle Size < 5/32"
- Aqueous Liquids Content ≤3 inches above waste surface
- Non-hazardous by RCRA/TSCA Reference Section 6.3
RCRA/TSCA Guidelines

7.3. Receipt Guideline

All requirements of the Generator Responsibilities (Section 3.2.3) shall be met prior to receipt of waste at ERS.

Waste Acceptance Guidelines

8. ACCEPTANCE GUIDELINE FOR AQUEOUS LIQUIDS**8.1. Applicability**

These acceptance guidelines are applicable to the receipt of aqueous liquids for processing.

8.2. Waste Acceptance Guideline

Aqueous liquids which exceed the following guideline may not be acceptable for processing. Written approval must be provided by ERS for acceptance. No exceptions will be granted for processing hazardous wastes.

- pH Range: 5 - 9
- Solids Content: < 10% by volume
- Particle Size: <5/32"
- Oil Content: < 10% by volume
- Chelating Agents: < 20% by volume
- Non-hazardous by RCRA/TSCA Reference Section 6.3 RCRA/TSCA Guidelines

8.3. Receipt Guideline

All requirements of the Generator Responsibilities (Section 3.2.3) shall be met prior to receipt of waste at ERS.

Generators are required to provide a certification letter with each shipment stating that the liquid's pH is between 5 and 9 and that the shipment is not considered a hazardous waste in accordance with RCRA/TSCA regulations. The examples in Attachments 12.1 and 12.2 are acceptable to ERS, depending on the source of knowledge.

9. ACCEPTANCE GUIDELINE FOR CONTAMINATED OILS**9.1. Applicability**

These acceptance guidelines are applicable to the receipt of radioactively contaminated oils and fluids for processing.

9.2. Oil Acceptance Guideline

Petroleum-based lubricating, hydraulic oil, and other oils must meet the following specific guidelines for processing.

- Viscosity: ≤ 40 weight (< 100 ssu)
- Solids Contents: < 10% by volume
- Particle Size: <5/32"
- Aqueous Liquids Content: < 20% by volume
- Non-hazardous by RCRA/TSCA: Reference Section 6.3 RCRA/TSCA Guidelines

Most synthetic fluids including Fyrquel Electro-Hydraulic Control (EHC) fluid, fuel oils and Mobil SHC lubricating fluids are acceptable.

9.3. Receipt Guideline

All requirements of the Generator Responsibilities (Section 3.2.3) shall be met prior to receipt of waste at ERS.

Generators are required to provide a certification letter with each shipment stating that the shipment is not considered a hazardous waste in accordance with RCRA/TSCA regulations. The examples in Attachments 12.3 and 12.4 are acceptable to ERS, depending on the source of knowledge.

10. ACCEPTANCE GUIDELINE FOR PROCESSING OF SLUDGES

10.1. RCRA/TSCA Guidelines

ERS is not a permitted Treatment, Storage, or Disposal Facility (TSDF) under RCRA regulations. **Waste shipped to ERS shall not be listed or characterized as hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) or the Toxic Substances Control Act (TSCA).**

It is the Generator's responsibility through testing, as required, to ensure that hazardous waste is not shipped to ERS. Listed below is a general guideline for interfacing analytical results in the Generator's waste with ERS's acceptance guideline. ERS's acceptance guideline is based on EPA regulations contained in 40 CFR 261/279, 40 CFR 761, and the State of Tennessee regulations (0400-12-01, Hazardous Waste Management), where appropriate.

10.2. Listed Hazardous Wastes

A waste is considered hazardous if it appears on any one of the four lists of hazardous waste contained in the RCRA Regulations. Wastes have been classified as hazardous because they either exhibit one of the characteristics described below, or they contain any number of toxic components that have been shown to be harmful to health and/or the environment. The EPA regulations list over 400 hazardous wastes, including wastes derived from manufacturing processes and discarded commercial chemical products.

10.3. Characteristic Hazardous Wastes

Even if a waste does not appear on one of the EPA lists, it will be considered hazardous if it has one or more of the following hazardous waste characteristics:

Ignitable waste - easily combustible or flammable or has a flash point of 140 degrees Fahrenheit or lower. Examples: isopropyl alcohol, MEK, and paint thinner. ***The EPA Hazardous Waste number is D001.***

Corrosive waste - will corrode steel one inch per year, burn the skin, dissolve metals, or has a pH less than or equal to 2 or greater than or equal to 12.5. Examples: waste rust removers, waste acid or alkaline cleaning fluids, and battery acid such as sulfuric acid. ***The EPA Hazardous Waste number is D002.***

Reactive waste - it is unstable or undergoes a rapid or a violent chemical reaction with other materials or water. Examples: cyanide plating waste, waste bleaches, and waste oxidizers (an oxidizer is a chemical that fuels a fire, in other words makes it get hotter). ***The EPA Hazardous Waste number is D003.***

Toxic Waste - A solid waste exhibits the characteristic of toxicity if, using the TCLP (Toxicity Characteristic Leaching Procedure), Test Method 1311 in EPA Publication

SW-846 or equivalent methods approved by the Administrator under the procedures set forth in 260.20 and 260.21, it contains any of the contaminants listed in Table 1 (40 CFR 261.24) at the concentration equal to or greater than the respective value given in the listed table.

10.4. Toxic Metals

<u>Toxic Metals (40 CFR 261.24)</u>	<u>ERS Acceptance Guideline</u>
• Arsenic	< 0.20 mg/l
• Barium	< 4.0 mg/l
• Cadmium	< 0.04 mg/l
• Chromium	< 5.0 mg/l
• Lead	< 0.20 mg/l
• Mercury	< 0.008 mg/l
• Selenium	< 0.04 mg/l
• Silver	< 0.20 mg/l

10.5. Organics

See list of organic compounds and their respective regulatory levels listed in 40 CFR 261.24. Any compounds which cannot be certified by the generator to be absent from the waste to be processed must be tested using EPA approved methods and standards.

