

REQUIRED READING SYNOPSIS

Complete this form and submit with procedure revisions when Required Reading is selected as the level of training on the WCH-DC-002 form.

Procedure No.: WMT-1-2.2	Rev No.: 26	Author: M. E. Lewis	Date: 4/30/2012
Procedure Title: Classifying, Packaging, and Communication of Hazardous Materials for Transportation			
<p>I. Summary of Changes:</p> <p>This revision changes the Prepared By to M. E. Lewis, revises WCH-EE-307 "Pre-Shipment Checklist" and associated instructions, inserts a CAUTION statement clarifying no regulated shipments are allowed to be shipped in Truck & pups and Super Dumps,</p>			
<p>II. Primary Steps Affected:</p> <ol style="list-style-type: none"> 1. Prepared By is now M. E. Lewis 2. Inserted CAUTION statement in Section 6.3.2: "Under no circumstances are waste shipments originating from regulated areas allowed to be shipped in Super Dumps or Truck and Pups." 3. Attachment 4 Instructions and form WCH-EE-307 were revised to delete the signature field and insert a disclaimer stating the information contained therein was provided by individuals performing direct observation of the waste loading and who performed the radiological surveys. 			
<p>III. Rationale for Changes:</p> <p>This procedure revision provides clarity regarding the completion of WCH-EE-307 and also revises Section 6.3.2 to address IF-2012-0084.</p>			

WMT-1, Waste Management and Transportation

Classifying, Packaging and Communication of Hazardous Materials for Transportation

Prepared By: M. E. Lewis

1.0 PURPOSE

This procedure identifies the requirements for classifying, packaging, and communication of hazardous materials for transportation and provides instructions for completion (filling out) of the Onsite Waste Tracking Form (OWTF).

2.0 SCOPE

This procedure applies to the transportation of hazardous materials by Washington Closure Hanford (WCH) and WCH sub-contractors.

This procedure requires the user to be trained in the applicable requirements of 49 *Code of Federal Regulations* (CFR) and applicable requirements of the *Hanford Sitewide Transportation Safety Document* DOE/RL-2001-36 (TSD); therefore, the user is generally directed to refer directly to applicable regulatory citations.

This procedure does invoke basic U.S. Department of Transportation (DOT) requirements for any WCH hazardous and non-hazardous material shipment regardless of the shipping document utilized; however, it does not provide specific instruction for completion of Uniform Hazardous Waste Manifests (UHWM), Hazardous Material Shipment Records (HMSR), Radioactive Shipping Records (RSR), or Mission Support Alliance Effluent Treatment Facility (MSA ETF) shipments. If direction is required for the completion of any of these documents, contact the Transportation and Packaging Task Lead (T&P TL).

3.0 DEFINITIONS

See WMT-1, *Waste Management and Transportation*, WMT-1-APA, "Glossary of Terms."

4.0 RESPONSIBILITIES

Authorized Shippers

- Ensures hazardous materials shipped by WCH are properly classified, described, packaged, marked, and labeled and are in the proper condition for transportation according to the applicable regulations of the DOT, DOE orders, and WCH procedures.

Information & Administrative Services (I&AS)

- Provides records management services for the transportation program.

Nuclear Safety

- Reviews and approves fissile material shipment checklists.

**Other Hanford Contractors
(OHC) Waste Generators**

- Ensures hazardous materials shipped are properly classified, described, packaged, marked, and labeled and are in the proper condition for transportation according to the applicable regulations of the DOT, DOE orders, WCH procedures, and internal procedures/instructions.
- Utilizes the OWTF for waste shipments to the Environmental Restoration Disposal Facility (ERDF).
- Requests an OWTF approval number from Waste Services (WS).

**Transportation and
Packaging Task Lead**

- Acts as the WCH Task Lead with respect to transportation and packaging issues.
- Invokes shipment checklists.
- Approves shipment checklist waiver requests.
- Reviews shipment checklists.
- Approves shipment checklists for fissile or Type B shipments.
- Maintains and approves the authorized shippers list.
- Provides documentation to I&AS.
- Maintains and implements the unreviewed safety question for the transportation program.

WCH Project Director

- Ensures adherence to the requirements of the WCH transportation program.

**Waste Information Tracking
Specialist (WITS)**

- Maintains completed OWTFs.
- Transfers archived OWTFs to I&AS for retention.
- Maintains package certification documents.

**Waste Services Lead or
Designee**

- Coordinates transportation and waste issues for the Project Manager.
- Maintains oversight of Project Waste Transportation Specialist (WTS).

**Waste Transportation
Specialists**

- Reviews survey plans or equivalent when using field instrumentation for transportation decisions.
- Invokes shipment checklists completion or reviews.
- Reviews and approves shipment checklists.
- Reviews field information survey plans or equivalent.
- Requests waivers to shipment checklists.
- Determines frequency of Low Specific Activity (LSA) evaluations.
- Reviews and approves profile and template inputs in Waste Management Information System (WMIS).
- Provides documentation to I&AS.
- Ensures hazardous materials shipped by WCH are properly classified, described, packaged, marked, and labeled and are in the proper condition for transportation according to the applicable regulations of the DOT, DOE orders, and WCH procedures.
- Prepares or coordinates all shipping documentation including the Pre-Shipment Checklist (WCH-EE-307), Pre-Shipment Checklist-Treatment Required (WCH-EE-318), and OWTF.
- Prepares the shipment checklist.
- Utilizes the OWTF as the shipping document for waste shipments to ERDF.
- Ensures or notifies ERDF of the transportation situations identified in Section 6.3 of this procedure.
- Reviews field information survey plans or equivalent when using field instrumentation for transportation decisions.
- Prepares Site-Specific Waste Management Instructions for approval per WMT-1-1.9, "Site-Specific Waste Management Instructions."
- Performs Low Specific Activity (LSA) and Surface Contaminated Object (SCO) calculations.

- Ensures valid information is used to classify material for shipment.
- Coordinates container contents validation.
- Provides documentation to I&AS.
- Ensures that Dose Equivalent-Curie (DE-Ci) is calculated and documented on the Shipment Checklist and the OWTF.

WS Manager

- Maintains and provides technical oversight of the WCH Transportation Program.
- Performs or ensures self-assessments of the Transportation Program processes and activities.
- Performs or ensures an annual assessment of transportation operations.
- Approves nonroutine hazardous material, waste, and sample packaging.
- Assigns and reviews shipment checklist, if required.
- Assigns qualified WTSs to Projects.
- Maintains auditable documentation of the inspection, maintenance, and certification that demonstrates the package is ready for use.
- Ensures utilization of shipment checklists.
- Plans waste management aspects of project work scope.
- Manages functional training activities to ensure that personnel assigned to tasks relating to the transportation program possess adequate training to perform assigned tasks.
- Authorizes, in writing, a Project's justification for not using WCH-EE-307 or WCH-EE-318.

Waste Operations Director

- Ensures operations personnel fill out disposal information on the OWTF.
- Ensures that containers brought into and out of the ERDF are surveyed, marked, labeled, and inspected as required by this procedure.

5.0 PREREQUISITES/LIMITATIONS/CAUTIONS

All persons who classify hazardous materials for onsite transportation shall be trained in accordance with a WCH approved training course developed for compliance with 49 CFR 172.704 in accordance with WMT-1, *Waste Management and Transportation*, WMT-1-1.11, "Transportation, Packaging, and Waste Designation Training."

This procedure includes use of clean Roll-on/Roll-off containers in any color other than the current standard/orange.

WCH does not ship or transport the following materials and does not have a Hazardous Material Safety Permit (49 CFR 385.403). If any of the following materials are to be shipped, a Hazardous Material Permit and a Transportation Security Plan would be required prior to performing that task.

- Highway route-controlled quantities of Class 7 (radioactive) material;
- More than 25 kg (55 pounds) of a Division 1.1, 1.2, or 1.3 (explosive) material or an amount of a Division 1.5 (explosive) material requiring placarding under part 49 CFR 172;
- More than 1 liter (1.08 quarts) per package of a "material poisonous by inhalation," as defined in 49 CFR 171.8, that meets the criteria for "hazard zone A," as specified in 49 CFR 173.133(a);
- A "material poisonous by inhalation," as defined in 49 CFR 171.8, that meets the criteria for "hazard zone B," as specified in 49 CFR 173.133(a) in a bulk packaging (capacity greater than 450 L [119 gallons]);
- A "material poisonous by inhalation," as defined in 49 CFR 171.8, that meets the criteria for "hazard zone C," or "hazard zone D," as specified in 49 CFR 173.116(a), in a packaging having a capacity equal to or greater than 13,248 L (3,500 gallons); or
- A shipment of compressed or refrigerated liquefied methane or liquefied natural gas, or other liquefied gas with a methane content of at least 85 percent, in a bulk packaging having a capacity equal to or greater than 13,248 L (3,500 gallons).

