

## WASTE MANAGEMENT AN INTEGRATED CUSTOMER SERVICE APPROACH

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### ABSTRACT

Department of Energy (DOE) weapons installations generate waste from a multitude of activities; weapons production, routine maintenance, health and safety, deactivation, decontamination, decommissioning, and environmental restoration. These activities are transpiring concurrently throughout the weapons complex by a variety of contractors. DOE Conduct of Operations requires detailed procedures specifying the process for radioactive waste management. However, uniform implementation is often challenging due to the changing waste management requirements of multiple site projects, contractors, and organizations.

From waste generation planning to off-site disposal, there are numerous details that must be addressed to achieve effective waste management. For example, many logistical issues must be addressed prior to the actual waste generation. One must ensure the availability of approved waste packaging commodities, which include the waste handling materials such as absorbents, containers (drums, boxes, etc.), and their associated internal components (liners, filters, etc.). The waste generators must understand their responsibilities for packaging waste for compliant on-site storage and off-site transportation and disposal (appropriately trained). Furthermore, the supporting organizations such as inspection, shipping, and certification must be orchestrated to provide a coordinated effort from the point-of-generation through final disposal. There are significant controlling and operational instructions and procedures which must be maintained as well as data management for waste tracking and traceability.

This paper provides a relatively detailed overview of the Rocky Flats Environmental Technology Site (RFETS) new Customer Service Organization (CSO) operations for waste management. The level of detail is sufficient to describe the form and function of the new CSO, which the authors believe, will provide useful waste management concepts that can be implemented by other sites.

### INTRODUCTION

The Rocky Flats Environmental Technology Site (RFETS) is a Department of Energy (DOE) nuclear weapons facility undergoing closure. It is an industrial complex with process facilities, soils, groundwater and legacy wastes (previously generated production process waste) contaminated with radioactive and hazardous constituents. These contaminated media must be cleaned-up and the waste generated must be disposed of to achieve closure of the site. Therefore, Site Management and the DOE have developed a ten-year closure plan in coordination with the Stakeholders to address this change in the site mission.

Due to the continued deterioration of the aging systems, the site must meet the challenge to reduce long term risks by accelerating closure process while maintaining the highest level of safety. A major factor in achieving this goal is compliant waste management. Packaging waste correctly the first time to limit personnel exposure, expedite the disposal process, and reduce process costs is key to the overall success of the project.

Closure of the site requires removal of radiological and hazardous wastes that were generated during the production of nuclear weapon components (legacy waste), routine maintenance, and current deactivation, decontamination, decommissioning, and environmental restoration activities. These activities may have occurred from a single closure project or multiple closure projects within a single facility often by different contractors and/or organizations.

Per DOE Orders and formalized Conduct of Operations, detailed procedures are required to be in place for hazardous and radioactive waste management. However, effective implementation of the often-changing requirements through detailed waste management procedures across multiple closure projects, contractors and organizations is a significant challenge.

During RFETS production of nuclear weapon components, the waste management activities were incorporated into the production process as part of the site mission. Upon change of mission from production to site closure, the waste management process was fractionated between multiple closure projects, contractors and organizations. Each

implementing and/or administering their own unique waste management process, to achieve programmatic and regulatory requirements. This resulted in numerous noncompliance infractions caused by misinterpretations, and the changing and inconsistent application of applicable waste management requirements. The noncompliance's were costly to operations, increased personnel exposures, and failed to meet the demands of the site closure schedule.

Resolution of this problem was met in 1998 by a re-engineering effort that resulted in the creation of a group known as the Waste Management Customer Service Organization. The mission of this group was to foster a customer/client relationship between the Waste Management Organization and the waste generating projects/facilities. This is a centralized group of Customer Service Representatives (CSR's), who are subject matter experts (acting as the single point-of -contact), chartered to oversee, coordinate and verify the waste management activities of multiple closure projects. CSR's ensure all waste generated is compliant with the packaging requirements in accordance with Building Authorization Basis, Department Of Transportation regulations, and disposal facility waste acceptance criteria.

The ultimate customers of this waste management approach are the waste repositories. For Rocky Flats, the primary waste repositories for radioactive waste are the Nevada Test Site and the Waste Isolation Pilot Plant (WIPP). This approach has received high praise from the Nevada Test Site and was recognized as an "exemplary practice" by auditors from the Waste Isolation Pilot Plant. Preplanning is the key to the success of this approach.

## **OVERVIEW**

In general, the approach involves treating the waste generating project as a "customer", making the process of waste management as simple as possible. By providing dedicated subject matter expertise, and a simplified set of instructions, specific to the waste generating activity, with an increased focus on waste acceptance and disposal as the primary goal, the Waste Management Customer Service approach has proven to be an effective waste management strategy.

The Customer Service approach utilizes a single point contact and waste management subject matter expert to oversee, guide, and coordinate all waste management activities for the project. This individual, or Customer Service Representative (CSR),

- Participates in the preplanning of all work,
- Walks down the waste generating project prior to commencing work,
- Prepares waste generating instructions (WGI's) for the specific project,
- Assists with the procurement of specified waste commodities,
- Assists and guides the waste generators during the waste generating process, and
- Verifies final waste package configurations prior to transfer and/or transport.

