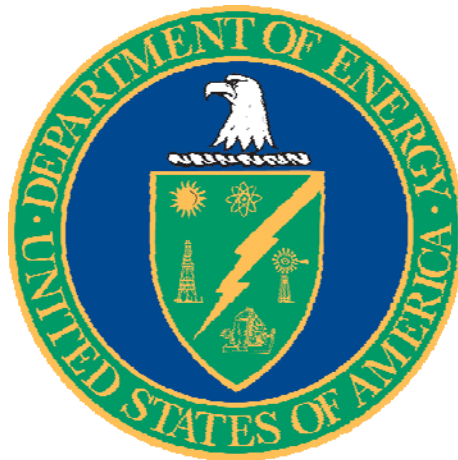


# Waste Data System User's Manual

U.S. Department of Energy

Revision 17

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# Waste Data System User's Manual

Revision 17

CBFO Approval: //Signature on File// January 17, 2018  
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NTP Operations Division

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**CHANGE HISTORY SUMMARY**

| <b>REVISION NUMBER</b> | <b>DATE ISSUED</b> | <b>DESCRIPTION OF CHANGES</b>   |
|------------------------|--------------------|---|
| 16                     | 09/20/17           | <ul style="list-style-type: none"><li>• Replaced Figure 6-F – Packaging Dashboard.</li><li>• Replaced hazardous waste code for hazardous waste number section 5.2.</li><li>• Replaced Figure 6-L – Transportation Dashboard.</li><li>• Added list of figures and list of tables to table of contents.</li><li>• Added SG, WCO, IRM, to Acronyms and Abbreviations.</li><li>• Editorial corrections.</li></ul> |
| 17                     | 01/18/18           | <ul style="list-style-type: none"><li>• Added new Process Assembly screen to Waste Handling Operations Dashboard.</li><li>• Added reports to Packaging Dashboard.</li><li>• Added reports to Safety and Emergency Response Dashboard.</li></ul>   |

**ACRONYMS AND ABBREVIATIONS**

|                |  |
|----------------|--|
| AK             | Acceptable Knowledge                           |
| BOKE           | Basis of Knowledge Evaluation                  |
| CBFO           | Carlsbad Field Office                          |
| CCEM           | Chemical Compatibility Evaluation Memorandum   |
| CFR            | Code of Federal Regulations                    |
| CH             | Contact-Handled                                |
| CHTES          | CH-TRAMPAC Evaluation Software                 |
| CPR            | Cellulose, Plastic, Rubber                     |
| CTMA           | CH-TRUCON Maintenance Application              |
| DA             | Data Administrator                             |
| DB             | Database                                       |
| DOE            | U.S. Department of Energy                      |
| DOT            | U.S. Department of Transportation              |
| DSA            | Documented Safety Analysis                     |
| EPA            | U.S. Environmental Protection Agency           |
| ETS            | Emplacement Tracking Software                  |
| FGE            | Fissile Gram Equivalent                        |
| g/cc           | Grams Per Cubic Centimeter                     |
| HalfPACT       | HalfPACT Waste Shipping Container              |
| HWFP           | Hazardous Waste Facility Permit                |
| ICV            | Inner Containment Vessel                       |
| ID             | Identification                                 |
| IP             | Internet Protocol                              |
| IRM            | Information Resources Management               |
| IV             | Inner Vessel                                   |
| kg             | Kilogram                                       |
| LDR            | Land Disposal Restrictions                     |
| LWA            | Land Withdrawal Act                            |
| m <sup>3</sup> | Cubic Meters                                   |
| MgO            | magnesium oxide                                |
| NIST           | National Institute of Standards and Technology |
| NMED           | New Mexico Environment Department              |

