RIVER BEND STATION
APPROVAL SHEET
STATION OPERATING PROCEDURES

NO. RWS- 0207 TITLE RADWASTE SHIPPING CRITERIA

SAFETY RELATED YES [X] NO [ ]

TECHNICAL REVIEW REQUIRED YES [~~X~~] NO [X]

REV. NO.	PAGES ISSUED	INDEP. REVIEW SIGNATURE/DATE	TECH. REVIEW SIGNATURE/DATE	APPROVED BY SIGNATURE/DATE	EFFECT DATE
0	[illegible] 19 [illegible] S	Ralph [illegible] 12/[illegible]/84	[illegible] 12/18/84	SKRadebaugh for PFRESHILL 12-27-84	01/02/85
1	1 Thru 18	[illegible] 4/[illegible]/85	[illegible] 5/11/85	[illegible] 5-13-85	05-18-85
2	1 Thru 20	[illegible] 3/13/87		Philip [illegible] 3/14/87	03/16/87

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1.0 PURPOSE/SCOPE/APPLICABILITY

1.1 This procedure establishes the Radioactive Material Shipping Criteria for River Bend Station. This criteria provides management approved procedures, which ensure compliance with the regulations governing the packaging and shipment of radioactive material.

1.2 Materials that do not meet the definition of radioactive material but are present and in quantities and concentrations equal to or less than the defined "EXEMPT" quantity will not be shipped by radioactive material shipping procedures. Other GSU shipping procedures apply.

1.3 It is the intent of River Bend Station to provide the information necessary in the event of a shipping accident or incident. The shipping packet shall provide complete and accurate information concerning the radioactive material and details of the shipment to emergency response personnel.

2.0 REFERENCES

2.1 Title 10, Code of Federal Regulations, Part 20

2.2 Title 10, Code of Federal Regulations, Part 61

2.3 Title 10, Code of Federal Regulations, Part 71

2.4 Title 49, Code of Federal Regulations, Parts 100-199

2.5 USNRC, Special Nuclear Materials License 12-13536-01 issued to Chem-Nuclear Systems, Inc.

2.6 USNRC, Special Nuclear Materials License 16-19204-01, issued to U.S. Ecology, Inc.

2.7 State of South Carolina, Radioactive Materials License 097, issued to Chem-Nuclear Systems, Inc.

2.8 State of Washington, Radioactive Materials License WN-1019-2, issued to U.S. Ecology, Inc.

2.9 Chem-Nuclear Systems, Inc., Barnwell Site Disposal Criteria

2.10 RSP-0200, Radiation Work Permits

2.11 RSP-0009, ALARA Program Implementation

2.12 RPP-0006, Radiological Surveys

2.13 RBNP-024 Radiation Protection Plan

2.14 RPP-0005, Posting of Radiologically Controlled Areas

2.15 RWS-0211, General Performance Control for Radwaste

2.16 RSP-0205, Receipt of Radioactive Material

2.17 RWS-0327, Shipping of Low Specific Activity (LSA), Radioactive Material

2.18 RWS-0324, Shipping Special Form Radioactive Material

2.19 RWS-0325, Shipping $\leq A_2$ Quantities of Radioactive Material

2.20 RWS-0326, Shipping $> A_2$ Quantities of Radioactive Material

2.21 RWS-0330, Shipping Limited Quantities of Radioactive Material

2.22 RWS-0204 Process Control Program

2.23 RWS-0314, Volume Allocation and Prior Notification

2.24 RWS-0328, Shipping Radioactive Instruments and Articles

2.25 RWS-0329, Shipping Empty Radioactive Containers

2.26 ADM-0006, Control of Plant Records

2.27 RWS-0209, Operation of Radwaste Vendor Solidification System/Mobile Equipment

2.28 I&E Notices and Bulletins Commitment File

2.29 I&E Information Notice No. 84-72

2.30 I&E Information Notice No. 80-32 & 80-32 Rev. 1

2.31 Title 10 Code of Federal Regulations Part 30

2.32 RWS-0206, Radwaste Scaling Factor Program

2.33 Low Level Radioactive Waste Policy Act of 1985, Public Law 99-240

2.34 Tracking Commitment Number 03247

3.0 DEFINITIONS

3.1 A_1 - means the maximum activity of special form radioactive material permitted in a Type A package.

3.2 A_2 - means the maximum activity of radioactive material, other than special form material or LSA Radioactive Material, permitted in a Type A package.