By establishing a customer/client relationship, virtually all of the waste management aspects of a given project are managed through a single-point contact who also functions as the subject matter expert. This waste management strategy allows the waste generating project/facility to focus on its primary goal. Whether it's the production of components, research and development activities, or decommissioning and demolition, the management of the resulting waste is no longer an issue.

There are six basis elements of the Waste Management Customer Service approach. These six elements are:

1. Customer Service Representatives
2. Waste Commodity Procurement Engineers
3. Waste Inspection/Waste Package Certification
4. Data Management
5. Procedure/Requirements Document Development
6. Waste Generator Training

These six elements are diagrammatically represented in Figure 1. Each element can function independently or in concert with one or all of the other elements.

The Waste Management Customer Service approach entails utilizing all of these elements through one coordinated effort, thus providing a mechanism for one-stop shopping for waste management technical and subject matter expertise.

## **CUSTOMER SERVICE REPRESENTATIVES**

The key element to the Waste Management Customer Service approach is the Customer Service Representative. Customer Service Representatives (CSR's) are charged with providing a full technical and administrative support function to all Waste Generators for the planning, characterization, generation, and packaging of all wastes generated during the project or throughout the facility. This includes:

- Controlling and coordinating the activities of the Waste Generators.
- Integrating Waste Management Operations with the Waste Generators by providing a source of subject matter expertise for waste management at the project site.
- Providing programmatic oversight, guidance, and assistance to line management to facilitate implementation of waste management, storage, and disposal policies, procedures, and instructions.
- Preparing and issuing waste generating instructions (WGI's) for all waste generating activities.
- Verifying all waste packages for compliance with the applicable storage and off/on-site waste disposal requirements prior to transfer.
- Establishing and implementing strategic plans for long-term improvements in Waste Management and functional process operations.

Waste Management Customer Service Representatives prepare and issue waste generating instructions (WGI's) for virtually all of the waste generating activities associated with the project or facility. These instructions summarize the applicable waste packaging requirements, streamline the waste management process, and are an integral feature to the success of the project as a whole.

WGI's summarize Department of Transportation (DOT) requirements, disposal site waste acceptance criteria, and waste packaging requirements into a simple, easy to read format for the project/facility worker. Specific sections within the WGI's include:

- Waste Type/Waste Description
- Characterization Basis
- Package Type and Quantity
- Package Liner Requirements
- Package Label Requirements
- Package Documentation Requirements
- Accumulation/Storage/Disposal Requirements
- CSR Authorization
- Waste Generator Concurrence/Acknowledgement

An example of typical WGI for a project is attached as Appendix 1 to this paper.

## **WASTE COMMODITY PROCUREMENT**

The second element of the Waste Management Customer Service approach is the integration of the procurement of waste commodities into the waste management infrastructure. In conjunction with overseeing the waste generating activities and preparing WGI's, CSR's also are responsible for coordinating and integrating the procurement activities to ensure only approved, quality waste commodities are procured for use by the Project or Facility. These commodities include waste containers, liners, filters, bags, and any other items directly related to the waste packagings.

Project needs are CSO's prime consideration when determining commodity cost, schedule, and the logistics of safety, compliance, handling, packaging, and shipping requirements. These considerations are discussed with the projects and the other responsible organizations (Health and Safety, Radiological Engineering, Transportation, etc.) to reduce risk, decrease costs, and increase efficiencies. The required changes are introduced if the conditions and circumstances allow.

Waste packaging commodities are an integral element of the total compliant waste package. Waste forms, sizes, and handling requirements dictate specific packaging types and configurations, which may be specified by the Department Of Transportation and/or the Waste Acceptance Facilities. The generator must maintain documentation of conformance to approved packaging requirements as part of the certified waste program.

The Customer Service Organization oversees this element as the Subject-Matter-Expert (single point-of contact) coordinating and integrating specification requirements between the waste generator (closure project), quality, engineering, procurement systems, the supplier, and applicable waste programs to ensure that only approved packaging is procured for certified waste packages.

The waste generator identifies a packaging need based on the closure project being performed. As indicated earlier, the CSR evaluates this information and prepares a WGI specific to the waste generators needs. A Material & Supply Card is then approved by the CSR for the approved waste packaging commodities based on the WGI prerequisites. This information is then provided to the Waste Commodity Procurement Engineer and consolidated with other closure project projections. A picture of future commodity needs develops and is utilized to maintain a minimum inventory safety level.

All changes to waste packaging commodity specifications whether dictated by requirements, manufacturing process, or administrative issues must be reviewed and approved by the CSO. This assures the required configurations necessary for compliant waste packaging commodities are in accordance with transportation and disposal requirements.

- Evaluating and implementing packaging efficiencies,
- Reviewing and approving waste commodity design packages,
- Development of waste commodity requirements, specifications, and procedures,
- Standardizing the availability/use of waste commodities,
- Forecasting short and long-term waste commodity needs, and
- Specifying the appropriate waste package configuration in the WGI.

The process of coupling the procurement of the waste commodities with the waste generating process provides the opportunity for direct involvement of waste management subject matter expertise in the overall management of the waste from cradle to grave. In addition, the opportunity for larger, more efficient waste packages becomes readily apparent.