Each person who offers for transportation in commerce or transports in commerce one or more of the following hazardous materials must develop and adhere to a transportation security plan for hazardous materials that conforms to the requirements of this subpart. As used in this section, "large bulk quantity" refers to a quantity greater than 3,000 kg (6,614 pounds) for solids or 3,000 liters (792 gallons) for liquids and gases in a single packaging such as a cargo tank motor vehicle, portable tank, tank car, or other bulk container:

- (1) Any quantity of a Division 1.1, 1.2, or 1.3 materials;
- (2) A quantity of a Division 1.4, 1.5, or 1.6 materials requiring placarding in accordance with subpart F of this part;
- (3) A large bulk quantity of Division 2.1 material;
- (4) A large bulk quantity of Division 2.2 material with a subsidiary hazard of 5.1;
- (5) Any quantity of a material poisonous by inhalation, as defined in Sec. 171.8 of this subchapter;

- (6) A large bulk quantity of a Class 3 material meeting the criteria for Packing Group I or II;
- (7) A quantity of desensitized explosives meeting the definition of Division 4.1 or Class 3 material requiring placarding in accordance with subpart F of this part;
- (8) A large bulk quantity of a Division 4.2 material meeting the criteria for Packing Group I or II;
- (9) A quantity of a Division 4.3 material requiring placarding in accordance with subpart F of this part;
- (10) A large bulk quantity of a Division 5.1 material in Packing Groups I and II; perchlorates; or ammonium nitrate, ammonium nitrate fertilizers, or ammonium nitrate emulsions, suspensions, or gels;
- (11) Any quantity of organic peroxide, Type B, liquid or solid, temperature controlled;
- (12) A large bulk quantity of Division 6.1 material (for a material poisonous by inhalation see paragraph (5) above);
- (13) A select agent or toxin regulated by the Centers for Disease Control and Prevention under 42 CFR part 73 or the United States Department of Agriculture under 9 CFR part 121;
- (14) A quantity of uranium hexafluoride requiring placarding under Sec. 172.505(b);
- (15) International Atomic Energy Agency (IAEA) Code of Conduct Category 1 and 2 materials including Highway Route Controlled quantities as defined in 49 CFR 173.403 or known as radionuclides in forms listed as RAM-QC by the Nuclear Regulatory Commission;
- (16) A large bulk quantity of Class 8 material meeting the criteria for Packing Group I.

6.0 PROCEDURE

6.1 Identification of Hazardous Materials

Prior to transportation the WTS shall classify materials in accordance with 49 CFR. The classifications shall be documented with I&AS.

Classification shall consider hazard class or division, reportable quantities, packing group, precedence of hazard, and proper shipping name selection.

Radiological classifications shall be documented in either a project calculation or through the use of RadCalc.

NOTE: The WTS calculation of LSA/SCO material is acceptable for documentation (in the Universal Content Manager [UCM]) of the formal evaluation in the following paragraph and is not required to be documented on the OWTF.

Materials classified as either LSA I, II, III, or Surface Contaminated Object (SCO) I, II require a formal evaluation of the material to ensure that it is qualified as either LSA or SCO. This formal evaluation will be performed by the WTS with project engineering assistance as necessary, at a frequency determined by the Waste Services Lead (WSL), in accordance with the methodology in U.S. Nuclear Regulatory Commission NUREG-1608, "Categorizing and Transporting Low Specific Activity Materials and Surface Contaminated Objects. The formal evaluation will be available at the project via applicable reference number and referenced on applicable Shipment Checklist. The definition of LSA includes the term "distributed throughout." It is permissible to

apply qualitative techniques for LSA materials having radioactive quantities less than 1 A₂ and more quantitative techniques for quantities greater than 1 A₂. The NUREG provides additional determination guidance in Sections 3.3.1, 3.3.2, and 4.2.3.

When using field information (e.g., surveys) to make transportation decisions, the WTS or WSL will review the survey plan, or equivalent document, to ensure the following:

- The detection limit/background is appropriate for the decision being made (e.g., the detection limit is lower than the regulatory limit)
- The action levels are appropriately identified
- The method of review by the WTS is identified (e.g., the Radiological Control Technician [RCT] will verbally communicate results to the WTS; the WTS will review a Radiological Survey Record)
- The above items are documented as radiological measurements in accordance with RC-200, *Radiological Control Field Procedures*.

When using field information as a check, or similar level of information, on decisions already made, the WTS will ensure that they understand the limitations of the measurements as they relate to the activity. This applies to both radioactive and nonradioactive shipments. Typical checks include Geiger-Muller detector scan rates, instrument background limitations, and calibration restrictions.

NOTE: Large equipment does not include “tools of the trade” (e.g., shovels, hand tools) and equipment that has not been in a contamination area is not to be regulated as radioactive material.

A documented external radiological survey (total contamination survey), when directed by the WTS, is required when releasing equipment and Roll-on/Roll-off containers that have been in a contamination area and/or in ERDF cells for transportation onsite or offsite. The release survey is to be equal to or less than DOT standards (49 CFR 173.443(a), Table 9). If it is not practical to show that an item is contaminated at or less than the DOT limits, it may be conservatively shipped as radioactive material per the DOT. Report the minimum detectable survey results if the technician reports the results as below the detectable limit as discussed above. Any marking, labeling, or placarding that may be required is for DOT purposes only and equipment would not be required to be placed in a Radiological Management Area unless the equipment is above Radiological Control limits.

Prior to the Project Services movement of DOT 49 CFR regulated materials from the warehouse to the material’s intended WCH delivery location, a qualified WTS will review the receipt documents to determine if any additional controls are needed for delivery. Should the materials be regulated by DOT 49 CFR, the WTS will provide the needed shipment paperwork to accompany the material delivery.

6.1.1 Shipment Checklist

The WSL shall require the authorized WTS to complete an appropriate shipment checklist (WCH-EE-287) (Attachment 3) for any of the following conditions:

- Any shipment greater than an A₂ quantity of radioactive material
- Any hazardous material shipment other than Class 7 or Class 9 (excluding Universal Waste/Recycle, material being excessed and non-regulated material)
- The first shipment of any hazardous materials shipping campaign (including Class 7 and 9)
- When shipping complex waste streams, as determined by the WS Manager, T&P TL, or WSL.

In addition to the above checklist requirements, the following situations require the WSL to determine if a complete checklist or a review of an existing checklist is warranted (checklist review will be documented on a training roster or equivalent form):

- When a WTS is new to a project and/or shipment process
- When there is a change to the waste stream or shipment process.

The WSL shall review, approve, sign, and date the completed checklist prior to the performance of the specific shipment. In the case of a fissile material shipment, a Nuclear Safety representative shall also approve the checklist. All source documentation used for radiological or chemical characterization shall either be attached to or referenced by the shipment checklist. The checklist will be initiated by the authorized WTS prior to the shipment.

The T&P TL may approve waivers to checklist requirements (e.g., a waste stream of non-class 7 or 9 materials requiring numerous shipments per day may have a checklist required for the first campaign shipment only). The WSL will request the waiver in writing (e-mail is acceptable), documenting the reasons why the waiver is appropriate. Waivers will be maintained as shipping documentation.

6.2 Packaging of Hazardous Material for Transportation

All hazardous materials transported by WCH will be packaged in accordance with the applicable requirements of the DOT as identified in 49 CFR or the Hanford Sitewide TSD.

6.2.1 U.S. Department of Transportation Compliant Packaging

In addition to DOT requirements, DOE O 460.1C requires that documentation be kept by the offeror of any industrial packagings and Type A packaging demonstrating that the package complies with the requirements of 49 CFR 173.410(b), 173.411(b)(6)(iii) or 173.415(a). The project procuring industrial packaging or Type A packaging is responsible for meeting this requirement.