3.3 Approved Container - A container approved by the USNRC or built to specifications prescribed by the USDOT.

3.4 Carrier - An individual or organization engaged in the transportation of property and materials.

3.5 Closed Transport Vehicle - A vehicle equipped with a securely attached exterior enclosure that, during normal transportation, restricts the access of unauthorized persons to the cargo space containing the radioactive material. The enclosure may be either temporary or permanent, and in the case of packaged materials may be of the "see-through" type, and must limit access from the top, sides, ends and bottom.

3.6 Consignee - The individual or organization receiving the shipment.

3.7 Consignor - The individual or organization presenting material for shipment.

3.8 Containment System - The components of the packaging intended to retain the radioactive contents during transportation.

3.9 Exclusive Use - The sole use of a transport vehicle by a single consignor and for which all initial, intermediate and final loading and unloading are carried out in accordance with the direction of the consignor or consignee.

3.10 Exempt Concentration - Material containing activity in concentrations equal to or less than the limit specified in Schedule A of Reference 2.31.

3.11 Exempt Quantity - Material containing activity in quantities equal to or less than the limit specified in Schedule B of Reference 2.31.

3.12 Fissile Material - Any material consisting of, or containing one or more fissile radionuclides. Fissile radionuclides are PU-238, PU-239, PU-241, U-233, and U-235. A procedure will be developed when the need arises for shipping fissile material.

3.13 Highway Route Controlled Quantity - A quantity within a single package which exceeds: 3000 times the A_1 value of the radionuclides, For Special Form Radioactive Material. 3000 times the A_2 value of the radionuclide for Normal Form Radioactive Material; or 30,000 Ci, whichever is less. A procedure will be developed when the need arises For Shipping Highway Route Controlled Quantity.

3.14 Limited Quantity - A quantity of radioactive material not exceeding the limits prescribed in Reference 2.4, Part 173.403m.

3.15 Low Specific Activity (LSA) - Material in which the radioactivity is essentially uniformly distributed, and in which the estimated average concentration per gram of contents does not exceed the limits prescribed in Reference 2.4, Part 173.403n.

3.16 Normal Form - Radioactive material which has not been demonstrated to qualify as special form.

3.17 N.O.S. - Not otherwise specified.

3.18 Package - The packaging together with its radioactive contents as presented for transport.

3.19 Packaging - The assembly of components necessary to ensure compliance with packaging requirements. It may consist of one or more receptacles, absorbent materials, spacing structures, thermal insulation, radiation shielding, and devices for cooling or absorbing mechanical shocks.

3.20 Radioactive Contents - The radioactive material, together with any contaminated liquids or gases, within the package.

3.21 Radioactive Material - For purposes of transportation, material having a specific activity greater than 0.002 microcuries per gram.

3.22 Special Form - Radioactive material which meets the requirements specified in Reference 2.18.

3.23 Specific Activity - The radioactivity per unit of mass of an individual radionuclide, in material in which the activity is essentially, uniformly distributed.

3.24 Strong Tight Container/Package - A container/package which will prevent leakage of radioactive materials under conditions normally incident to transportation.

3.25 Transport Index - A dimensionless number placed on the label of a package to designate the degree of control to be exercised by the carrier during transportation.

3.26 Type A Package - A packaging together with its radioactive contents, the quantity of which may not exceed the A_1 and A_2 values listed in Reference 2.17, Enclosure 1.

3.27 Type B Package - A packaging together with its radioactive contents, the quantity of which exceeds the A_1 and A_2 values listed in Reference 2.17, Enclosure 1.

3.28 Type A Packaging - A packaging designed to retain the integrity of containment and shielding, under normal conditions of transport, as prescribed in Reference 2.3.

3.29 Type B Packaging - A packaging designed to retain the integrity, of containment and shielding, under normal conditions of transport and hypothetical accident conditions, as prescribed in Reference 2.3.

3.30 Shipping Document File Package - A package of shipping documents required to ship radioactive material. Those specific documents are determined by the license of the organization receiving the material and the Department of Transportation.