## **WASTE INSPECTION/WASTE PACKAGE CERTIFICATION**

The third element of the Waste Management Customer Service approach is the certification of waste for quality assurance requirements and objectives. This Waste Inspection/Waste Certification element provides oversight to ensure compliance with the requirements of the DOE Order for Radioactive Waste Management and the disposal facility waste acceptance criteria (WAC). Waste certification historically occurs late in the waste management process, involving numerous organizational inputs resulting in some untimely delays due to the late discovery of packaging non-conformances. An analysis indicated that significant improvements could be achieved if the certification was moved as close as possible to the point of generation. This alleviated the need to transfer the waste to storage, assay, or non-destructive testing prior to shipping it off-site thus, eliminating redundant inspection, verification, and certification activities.

The implementation of a waste package certification program at or near the point of generation provides an opportunity to enhance the waste management process by streamlining the flow of waste containers out of the facility and off-site. Waste package certification provides the opportunity for:

- Reduced number of container inspections,
- Reduced waste storage,
- Reduced waste container handling,
- Reduced radiological exposure,
- Reduced operating costs, and
- Increased throughput.

A comparative overview of the waste management process with and without waste package certification as a key component is illustrated as Appendix 2 to this paper).

Waste package certification needs to be an integral part of the waste generating process. To facilitate this, the Waste Management Customer Service Organization develops a specific template for the waste generating instructions (WGIs) that will be used to package these wastes. In contrast to existing low-level waste WGIs, this WGI will specify the following:

- Only those requirements specific to waste acceptance criteria at the Nevada Test Site.
- Only those transportation requirements specific to off-site transportation.

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- All wastes must be 100% in-process inspected by a qualified Waste Inspector.
- All wastes must be characterized utilizing surface contaminated object (SCO) methodology.
- Customer Service Organization waste container verification is not required.
- Disposal Projects acknowledgement on the WGI.

Once the WGI has been issued to the waste generating facility/project, the Waste Generator, with oversight from a Waste Inspector, will package the waste in accordance with the requirements specified in the WGI. These two individuals will sign and date the waste container documentation for each waste package placed into the container. This aspect of the process provides for Quality Assurance to be built into the process as opposed to inspected into the container after the fact.

After the container has been closed, a Waste Management Customer Service Representative will be contacted to certify the waste container. This Customer Service Representative has obtained the necessary training and qualifications

### **Training Requirements**

- Building Orientations (Specific to the areas of responsibility)
- DOT Hazardous Waste Transportation
- DOT Radiological Waste Transportation
- Hazardous Communication
- Hazardous Waste Operations
- Radiological Worker
- RCRA Waste Management
- RCRA/Waste Generator
- Respirator Protection/Indoctrination, as applicable
- Waste Stream and Residue Identification and Characterization
- Waste Generator
- Acquisition Procurement for Requisitioning Commodities and Services
- Nonweapons-Procured Item Acceptance and Certification
- Procurement Quality Assurance Requirements
- Control of Nonconforming Items
- Design Process Requirements
- LL/LLM Waste Management Plan
- Subcontractor Quality Evaluations
- Training Implementation Plan
- WIPP RCRA Permit
- WIPP TRU Waste Characterization Program
- Waste Environmental Management System

### **Qualifications Requirements**

- BS Science or Engineering
- 6 or More Years of Relevant Experience

to perform the container certification function and is independent from the waste generating activity. A typical waste container verification checklist is attached as Appendix 3 to this paper.

This certification process involves a documented walk-down/inspection of each waste container to verify the container meets all of the requirements specified in the WGI and all of the applicable documentation is available prior to transport. This process entails verifying the condition of the waste container, verifying the accuracy of the waste package documentation, and locking out certain fields in the electronic waste management database once the waste container is certified.

In the event the containers cannot be certified, the containers and associated paperwork will be turned back to the project or facility for corrective action. Containers that meet the requirements and can be certified will be turned over for load preparation and off-site disposal.

## **DATA MANAGEMENT**

The fourth element of the Waste Management Customer Service approach involves the tracking and trending of data associated with the day-to-day activities of waste management operations. To accomplish this activity, Data Management Specialists are assigned to and work directly with the Customer Service Representatives to enter data into a centralized waste management database. This database tracks the following types of information:

- Waste quantities,
- Generation locations,
- Waste Container storage locations,
- Waste characterization data and rationale,
- Quality records, and
- Historical records

The Data Management Specialists are responsible for the data entry and data maintenance in this database. This includes:

- Obtaining the required data for from Waste Generators,
- Data entry,
- Providing quality assurance checks of the data in accordance with the applicable waste management procedures,
- Updating data as required with new and/or revised information,
- Tracking, trending, and resolution of waste management issues,
- Providing waste inventory and specialized reports as requested by waste generators and/or management personnel,
- Addressing data issues with respect to data accuracy, and
- Maintaining quality records of database activity.

By providing this type of data management support directly from the Waste Management organization, in conjunction with the Customer Service Representative, subject matter expertise is built into the process at the point of generation through final disposal.