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|             |  |
|-------------|--|
| OC          | Outer Container  |
| OCA         | Outer Containment Assembly                                       |
| OJT         | On-The-Job-Training  |
| OPCTCD      | Overpack Payload Container Transportation Certification Document |
| PATCD       | Payload Assembly Transportation Certification Document           |
| PCB         | Polychlorinated Biphenyl   |
| PCTCD       | Payload Container Transportation Certification Document          |
| PDF         | Portable Document Format   |
| PE-Ci       | Pu-239 equivalent curie  |
| PTCD        | Payload Transportation Certification Document                    |
| QA          | Quality Assurance  |
| RCRA        | Resource Conservation and Recovery Act                           |
| RH          | Remote-Handled   |
| RHTES       | RH-TRAMPAC Evaluation Software                                   |
| RTMA        | RH-TRUCON Maintenance Application                                |
| SG          | Shipper/Generator  |
| SLB2        | Standard Large Box 2   |
| SWB         | Standard Waste Box   |
| T3MA        | TRUPACT-III TRUCON Maintenance Application                       |
| TBO         | To-Be-Overpacked   |
| TCO         | Transportation Certification Official                            |
| TDOP        | Ten-Drum Overpack  |
| TRAMPAC     | Transuranic Waste Authorized Methods for Payload Control         |
| TRU         | Transuranic  |
| TRUCON      | TRUPACT-II Content Code  |
| TRUPACT-II  | Transuranic Package Transporter-Model II                         |
| TRUPACT-III | Transuranic Package Transporter-Model III                        |
| URL         | Uniform Resource Locator   |
| VE          | Visual Examination   |
| WAC         | Waste Acceptance Criteria  |
| WAP         | Waste Analysis Plan  |
| WCO         | Waste Certification Official                                     |
| WDS         | Waste Data System  |
| WIPP        | Waste Isolation Pilot Plant                                      |
| WIPPIVE     | WIPP Instant Virtual Extranet                                    |
| WITS        | Waste Information Tracking System                                |
| WWIS        | WIPP Waste Information System                                    |

## **WASTE DATA SYSTEM DEFINITIONS**

**Acceptable Knowledge (AK)** – Includes any documentation that describes or verifies site history, mission, and operations, in addition to waste-stream-specific information used to define the generating process, waste matrix, waste quantities, and contaminants (radiological and chemical).

**Assembly** – A group of waste containers, such as seven 55-gallon drums or pipe overpacks (seven-pack), three 100-gallon drums, one standard waste box (SWB), one standard large box 2 (SLB2), or one ten-drum overpack (TDOP) that are packed for placement in a transportation package.

**Canister** – The remote-handled (RH) transuranic (TRU) waste canister, which is authorized for transport within the RH TRU 72-B shipping package.

**Certified Waste** – Waste that has been confirmed under a formal program to comply with acceptance criteria under an approved waste certification program.

**Characterization** – Sampling, monitoring, and analysis to identify and quantify the constituents of a waste material, such as review of acceptable knowledge, nondestructive examination, visual examination, nondestructive assay, headspace gas sampling and analysis, or chemical analysis of the volatile or semi-volatile organic compounds or metals.

**Chemical Compatibility Evaluation Memorandum** – The AK Expert performs chemical compatibility evaluations and prepares the Chemical Compatibility Evaluation Memorandum (CCEM). The chemical compatibility evaluation is based on the method described in EPA-600/2-80-076, *A Method for Determining the Compatibility of Hazardous Wastes* (EPA Method).

**Content Code** – Code that describes the generator or physical location of the waste, the physical and chemical form of the waste, and differences in packaging configurations used to demonstrate compliance with the applicable Transuranic Waste Authorized Method for Payload Control (TRAMPAC).

**Database** – The electronic storage of data in a way that allows data manipulation and retrieval. Databases may include tables, fields, and records.

**Exit Code** – Values returned by the application to assist the user in discovering the source of an evaluation failure and to inform the user more specifically of the available shipment options in case of a "conditional" evaluation status.

**Field** – A single fact or data item. A field is the smallest unit of named data that has meaning in a database. In a database table, the fields are commonly referred to as columns.



**Inter-Site Shipment** – A shipment of certified TRU waste containers that meets U.S. Department of Transportation (DOT) and other applicable requirements of the Certificate of Compliance for the shipping package used by the shipper. Inter-site shipments are those that originate at a TRU waste generator site and are being sent to a site for formal characterization, certification, and shipment to Waste Isolation Pilot Plant (WIPP).

**Layers of Confinement** – Any boundary that restricts, but does not prohibit, the release of hydrogen gas across the boundary. Examples of confinement layers are plastic bags (smaller inner bags or larger container bags) with the allowable closure methods described in appendix 3.8 of the contact-handled (CH)-TRU Payload Appendices and metal containers fitted with filter vents.