Each packaging must maintain auditable documentation of the inspection, maintenance, and certification that demonstrates the package is ready for use. This is cradle-to-grave

documentation including purchase specifications, first use inspections, reuse/maintenance, and disposal. WS, the Project, and Waste Operations share these documentation tasks.

1. Waste Services:

- Establishes and maintains procurement specifications for new packaging
 - 49 CFR 173.410(b) requires that each lifting attachment that is a structural part of the package must be designed so that failure of any lifting attachment under excessive load would not impair the ability of the package to meet other requirements of this subpart.

NOTE: The intent of this requirement is to ensure that if an excessive load is applied to a lifting attachment that the attachment would fail rather than tearing a hole in the package which would cause a loss of containment and/or shielding.

- 49 CFR 173.411(b)(6)(iii) requires the (IP-2/IP-3) design to conform to the standards prescribed in the International Organization for Standardization document ISO 1496-1: "Series 1 Freight Containers- Specifications and Testing-Part1: General Cargo Containers.
 - 49 CFR 173.415(a) requires that complete documentation of tests and an engineering evaluation or comparative data showing that the construction methods, packaging design, and materials of construction comply with this specification.
- Ensures engineering evaluation of payload/contents with respect to packaging certification is performed and maintained
 - Informs project WTS of packaging certification and limitations
 - Maintains packaging records received from Projects
 - Maintains Waste Management Information System (WMIS) Container Maintenance Module
 - Ensures that testing documentation is available for packagings in use or are to be purchased. Certain specific load testing or engineering evaluations not in the Certificate of Conformance (CoC) that shows the packaging meeting the 49 CFR 173.410(a), 173.411(b)(6)(iii), and 173.415(a) requirements are to be obtained from the CoC officials prior to use.

2. Project (Other than ERDF Containers):

- Provides In-Use and Pre-Use packaging inspections using WCH-EE-325, Pre-Use Inspection Form (DOT/DOE packages)
- Documents packaging inspections
- Removes defective packaging from service
- Provides inspection records to the T&P TL.

3. Waste Operation (for ERDF Containers):

- Maintains the container maintenance and management program
- Inputs ERDF Container maintenance into WMIS
- Disposes of nonrepairable packaging.

6.2.2 Non-U.S. Department of Transportation Compliant Packaging

In the event that it is not possible to package in accordance with 49 CFR, hazardous materials packaging will be in accordance with the requirements of WMT-1-2.5, "Use of Non-U.S. Department of Transportation-Approved Packagings."

6.3 Communication of Hazards

Hazard Communication shall be in accordance with the requirements of 49 CFR and any other applicable regulations or requirements. This includes, but is not limited to marking, labeling, and placarding.

The OWTF has a check box to signify that multiple OWTFs may be used for a single shipment. This means that different wastes are present in either drums or in a Roll-on/Roll-off container. It means that more than one OWTF is present in the pouch. The wastes may require different handling at ERDF.

Site-specific Waste Management Instructions prepared in accordance with WMT-1-1.9, will identify specific marking, labeling, and placarding requirements (e.g., ERDF Roll-on/Roll-off containers for radioactive LSA-II shipped as exclusive use will be marked "Radioactive-LSA" and placarded radioactive).

Projects shall utilize WCH-EE-307, "Pre-shipment Checklist" or WCH-EE-318, "Pre-Shipment Checklist-Treatment Required" to aid in communicating the type of material in the shipment unless authorized in writing by the WS Manager.

NOTE: WCH-EE-318 will be generated with a "Treatment Required" water mark for those shipments marked with Special Handled Waste.

For shipments made for DOT Class 7 materials (goldenrod paper) and the Project uses WCH-EE-307, WCH-EE-318, WCH-EE-316 and WCH-EE-317 to document the container contents, WCH-EE-307, WCH-EE-318, WCH-EE-316 and WCH-EE-317 shall be goldenrod. If WCH-EE-307 and WCH-EE-318 are used, the WTS shall coordinate the use of WCH-EE-307, WCH-EE-318, WCH-EE-316 and WCH-EE-317 and transfers the required information onto the OWTF from WCH-EE-307, WCH-EE-316 and WCH-EE-317. The WCH-EE-307, WCH-EE-318, WCH-EE-316 and WCH-EE-317 may be sent to the WTS within the project but are to not be added to the pouch when the shipment is sent to ERDF. The WCH-EE-307 and WCH-EE-318 are not a record. The WCH-EE-316 and WCH-EE-317 are considered records. When used, the WCH-EE-317 is to be sent to the ERDF Waste Management Officer (WMO) or Deputy Waste Management Officer (DWMO) prior to making the shipment.

For shipments containing asbestos, the WCH-EE-307 or WCH-EE-318 forms are to be marked as asbestos. Of particular importance, if there is “bagged asbestos” in the shipment, the “bagged asbestos” is to be marked as well.

NOTE: Shipments of DOT Class 7 Low Specific Activity materials using Roll-on/Roll-off containers are all to be shipped as Exclusive Use and have exclusive use instructions.

For shipments made on a goldenrod OWTF (i.e., DOT Class 7 materials), the WTS shall place the OWTF and a goldenrod sheet of paper containing the exclusive use instructions and the words “Return as Radioactive Empty” in at least a 70 point font in the packet on the ERDF Roll-on/Roll-off container. Once emptied, this exclusive use instructions paper is left in the packet and signifies that the driver is to display black lettered “UN2908” on orange panels and the 6” x 6” EMPTY label (CCN 117530).

The following items are required to be performed by Waste Operations at the ERDF dump ramp to ensure that Roll-on/Roll-off containers qualify as empty:

- Visually inspect the interior of an emptied can to ensure it has less than 138 lbs of soil remains (about 10 gallons)
- If the can comes to ERDF with a goldenrod OWTF, the Exclusive Use Instructions on a sheet of goldenrod paper is required to be left in the packet.

6.3.1 Shipping Papers

Shipping papers shall be prepared in accordance with all applicable requirements including 49 CFR 172, 40 CFR 262, 40 CFR 761, and receiving facility requirements.

OWTF for ERDF bound waste will be completed in accordance with Attachment 1, utilizing WMIS by the project WTS or delegate.

OWTF and associated shipping papers including Shipment Checklist, Pre-Shipment Checklist, and Driver’s logs are color-coded based on use as follows:

- White – Routine shipments (e.g., nonregulated or non-DOT regulated)
- Goldenrod – All DOT Class 7 shipments to ERDF
- Blue – As directed by ERDF Waste Management Officer (typically DOT regulated nonradioactive shipments requiring treatment or other special handling).

NOTE: Waste shipments made that are Out of Commerce using the proper shipping name “Radioactive Material, Transported Under Special Arrangement” are to be identified as “Out of Commerce” in association with the shipping description of the hazardous material.

6.3.2 Special Non-regulated/Non-radioactive Shipments

These are shipments of non-regulated/non-radioactive material shipped via Truck and Pup, Super dump, or other selected shipments. Shipments of non-regulated/non-radioactive railroad ties or telephone poles are an example of a special shipment.

CAUTION

Under **no** circumstances are waste shipments originating from regulated areas allowed to be shipped in Super Dumps or Truck and Pups.

The WS Manager has approved an exemption from using WCH-EE-307 or WCH-EE-318 for Special Shipments. Special Shipments shall utilize the OWTF to track the inventory of the materials transported to ERDF. The shipper signature on the OWTF can be signed by either a certified shipper or WMIS trained individual designated by the WS Manager or WSL assigned to the project. OWTFs shall be generated under the direction of a certified shipper.

The following deviations to WMT-1-2.2 are authorized for Special Non-hazardous/Non-radioactive shipments:

Truck and Pup

- OWTF (block 1) Driver prints, signs their name, dates when the load is transported and adds the truck number
- OWTF date filled (block 4) will be entered by the designated shipper
- OWTF container number (block 3) will be the associated pup number and is entered by the designated shipper
- OWTF container description (block 14) will be truck and pup
- OWTF number of containers (block 15) will be 1
- US DOT description (block 20) will reflect non-regulated
- Annotate the truck number in block 1
- Use of WCH-EE-307, Pre-Shipment Checklist is not required.