## **PROCEDURE DEVELOPMENT**

The fifth element of the Waste Management Customer Service approach involves establishing the requirements infrastructure. The management of radioactive and non-radioactive waste entails numerous requirements that evolve and change on a routine basis. To ensure the latest information is formally documented and disseminated, detailed requirements documents and procedures need to be maintained. These documents not only provide a source for requirements identification, but also provide an auditable trail for compliance verification and customer satisfaction.

The Waste Management Customer Service approach utilizes Procedure/Document Specialists as integral part of the Waste Management organization to establish and maintain a consistent set of requirements for use by the waste generators. This process ensures the regulatory and environmental requirements flow down into operations objectives.

The Procedure/Document Specialists are responsible for providing technical and administrative support to establish and maintain a documented infrastructure that supports the needs of the waste generators, regulators, and the customers at large. This includes:

- Maintaining technical expertise in the field of waste management,
- Understanding and implementing the procedural hierarchy and infrastructure with respect to revision, control, and maintenance of operational and administrative procedures,
- Supporting the development of Operations Orders, Standing Orders, and Shift Orders for those operations impacted by Waste Management Operations,
- Reviewing and commenting on behalf of Waste Management for procedures issued by others,
- Ensuring accurate records are kept and maintained for all procedure modifications, and
- Ensuring consistency and technical accuracy of the waste management procedures.

Once again, by introducing waste management technical and subject matter expertise into the administrative/procedural arenas of waste management, the hierarchy of waste packaging and shipping requirements is maintained effectively communicated to the waste generators. As with the other facets of the Waste Management Customer Service approach,

the Customer Service Representative functions to liaison and provide feedback for the maintenance and communication of change waste management requirements.

## **WASTE GENERATOR TRAINING**

The final element of the Waste Management Customer Service approach involves project specific waste generator training. Through the use of technical and subject matter expertise, a well defined waste management procedural infrastructure, and the overall knowledge and understanding of the waste management process, a comprehensive Waste Generator Training program can be developed that is responsive to the customer's needs and the changing requirements.

The training program consists of both classroom and on the job training. It can be tailored/customized to the specific waste-generating project to meet the needs of both the client and Waste Management. By working directly with the specific project, the need to train all of the workers on all of the waste management requirements is eliminated. This type of job specific training is more effective and results in fewer compliance issues with respect to waste characterization and waste packaging.

A typical waste-generating course can address one, several, or all of the following topics, depending on the customer's expectations:

- Waste Management Process - From Point of Generation through Final Disposal,
- Waste Characterization - Radiological and Chemical,
- Waste Packaging - General requirements or specific container recommendations,
- Container Marking and Labeling,
- Data Management,
- Container Transfer and Shipping, and
- Disposal Site Waste Acceptance Criteria,

## **CONCLUSION**

By utilizing a single point contact for waste management subject matter expertise, integrating and controlling the procurement of waste packaging commodities, and providing a waste management infrastructure with subject matter expertise built in, the management of wastes can be accomplished both effectively and efficiently. The six elements of this approach described above lay the foundation for successful and compliant waste management activities. This approach has been successfully implemented at the Rocky Flats Environmental Technology Site and has received high marks from the Operating Contractor, off-site disposal facilities, and the Department of Energy.

The CSO facilitates the identification, resolution, and integration of these Waste Management elements between the projects and support organizations in order to ensure compliance with applicable procedural, directive, and/or regulatory requirements. Their association with the support organizations is oversight and may vary on a case-by-case basis, as circumstances dictate.

Since the inception of the Customer Service Organization the Rocky Flats Environmental Technology Site has benefited from:

- A 64% increase in waste acceptance.
- A 30% increase in waste packaging efficiencies by implementing the use of cargo containers.
- A 3M-dollar reduction in waste packaging costs by implementing like new cargo's.
- An 86% reduction in waste package non-conformance reports.
- The elimination of non-certifiable waste packaging commodities.
- A 42% reduction in the number of waste packaging commodity types.

All of which has significantly reduced costs, decreased personnel risks, expedited schedules, and increased packaging efficiencies.