**Magnesium oxide (MgO) Target Factor** – The targeted amount of excess MgO, over and above the cellulose, plastic, rubber (CPR) components of the waste, that has been emplaced in a WIPP disposal room.

**Overpack Container** – A payload container (85-gallon drum, SWB, TDOP) used to package one or more filtered waste containers, prior to placement of the configuration in a Type B shipping container. The overpacked containers must meet a subset of the regulatory requirements outlined by the CH TRAMPAC, Waste Acceptance Criteria (WAC), and Waste Analysis Plan (WAP).

**Package** – (1) A packaging plus its contents; (2) packaging together with its radioactive contents as presented for transport.

**Packaging** – The assembly of components necessary to ensure compliance with the packaging requirements of the *Code of Federal Regulations*, Title 10, part 71 (10 CFR 71).

**Payload** – (a) Two assemblies (e.g., two 55-gallon drum seven packs or two SWBs) or one TDOP placed in a TRUPACT-II for shipment; (b) one RH 72-B canister placed in a RH72-B Cask for shipment; or (c) one SLB2 placed in a TRUPACT-III for shipment.

**Record** – A collection of related data that is treated as a unit. Records are collections of fields. One record contains data that pertain to a single thing (e.g., container). In a database table, the records are commonly referred to as rows.

**RH 72-B Canister** – Container that is transported in the RH 72-B Cask.

**RH 72-B Cask** – A U.S. Nuclear Regulatory Commission-certified Type B transportation packaging used for transportation of RH-TRU waste.

**RH-TRU Waste** – Transuranic waste with an external radiation dose rate greater than or equal to 200 millirem/hr and less than or equal to 1,000 rem/hr at the waste container's surface.

**Shipment** – A group of up to three reusable Type B shipping containers that will be shipped on one truck.

**Shipment Confirmation** – Performance of waste confirmation on a representative subpopulation of each waste stream shipment after certification and prior to shipment as described in the Hazardous Waste Facility Permit (HWFP). The Permittees will use radiography, review of radiography audio/video recordings, and visual examination (VE), or review of VE records (e.g., VE data sheets or packaging logs) to examine at least 7% of each waste stream in each shipment to confirm that the waste contains no ignitable, corrosive, or reactive waste, that the summary category group and waste matrix code are correct, and that all hazardous waste numbers are acceptable at WIPP. Waste confirmation will be performed by the Permittees prior to shipment of waste from the generator/storage site to WIPP.

**WIPP Waste Information System (WWIS)** – A computerized data management system used by WIPP to gather, store, and process information pertaining to CH and RH TRU waste destined for, or disposed of, at WIPP. The WWIS database is a subsystem of the Waste Data System (WDS).

## **1.0 OVERVIEW**

The Waste Data System (WDS) is a web-based software system used by the Waste Isolation Pilot Plant (WIPP) to gather, store, and process information pertaining to contact-handled (CH) and remote-handled (RH) transuranic (TRU) waste. The WDS incorporates data entry, data administration, and reporting functionality for waste shipments between the U.S. Department of Energy (DOE) generator sites and DOE sites where waste processing and repackaging are performed, and shipments to the WIPP site. The WDS is used to create and store documentation about waste containers, shipments, and emplacement information at WIPP. The WDS is fully compliant with and implements the data requirements summarized in DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (WAC)*, and other specified authorization basis documents. The WAC serves as the DOE's primary directive for ensuring that CH- and RH-TRU waste are managed and disposed of in a manner that protects human health and safety and the environment. The WDS includes all of the elements that were implemented in the WIPP Waste Information System (WWIS) to meet regulatory requirements for the operation of WIPP. The WWIS is a subsystem of the WDS.

The WDS allows users to upload container data, plan and create payloads using uploaded containers, and plan and create shipments using approved payloads. The WDS takes advantage of previously developed applications through direct integration and interfacing.

## **2.0 SUMMARY OF APPLICABLE AUTHORIZATION BASIS REQUIREMENTS AND PERMITS**

The WIPP WAC summarizes the requirements applicable to the transportation, storage, and disposal of CH- and RH-TRU waste at WIPP. The WIPP authorization basis for the disposal of CH- and RH-TRU waste includes the DOE National Security and Military Applications of Nuclear Energy Authorization Act of 1980 and the WIPP Land Withdrawal Act (LWA). The WAC summarizes the requirements and associated criteria imposed by these acts and the Resource Conservation and Recovery Act (RCRA) on the TRU waste destined for disposal at WIPP.