Super dump

- OWTF (block 1) Driver prints, signs their name, dates when the load is transported and adds the truck number
- OWTF date filled (block 4) will be entered by the designated shipper
- OWTF container number (block 3) will be the associated super dump number

- OWTF container description (block 14) will be Super dump
- OWTF number of containers (block 15) will be 1
- US DOT description (block 20) will reflect non-regulated
- Annotate the truck number in block 1
- Use of WCH-EE-307, Pre-Shipment Checklist is not required.

Railroad Ties/telephone Poles

- OWTF (block 1) Driver prints, signs their name, dates when the load is transported and adds the truck number
- OWTF date filled (block 4) will be entered by the designated shipper
- OWTF container number (block 3) will be N/A
- OWTF container description (block 14) will be Rail road ties or telephone poles
- OWTF number of containers (block 15) will be 1
- US DOT description (block 20) will reflect non-regulated
- Annotate the truck number in block 1.

6.3.3 Emergency Response Information

Emergency response information shall be provided in accordance with the requirements of 49 CFR 172. This includes the requirement for an emergency response phone number. Emergency response information must be provided in the cab of the vehicle. This includes the appropriate emergency response guide page from the *Emergency Response Guidebook*, or a current copy of the guidebook and shipping papers.

For hazardous material shipments, an emergency contact telephone number shall be provided on the shipping papers by the WTS. For shipments made within all portions of the Hanford site this number is (509) 713-3056 which meets the requirements of 49 CFR 172.604. The telephone number must be:

- Monitored at all times the hazardous material is in transportation including storage incidental to transportation
- The number of a person who is either knowledgeable of the hazardous material being shipped and has comprehensive emergency response and incident mitigation information, 49 CFR classification, and communication requirements for that material, or has immediate access to a person who possesses such knowledge and information.

NOTE: (509) 373-3800 and (509) 373-0911 are not to be used for the emergency contact telephone number.

When shipments are made off the Hanford site "In Commerce" then 1-888-766-0771 shall be used, notifications shall be made in accordance with Section 6.3.4, "Emergency Response Notifications."

If an alternative emergency contact phone number is used for off-site shipments that meet the above requirements, then the contact person must immediately notify the Patrol Operations Center (POC) and Occurrence Notification Center (ONC) if a call is received from an off-site agency requesting assistance with the shipment. The notifications in 6.3.4 are not required.

6.3.4 Emergency Response Notifications

The POC and the Hanford ONC shall be notified of hazardous material shipments made whenever the 1-888-766-0771 number is listed as the emergency contact phone number. Notifications shall be made prior to the shipment in accordance with this section. Shipping papers provided shall show the highest values that will be shipped (e.g., DE-Ci, maximum profile values for a waste site on an OWTF [WCH-EE-286]).

1. Send shipping papers and associated emergency response information by facsimile (FAX) (see Attachment 2) or e-mail if no FAX is available to the POC. The POC is staffed at all times.
 - POC FAX number: (509) 373-1099
2. Confirm POC receipt of shipping papers only if the FAX or e-mail transmission is identified as not successful.
 - POC e-mail: ^Patrol Operations Center
 - POC telephone: 509-373-3800.
3. Send shipping papers and associated emergency response information by FAX (see Attachment 2) or e-mail if no FAX is available to the ONC. The ONC is staffed at all times.
 - ONC FAX number: (509) 376-6379
 - ONC e-mail: ^Occurrence Notify Center.
4. Confirm ONC receipt of shipping papers and associated emergency response information by telephone only if the FAX or e-mail transmission is identified as not successful.
 - ONC e-mail: ^Occurrence Notify Center
 - ONC telephone: (509) 376-2900.

6.3.5 Notifications

6.3.5.1 Immediate Notice of Certain Hazardous Materials Incidents. Refer to SEM-3-1.1, "Single Point of Contact" for incidents that require immediate notice of certain hazardous materials incidents:

Basis: 49 CFR 171.15

6.3.5.2 Detailed Hazardous Materials Incident Reports. Refer to SEM-3-1.1 for what requires a detailed hazardous materials incident report and updates.

Basis: 49 CFR 171.16

6.3.5.3 General. For shipments to the ERDF, notification to the ERDF Waste Management Officer (WMO) or Deputy Waste Management Officer (DWMO) by the project WSL or designee shall include the proposed transport schedule and a description of the material proposed to be transported. Ensure that the shipments are listed on the 3-week rolling schedule.

6.3.5.4 Radioactive Material. Prior to shipping any of the following special situations, a notification to the receiving facility by the project WSL or designee must be made:

- Containerized or packaged waste that will be disposed in the ERDF with the container intact, or that will be removed from a Type B equivalent and placed in the landfill intact (24-hour notification in advance of the shipment by providing a completed OWTF to the ERDF WMO or DWMO is required).

NOTE: WMIS performs a sum of the fractions (SOF)/g calculation and automatically prints this number on the OWTF.

- 1) Onsite Waste Tracking Forms for waste disposed while containerized (and not disposed as standard bulk waste) shall be identified as containing >5% (by volume) combustibles. This shall be accomplished for such waste that exceeds 5% by the checkbox labeled "Combustibles" on the OWTF. The determination of combustible content shall be made by observation by the waste generator.
- 2) Packaged waste, not disposed as standard bulk waste, that is >5% (by volume) combustibles shall be treated as 100% combustible for inventory control purposes.
- 3) If any container of a multi-container shipment on a single OWTF is identified with >5% (by volume) combustibles, then all containers shipped under that OWTF will be managed as 100% combustible for inventory control purposes.
- 4) If weight percentage is used rather than volume percentage, then the threshold value shall be $\leq 0.5\%$ (by weight) rather than $\leq 5\%$ (by volume).

NOTE: Contaminated combustible Materials is defined in DOE-HDBK-3010-94 as, "...paper, rags, cardboard, plastic from wrapping, sheeting, bags, containers, windows, tools, casings, and ion exchange resins. There could also be contaminated structural material such as wood and wall board." This definition also encompasses gloves and other PPE.

A case-specific evaluation shall be performed by the WTS/WSL prior to shipment of the following waste packages to ERDF that contain radionuclides whose DOE-STD-1027 Hazard Category 3 Threshold Quantities (TQs) are based on the direct exposure pathway (e.g., cobalt-60 [280 Ci]) (see 0600X-CA-N0030, *Threshold Quantities and Release Fractions*

for *WMIS Lookup Table*) to ensure that a Below Hazard Category 3 Final Hazard Categorization for ERDF can be maintained:

- DOT Type B nonequivalent shipping containers

NOTE: This does not apply to ERDF Roll-on/Roll-off containers used as a Type B nonequivalent shipping container.

- Waste packages that will be removed from a DOT Type B compliant or Type B equivalent shipping container at ERDF prior to treatment and/or disposal
- Shielded Type A waste containers or other shielded industrial packaging that will be staged in an established staging area (excluding the Container Transfer Area).

The evaluation must demonstrate that there is no credible release mechanism or breach of shielding capacity under all applicable accident conditions at ERDF.

No evaluation is required if one of the following criteria is met for the waste package:

1. The initial SOF, based on the inventory of all radionuclides ratioed to the appropriate hazard Category 3 TQ, is less than 1.0.
2. The final SOF (allowing for adjusted Hazard Category 3 TQs based on the waste form for isotopes whose Hazard Category 3 TQs are not based on the direct exposure pathway) for the package or container is less than 0.81.

The case-specific evaluation requires the U.S. Department of Energy, Richland Operations Office (DOE-RL) approval. A minimum of 6 weeks between notification to ERDF and the desired ship date should be allowed for the evaluation and DOE-RL approval. For a complete list of direct exposure pathway radionuclides or assistance in making the determinations in (1) and (2) above, contact the ERDF Resident Engineer.

If the waste destined for shipment to ERDF is above the limits established in the ERDF Authorization Basis (including the Field Verification Requirement [FVR] limits identified below) (WCH-174, "Final Hazard Categorization for the Environmental Restoration Disposal Facility"), the shipper must notify the ERDF WMO or DWMO at least 24 hours in advance of the shipment in addition to any other notice. The WMIS generated OWTF is automatically marked, "ELEVATED RADIONUCLIDE CONCENTRATION WASTE – DO NOT UNLOAD WITHOUT THE WASTE MANAGEMENT OFFICER APPROVAL."