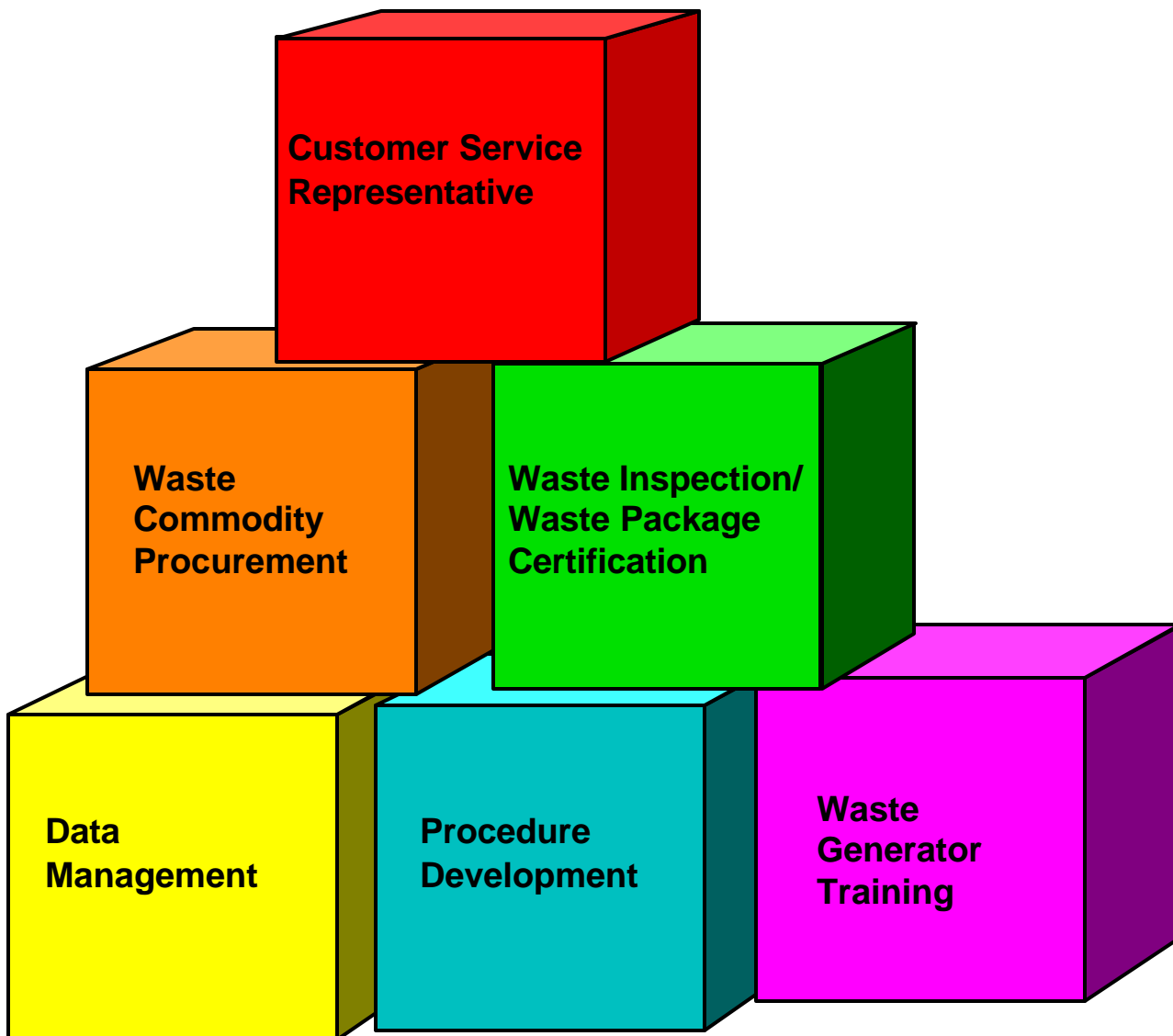


Fig. 1 Six Elements of The Waste Management Customer Service Organization



**NO. GI99XXXXYYYYA**

<b>IDC #: 0XXX:</b>	<b>WASTE TYPE: XXX</b>	<b>NTS PROFILE # OR TRUCON CODE:</b>
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**WASTE DESCRIPTION**

[Waste stream description] And

[Additional descriptive information about the contaminants in the waste stream, such as, "This waste contains RCRA hazardous constituents and is RCRA-regulated hazardous waste."]

**CHARACTERIZATION BASIS:**

Characterization of this waste stream is based on process knowledge or analytical data (attached).

PROCESS NAME	PROCESS NUMBER	IDC OR WFC	CHEMICAL CONSTITUENT CODE RCRA REGULATED	CHEMICAL CONSTITUENT CODE NONRCRA REGULATED	COMP CODE	RCRA HAZARDOUS WASTE	LAND DISPOSAL RESTRICTED	EPA CODE/S

[Other characterization information, such as requirements for WSRIC process codes with variable waste streams, SCO waste, depleted uranium, etc.]

**PACKAGE TYPE/QUANTITY:**

Based on waste generation forecasts for this project, [specific number of packages in alpha format, (number of packages in numeric format) package type description] are approved for this WGI. The number of approved packages may only be changed by the CSR.

Order empty containers through the CSR. The signature of the Customer Service Representative is required on the Material and Supply (M&S) card.

[Additional information, such as requirements for SCO waste characterized as Radioactive Material n.o.s., etc.]

**PACKAGE LINER REQUIREMENTS:**

[Specific liner requirements, such as "one (1) 55-gal polyethylene drum liner bag (10 mil)"]

[Additional liner requirements, such as requirements for light IDCs, sharp objects, etc.]

**PACKAGE LABEL REQUIREMENTS:**

[Specific required labels, such as the Radioactive Material Tag/Label, Beryllium Label, Hazardous Waste Label, classified waste, RAM NOS, RAM Fissile NOS etc.]

**PACKAGING REQUIREMENTS:**

[Unique or specific packaging requirements, such as specific TRUCON Code packaging instructions, requirements for asbestos, Be, PCBs, classified shapes/IDCs, light IDCs, RTR, etc.]

**PACKAGE DOCUMENTATION REQUIREMENTS:**

Waste/Residue Traveler

[Specific documentation requirements, such as the Nuclear Material and Drum Transfer Report, blocking and bracing plan, SCO characterization, signed WSRIC Residue/Waste Stream Characterization Worksheet (for variable waste), documentation of vented and/or filtered status, etc.]