- Total Halogen (TOX) \leq 1,000 ppm unless rebutted*
- Polychlorinated Biphenyl's < 2.0 ppm
- Flashpoint \geq 140°F

*EPA has specified a limit of 1,000 ppm as the level at which they presume mixing with spent halogenated solvents has occurred. The waste can contain up to 4,000 ppm total halogens if the presumption of mixing can be successfully rebutted. To successfully rebut the mixing presumption, analysis must be performed to demonstrate that the waste contains less than 100 ppm of any individual halogenated solvent listed as an F001 or F002 waste and certify there has been no intentional mixing of hazardous constituents with the waste. Additional volatile organic analysis would be required to analyze for these individual compounds.

10.6. Packaging

All waste should be packaged in metal (carbon or stainless steel) or plastic containers, which are compatible with the waste and authorized for the transportation of radioactive material in accordance with U.S. Department of Transportation (DOT) regulations.

All containers that are not provided by ERS will remain the responsibility of the Generator even after the waste media has been removed. Advance arrangements (including pricing) shall be made to allow ERS to disposition the emptied waste containers as a convenience to the Client.

No Foreign Material Clause - No foreign material is allowed in the container, without specific Logistics Manager approval, that would otherwise hinder the remote sluicing of

the waste from its packaging for processing (i.e., duct tape, gloves, herculite, plastic, tie-wraps, or other trash/debris that will not pass through a 5/32" (0.156") diameter hole. Presence of such material will result in additional fees and possible container rejection and return at the Generator's expense. Each situation will be evaluated on a case-by-case basis taking into account container exposure rates, type and amount of foreign material, etc. This requirement is necessary to ensure that ERS personnel exposure is kept as low as reasonably achievable.

10.7. Receipt Guideline

All requirements of the Generator Responsibilities (Section 3.2.3) shall be met prior to receipt of waste at ERS.

10.8. Disposition of Non-Conforming Waste

Waste, which does not meet the requirements of the ERS RML, will be dispositioned as required by regulations and/or returned to the Generator at the Generator's expense.

Please contact Customer Service or ERS's Logistics Manager for more information.

11. PLASTIC/ORGANIC MATERIALS NOT ACCEPTABLE FOR PROCESSING

- Poly Vinyl Chloride (PVC or CPVC)
- Teflon
- Halogen containing materials (halogens are Chlorine or Fluorine)
- Hazardous/mixed wastes

12. ATTACHMENTS

- 12.1 Generator Certification of pH – Example 1
- 12.2 Generator Certification of pH – Example 2
- 12.3 Generator Certification of Oils – Example 1
- 12.4 Generator Certification of Oils – Example 2

ATTACHMENT

12.1. Generator Certification of pH – Example 1

Example No. 1 (used when certification is based on process knowledge)

This is to certify that to the best of my knowledge, the aqueous liquid contained in (generator/shipper) shipment no. _____ does not contain any hazardous wastes listed under 40 CFR 261 Subpart D; that the aqueous liquid does not exhibit any hazardous waste characteristics identified under 40 CFR 261 Subpart C; and that the aqueous liquid meets the ERS's acceptance guidelines. The liquid's pH is _____.

This certification is based on knowledge of the systems/processes in which the liquid was generated and process controls which would prohibit the addition of hazardous constituents into the liquid.

Should you have any questions concerning this information, please feel free to contact me at () - .

Sincerely,

ATTACHMENT

12.2. Generator Certification of pH – Example 2Example No. 2 (used when certification is based on lab analysis)

This is to certify that to the best of my knowledge, the aqueous liquid contained in (generator/shipper) shipment no. _____ does not contain any hazardous wastes listed under 40 CFR 261 Subpart D; that the aqueous liquid does not exhibit any hazardous waste characteristics identified under 40 CFR 261 Subpart C; and that the aqueous liquid meets the ERS's acceptance guidelines. The liquid's pH is _____.

This certification is based on knowledge of the systems/processes in which the liquid was generated and verified by actual testing performed by _____ under work order/lab no. _____.

Should you have any questions concerning this information, please feel free to contact me at () - .

Sincerely,

ATTACHMENT

12.3. Generator Certification of Oils – Example 1Example No. 1 (used when certification is based on process knowledge)

This is to certify that to the best of my knowledge, the oil contained in (generator/shipper) shipment no. _____ does not contain any hazardous wastes listed under 40 CFR 261 Subpart D; that the oil does not exhibit any hazardous waste characteristics identified under 40 CFR 261 Subpart C; and that the oil meets the ERS's acceptance guidelines.

This certification is based on knowledge of the system(s) in which the oil was generated and process controls which would prohibit the addition of hazardous constituents into the oil.

Should you have any questions concerning this information, please feel free to contact me at () - .

Sincerely,

ATTACHMENT

12.4. Generator Certification of Oils – Example 2Example No. 2 (used when certification is based on lab analysis)

This is to certify that to the best of my knowledge, the oil contained in (generator/shipper) shipment no. _____ does not contain any hazardous wastes listed under 40 CFR 261 Subpart D; that the oil does not exhibit any hazardous waste characteristics identified under 40 CFR 261 Subpart C; and that the oil meets the ERS's acceptance guidelines.

This certification is based on knowledge of the system(s) in which the oil was generated and verified by actual testing performed by _____ under work order/lab no. _____.

Should you have any questions concerning this information, please feel free to contact me at () - .

Sincerely,