Field Verification Requirement limits are as follows:

- The activity of uranium-235 in enriched uranium must not exceed 1,300 pCi uranium-235 per gram of soil/waste matrix. There are no criticality safety (FVR) limitations on uranium if the enrichment is less than or equal to 0.96% uranium-235 (0.93 wt% uranium-235 if metallic uranium).
- The activity of plutonium-239 must not exceed 12,000 pCi plutonium-239 per gram of soil/waste matrix.

- The activity of uranium-233 must not exceed 36,000 pCi uranium-233 per gram of soil/waste matrix.

For shipments of fissile radioactive material, Type B quantity of radioactive material, or gas poisonous by inhalation, provide the receiving organization with an estimated time of arrival and notification of shipment release. Contact the receiving facility to determine the appropriate method for notification.

Onsite shipment of radioactive material (not for disposal) shall utilize the MSA Radioactive Shipping Record (RSR) to communicate and document who, what and where the material is going as well as the radiological survey results. The RSR is available by going to the following link <http://www.rl.gov/livecycle/Renderform.aspx?formName=F2685-A-6003-214-1.pdf> and filling out the form. Either use carbon-less paper or fill out the form and copy 5 times.

6.4 Additional Security Measures to Implement for Motor Carriers Transporting Radioactive Material/Waste

The following additional security measures are to be implemented when commercial shipments and shippers are used to transport DOE, Environmental Management placarded low-level and mixed low-level wastes, transuranic wastes, and quantities of Type A or greater radioactive materials onto and off of the Hanford Site. These measures do not apply to shipments of samples (40 CFR 261.4 and 49 CFR 172.101(c)(11), medical isotopes, radiation worker laundry, empty containers, , shipments to Waste Isolation Pilot Plant (WIPP), intra-site movements that are not moved by a commercial carrier or when shipments are transported under a road closure situation (WMT-1-2.6, "Road Closures"). The Carlsbad Field Office will obtain approval for shipments of transuranic waste to WIPP. WCH shall use the EM electronic system in accordance with the "Office of Environmental Management Automated Shipping Approval System User's Manual".

WCH shall notify Energy Northwest seven days in advance of any movement of "common" explosives over 1,800 pounds excluding small arms ammunition or classified shipments within five miles of Energy Northwest and/or of any railroad shipment from/to Hanford north of the rail spur to the Fast Flux Test Facility.

1. WSLs are to verify and document that drivers entering the facility for loading/unloading of shipments be escorted to the loading/unloading location unless a security badge has been issued.
2. WSLs are to verify and document that the name of the driver(s) who will be entering DOE facilities to pick up shipments to be used for commercial shipment is on the list provided by the motor carrier.
3. WSLs are to verify and document that the motor carriers to be used has determined and provided documentation that all drivers meet the personnel security requirements addressed in the Department of Transportation's Security Sensitive Visits.
4. WSLs are to obtain copies of documentation from the carriers that all drivers are citizens of the United States.

5. WSLs are to verify that drivers have a CDL with proper hazardous materials endorsements, and attach a copy to the shipment documentation to be kept on file for each shipment.

NOTE: Any driver's licenses that show a Social Security Account Number will have the number blacked out prior to transmittal.

6. WSLs are to verify and document that the carriers use satellite tracking and/or maintain cellular telephone contact with the driver, including the requirement that the driver must contact carrier dispatch at regular intervals.
7. WSLs are to ensure that Security staff perform and document pre-loading equipment inspections to avoid explosive and other devices.

NOTE: This requirement may be satisfied by ensuring that the Hanford Patrol has cleared the vehicle.

8. WSLs are to ensure that carrier drivers are provided a briefing and a copy of written instructions regarding en-route shipment security measures to be taken. The carrier should ensure that drivers can read and understand the instructions provided and have the driver sign a copy of those instructions. The signed and dated copy of the instructions is to be attached to the shipment documentation and kept on file.
9. WSLs are to ensure that consignees are requested to provide notification of receipt of shipments.
10. WSLs are to verify and document that the motor carriers to be used have been approved under the DOE's Motor Carrier Evaluation Program for transportation of identified payloads.

6.4.1 Additional Security Measures to Implement for Rail Carriers Transporting Radioactive Material/Waste

WCH does not ship or transport radioactive material/waste using Rail Carriers but if necessary will perform the following requirements prior to performing that task.

1. WSLs are to verify the security plan identifies communication links, frequency of communications, and points of contact information for security-related emergencies.
2. WSLs implement a mechanism to be notified by the carrier should cars/train encounter any unexpected occurrences en route. Ensure the rail carrier has access to this information.
3. WSLs are to ensure that Security staff perform and document pre-loading equipment inspections to avoid explosive and other devices.

NOTE: This requirement may be satisfied by ensuring that the Hanford Patrol has cleared the vehicle.

4. WSLs shall verify and document the rail carrier has a communication system (through central dispatch or other method) in place to track status of rail cars.
5. WSLs are to ensure that consignees are requested to provide notification of arrival of cars/train.

6.4.2 DOE O 460.1C Requirements/Compliance

To the extent that WCH and sub-contractors are regulated by the Nuclear Regulatory Commission (NRC) or a state under an agreement with the NRC (Agreement State), or U.S. DOT, nothing in the DOE O 460.1C relieves the contractor of having to comply with any applicable regulatory requirements.

For specific radioactive material packagings for offsite shipments, the following apply:

- a. Each contractor that offers for transportation or transports radioactive material in a Type B or fissile material packaging, as appropriate, certified by the Headquarters Certifying Official (HCO), National Nuclear Security Administration Certifying Official (NNSA CO) or the U.S. NRC, must meet the conditions specified in the Certificate of Compliance (CoC) or Offsite Transportation Certificate (OTC), as appropriate, for the package issued by the HCO, NNSA CO or NRC and register in writing with the HCO or the NNSA CO prior to use.
- b. For a new NRC or DOT packaging certificate, the contractor must file a request for a new certificate with the responsible Head of the Operations Office or the field Office/Site Office Manager for processing through the HCO or NNSA CO, as appropriate. When DOE or NNSA is the holder of a packaging certificate issued by the NRC or DOT, the contractor must file a request for revisions to or renewal of existing NRC or DOT certificate with the responsible Head of the Operations Office or the Field Office/Site Office Manager for processing through the HCO or NNSA CO.
- c. For a new DOE or NNSA Type B or fissile material packaging, each contractor must submit an application to the responsible Head of the Operations Office or the Field Office/Site Office Manager for processing through the HCO or NNSA CO. This application must include a Safety Analysis Report for Packaging (SARP) and any other supporting documentation to demonstrate that the packaging meets the requirements of 10 CFR Part 71, Subparts E, F, G, and H, and any other applicable standards for certification prior to use.

The contractor must report to the responsible Head of the Operations Office or the Field Office/Site Office Manager within 30 days, of any instance of significant reduction in the effectiveness of any approved Type B or fissile packaging during use; any discovery of any defects with safety significance in Type B or fissile packaging after first use, with details of the means employed to repair the defects and prevent their recurrence; or any instances where the conditions of approval in the CoC were not observed in making a shipment.

For use of the International Civil Aviation Organization's (ICAO) *Technical Instructions*, the International Maritime Organization's (IMO) *International Maritime Dangerous Goods (IMDG) Code*, Transport Canada's *Transportation of Dangerous Goods Regulations*, and/or the International Atomic Energy Agency's *Regulations for the Safe Transport of Radioactive Material (TS-R-1)* for domestic segments of international transportation by air, vessel, rail, or highway, the contractor must also meet the requirements of 49 CFR Part 171.

If the contractor is subject to the HMR and wishes to prepare and/or conduct an offsite shipment that is not in accordance with the HMR, then the contractor must apply for a DOT Special Permit. Applications must be submitted to the responsible Head of the Operations Office or the Field Office/Site Office Manager for processing through the HCO or NNSA CO to DOT. Applications must follow the directions in 49 CFR 107.105.

If the contractor is not otherwise subject to the HMR and wishes to conduct activities that are not in accordance with the requirements of the DOE O 460.1C Contractor Requirements Document, then the contractor must apply to the responsible Head of the Operations Office or the Field Office/Site Office Manager for processing through HCO or NNSA CO for a DOE or NNSA exemption. Applications must be prepared in accordance with the procedures in 49 CFR 107.105(c) and (d).

7.0 RECORDS

Transportation and waste documents are designated by the TSD as lifetime records. Therefore, regardless of any regulatory record retention requirements, these documents will be maintained as WCH permanent records.

