

BPW-3 11e.(2) INCOMING WASTE SAMPLING AND ANALYSIS

MANUAL/PROCEDURE: BPW-3 11e.(2) WASTE SAMPLING AND ANALYSIS

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PURPOSE:

Incorporate changes from CAP and annual review

SUBMITTED BY:

Curtis Kirk

Signature

Date

FORWARDED:

Site Manager

Date

Site Radiation Safety Officer

Date

Quality Assurance Officer

Date

CONCURRENCE:

Compliance Engineer

Date

REVIEW:

Corporate Radiation Safety Officer

Date

APPROVAL:

Project Manager/Operations Director

Date

9702140256 970110
PDR ADOCK 04008989
C PDR

REV: 04 RCN: 00

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BPW -3 11E.(2) INCOMING WASTE SAMPLING AND ANALYSIS

A. PURPOSE:

This procedure is designed to provide a consistent method for sampling and analyzing incoming shipment wastes to ensure that: the radioactive characteristics of the material are within the license limits; the material is not a liquid waste and does not contain excessive free liquids; and the material is not a hazardous waste subject to RCRA regulations. This procedure aids in ensuring that representative samples of the incoming-shipments are obtained and that Chemical (as necessary) and Radiological Analyses are performed to characterize incoming wastes.

B. REFERENCES OR AUTHORITY:

1. 11e.(2) Radioactive Material License SMC-1559, as amended
2. Application for 11e.(2) Radioactive Material License SMC-1559, as amended
3. Envirocare of Utah, Inc. Quality Assurance Manual;
4. 40 CFR 261;
5. 10 CFR 40, Appendix A, as revised
6. Ground Water Quality Discharge Permit #UGW450005, as amended
7. Waste Management Plan, as revised
8. Envirocare of Utah, Inc. Operating Procedures Manual, as revised
9. Envirocare of Utah, Inc. Safety and Health Manual, as revised
10. Envirocare of Utah, Inc. Problem Reporting Plan, as revised

C. PRECAUTIONS AND LIMITATIONS:

1. Review the generator's pre-shipment analysis, certification, and the manifest/shipping papers for potential health and safety hazards prior to inspecting and sampling activities.
2. Where off-site analysis is required, the samples should be sent to the laboratory within seven days of the shipment's arrival at the South Clive Site. Laboratory results showing that the material is within the parameters of the license must be received within 45 days of the applicable shipment's arrival at the South Clive Site.
3. Any waste which is determined to be a hazardous waste; to exceed the Reference 1 restrictions; or to be non-11e.(2) waste shall not be disposed of in the 11e.(2) disposal cells. Such waste must be handled and disposed of elsewhere in compliance with all other applicable regulations or returned to its place of origin.
4. For safety reasons and sample preservation, the photoionization "sniffer" test should be the first chemical analysis run. An organic filter cartridge respirator should be worn when conducting this initial test.

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5. Wear safety eye wear, gloves, protective clothing, a respirator with organic cartridge, and protective footwear during sampling or handling waste to prevent skin contamination or exposure to unknown contaminants.

6. When sampling inside an enclosed conveyance, the sampling team should be comprised of at least two team members. One team member should be positioned outside the waste conveyance and observe the sampling performed by the other team member. The observer should maintain visual contact with the sampler at all times. The team member performing the actual sampling shall be a qualified sampler in accordance with procedure TRAIN-1 of this manual.

D. GENERAL INSTRUCTIONS:

1. This procedure applies to the radioactive component of all 11e.(2) waste destined for disposal at the Envirocare South Clive Disposal Facility.

2. Samples must be submitted to an approved analytical laboratory for radiologic analysis to confirm that the waste has been properly manifested and is within the parameters of Reference 1.

3. Envirocare's Business Development shall be informed of problems or discrepancies with samples or incoming shipments by use of a Problem Report (EC-2702), as detailed in the Problem Reporting Plan. The Problem Report should include, as a minimum, a description of the problem, the date and time of discovery of the problem, the recommended resolution of the problem, and corporate approval of the resolution.

4. Incoming shipments must have samples obtained according to the frequencies noted below:

Note: For counting purposes, one rail car (any type) may represent a nominal 100 cubic yards and one highway shipment (any type) may represent a nominal 20 yards. The actual volumes may also be used for counting purposes.

a. For each waste stream, the minimum number of samples to be analyzed for radiologics is:

1) One sample for each of the first ten (10) shipments (rail or highway); or, one sample for each of the first 100 cubic yards (yd³) up to 1,000 yd³.