3.31 UN Number - International Identification Number used for shipping of hazardous materials on public highways.

3.32 IAW - In accordance with

3.33 USDOT - United States Department of Transportation

3.34 USNRC - United States Nuclear Regulatory Commission

3.35 Hydrogen Buildup - Hydrogen buildup in containers will be addressed by the container's certificate of compliance. Containers may require venting within 10 days prior to shipment or inerting with noncombustable gas. Ref. 2.34

3.36 Pyrophoric - A spontaneously combustible substance classified by 49CFR172.102 as: liquid, UN2845; metals, UN1383 and solids, UN 2846 and packaged in accordance with 49CFR 173.418.

3.37 Oxidants - A substance that yields oxygen readily to stimulate the combustion of organic matter. Oxidants will be handled in accordance with 49CFR173.150-154.

3.38 Scaling factor - A multiplication factor that when applied to the known concentration of a radionuclide, would yeild the concentration of a difficult to measure radionuclide known to be in a ratio with the original radionuclide.

4.0 RESPONSIBILITIES

4.1 The Radwaste Supervisor shall be responsible for:

4.1.1 Ensuring that Radwaste activities comply with the requirements of the USDOT and the operating license as issued and amended by the USNRC, the Plant Technical Specifications, the Final Safety Analysis Report and the established policies, programs, and procedures of the Radwaste Section at River Bend Station.

4.1.2 Implementing the River Bend Station, Radioactive Material Shipping Procedures.

4.1.3 Implementing General Performance Control for Radwaste and approving the Radwaste Personnel Training Program.

4.1.4 Ensuring processed Radwaste material is acceptable for shipment and disposal.

4.1.5 Reviewing all shipment packages prior to transmitter to Permanent Plant Files.

4.2 The Radwaste Specialist shall be responsible for:

4.2.1 Ensuring radioactive material is packaged, handled, stored, and shipped in accordance with applicable regulations.

4.2.2 Scheduling transport vehicles and equipment

4.2.3 Obtaining allotted burial volume, when required by disposal sites.

4.2.4 Ensuring that the scaling factors are applied when calculating the waste classification and curie content of all shipments for burial in accordance with Reference 2.31.

4.3 Radwaste Qualified Radiation Protection Technicians shall be responsible for ensuring that radioactive material is surveyed, labeled, and shipped in accordance with applicable procedures.

4.4 All personnel shall be aware of their responsibilities toward ALARA in accordance with Reference 2.11.

5.0 PROCEDURE CONTENT

5.1 Unity Equation

5.1.1 Throughout this procedure it will be necessary to determine if a combination of values, when taken as a whole, exceed a corresponding combination of varying limits. The unity equation provides a means to make this determination.

1. Example: A material contains three radionuclides ,2 curies of CO-60, 5 curies of CS-137 and .01 curie of SR-90. Reference 2.4, Article 173.435 places a limit on the maximum amount of each of these radionuclides that may be contained in a single package. The limits are 7 curies of CO-60, 10 curies of CS-137 and 0.4 curies of SR-90 for normal form material. This does not allow the package to contain this amount of activity, the package may contain only fractions of each limiting value which, when added together do not exceed unity. This is expressed by the unity equation as follows:

$$\frac{\text{Value A}}{\text{Limit A}} + \frac{\text{Value B}}{\text{Limit B}} + \frac{\text{Value C}}{\text{Limit C}} = \leq 1$$

2. Using the radionuclides of this example, the equation becomes:

$$\frac{\text{CO-60 Present}}{\text{CO-60 Limit}} + \frac{\text{CS-137 Present}}{\text{CS-137 Limit}} + \frac{\text{SR-90 Present}}{\text{SR-90 Limit}} = \leq 1$$

3. Inserting the numerical values, the equation becomes:

$$\frac{2}{7} + \frac{5}{10} + \frac{.01}{.4} = < 1 \text{ or } .29 + .5 + .025 = \leq 1$$

4. Completing the equation:

$$.81 = < 1$$

5.1.2 If the resulting value is equal to or less than one, the combined activity of the three radionuclides does not exceed the package limit. In this case, more restrictive classification would not be required. If the resulting value exceeds one, the combination of radionuclides is unacceptable as the type material for which the limit was used.