Fig. 2 Example Template of a Waste Generating Instruction

**ACCUMULATION/STORAGE/DISPOSAL:**

Contact the Customer Service Organization with a list of packages to be WGI verified and to arrange transfer.

[Additional requirements for storage and accumulation, such as package-specific outdoor storage requirements, RCRA/CERCLA storage requirements, PCB ballast storage requirements etc.]

**WGI ATTACHMENTS:**

Waste package Type XXX Waste Generating Instruction Addendum, Revision X.

[Other attachments that may be useful to the generator, such as packaging diagrams.]

**AUTHORIZATION:**

The signature below authorizes the generation and packaging of the above described waste.

CUSTOMER SERVICE REPRESENTATIVE : [CSR NAME]

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

[Other signatures as required to document concurrence for project-related issues].

**CONCURRENCE:**

QA REPRESENTATIVE:

SIGNATURE \_\_\_\_\_ EMPLOYEE# \_\_\_\_\_ DATE \_\_\_\_\_

CRITICALITY SAFETY:

SIGNATURE \_\_\_\_\_ EMPLOYEE# \_\_\_\_\_ DATE \_\_\_\_\_  
Signature signifies that the facility is aware of packaging activities and the activities are consistent with Building Criticality Safety Requirements

**GENERATOR ACKNOWLEDGEMENT:**

This instruction has been issued to: \_\_\_\_\_ (Generator Name), (Generator Building or Location) \_\_\_\_\_

The Signature below acknowledges the contents of this instruction and documents the agreement to adhere to these requirements.

SIGNATURE \_\_\_\_\_ EMPLOYEE# \_\_\_\_\_ DATE \_\_\_\_\_

**COMMENTS:**

Fig. 2 (Cont.)