2) One sample for each additional 500 yd³ after the conditions of D.4.a.1 have been met.

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- b. For each waste stream, the minimum number of samples to be analyzed for the Immediate Chemical Screening Parameters is:

- 1) One sample from the first shipment received.
- 2) After the first shipment, one sample for each 50,000 tons of 11e.(2) waste received.

5. In order to collect a more representative sample for verification of radionuclide content and Chemical Screening Parameters, the sampling methods noted below should be followed. Although only minimum numbers of aliquots are specified, the samplers should collect enough aliquots to ensure that all portions of the corresponding waste volume are represented.

- a. **Bulk Rail Shipments:** The sample shall be a composite sample consisting of six aliquots from different locations.
- b. **Bulk Highway Shipments:** The sample shall be a composite sample consisting of two aliquots from different locations.
- c. **20-yd³ Boxes:** The sample shall be a composite sample consisting of two aliquots from different locations in the box.
- d. **B-25 Boxes (3.5-yd³):** The sample shall be a composite sample consisting of one aliquot from each of six boxes. Where there are fewer than six boxes, the requirement is a minimum of 6 aliquots from different locations, ensuring that at least one aliquot is taken from each box.
- e. **Drums, Barrels and Smaller Containers:** The sample shall be a composite sample consisting of one aliquot from each of at least six containers in each shipment.
- g. All bulk shipment and container samples should be collected to include material at varying depths throughout the waste.
- h. These sampling methods are summarized below:

Waste Conveyance	Type	Number of Aliquots
Bulk Rail Shipments	composite	6
Bulk Highway Shipments	composite	2
20-yd ³ Boxes	composite	2 per box
B-25 Boxes	composite	6 per shipment

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Drums, Barrels, and Smaller Containers	composite	6
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6. Should the results from the analytical laboratory show that the waste is beyond the limits of References 1, or 4, and the waste has been placed in the embankment, the following Contingency Plan must be implemented:

- a. The Corporate Environmental Engineer is notified immediately of the situation by site personnel.
- b. Within 24 hours of discovering that non-conforming material has been disposed, the regional office of the NRC and the Utah DRC must be notified by the Corporate Environmental Engineer.

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- c. Within seven calendar days of the notification, a written description of the situation must be provided to the NRC and Utah DRC by the Corporate Environmental Engineer. The following information must be included in the written description:
 - 1) name of the generator;
 - 2) name of the non-conforming waste stream;
 - 3) amount of non-conforming waste disposed;
 - 4) location of the non-conforming waste in the disposal cell;
 - 5) date the non-conforming waste was accepted;
 - 6) date the non-conforming waste was placed in the disposal cell;
 - 7) description of the waste placed on and around the non-conforming waste;
 - d. Provide a written plan to the NRC for managing the non-conforming material. The plan must describe alternative actions and the consequences of each action.
 - e. Re-sample the shipment, by means of a core sampler, other device, or removal of portions of subsequent lifts, as necessary, to confirm the initial analytical results.
 - f. If the non-conforming waste is determined to be a hazardous waste and/or a non-11e.(2) waste which is not eligible for placement in the 11e.(2) disposal facility, the recommended course of action will be to remove it and return it to the generator.
 - g. Obtain approval from the NRC for the plan to manage the non-compliance waste. This approval may be obtained as the plan is revised in cooperation with the NRC.
 - h. Carry out the approved management plan.
7. Analytical results of Total 11e.(2) Chemical Screening Parameter Analysis are divided into the following five categories upon review:
- a. Category 1: The results show that no additional constituents or characteristics were detected other than those addressed by the 11e.(2) license.
 - b. Category 2: The results show that additional constituents were detected, but the constituents are not listed in Reference 4 (Appendix VIII), Reference 5 (Appendix A Criterion 13), or Reference 6 (Table 3).
 - c. Category 3: The results show that the waste has the possibility of additional constituents that are not addressed in the 11e.(2) License.

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- d. Category 4: The results show that the waste definitely has additional constituents that are not addressed in the 11e.(2) License, and will need to be added to section 11.1.
- e. Category 5: The results show that the waste is not 11e(2) by-product material.