5.2 Classify Radioactive Material for transport as follows:

5.2.1 Radioactive Material, Limited Quantity, N.O.S., UN 2910 (Package and ship in accordance with Reference 2.21.)

1. Total activity $\leq .001A_2$ (see Step 5.1 for multiple isotopes) for isotopes other than tritium and liquids and;

2. $\leq$ 0.5 mR/hr on contact with the package surface

3. $\leq$ 1000 dpm/100 cm^2 Beta-Gamma and $\leq$ 20 dpm/100 cm^2 Alpha loose surface contamination on the package surface.

5.2.2 Radioactive Material, Low Specific Activity, N.O.S., UN 2912 (Package and ship IAW Reference 2.17)

1. Uniform distribution of activity throughout the material and;

2. Specific activity as follows (see Step 5.1 for multiple isotopes)

(1) $\leq$ 0.0001 mCi/gm for $A_2 \leq .05$ Ci or;

(2) $\leq$ 0.005 mCi/gm for $A_2 > .05$ Ci but $\leq$ 1.0 Ci or;

(3) $\leq$ 0.3 mCi/gm for A_2 > 1.0 Ci

3. As defined in accordance with Reference 2.4.

5.2.3 Radioactive Material Special Form NOS UN 2974 Package and Ship IAW Reference 2.18

1. Total activity > A_1 (see Step 5.1 for multiple isotopes) and;

2. Meets the definition of Special Form Radioactive Material

5.2.4 Radioactive Material, Instruments and Articles, UN 2911 (Package and ship IAW Reference 2.24)

1. Manufactured devices having radioactive material as a component part and;

2. Activity (each article or instrument) < the limit of the unit equation and;

3. $\leq$ 10 mR/hr at 10cm from the instrument/article surface and;

4. Maximum dose rate on contact with surface of package shall not exceed .5 mR/hr unless transported via exclusive use vehicle, in which the limit is 2 mR/hr.

5. Activity (package total) < the limit of the unit equation

6. Contamination in accordance with Step 5.2.1(3).

5.2.5 Radioactive Material, Fissile, N.O.S., UN 2918 (See Definition 3.12)

5.2.6 Radioactive Material, Empty Packages, UN 2906 (Package and Ship IAW Reference 2.25)

1. Package in unimpaired condition and securely closed

2. $\leq$ 0.5 mR/hr on the package surface and;

3. $\leq$ 2.2E+05 dpm/100cm^2 B - γ and $\leq$ 2.2E+04 dpm/100 cm^2 Alpha, internal loose surface contamination.

4. $\leq$ 1000 dpm/100 cm^2 B - γ and $\leq$ 20 dpm/100 cm^2 Alpha, external loose surface contamination.

5.2.7 Radioactive Material, N.O.S., UN.2982

1. $\leq A_2$ quantity (Package and Ship IAW Reference 2.19)

   (1) Total activity > 0.002 mCi/gm and;

   (2) Not classified in Steps 5.2.1 through 5.2.6

2. $> A_1$ or A_2 quantity (Package and Ship IAW Reference 2.20)

   (1) Total activity; $\leq$ 3000 time A_1 or A_2, or $\leq$ 30,000 Ci, whichever is less

   (2) Not classified in Steps 5.2.1 through 5.2.6

3. Highway Controlled Quantity (See Definition 3.13 of this procedure)

5.3 Classify Radioactive Material for disposal as follows (Document IAW Reference 2.17):

5.3.1 Class A Radwaste

1. Radionuclide concentrations $\leq$ the values in Table 1, Col. 1 or;

2. Radionuclide concentrations $\leq$ the value in Table 2, Col. 1

5.3.2 Class B Radwaste

1. Radionuclide concentration > the values in Table 2, Col. 1 but $\leq$ the values in Table 2, Col. 2

5.3.3 Class C Radwaste

1. Radionuclide concentrations > the values in Table 1, Col. 1 but $\leq$ the values in Table 1, Col.2.

2. Radionuclide concentrations > the values in Table 2, Col. 2 but $\leq$ the values in Table 2, Col. 3.

5.3.4 Material not acceptable for disposal.

1. Radionuclide concentration > the values in Table 1, Col. 2.

2. Radionuclide concentration > the values in Table 2, Col. 3.

NOTE

Any material not on Table 1 or Table 2 is Class A Radwaste.