7.1 Specific Record Retention

1. OWTF Package

Waste Services will provide completed waste shipment packages (OWTF and any attachments and WCH-EE-316 and WCH-EE-317) to I&AS (Records) to be retired to the Hanford Site Records Holding Area (RHA) in accordance with approved Records Inventory and Disposition Schedules (RIDS) and shall be held at RHA for 5 years prior to transfer to long-term storage.

Waste Services will provide I&AS Document Control Cover Sheets with applicable cross-reference information (e.g., OWTF numbers) to ensure proper disposition.

2. Stand-Alone Packages

Infrequently, manifests other than an OWTF may be utilized to perform waste or hazardous material shipments (e.g., RSR, UHWM, HMSR, NRC manifests). These documents will be provided to the Waste Information Tracking Specialist (WITS) for processing into the electronic document management system. The OWTF number will be provided with these documents, if applicable. A unique sequential Waste Services number will be applied to the document.

3. Shipment Checklist

Copies of completed and approved waste shipment checklist (WCH-EE-287) and waivers shall be provided to the T&P TL and to I&AS (Document Control) for processing into the electronic document management system. I&AS (Document Control) will assign a unique sequential number, a specific document type, and cross reference the checklist to the profile, waste stream name, and other key information.

4. Miscellaneous Documents

Any document associated with the WCH Waste Services Program (except for WCH-EE-307 and WCH-EE-318) not specifically listed shall be provided to the WITS for processing into the electronic document management system (if appropriate).

8.0 JUSTIFICATION SUMMARY

Revision	Reason for Revision
26	Changed Prepared by: to M. E. Lewis. Revised WCH-EE-307 and associated instructions. Minor editorial changes to OWTF FIELD DESCRIPTIONS page. Revised Section 6.3.2 to address IF-2012-0084.
25	Revised the instructions for filling out WCH-EE-286, issued a revised WCH-EE-286, revised WCH-EE-307, Pre-Shipment Checklist and revised WCH-EE-318, Pre-Shipment Checklist Treatment Required.
24	Added a Pre-Use Inspection form (WCH-EE-325) for containers that are not ERDF Roll-on/Roll-off addressing IF-2011-0546 action, revised form WCH-EE-287, "Shipment Checklist" adding approval reasons for T&P TL and revised the format of WCH-EE-307.

9.0 REFERENCES

0600X-CA-N0030, 2008, *Threshold Quantities and Release Fractions for WMIS Lookup Table*, Rev. 0, Washington Closure Hanford, Richland, Washington.

49 CFR 1 through 1420, "Transportation," *Code of Federal Regulations*, as amended.

CCN 117530, 2004, "Transportation of Empty Containers from the ERDF," Interoffice Memorandum dated November 9, 2004, Bechtel Hanford, Inc., Richland, Washington.

DOE, 1994a, *Airborne Release Fractions/Rates and Respirable Fractions for Nonreactor Nuclear Facilities*, DOE-HDBK-3010-94, U.S. Department of Energy, Washington, D.C., December 1994, Change Notice No 1, January 1996.

DOE O 460.1C, *Packaging and Transportation Safety*, U.S. Department of Energy, Washington, D.C.

DOE-RL, 2002, *Hanford Sitewide Transportation Safety Document*, DOE/RL-2001-36, Current Revision, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

NUREG-1608, *Categorizing and Transporting Low Specific Activity Materials and Surface Contaminated Objects*, U.S. Nuclear Regulatory Commission, Washington, D.C.

Emergency Response Guidebook, U.S. Department of Transportation, latest revision.

International Civil Aviation Organization, *Technical Instructions*, Annex 18, Montreal, Quebec, Canada

International Maritime Organization, *International Maritime Dangerous Goods (IMDG) Code*,

QA-1, *Quality Assurance*, QA-1-1.5, "Self Assessments", Washington Closure Hanford, Richland, Washington.

RC-200, *Radiological Control Field Procedures*, Washington Closure Hanford, Richland, Washington.

TS-R-1, IAEA Safety Standards, *Regulations for the Safe Transport of Radioactive Material*, International Atomic Energy Agency, Vienna, latest revision.

WCH-174, *Final Hazard Categorization for the Environmental Restoration Disposal Facility*, Current Revision, Washington Closure Hanford, Richland, Washington.

WMT-1, *Waste Management and Transportation*, Washington Closure Hanford, Richland, Washington.

WMT-1-1.9, "Site-Specific Waste Management Instructions"

WMT-1-1.11, "Transportation, Packaging, and Waste Designation Training"

WMT-1-2.5, "Use of Non-U.S. Department of Transportation-Approved Packagings"

WMT-1-2.6, "Road Closures"

WMT-1-APA, "Glossary of Terms"

10.0 FORMS

: **NOTE:** See the WCH Intranet Forms page for the most current version of forms. :

WCH-EE-286, WCH Onsite Waste Tracking Form

WCH-EE-287, Shipment Checklist

WCH-EE-303, Hazardous Material Shipment Fax Cover Sheet

WCH-EE-307, Pre-Shipment Checklist

WCH-EE-316, Daily Shipper's List

WCH-EE-317, Daily Shipper's List, Treatment Required

WCH-EE-318, Pre-Shipment Checklist-Treatment Required

WCH-EE-325, Pre-Use Inspection Form

A-6003-214.1, Radioactive Shipment Record

11.0 ATTACHMENTS

1. OWTF (Example) and Completion Instructions
2. Hazardous Material Shipment Fax Cover Sheet (Example)
3. Shipment Checklist (Example) and Completion Instructions
4. Pre-Shipment Checklist (Example) and Completion Instructions

Attachment 1: OWTF (Example) and Completion Instructions

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WCH ONSITE WASTE TRACKING FORM

OWTF # _____

Generator Information			
1. Driver Name: Print: _____		Signature: _____	
Date Transported: _____		Truck #: _____	
2. Template Name: _____		3. Container Number: _____	4. Date Filled: _____
5. Description: <input type="radio"/> Soil <input type="radio"/> Debris <input type="radio"/> All Metal <input type="radio"/> 50/50 (check all that apply) <input type="radio"/> Standard Bulk Waste <input type="radio"/> WSRP Required <input type="radio"/> Special Hauled Waste <input type="radio"/> Concrete or Boulders >4 ft in any dimension <input type="radio"/> Asbestos: <input type="radio"/> Bagged Asbestos <input type="radio"/> Items >10 lbs/over 10" <input type="radio"/> Combustibles Other: _____ <input type="radio"/> Multiple OWTFs: _____			
Disposal Information			
6. <input type="radio"/> Disposal		7. <input type="radio"/> Grout Fill	
<input type="radio"/> Treatment - Batch # _____		Action: _____ Date: _____	
8. Disposal Site: _____			
Initials: _____			
Handling Information			
9. Waste Name No: _____		10. Point of Origin: _____	
11. Summary: _____			
DOT Information			
12. Generator Name / Mailing Address: U.S. EPA ID# WA7890008967 U.S. Department of Energy Richland Operations In Care of _____ P.O. Box 550 Richland, WA 99352		13. Transport Company: _____	
14. Container Type: _____		15. Number of Containers: _____	16. Emergency Contact: _____
17. Gross Wt. (kg): _____	18. Net Wt. (kg): _____	19. Waste Vol. (m ³): _____	
20. US DOT Description: (ID No., PSN, HC, PG) _____ ERG#: _____			
21. Radionuclide List: _____			
22. Applicable Waste Codes: _____			
23. Total TBqs: _____		24. Exclusive Use Shipment: <input type="radio"/> Yes <input type="radio"/> No	
25. SPA Checklist No: _____		26. DE-Ci: _____	27. NRC Class: _____
28. This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.			
Signature: _____			

WCH ONSITE WASTE TRACKING FORM

OWTF # _____

29. PIN	30. Gross Weight (kg)	31. Net Weight (kg)	32. Volume (m ³)	33. RQ	34. Proper Shipping Name
TOTALS					

Example

OWTF FIELD DESCRIPTIONS

GENERATOR INFORMATION

1. **Driver Name, Printed and Signed, Date Transported, and Truck #:** The truck driver hauling the container to the ERDF shall print and sign, enter the date the shipment was accepted. This date indicates acceptance of the container for transportation and enter the Truck #.
2. **Template Name:** The WTS populates this block when filling out the template.
3. **Container No.:** The WTS is to use WMIS to enter the container or truck number, as applicable. In most cases, numbered Roll-on/Roll-off containers will be used for transport to Environmental Restoration Disposal Facility (ERDF). If multiple packages are being transported, enter this information on the OWTF Multiple Container Form. WMIS will auto enter an authorization number, for multiple containers; manually enter the Package Identification Numbers.
4. **Date Filled:** The WTS is to enter the date the container was filled. For non-containerized waste, enter N/A.
5. **Description:** The WTS is to provide any additional description and transfer this information from WCH-EE-307 to the OWTF that would assist the disposal facility with proper handling of the waste stream. Particular attention to listing items which may effect safe handling or disposal operations. The waste shipping and receiving plan (WSRP) will require the shipper to make a choice of either a WSRP or N/A.