E. OPERATING INSTRUCTIONS:

1. Upon arrival at the South Clive Site, the waste shipment is controlled in accordance with Reference 8, procedure BPW-2, "Incoming Waste Acceptance Control."
2. Representative samples must be obtained from the waste conveyances for analyses of the waste to confirm that the waste is within the parameters of Reference 1. Samples are obtained in accordance with D.4 and 5 above.
3. A qualified Sample Technician collects the appropriate samples from the shipment as follows:
 - a. Gather the needed sampling equipment including a scoop, shovel, auger or other appropriate tools, and sample containers.
 - b. Follow the Precautions and Limitations above, prior to inspection and sampling of the 11e.(2) waste.
 - c. Open the container of waste to be sampled and visually inspect the contents to determine if the waste has any free liquids, or, if it needs to be subjected to the Paint Filter Liquids Test. A container having free-standing liquid or which fails a Paint Filter Liquids Test (PFLT) will not be accepted by Envirocare for storage or disposal.
 - d. Gather the samples in an approved sample container using proper chain-of-custody procedures.
4. A Total 11e.(2) Chemical Screening Parameter Analysis is completed by the contracted off-site laboratory for each 50,000 tons of 11e.(2) material. Constituents to be analyzed are determined by the Operations Director, Environmental Engineer, and/or Corporate Radiation Safety Officer. The laboratory analyst documents that the samples have been obtained by signing the EC-18. An analytical request form is forwarded with the samples to the contract laboratory within seven days of sample collection.

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5. Should the results of the Total 11e.(2) Chemical Screening Parameter Analysis indicate that the waste may contain constituents that are not addressed in Reference 1, proceed as follows:

- a. For waste classified as Category 3 (as defined in General Instruction D.7 above), if a constituent is detected above the limit of quantitation, perform the following:
 - 1) Determine if the constituent is listed in Reference 4 (Appendix VIII), Reference 5 (Appendix A, Criterion 13), or Reference 6 (Table 3).
 - 2) Determine if and applicable treatment standard exists in 40 CFR 268 for waste containing the constituent. If the concentration is greater than the treatment standard, then classify the waste as Category 4 waste, and follow instructions E.5.b below.
 3. If the concentration is less than the treatment standard, discuss the results with the generator to determine if the waste still exhibits the characteristics of 11e.(2) material.
- b. For waste classified as Category 4 (as defined in General Instruction D.7 above):
 - 1) Notify the generator of the finding and discuss whether this constituent indicates that the waste is hazardous. If the waste is determined to be hazardous, it is no longer characteristic of 11e.(2) material and is therefore a Category 5 waste.
 - 2) If the constituent is determined to be non-hazardous, sample the next incoming shipment and have it analyzed for the constituent.
 - *- If the constituent does not appear in the sample, the first sample is considered to be an anomaly, and the waste can be accepted for disposal.
 - *- If the constituent is found again, add the constituent to Reference 1, condition 11.1.
- c. For waste classified as Category 5 (as defined in General Instruction D.7 above):
 - 1) Reject the waste and inform the generator that the waste has not been accepted for disposal at the Envirocare Waste Disposal Facility.

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- 2) Sample the next incoming shipment from this generator and have it undergo the Total 11e.(2) Chemical Screening Analysis.

F. QUALITY CONTROL:

1. QC Process Control: The sample team must ensure that the samples obtained are representative of the incoming-waste. Samples should include any debris, if it can be sampled, which could be scattered throughout the waste shipment.
2. Sample Control: Ensure chain-of-custody procedures are followed for control of the incoming-shipment samples. Fill out and file the corresponding form (EC-0101). Note the dates of sample shipment for off-site laboratory analysis in the Sampling Control Log. Sample material should be disposed when the analyses and data review are completed and the chain-of-custody form should be updated to reflect the disposal.
3. Data Control: The completed Form EC-18, the RSR for the shipment, any Problem Reports (EC-2702), EC-1875 and any additional documents pertaining to the incoming-shipment should be filed in the operating record at the South Clive Site.
4. Audit Requirements:
 - a. Quarterly, the QA Department will review the documentation associated with the incoming-shipments. This includes, but is not limited to, ensuring that: the applicable forms are filled out correctly and filed appropriately; the sampling is being conducted in accordance with the required frequencies; and sample results are obtained within 45 days.
 - b. Semi-annually: The QA Officer will coordinate a comprehensive audit of Incoming-shipment waste sampling and analysis practices during the 11e.(2) waste management audit.