NOTE

Use the most restrictive Classification for multiple-isotope material

The classification of Radwaste material is determined by using the values listed in the following tables:

Table 1 - Long Lived Radionuclides

Radionuclide	Concentration uCi/cc Column 1	Column 2
C-14	0.8	8
C-14 in activated metal	8	80
Ni-50 in activated metal	22	220
Nb-94 in activated metal	0.02	0.2
To-99	0.3	3
I-129	0.008	0.08
Alpha Emitting Transuranics	Concentration of nCi/gm	
with t 1/2 > 5 years	10	100
Pu-241	350	3500
Cm-242	2,000	20,000
**Ra-226	$\leq$ 10	* * *
**Transuranics	$\leq$ 10	* * *

Table 2- Short Lived Radionuclides

Radionuclide	Concentration uCi/cc Column 1	Column 2	Column 3
Total of all radionuclides			
With t 1/2 < 5 years	700	*	*
H-3	40	*	*
Co-60	700	*	*
Ni-63	3.5	70	700
Ni-63 in activated metal	35	700	7,000
Sr-90	0.04	150	7,000
Cs-137	1	44	4,600

*There are no Class B or C limits established for these radionuclides. Other considerations, such as external radiation levels and internal heat generation, are limiting factors in the packaging of material containing these radionuclides. If concentrations of these radionuclides exceed the Class A limitations, the material will be assigned to Class B unless other radionuclides are present in concentrations which would make the waste Class C.

**Specific requirement of US Ecology, State of Washington Radioactive
***Specific Approval required Material License only.

5.3.5 Determination of Waste Classification

NOTE:

A radionuclide shall be determined to be significant for the purposes of classification if it is contained in the waste in concentration greater than 0.01 times the concentration of that nuclide listed in Table 1, Column 2 or 0.01 times, the smallest concentration of that nuclide listed in Table 2. This does not include isotopes in Table 2 with $T_{\frac{1}{2}}$ less than 5 years. An isotope with $T_{\frac{1}{2}}$ less than 5 years (other than Cm-242) is considered significant for purposes of classification if it is contained in concentrations greater than $7\mu Ci/cm^3$.

1. Material containing only those radionuclides listed in Table 1.

   (1) If the concentration of a radionuclide present in the material does not exceed the value in Table 1, Column 1, the waste is Class A.

   (2) If the concentration of a radionuclide present in the material exceeds the value listed in Table 1, Column 1, but does not exceed the value listed in Table 1, Column 2, the waste is Class C.

   (3) If the concentration of a radionuclide present in the material exceeds the value listed in Table 1, Column 2, the material is generally not acceptance for disposal.

(4) If more than one radionuclide listed in Table 1 is present in the material, the unity equation must be used to determine the waste classification.

2. Material containing only those radionuclides listed in Table 2.

(1) If the concentration of a radionuclide present in the material does not exceed the value listed in Table 2, Column 1, the waste is Class A.

(2) If the concentration of a radionuclide present in the material exceeds the value listed in Table 2, Column 1, but does not exceed the value listed in Table 2, Column 2, the waste is Class B.

(3) If the concentration of a radionuclide present in the material exceeds the value listed in Table 2, Column , but does not exceed the value listed in Table 2, Column 3, the waste is Class C.

(4) If the concentration of a radionuclide present in the material exceeds the value listed in Table 2, Column 3, the material is generally not acceptable for disposal.

(5) If more than one radionuclide listed in Table 2 is present in the material, the unity equation must be used to determine the waste classification.

3. Material containing radionuclides listed in both Table 1 and Table 2.

The material is to be evaluated, using Table 1 or Table 2, with the most restrictive waste classification being assigned.

4. Material not containing any radionuclides listed in Table 1 or Table 2 is considered Class A waste.

5.3.6 Dependent upon the waste classification to which it is assigned, packaged Radwaste material must satisfy specific requirements relative to physical form, chemical form, liquid content and structural stability. The River Bend Station Radwaste Process Control Program Reference 2.22 addresses these requirements and provides instructions which ensure compliance with them.