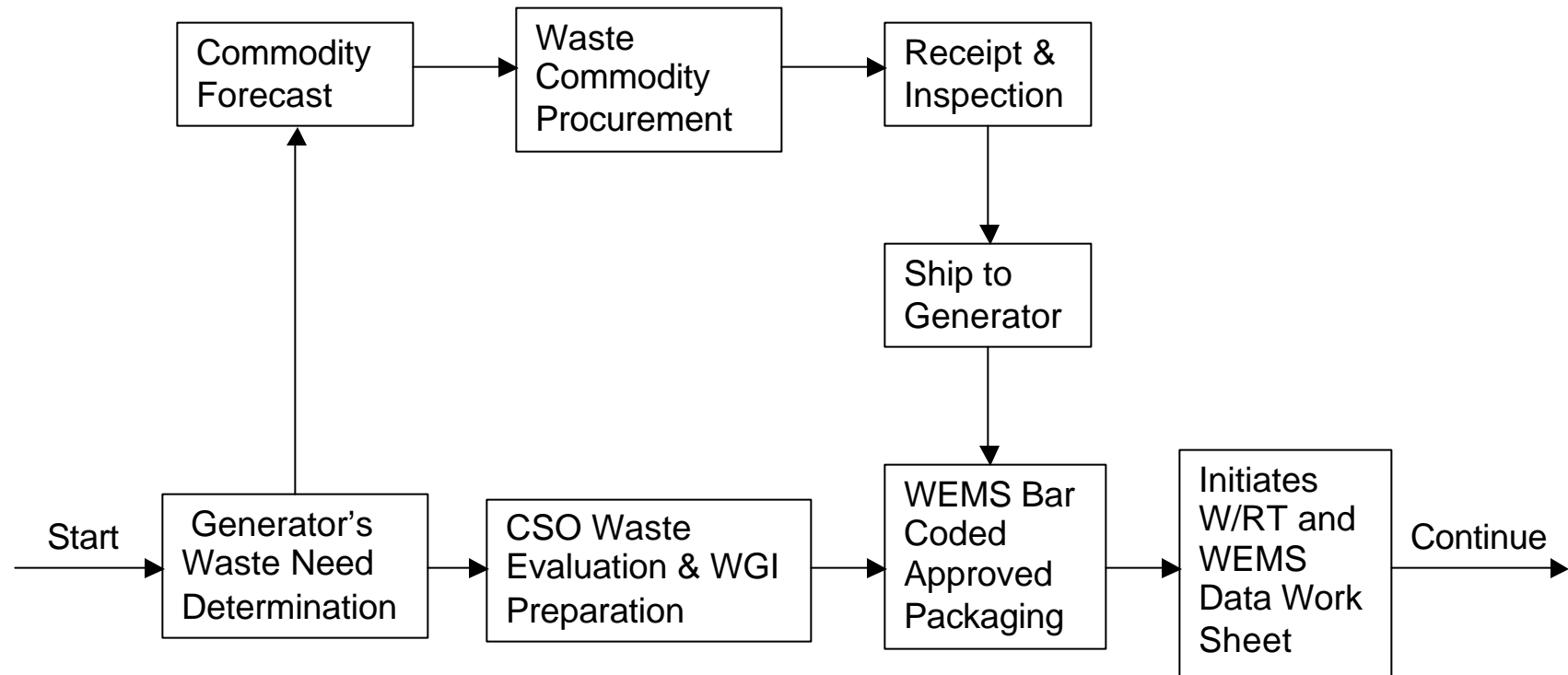


Fig. 3 Waste Process Flow Diagrams

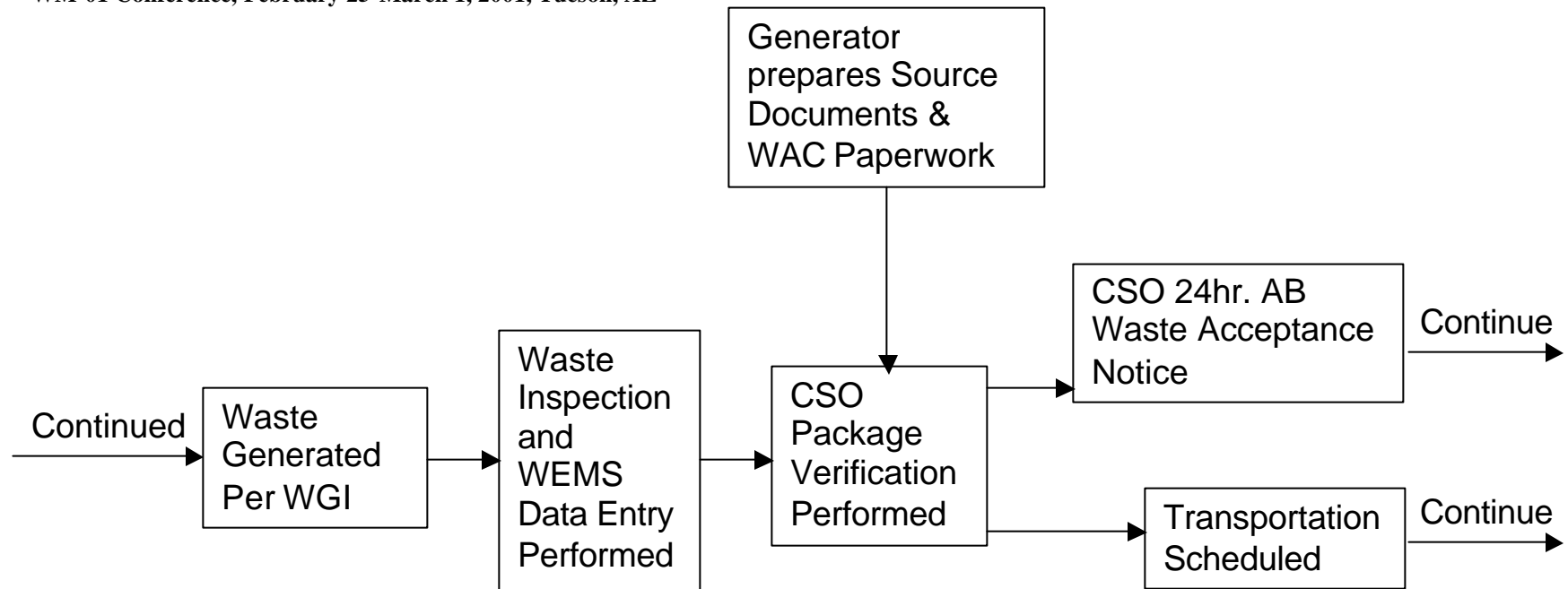


Figure 3 (Continued) Waste Process Flow Diagrams

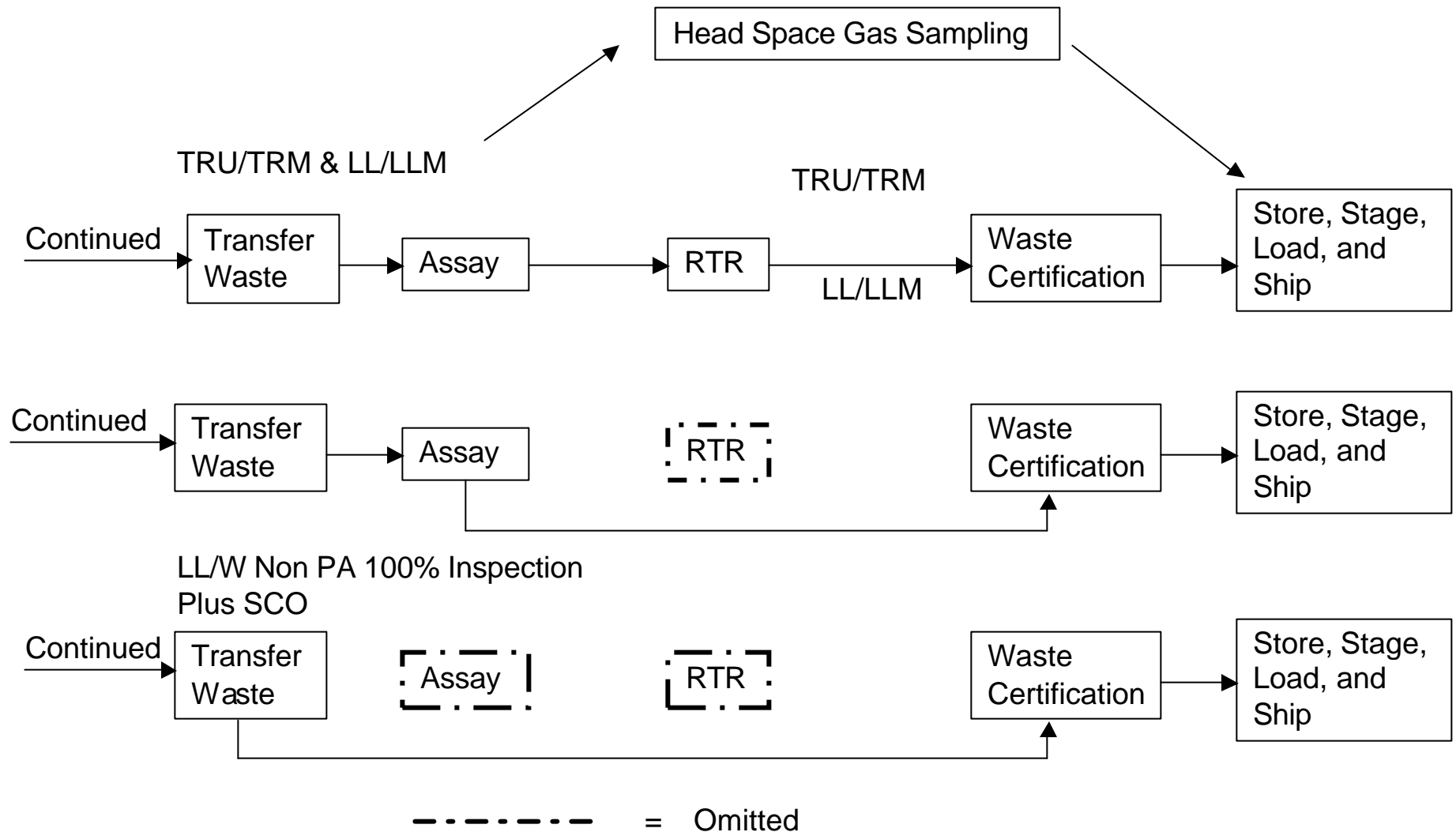


Figure 3 (Continued) Waste Process Flow Diagrams

## CSO WASTE PACKAGE WGI VERIFICATION CHECKLIST

Revision 12 (12/14/99)

Pkg. # \_\_\_\_\_

WGI # \_\_\_\_\_

ACTION		YES	NO	N/A	COMMENT
<b>WEMS VERIFICATION (electronic/field verification of WEMS Package Accuracy Report [PAR])</b>					
1	Exact location accurately documented (i.e., Bldg, Unit, Room, generation Bldg. and Room [if applicable])?				
2	Package #, including extended #, matches that in the W/RT?				
3	Package type matches that in the WGI?				
4	Status, in transit, filter type, and rad fields are accurately documented?				
5	Liner types meet minimum requirements of WGI for LLW/LLM/LLT and exact requirements for TRU/TRM/TRT?				
6	Waste type (e.g., TRU/TRM etc.) matches that in the WGI?				
7	IDC matches that in the WGI?				
8	WGI number matches that in the WGI?				
9	Solid/Liquid/Both/Gas field is accurately documented?				
10	WSRIC or NRWOL Process Numbers match those in the WGI Characterization Basis Section?				
11	RCRA, CERCLA and LDR fields accurately documented?				
12	RCRA information matches that in WGI Characterization Basis Section? - EPA Codes -Compatibility Codes - Accumulation Start Date				
13	CCCs (RCRA and non-RCRA) match those in WGI Characterization Basis Section? Include all "00" CCC codes.				
14	Non-RCRA compatibility codes match those in WGI Characterization Basis Section?				
15	Fill date matches that in W/RT?				