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- A. PURPOSE:** This procedure is designed to provide a consistent method for acceptance control of 11e.(2) incoming-shipment wastes to ensure the waste shipment's condition and parameters comply with governmental regulations for acceptance of the waste.
- B. REFERENCES OR AUTHORITY:**
1. 11e.(2) Radioactive Material License SMC-1559, dated 11/19/93, as amended;
 2. Application for 11e.(2) Radioactive Material License SMC-1559, dated 12/23/91, as amended;
 3. Envirocare of Utah, Inc. Quality Assurance Manual;
 4. 49 CFR 173.425;
 5. 40 CFR 264;
 6. 10 CFR 20.1992;
 7. Ground Water Quality Discharge Permit No. UGW450005, dated 9/10/93, as amended;
 8. 10 CFR 20, Appendix F;
 9. Waste Management Plan, dated 9/10/93, as amended;
 10. Envirocare of Utah, Inc. Operating Procedures Manual.
- C. PRECAUTIONS AND LIMITATIONS:**
1. Review the generator's pre-shipment analysis and the manifest/shipping papers for potential health and safety hazards for inspection and sampling.
 2. Where off-site analysis is required, the samples must be sent to the laboratory within five working days of the shipment's arrival at the Clive Site. Laboratory results must be received within 45 days of the applicable shipment's arrival at the Clive Site, showing that the material is within the parameters of the license.
 3. All incoming-shipments should have the proper labeling and marking as required by the U.S. Department of Transportation (DOT). If not, the Clive Site ARCS or RSO shall inform Envirocare Business Development via a Problem Report (EC-2700), and Business Development shall notify the generator for resolution.
 4. Rail cars or trucks which are found on the arrival survey to have external exposure rates of greater than 5 mrem/hr at 30 cm from any surface will be posted as a Radiation Area, in compliance with reference 6, until disposed. Additional precautions shall be taken for disposal as outlined in OP Manual procedure BPW-5.
 5. Wear safety eye wear, gloves, protective clothing, a respirator with a HEPA filter, and protective footwear during sampling or handling waste to prevent skin contamination.

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6. When sampling inside an enclosed conveyance, the sampling team should be comprised of at least two team members. One team member should be positioned outside the waste conveyance and observe the sampling performed by the other team member. The observer should maintain visual contact with the sampler at all times. The team member performing the actual sampling shall be a qualified sampler in accordance with procedure TRAIN-1 of this manual.

D. GENERAL INSTRUCTIONS:

1. This procedure applies to all 11e.(2) incoming-shipments of waste destined for disposal at the Envirocare South Clive Disposal Facility.

2. When a shipment of 11e.(2) waste arrives, it is not considered to be accepted for disposal until this acceptance procedure has been completed and the material has been documented as acceptable. A transportation vehicle may be physically located on Envirocare site property and still not be considered "accepted" for disposal at Envirocare pending resolution of any outstanding issues. Should non-accepted 11e.(2) waste be dumped or unloaded without direction or permission from Envirocare, the NRC, the Utah Division of Radiation Control and the Utah Division of Water Quality will be immediately (within 24 hours) contacted.

3. The procedure for accepting incoming 11e.(2) waste shipments is outlined as follows:

- a. File review;
- b. Review of manifest and shipping papers (Radioactive Waste Shipment and Disposal Record (RSR));
- c. Determination that the individual truck or rail car (or string of rail cars) meets the criterion of having an average concentration of no more than 2,000 pCi/g of the Uranium series or 6000 Pci/g of the Thorium series.
- d. Survey of freight container;
- e. Smear testing of external surface of the freight container.
- f. Visual inspection of freight container and packages for physical integrity and/or for signs of visible material on the exterior or loose in the conveyance, and for the presence of any free standing liquid;
- g. Inspection for compliance with the Department of Transportation (DOT) shipping regulations. All shipments will be required to meet the packaging

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requirements for Low Specific Activity Shipments described in reference 4, regardless of the actual radioactivity concentrations.

Note--If any shipment has radioactivity concentrations of greater than 2,000 $\mu\text{Ci/g}$, it will be required to meet all DOT regulations of marking, labelling and placarding.