5.3.7 Documentation of waste classification is provided for in Reference 2.17.

5.4 Decay correction of activity to shipment date.

5.4.1 When it is necessary to correct the activity to the actual date of shipment, the calculation shall be made by using the following equation.

$$A = A_o e^{-\lambda T}$$

where:

A = The activity in millicuries (mCi) on the date of shipment.

A_o = The activity in millicuries (mCi) on the date of analysis.

e = Base natural logarithm (2.718)

$\lambda = .693/T_{\frac{1}{2}}$

T = The elapsed time from analysis to shipment. T and $T_{\frac{1}{2}}$ must use the same units, i.e., day, hours, etc.

NOTE

Decay correct all shipments to the date of actual shipment.

5.5 Disposal Site Acceptance Criteria

5.5.1 All Radwaste material generated at River Bend Station will normally be disposed of at one of three licensed disposal sites Chem-Nuclear Systems, Inc. operates one site at Barnwell, South Carolina; the other sites are operated by US Ecology, Inc., at Richland, Washington and Beatty, Nevada.

5.5.2 The operators of each disposal site have established acceptance criteria for the receipt and disposal of Radwaste material. These acceptance criteria are based on the conditions of the site operating license and must be satisfied or the Radwaste material will not be accepted for disposal. These acceptance criteria are site specific and differ in some areas.

5.5.3 Specific measures to ensure compliance with these acceptance criteria are incorporated into the River Bend Station Radwaste Process Control Program and individual procedures directing the packaging and shipment of Radwaste material.

NOTE

All calculations used to classify radioactive material will be reviewed by the Radwaste Supervisor or designee prior to the shipment leaving River Bend Station.

5.6 Volume Allocation and Prior Notification

5.6.1 The State of South Carolina, as the licensing authority for Chem-Nuclear System, Inc.'s Barnwell Disposal Site (South Carolina is an agreement state), has placed restrictions on the volume of waste that may be buried there. Because of these restrictions, Chem-Nuclear Systems, Inc. has implemented a volume allocation plan.

5.6.2 This plan allots a set volume of disposal space to each Radwaste customer/generator. The Gulf States Utilities Company does not receive a monthly allocation, but must obtain disposal volume.

5.6.3 Shipments of Radwaste material to the Barnwell, South Carolina and Richland, Washington disposal site must be scheduled in advance. This advance scheduling is a requirement of the Prior Notification Plan, established by Reference 2.4.

5.6.4 Instructions for obtaining disposal volume and complying with the requirements of the Prior Notification Plan are provided in Reference 2.23.

5.7 Shipping Documents

5.7.1 Each shipment of radioactive material must be accompanied by a package of shipping documents. The required documentation is dependent upon the type of shipment and mode of transport.

5.7.2 Guidelines for determining the required shipping documents and instructions for completing them are provided in each individual shipping procedure.

5.8 Shielded Transport Equipment

5.8.1 Gulf States Utilities must be a registered user of any NRC approved casks planned for use. Apply to the USNRC to become a registered user of a NRC approved shipping cask when radiation levels exceed the limits acceptable for transportation.

NOTE

NRC approved shipping casks are licensed by the USNRC through issuance of a Certificate of Compliance. All conditions of the Certificate of Compliance must be met when shipping Radwaste material in a licensed cask. Ref. 2.34

5.8.2 Guidelines for selecting an appropriate cask are provided in Reference 2.17.

5.9 Shipping Containers

5.9.1 Package, store and ship Dry Active Waste in containers similar to the construction and design of sealed/painted 18 gauge DOT-17H 55 gallon drums or metal or wooden boxes.

5.9.2 Solidified waste shall be packaged, stored and shipped in DOT approved containers.

5.9.3 Packages within an exclusive use vehicle may have external loose surface contamination up to 22,000 dpm/100cm^2 Beta, Gamma or 2200 dpm/100cm^2 Alpha, during and at the end of transportation, provided that this contamination is present due to leaching of the package and contamination at the beginning of transportation does not exceed 2200 dpm/100cm^2 Beta, Gamma or 220 dpm/100cm^2 Alpha. Situations that would exceed this limit will be treated on a case by case basis.