The DOE TRU waste sites must certify CH- and RH-TRU waste payload containers to the WAC. The flow-down of applicable requirements to the WAC and integrated into the WDS are traceable to several higher-tier documents, including, but not limited to:

- Waste Isolation Pilot Plant Documented Safety Analysis (DSA)
- Transuranic Package Transporter-Model II (TRUPACT-II), Transuranic Package Transporter-Model III (TRUPACT-III), and HalfPACT Certificates of Compliance for the transportation of CH wastes, and RH-TRU 72-B Certificates of Compliance for transportation of RH wastes
- WIPP LWA
- WIPP Hazardous Waste Facility Permit (HWFP)
- The U.S. Environmental Protection Agency (EPA) Compliance Recertification Decision and approval for polychlorinated biphenyls (PCBs) disposal
- The EPA letter of approval of the DOE's RH-TRU Waste Characterization Program

The WAC requires that sites transmit required characterization, certification, and shipping data to WIPP using the database. The electronic database is equipped with edit/limit checks to ensure that the data representing the waste payload containers are in compliance with the WAC. The WAC requires the sites to transmit the required waste characterization, certification, and shipping data via the database before shipping TRU waste payload containers from a WIPP-accepted waste stream to WIPP. The WDS implements the authorization basis requirements by edit/limit checks that are included as a software module.

## **2.1 Edit/Limit Checks**

This section describes the edit/limit checks that are incorporated into the WDS software design. Additional information about edit/limit checks is available to users via screen-level and context-level online help.

### **2.1.1 WIPP HWFP – Waste Analysis Plan**

The WDS container characterization edit/limit check evaluations are retrievable as a unit from the WDS middle-tier, and include the container characterization Waste Analysis Plan (WAP) evaluation and the container characterization data integrity evaluation. The WDS Data Dictionary is maintained by Waste Information Tracking System (WITS) personnel and is updated for each WDS Release.

### **2.1.2 WIPP WAC**

The WDS container certification WAC evaluation includes the applicable WAC edit/limit checks based on the container handling code. For both CH and RH containers, the container certification WAC evaluation includes the CH container edit/limit checks and the RH container edit/limit checks.

### **2.1.3 Transuranic Waste Authorized Methods for Payload Control**

The CH-TRUPACT-II Content Code (TRUCON) Maintenance Application (CTMA), RH-TRUCON Maintenance Application (RTMA), and TRUPACT-III TRUCON Maintenance Application (T3MA) are specialized reference data applications used to manage TRUCON Code and Shipping Category data. The data provide references for performing the associated Transuranic Waste Authorized Methods for Payload Control (TRAMPAC) evaluations.

### **2.1.4 WIPP DSA**

The WIPP DSA provides a summary of limits to be imposed on CH and RH containers in accordance with the Nuclear Criticality Safety Evaluation. The WDS conducts edit/limit checks on CH and RH containers according to the values described in Chapter 6 of the WIPP DSA, *Prevention of Inadvertent Criticality*.

The WIPP DSA, Rev. 5, now includes requirements from the WIPP WAC that apply to initial conditions in the DSA accident scenarios and are monitored through Key Elements in Chapter 18 that must be met prior to shipment to WIPP.

### **3.0 SCOPE**

This user's manual provides users with summary information on data entry, data review, conducting searches, and producing output reports, and also describes helpful features contained in each topic-specific dashboard.

The software provides the ability to access the WDS User's Manual from each screen in the system after login. The software provides the ability to access screen-level help for each screen for which approved help content is available. The user can access context-sensitive help for individual sections of a screen for which approved block-level help content is available. On-screen help is also available for the TRUCON Code field on the Container Certification Data Submittal screen on TRUCON Code/Shipping Category associations for CH containers (excluding SLB2 containers).

The magnesium oxide (MgO) barcode application is used to facilitate the receipt and emplacement of CH waste shipments at WIPP. The application was designed to be used by wireless barcode scanners and tied directly to shipment and container information provided by the application. Appendix A provides a summary of the Emplacement Tracking System barcode application and the WDS Manual Emplacement Screen.