- h. Inspection and sampling (if required) of the waste;
 - i. Sample analysis (if required) of the waste;
 - j. Acceptance/Rejection of the shipment.
4. Rail cars or trucks which have external exposure rates greater than 5 mrem/h at 30 cm, and which cannot be disposed of within 24 hours, will be posted as a Radiation Area in compliance with 10 CFR 20.1902(a) until disposed. Additional precautions shall be taken for disposal as outlined in OP Manual BPW-5.
5. When sampling, use approved sampling and analytical methods as outlined in references 1 and 9 above, and in OP Manual procedure BPW-3.
6. During the inspection of the shipment, identify discrepancies associated with the shipment. All discrepancies must be addressed or resolved prior to accepting the shipment. A qualified ARCS Coordinator, the Site RSO, or Site Manager will inform Business Development of any discrepancy and it will be resolved with the generator by Business Development. The shipment should not be unloaded or disposed until such discrepancies have been settled, either through written documentation which reflects the necessary changes in the manifest or through a generator representative visit to the disposal site. The types of these possible discrepancies are described below:
- a. Manifest Discrepancies:
 - 1) incomplete manifests;
 - 2) count discrepancies;
 - 3) significant weight or volume discrepancies; and,
 - 4) other manifest accuracy discrepancies (Phone #, address, names, etc.)
 - b. Inspection Discrepancies:
 - 1) free liquids present;
 - 2) damaged or open containers;
 - 3) containers with holes or penetrations;
 - 4) waste outside of the container;
 - 5) leaking containers; and,

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- 6) packaging or placarding not in accordance with DOT regulations.
7. Signed manifests (RSR's)(originals or copies) and applicable additional documentation (i.e. EC-18, bill of lading (if applicable), etc.) for shipment acceptance must be kept on file at the Envirocare Site in accordance with OP Manual procedure ADMIN-3.

The RSR serves several functions, including:

- a. complies with the requirements of a manifest as outlined in reference 8;
 - b. describes the number, types, and volumes of containers;
 - c. provides estimated weights, activities, and isotopes of the material;
 - d. documents generator's certification of packaging, classification, markings, labels, conditions of containers, and compliance with the applicable regulations and Envirocare's license and permits;
 - e. documents the generator's certification as to the RCRA or non-RCRA status of the material;
 - f. documents the generator's certification that the waste is 11e.(2);
 - g. documents the generator's warranty that the information provided in the RSR is true and correct;
 - h. provides a checklist for Envirocare for inspection of the incoming material and for possible discrepancies;
 - i. documents Envirocare's acceptance or rejection of the shipment;
 - j. identifies the parameters which will be analyzed (if required) by the independent, third-party laboratory; and,
 - k. alerts receiving staff to probable concentrations and gamma exposure rates.
8. Portable instruments may be used measure the external contamination on the shipment. This direct survey will be performed in addition to the smear survey if determined to be necessary by the Site RSO.

E. OPERATING PROCEDURES:

1. When a shipment of waste arrives at Envirocare, the ARCS Coordinator obtains the RSR and applicable shipping papers from the transporter and commences filling out the top of form EC-18. If desired, the form EC-18 may be initiated upon receipt of the facsimile copy of the RSR. The waste shipment is posted with a Bates number into the Incoming Shipment Book to facilitate tracking of the shipment through the acceptance procedure. Where applicable, and as a courtesy, the driver should be instructed about the delay expected to perform the detailed acceptance procedures.

(Note: A "shipment" refers to a single rail car, flatbed, dump truck, etc., loaded with incoming waste for possible management at Envirocare. When a shipment includes a

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trailer or "pup", the trailer or "pup" is considered to be a separate shipment from the primary load and an additional EC-18 needs to be completed.)