5.10 Departure of Transport Vehicle

NOTE

Vehicles transporting radioactive material are subject to regulations prescribed by the U.S. Department of Transportation.

5.10.1 Reduce external dose rates and removable loose surface contamination levels to within prescribed River Bend limits and in compliance with Reference 2.12.

5.10.2 Check the physical and operational condition of the vehicle.

5.10.3 Specific guidelines for performing radiological surveys of transport vehicles are provided in the appropriate shipping procedure for the type of shipment being made.

5.10.4 Prior to departure, several pictures should be taken of the truck. These pictures should show placards, shoring, etc. Pictures will be retained in the Radwaste Photo Album.

5.10.5 The Radiation Protection Supervisor/designee shall review and approve all shipping packages prior to the release of shipment.

5.11 Radwaste Storage Areas

NOTE

The Radwaste onsite storage area will be utilized for storage of packaged Radwaste material, awaiting shipment to a licensed disposal site.

5.11.1 Record the location of all containers or packages stored in the area.

NOTE

1. Handling Radioactive Waste within the area shall normally be handled remotely or with a forklift vehicle.

2. Dry Active Waste should be stored separately from solidified waste.

5.11.2 The Radwaste On-Site Storage area shall not be used for storage of outage equipment or any material other than Radwaste.

5.12 Radioactive Material Shipment Log

5.12.1 Complete an entry in the Radioactive Material Shipment Log (Attachment 1), prior to the release of the shipment, with the appropriate information.

1. Page No. - The calendar year and sequential page , i.e., 83 - 1.

2. Shipment Number - A five digit number which includes the calendar year and the sequential shipment number, i.e., 83-001.

3. Shipment Date - The date the shipment departs Beaver Bend Station.

4. Allocation No. - For shipments to [illegible], South Carolina. The allocation number is obtained in accordance with Reference 2.23, Volume Allocation and Prior Notification.

5. Total Activity - The total activity of all packages included in the shipment.

6. Total Weight - The total weight (in pounds) of all packages in the shipment.

7. Total Volume - The total volume (in cubic feet) of all packages in the shipment.

8. No./Type Pkgs. - The number of and type of packages included in the shipment.

9. Type Transport - The type of vehicle transporting the shipment.

10. Carrier - The carrier transporting the shipment.

11. Arrival Date (Expected) - The date the shipment is expected to arrive at the destination.

12. Arrival Date (Actual) - Upon verification of the actual arrival date.

13. Contents - A brief description of the material.

14. Destination - The name and address of the organization receiving the shipment.

5.13 Records

5.13.1 Maintain all records concerned with the process and shipping of Radwaste material in accordance with Reference 2.26.

5.14 Disposal of Scintillation Waste

Due to regulatory restriction concerning the disposal of organic material Scintillation liquids should be evaporated by the generator. The residue and empty, dry vials should be disposed of as Dry Active Waste.

6.0 ACCEPTANCE CRITERIA

N/A

"END"

ATTACHMENT - 1	EXAMPLE OF THE RADIOACTIVE MATERIAL SHIPMENT LOG

Page No. 1)

Shipment No.	2)	Shipment Date	3)
Allocation No.	4)	Total Activity	5)
Total Weight	6)	Total Volume	7)
No./Type Pkgs.	8)	Type Transport	9)
Carrier	10)	Arrival Date (Actual)	12)
Arrival Date (Expected)	11)		

Contents	13)
Destination	14)

Shipment No.		Shipment Date	
Allocation No.		Total Activity	
Total Weight		Total Volume	
No./Type Pkgs.		Type Transport	
Carrier		Arrival Date (Actual)	
Arrival Date (Expected)			

Contents	
Destination	

Shipment No.		Shipment Date	
Allocation No.		Total Activity	
Total Weight		Total Volume	
No./Type Pkgs.		Type Transport	
Carrier		Arrival Date (Actual)	
Arrival Date (Expected)			

Contents	
Destination	

Shipment No.		Shipment Date	
Allocation No.		Total Activity	
Total Weight		Total Volume	
No./Type Pkgs.		Type Transport	
Carrier		Arrival Date (Actual)	
Arrival Date (Expected)			

Contents	
Denstination	