A read-only version of the WDS application and database provides access to all report and query functions, except for those that are available only from screens that perform database updates. The read-only version does not allow access to any screens or any functions that perform database updates, except for updates to user preferences, password changes, and Report Builder query saves/updates. The read-only version is accessible only to registered WDS users. The internet address is <https://wds.wipp.ws>.

## **4.0 SECURITY, ACCESS PRIVILEGES, PASSWORDS, AND CONNECTIVITY**

This section provides information about security, passwords, and connectivity. This information can also be found in User Preferences screen-level help. WDS users who are external to WIPP access the system via DOENet or the WIPP Instant Virtual Extranet (WIPPIVE) server. Users who are internal to WIPP in Carlsbad and at the WIPP site access the WDS via WIPPNet. User Preferences screen-level help also provides instruction for obtaining help from the WIPP Data Administrator (DA).

### **4.1 Security**

Effective security is vital for safeguarding information and business processes. The WDS makes every reasonable effort to provide safe and secure access for its users while maintaining the highest levels of data security. This section summarizes components that comprise the overall security design for the WDS.

The goal of the WDS web server deployment is to closely follow the recommendations set forth in the National Institute of Standards and Technology (NIST) Guidelines on Securing Public Web Servers. The NIST guidelines provide comprehensive standards for securing web servers and the applications they contain. The security requirements and security controls that are in place to protect the accreditation boundary and the database have been implemented as described in the Department of Energy Office of Environmental Management Program Security Plan. System requirements are outlined in the screen-level help for each dashboard.

### **4.2 Connectivity and WIPP Technical Support Contact Information**

Prospective users who require access to the WDS may contact a DA via email at [DL\\_WDS\\_DA@wipp.ws](mailto:DL_WDS_DA@wipp.ws) to request access to WDS. Alternatively, the prospective user may contact a DA by telephone to obtain a WDS Access Request Form or requests for other support. The prospective user will be sent a WDS Access Request Form via email. The prospective user will then complete the form, provide justification of the need for access to the application, have the form approved by a management sponsor, and return it via email or fax to the DA. Upon receipt of the completed WDS Access Request Form, the DA will set up the user's account in the application and interface with the WIPP Information Resource Management (IRM) Group to assist the user with any connectivity issues that may prevent the user from accessing the WDS. If necessary, completion of additional forms may be required to establish access to the WIPP Secure Access (WIPPIVE), DOENet, and WIPPNet. After all required application forms have been completed and approved, the prospective user will receive via email the Uniform Resource Locator (URL) (i.e., internet address) needed to connect to the system, along with instructions regarding security and maintenance of passwords.

### **4.3 User Accounts and Passwords**

Each registered user is assigned a User identification (ID) and creates a password that is used to log in to the WDS application. The “complex” password criteria described here are also covered in User Preferences screen-level help. The software will display the password expiration date based on the default 90-day password expiration period. At the end of the 90-day password expiration period, the user is required to create a new password. The user's password must be a "complex" password that meets the following criteria:

- Password must be at least 12 characters long
- Password must contain three of the following:
  1. Uppercase letters (A-Z)
  2. Lowercase letters (a-z)
  3. Numbers (0-9)
  4. Special characters (! @ # \$ % ^ & \* ( ) + - = ? space)
- Passwords must not contain the user's first or last name, or the account username
- Passwords cannot start with a number
- Old passwords cannot be reused
- Passwords must contain at least eight non-blank characters

When the user account is created, each user is assigned a primary role based on the functions that the user will perform when using the WDS. For example, users who upload and submit container data to the WDS and users who create payloads and shipments are assigned the Shipper/Generator ([SG](#)) user role. Connectivity, WIPP Technical Support Contact Information, and User Roles are explained in detail in screen-level help for each user role.



**NOTE**

In accordance with an approved program plan document, the DAs create, edit, and inactivate WDS user accounts, add or remove role associations to user accounts, and add or remove site/program associations with user accounts. Whenever an inactivated user account is reactivated, the password is reset. When a password is reset by the user or the DA, the password expiration date will be set based on the default password expiration period. The password can be changed at any time, which will initiate a new 90-day expiration period.

Users will receive a system message when their passwords are within two weeks of expiration. Users who have not logged on to the WDS within the past 30 days will be notified via email of account inactivity, and users will be notified again after 60 days of inactivity. Accounts for users who have not logged into the WDS in the past 90 days will be automatically inactivated and the users will be sent an email message notifying them of their inactive account status.