2. File Review - (completed by the ARCS Coordinator or qualified designee).
 - a. Ensure that a completed copy of the generator's characterization and radiologic analysis is in the Site operating record files.
 - b. Check to see whether the previous shipment of the same waste material (if not the first shipment) was accepted without special consideration or discrepancies. If so, prepare to deal with the problems encountered previously.
3. Review of manifest (RSR) and shipping papers - (completed by the ARCS Coordinator or qualified designee). This review may be performed concurrently with E.2 above.
 - a. Before a shipment may be accepted, a completed RSR and Continuation Sheet for the shipment must be received by Envirocare. The RSR may either accompany the shipment or may be received by Envirocare prior to the time that the shipment is accepted (such as by facsimile).
 - b. Complete the top of form EC-18, if not completed previously.
 - c. The Site RSO notes the disposal cell location on the EC-18 and signs for completion of this review.
 - d. The ARCS Coordinator reviews the RSR for completeness and ensures the form is properly signed.
4. Survey of Freight Container (completed by a qualified radiation technician).
 - a. The freight container is externally surveyed for gamma exposure rates for comparison to RSR values and to assure compliance with DOT regulations. Other portable instruments appropriate to measure the radionuclides expected in the shipment will be used as necessary to measure for external surface contamination. If the external radiation exposure rate exceeds 1,000 $\mu\text{R/hr}$ at any point on the freight container surface, the surveyor must contact the Site RSO or the ARCS Coordinator for additional verification and direction.
 - b. Compare the gamma survey measurements with those on the RSR Continuation Sheet. The readings should be in reasonable agreement, such as within a factor of two for shipments with a gamma measurement greater than 100

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microRem/hr. If they aren't, determine the reason, record it on the form, and report it to the Site RSO.

5. Freight Container Smear Testing (completed by a qualified radiation technician).
 - a. Each incoming freight container is smear tested for removable contamination. Should the result of a smear test exceed acceptance standards of the Department of Transportation; the Site RSO or the ARCS Coordinator must be contacted for additional verification and direction.
 - b. Select an area on the vehicle exterior where surface contamination would likely be found (if present). Obtain a smear sample, using moderate pressure, from an area of 100 square centimeters.
 - c. Identify the smear sample by vehicle number and save it for radiological laboratory counting.
 - d. After all inspections are complete, turn smear samples into the radiological counting lab for counting. The data are then entered on the EC-18 and the removable activity in dpm/100 square cm is calculated.
 - e. If excessive removable radioactive contamination is found on the external surfaces of the package as delineated in 49 CFR 173.443, notify the shipper and Corporate RSO who will immediately notify the final delivering carrier and also inform the Utah Division of Radiation Control.
6. Shipment Container Visual Inspection (completed by a qualified radiation technician).
 - a. The information on the RSR shall be verified for accuracy by inspecting the container/car ID numbers and the number of cars or containers.
 - b. Each incoming shipment shall be visually inspected to verify whether there is any evidence of physical damage to the container that might jeopardize its integrity. This is accomplished by visually examining the containers for any appearance of packaging breach or any such potential problem.
 - c. Each incoming-shipment is also inspected to verify the proper DOT labeling and placarding has been affixed. For any discrepancies, the ARCS Coordinator or Site RSO shall contact Envirocare Business Development who will inform the generator and/or shipper for resolution.

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- d. If any discrepancies are found in the documentation, certification, or shipment, the discrepancies must be resolved prior to acceptance of the material by Envirocare. Envirocare will not unload/dispose of a shipment until such discrepancies have been resolved. Resolution must be accomplished either through a generator visit to the disposal site, or through written documentation which reflects necessary changes in the manifest.
- e. If there are any problems with the integrity of an incoming shipment, the problems will be immediately reported to the shipper. The Corporate RSO will also provide immediate notification to the regional office of the NRC and the Utah Division of Radiation Control .
- f. If a shipment arrives on site that is unacceptable under the conditions of the license, Envirocare will notify the generator and the regional office of the NRC by phone within 24 hours and by letter within one week.

7. Waste Inspection and Sampling (completed by a qualified Sample Control Officer).

- a. Prepare to safely inspect and sample the waste. Follow Precautions and Limitations 1, 4 and 5 above, prior to inspection of the 11e.(2) waste.
- b. Open and visually inspect the contents of the containers of waste to be sampled, to determine if the waste has any free-standing liquids. Any container having free-standing liquid or which fails a Paint Filter Liquid Test will not be accepted by Envirocare for storage or disposal. For problems with free liquids, the Laboratory Supervisor (or designated alternate) will inform the Site Manager, the Quality Assurance Officer, and Envirocare's Business Development. A Customer Service representative will then notify the generator for resolution. The Laboratory Supervisor (or designated alternate) or the Site Manager shall also notify the Utah DRC and the regional office of the NRC. Ensure that the manifest accurately matches the waste on the shipment as far as the number of containers and the kind of waste observed during the forthcoming waste inspection.