If the WCH-EE-307 arrives from the project marked "Bagged Asbestos", the WTS will mark the OWTF waste description, Block5, asbestos check box. Additionally, if the asbestos is bagged, the WTS shall check: "Bagged Asbestos".

The WTS will mark one of **Soil, Debris, All Metal** or **50/50**.

Waste will always be identified by one of the following categories in addition to any other description. This will require the WTS to annotate the OWTF Block 5 with one of the following categories.

- **Standard Bulk Waste** (e.g., normal dump and crush, no restrictions)
- **Special Handling Waste** (e.g., packaged waste without voids, hazardous debris microencapsulation, Hazardous waste stabilization, non-releasable retired rolling stock, tumbleweeds, void fill pipes (>6 inch), flat beds, and packaged waste with voids, flood grout, crane required, long items, asbestos, treatment required is now a part of special handling waste and may not require a WSRP) The drop-down menu only allows one choice (make this the most important) but remember to document all that apply by adding the additional Special Handling Waste types in Block5, Other.
- **WSRP** – WSRP #, Title and Date

NOTE: Debris is defined as: concrete blocks, slabs, boulders, rebar, steel plates, pipes, tubes or miscellaneous metals, building debris, structural steel, conduit equipment, containerized waste e.g., drums, barrels, boxes, soft waste, and asbestos-containing material.

NOTE: Predominantly Metal is defined as: This is waste from any conveyance that consists entirely of metal "Debris," plus any other material that may be used for cribbing/bedding. Any mixture of metal and soil, concrete, or wood is debris.

The following information is provided to assist in identifying waste for proper handling. Contact the ERDF Waste Management Officer (WMO) for specific guidance/clarification.

NOTE: Only one of the four options will be marked, soil, debris, 50/50, or all metal.

- a. If the container is 75 - 100% soil – check soil box.
 - b. If the container is 40 - 74% soil – check the 50/50 box.
 - c. If the container is 0 - 39% soil – check the debris box.
 - d. If the container is predominately metal (100% metal except cribbing/bedding material) check the all metal block.
- Items greater than 10 ft as loaded: Give estimated length and description.
 - Combustible Material (>5% by volume or >0.5% by weight)
 - Potential Spark Generating Material (e.g., zirconium metal)
 - Concrete Slabs, Blocks or Boulders > 4 ft in any dimension.
 - Other waste
 - Plates
 - Animal waste
 - Laboratory waste (e.g., broken glass, vials)
 - Verified empty intact bottles (e.g., glass, plastic, metal, flasks)
 - Dusty materials (e.g., sheetrock, absorbents, concrete dust).
 - Unusual: Soft waste, asbestos, containerized waste, WSRP (write WSRP number), void fill required (e.g., tanks, pipes, equipment with void dimension that exceed 6 in. in diameter).
 - Unusual odors
 - Radiological (e.g., contains high dose item(s), hot particles)

- If the waste has no listed waste codes and no longer exhibits the characteristic of a dangerous/hazardous waste because it has been treated, the OWTF shall include a statement describing the treatment technology that was used and the reason that the waste is no longer dangerous/hazardous.
- Multiple OWTFs
 - Checked when multiple containers with different OWTFs are on a single shipment.

DISPOSAL INFORMATION

6. **Disposal, Stockpile, or Treatment:** An ERDF representative shall complete this item deciding if the shipment is to be disposed, stockpiled or treated.

NOTE: An ERDF representative shall contact the WMO or DWMO if there are any questions as to the decision to dispose, stockpile, or treat the incoming waste.

7. **Placed Pending Action:** An ERDF representative shall complete this item. An ERDF representative shall initial and date the OWTF upon disposal.
8. **Disposal Coordinates:** An ERDF representative shall complete this item to record the disposal coordinates of the waste then initial and date this item.

HANDLING INFORMATION

9. **Waste Profile No:** The WTS populates this number when filling out the template.
10. **Point of Origin:** The WTS is to enter the location from which the waste material originated from the WMIS menu. This number must be obtained from ERDF Project Controls if not listed in WMIS.
11. **Sum of Fractions for Hazard Category 3, Combustible, Soil, Powder, Metals and Grout, Concrete:** WMIS automatically populates this block. (ERDF AB)

DOT INFORMATION

12. **Generator's Name and Mailing Address:** Enter the following address (WMIS auto entry):

U.S. Department of Energy, Richland Operations
U.S. EPA ID# WA 789 000 8967
In Care of: (Hand write the shipment originator).
P.O. Box 550
Richland, WA 99352

13. **Transport Company:** The WTS is to enter the name of the transport company.
14. **Container Type:** The WTS is to enter a description of the container being shipped (e.g., Roll-on/Roll-off, wood boxes, metal drum, or plastic-wrapped).

15. **Number of Containers:** The WTS is to enter the number of containers being transported.
16. **Emergency Contact:** The WTS is to enter the emergency contact telephone number.
17. **Gross Wt. (Kg):** The WTS is to enter the gross weight of the shipment (in kilograms). Estimated weights may be used for onsite shipments. If multiple packages are being transported, enter this information on the OWTF Multiple Container Form.
18. **Net Wt. (Kg):** The WTS is to enter the net weight (in kilograms).
19. **Waste Volume (m³):** The WTS is to enter the volume of waste in the shipment (in cubic meters). Do not enter the volume of the shipping containers. If multiple packages are being transported, enter this information on the OWTF Multiple Container Form.
20. **U.S. Department of Transportation (DOT) Description (ID Number, PSN, HC, and PG):**
The WTS enters the UN/NA number, proper shipping name, hazard class, and packing group for the material being transported, in accordance with 49 Code of Federal Regulations (172.202(a)(1,2,3,4)).
 - For radioactive material shipments, enter the physical and chemical form of the material (for bulk soil [the most common entry], the entry shall read, "Normal Form, Solid, Oxide").
 - Enter any additional 49 CFR required information (e.g., fissile statements, spec packaging, RQ, CSI).
21. **Radionuclide List:** List all radionuclides present in the shipment, ERDF Acceptance Criteria limits, and actual activity levels (WMIS auto entry). The number of radionuclides may result in a second page. (95% A2 DOT)
22. **Applicable Waste Codes:** Enter all state and federal waste codes applicable to the waste to be transported. If no waste codes are applicable, enter "None" (WMIS auto entry).
23. **Total TBqs:** Enter the tera Becquerels (TBqs) associated with this PIN (WMIS auto entry).
24. **Exclusive Use Shipment:** The WTS is to check the appropriate Y or N.
25. **SPA Checklist Number:** The WTS is to enter in the SPA Checklist number.
26. **DE-Ci:** If developing OWTF without use of WMIS, calculate using RadCalc and enter in the ICRP-72 DE-Ci number for this shipment and if using WMIS this is a WMIS Auto Entry.
27. **NRC Class:** Enter the U.S. Nuclear Regulatory Commission class (WMIS auto entry).

DOT CERTIFICATION SIGNATURE:

28. The WTS is to sign below the following statement: This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department

of Transportation. (49 CFR 172.204(a)(1)) This signature is to certify the DOT requirements of the shipment only.

NOTE: The OWTF may not be pre-signed; signatures will not be completed until the shipment has been verified for compliance by the WTS.