16	TID # matches that on the package?				
17	Total Gamma/Neutron measurements at the surface and at one meter matches with W/RT? Consider WEMS default values for measurements below minimum detectable activities				
18	RCT employee # and RCT date matches those in W/RT?				
19	Values listed in isotopic field match those in W/RT or on assay sheet, if applicable?				
20	Asbestos field accurately documented?				
21	PCB field accurately documented?				
<b>WASTE/RESIDUE TRAVELER VERIFICATION (field verification)</b>					
22	WGI # accurately documented on Page 1 of W/RT (Block 12)?				
23	Liner configuration noted on Page 1 of W/RT meets minimum requirements of WGI for LLW/LLM/LLT and exact requirements for TRU/TRM/TRT?				
24	W/RT consistent with information in WGI Characterization Basis Section?				
25	Waste Inspection completed (i.e., indicated in W/RT by Waste Inspector stamp, signature, and date; and by Inspection Checklist)? - <b>RAD WASTE ONLY</b>				
26	Presence of asbestos (friable or non-friable) is noted in Block 12, if applicable?				
<b>PHYSICAL/FINAL PACKAGE VERIFICATION (field verification)</b>					
28	Package labels match with labels specified on WGI? (Note: PCBs must have out-of-service date on label).				
29	RCRA label: EPA codes (if shown on label), accumulation start date, and compatibility codes match with W/RT?				
30	Package documentation matches with documentation requirements of the WGI? Examples include characterization per RSP 09.05 for SCO, blocking & bracing plan for waste items weighing more than 200 lbs,				

Fig. 4 Typical Waste Container Verification Checklist