For closed containers, during the initial waste inspection, the inspectors must monitor each container with the sniffer after it is opened. The monitoring must be done at the plane of opening of the container (i.e. where the lid sits or where the bag opens). If an equivalent value of 10 ppm benzene is encountered, organic cartridges must be worn with the respirators. If organic cartridges are worn during sampling or inspection, monitoring with the sniffer is not required.

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- c. Sample the waste according to OP Manual procedure BPW-3 "11e.(2) Incoming Waste Sampling and Analysis".
8. Sample Analysis (completed by a qualified lab analyst)
- a. Where off-site analysis is required, the samples must be sent to the laboratory within five working days of the shipment's arrival at the Clive Site.
 - b. If the established sampling procedures are not followed, the Laboratory Supervisor or Site Manager must sign the laboratory log book and the alternative sampling technique which was used must be described.
 - c. Analyze the samples (if applicable) in accordance with OP Manual procedure BPW-3. Ensure that the results are within the established tolerances.
9. Acceptance/Rejection of the Shipment (completed by a qualified ARCS).
- a. The Lab Analyst notifies the ARCS Coordinator or Site Manager that the shipment is ready for acceptance and management.
 - b. When the waste has been evaluated as outlined above and the EC-18 has been completed and signed to document that the waste is acceptable and that any discrepancies have been resolved or addressed, the shipment must then be made ready for movement (i.e. closing the containers, shutting the van-body doors, connecting to a locomotive, etc.).
 - c. The shipment proceeds as directed to the correct waste management area of the facility. Truck transports should be escorted to the management area.
 - d. Note any discrepancies observed during the acceptance procedure on form EC-18 and on the manifest. The ARCS Coordinator signs the RSR.
 - e. Give the yellow copy of the signed manifest to the transporter.
 - f. The Clive Administrative Assistant sends (mails) a photocopy of the signed manifest to the generator. The generator's copy of the manifests must be sent to the generator within 7 days of the date of arrival at the Clive Site.
 - g. The Administrative Assistant sends (mails) the pink copy of the signed manifest to the Corporate Controller's office for billing purposes. The pink copy is then returned to the generator with the invoice.

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- h. Place the white copy of the signed manifest in the operating record.
- i. If the shipment is rejected, document the rejection on a Problem Report (EC-2700), and inform Envirocare Business Development who will immediately notify the regional office of the NRC, the Utah Division of Radiation Control, and the generator for resolution.
- j. If a shipment is found to be in violation of DOT shipping regulations, but is otherwise acceptable it will not be accepted until:
 - 1) the generator or generator's agent has made necessary corrections to bring the shipment into compliance with DOT regulations; or,
 - 2) the Nuclear Regulatory Commission has approved acceptance of the shipment, as is.

Pending such corrective action, the shipment will remain on Envirocare property in order to eliminate the potential risk associated with transporting the waste, but will **not** be admitted to the Restricted Area.

However, if such a shipment is in violation of DOT regulations due to leakage of radioactive materials, it will be placed over an approved (contained) surface in the Restricted Area until the situation is resolved to prevent contamination of the environment.

F. QUALITY CONTROL:

- 1. QC Process Control Checks:
 - a. Prior to using the instruments for radiological surveys, ensure that they are in current calibration and the daily constancy check has been performed.
- 2. Sample Control: Samples are taken directly to Sample Control for distribution to the appropriate lab(s) for analysis. Ensure that Chain of Custody Procedures are followed.
- 3. Data Control:
 - a. Records of shipments accepted are entered in the "Incoming Shipment Book" with the assigned Bates Numbers.
 - b. For truck deliveries, yellow copies of the signed RSR's are returned to the driver.

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- c. The white copy of the signed RSR with the attached acceptance forms is delivered to the Administrative Assistant for entry into the computer data base and filing. Pink and green copies are sent to the Corporate Office each day where the pink copy is returned to the generator for billing and the green copy is filed.
 - d. Records are maintained in accordance with reference 9, procedure ADMIN-3.
4. Audit Requirements
- a. Quarterly, the QA Department will observe the performance of this procedure to ensure compliance, and proper documentation and records control.
 - b. Semiannually, the QA Department will coordinate a comprehensive review of the filed shipment records and supporting documentation to ensure a complete record exists.