Attachment 2: Hazardous Material Shipment Fax Cover Sheet (Example)

Acrobat 9.0
Print Form

Hazardous Material Shipment Fax Cover Sheet

Information to Patrol Operations Center (POC) and Occurrence Notification Center (ONC)
Check applicable boxes and complete information, and fax to: POC at 373-1099 and ONC at 376-6379

Inbound Shipment: <input type="checkbox"/>		Outbound Shipment: <input type="checkbox"/>	
Shipment Date:			
Shipment Number (Bill of Lading, Air-Bill, Waste Manifest, etc.):		Carrier:	
		Carrier Facility Number:	
		Commodity:	
Onsite Emergency Preparedness Data			
Enter Proper Shipping Name:		Material Form: Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/>	
Hazard Class:	UN:	ERG #:	Number of Packages:
Package Type: Fiberboard Box <input type="checkbox"/> Wood Box <input type="checkbox"/> Steel Box <input type="checkbox"/> Drum <input type="checkbox"/> Cask <input type="checkbox"/> Roll-off <input type="checkbox"/> Other <input type="checkbox"/>			
DE-Ci Value for Shipment:		Certified Type B Package: <input type="checkbox"/>	
Originator			
Contractor:		Facility Point of Contact:	
Originating Facility:		Work Phone:	
Building/Area:			
Transportation Contacts			
Waste Transportation Specialist:		Work Phone:	Cell Phone:
Waste Services Lead:		Work Phone:	Cell Phone:

Page 1 of _____
 (Including Cover Sheet)

Attachment 3: Shipment Checklist (Example) and Completion Instructions

Acrobat 9.0

SHIPMENT CHECKLIST

1. Date:		2. Originating WTS:	
3. Originating Facility:		4. Destination:	
5. Waste Stream:			
6. WSRP:		7. Profile:	
8. References:			
9. SAP and Related Documents:			
10. Waste Management Instructions:			
11. Packaging			
Type:		Radioactive Lir	
OTRS:	PS :	PA:	
12. Marking:			
List:			
13. Labeling:			
Type:			
If Rad - Contents:			
14. Placarding:			
Type:			
15. Shipping Document:			
U.S. DOT Description:			
Emergency Response Number:		Exclusive Use Shipment: <input type="radio"/> Yes <input type="radio"/> No	
Radionuclides:			
Technical/Chemical Group:			
Hazardous Substance:		EPA Waste:	
Physical Form:		Chemical Form:	

WCH-EE-287

SHIPMENT CHECKLIST

Fissile excepted: <input type="radio"/> Yes <input type="radio"/> No		
16. Supporting Calculations: (attach or list DocsOpen #, mark N/A if not applicable)		
Class 7:	RQ:	Radionuclide:
LSA:	SCO:	LTD QTY:
Type A/B:	Greater than Class C:	
A2:	HRCQ:	FVR:
DE-Ci:	<i>Note: If "In Commerce," and using 1-888-766-0771 then notify POC and ONC.</i>	
17. Other:		
Notifications:		
Treatment Plan:		
Treatment by Generator: <input type="radio"/> Yes <input type="radio"/> No		
18. Comments:		
19. Approval Signature:		
Waste Management Lead:	Date:	
Nuclear Safety (if fissile shipment):	Date:	
Transportation & Packaging Task Lead: (if fissile or Type B shipment)	Date:	

SHIPMENT CHECKLIST INSTRUCTIONS

This Checklist (WCH-EE-287) is required per Section 6.1.1. The purpose is to develop reproducible shipment documentation which meets all requirements; therefore, some specific checklist items will not pertain to every shipment and should be marked N/A, if appropriate. The checklist should serve as a guide but not a replacement for the regulations.

The following instructions will aid in the completion of the Shipment Checklist:

1. **Date:** The WTS is to enter the date the container was loaded.
2. **Originating WTS:** The WTS is to enter the name of the WTS preparing the checklist. After completing the checklist, initial next to the printed name.
3. **Originating Facility:** Identifies the building or site from which the material is being loaded out. This can either be pre-printed by the WTS when generating the form, or, hand written in by the individual responsible for completing the form.
4. **Destination:** The WTS is to enter the disposal location (e.g., ERDF).
5. **Waste Stream:** The WTS is to identify the specific waste stream for which the checklist was developed (e.g., High dose rate pipe from trench 12).
6. **WSRP:** The WTS is to enter the WSRP number or N/A.
7. **Profile:** The WTS is to list the waste profile number.
8. **References:** The WTS is to list any references utilized to prepare the checklist.
9. **SAP and Related Documents:** The WTS is to list the sampling analysis plan or related document, or N/A if not applicable.
10. **Waste Management Instructions:** The WTS is to list the Site Specific Waste Management Instruction or N/A if not applicable.
11. **Packaging:** The WTS is to describe the packaging to be utilized:
 - Type (e.g., IP, Type A, Type B)
 - Provide the radiation limits for this container
 - List any One Time Request for Shipment, PSSD, Special Packaging Authorization applicable numbers
 - Identify or attach the package specific instruction, if applicable.
12. **Marking:** The WTS is to describe all markings to be utilized, including those written on the OWTF.

13. **Labeling:** The WTS is to describe all labeling to be utilized. If radioactive labels are used, describe all required information to be added to the label.
14. **Placarding:** The WTS is to describe all placarding to be utilized.
15. **Shipping Document:** Complete as indicated.
16. **Supporting Calculations:** The WTS is to provide the method utilized to develop any required calculations. Attach the calculation or Universal Content Manager (UCM) number. Calculate and write in the ICRP-71/72 DE-Ci for this shipment. If listed calculation is not applicable, mark N/A.
17. **Other:** Provide documentation for the listed items, if not applicable mark N/A.
18. **Comments:** The WTS is to provide any comments/explanations of how the information was derived to assist in a reproducible result. If a Certificate of Compliance is applicable, list number here. If a special permit packaging is utilized, list the U.S. Department of Transportation -SP number.

Reviews: The WSL will ensure that the T&P TL has an opportunity to review all checklists.

Approvals: The WSL will sign and date approval of the checklist prior to shipment. Nuclear Safety signature and date is only required for fissile material shipments. The T&P TL will also sign and date for any fissile or Type B shipments.

Attachment 4: Pre-Shipment Checklist (Example) and Completion Instructions

Acrobat 9.0
Print Form

Pre-Shipment Checklist

Location: _____ Container No.: _____ Date: _____

Truck No.: _____ Weight: _____ 20 Ton 22 Ton 25 Ton

Check applicable boxes and fill-in additional information as necessary:

Soil (Soil can = 75%-100% soil)

50/50 (50/50 can = 40%-74% soil)

Debris (Debris can = 0%-39% soil)

Metal (100% metal except cribbing or bedding material)

Asbestos Bagged Asbestos

Items >10' Long/Oversized

Combustibles

Concrete or Boulders >4' in any dimension

Other: _____

Dose Rate _____ at contact _____ at 30cm

Print Name: _____
Waste Observer or Designee

Information entered on this form has been provided by personnel having performed direct observation of the contents loaded and the radiological surveys. To the best of my knowledge the information is accurate and complete.

WCH-EE-307 (TBD/2012)

PRE-SHIPMENT CHECKLIST COMPLETION INSTRUCTIONS

This Pre-Shipment Checklist (WCH-EE-307 and WCH-EE-318) is required per Section 6.3 unless officially excepted. The purpose is to identify the waste being loaded into the container, which assists the WTS in filling out the Onsite Waste Tracking Form. Some specific checklist items will not pertain to every shipment and project and should be marked N/A, if appropriate. The checklist should serve as a guide but not a replacement for the regulations.

Form WCH-EE-307 is used by waste generators to document the type and quantity of wastes that are loaded into shipment containers.

NOTE: This form is used in the field to document the type of waste placed into the shipping container. The information on this form is then transferred to the WCH-EE-286 (record form).

1. The Waste Observer or designee fills out the Location, Container Number, Date, Truck Number, Weight and whether the container is a 20, 22, or 25 ton container.
2. The Waste Observer or designee checks and writes in a physical description of the containerized waste or mark the other specific types of waste below soil, 50/50, debris, or all metal. The Waste Observer marks and describes whether the shipment has asbestos (including checking "Bagged Asbestos" if present), has item(s) greater than 10 ft in length, includes combustible material at >5% (for packages other than ERDF Roll-on/Roll-off containers, includes metal concrete or boulders greater than 4 ft in diameter
3. Radiological Control is to perform a survey of the container and report the dose rate at contact and at 30 cm.
4. The Waste Observer or Designee (teamster) is to clearly print his / her name and date the form.