Whenever a password is created or an existing password is reset, the user is required to confirm the new password by entering it a second time. Detailed instructions for creating and confirming a new password are outlined in screen-level help. After a user account has been established, the user is permitted to update the following account record fields by clicking the user preferences link at the bottom of the page: first name, last name, phone number, fax number, company, address, city, state, zip code, password, email address, and email notification flag. The User ID cannot be edited.

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The screenshot displays the WDS Login Page. At the top, a red banner reads "System Use Notification". Below this, a warning message is repeated: "\*\* WARNING \*\* WARNING \*\* WARNING \*\* WARNING \*\*". The main text is a disclaimer: "THIS IS A UNITED STATES GOVERNMENT COMPUTER. By logging onto this information system, or any devices connected to the information system, the user acknowledges, understands, and consents to certain identified actions. The user acknowledges, understands and consents to the fact that the user has no reasonable expectation of privacy regarding communications or data transiting or stored on the information system or devices connected to the information system. The user acknowledges, understands and consents to the fact that at any time and for any purpose, the government may monitor, intercept, record, and search any communications or data transiting or stored on the information system or devices connected to the information system. The user acknowledges and understands and consents to the fact that any communications or data transiting or stored on the information system or devices connected to the information system may be used or disclosed for purposes, including, but not limited to law enforcement or other government agencies, as deemed appropriate by DOE or as mandated by law. The user acknowledges, understands and agrees to be bound by requirements for use of government information systems consistent with DOE Order 203.1 and any other applicable DOE Order or directive regarding use of DOE information systems. The user acknowledges, understands and consents to the fact that unauthorized or improper use of Government information systems may result in limitations placed on the use of Government information systems, disciplinary or adverse actions, criminal penalties, and or financial liability for the cost of such improper use. To the extent the user has any questions concerning use of government information systems, the user will consult with their supervisor or other appropriate person." This text is followed by another warning: "\*\* WARNING \*\* WARNING \*\* WARNING \*\* WARNING \*\*". Below the text is a checkbox labeled "I AGREE TO THE ABOVE TERMS OF USE.". To the left of the login fields is the WDS logo, which consists of a circular icon with a red and blue design and the text "WDS WASTE DATA SYSTEM". The login fields include "Username" (text input), "Password" (password input), and "DB Instance" (dropdown menu with "prd05.wipp.carlsbad.nm.us" selected). A "LOGIN" button is positioned below these fields. In the bottom right corner, a dark grey box contains the text "INSTANCE: N/A" and "BUILD: WDS\_20160906".

**Figure 4-A – WDS Login Page**

### NOTE

If the URL changes, users will be notified. At first login, users may add the WDS link to their browser Favorites list.

When the URL is entered into the browser or selected from the user's Favorites list, the WDS login screen will appear as shown in Figure 4-A. Read the Privacy and Security Notice prior to logging in.

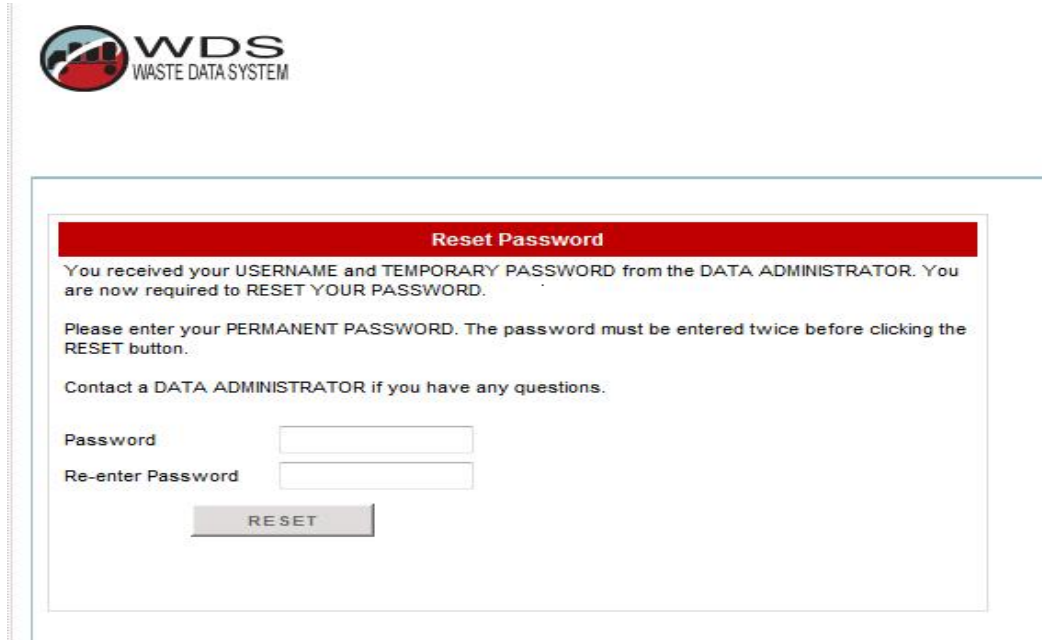
Use the following process to log in:

- Select the checkbox to agree to the terms of use.
- Enter a valid username in the User ID block.
- Enter a valid password in the Password block.
- Select the database that needs to be accessed from the database (DB) instance dropdown menu.
- Press the Login button.

**NOTE**

If the terms of use checkbox is unchecked, the user will be reminded to check the box before proceeding.

At first login, after the warning message has been confirmed and the login button is pressed, the software directs the new user to reset the password as shown below. Refer to this section and screen-level help for password requirements.



**Figure 4-B – WDS Reset Password Page Example**

The WDS stores the username, user Internet Protocol (IP) address, and date/time of login attempt for any login attempt to the system. The WDS will automatically close the current session after 30 minutes of inactivity. The user must then reenter identification and authentication information to access the WDS. The WDS enforces a limit of three consecutive invalid access attempts by a user during a 15-minute period, after which the WDS locks the account.

**NOTE**

Once the threshold of bad login attempts has been reached, the account will be automatically locked for one hour or until a DA unlocks it. When an account is unlocked, the WDS requires the DA to generate the password. After the DA has reset a user password, the user is required to create a new password upon the first login. The user is required to confirm the updated password by entering it a second time with an exact match.

Upon a successful login, any current and unexpired system messages are displayed. After acknowledgement of system messages, the software directs the user to the dashboard for the user's designated primary role. Dashboards are made available for selection by using the Dashboard dropdown menu.

## **5.0 VOLUME CONVERSION, WEIGHT CONVERSION, PACKING FRACTIONS, AND MgO CALCULATIONS**

This section provides a basic summary of standard volumetric conversions used in the database and instructions for navigating the WDS.

The container volume of a CH waste container is defined in cubic meters (m<sup>3</sup>) in the *Container Types Reference Data Report*.

The waste volume of a CH or RH payload container is calculated in m<sup>3</sup> as the sum of the container volume of the waste container(s) comprising the payload container, excluding the volume of dunnage containers. The waste volume of each pipe overpack is equal to the volume of the respective pipe component.

The container volume of an RH waste container is defined in m<sup>3</sup> in the *Container Types Reference Data Report*.

For weight conversion, the WDS converts kilograms (kg) to pounds by multiplying by a factor of 2.205. For all weight calculations, the software performs the entire calculation in kg and applies the conversion factor for pounds to the result when applicable. The waste container net weight is the sum of all material parameter weights for those material parameters identified as waste reported for the container.

## **5.1 Packing Fractions for Compacted Waste**

The WDS determines the packing fraction based on the compaction level of a non-overpack container in grams per cubic centimeter (g/cc) of waste, based on the density of the CPR (excluding cellulosic and plastic packaging materials in pipe overpacks) present in the container compared to the density of polyethylene as follows:

- $\text{CPR density (g/cc)} = ((\text{waste CPR weight (kg)} + \text{packaging CPR weight (kg)}) \times 1000 \text{ (g/kg)}) / (\text{container volume (m}^3) \times 1000000 \text{ (cubic centimeters cubed [cm}^3\text{]/m}^3\text{)})$
- 20% poly density =  $.20 \times .923 \text{ (g/cc)} = .1846 \text{ (g/cc)}$ : If the container CPR density (g/cc)  $>.1846 \text{ (g/cc)}$  and  $\leq .6461 \text{ (g/cc)}$ , the compaction level is defined as "partially compacted."
- 70% poly density =  $.70 \times .923 \text{ (g/cc)} = .6461 \text{ (g/cc)}$ : If the container CPR density (g/cc)  $>.6461 \text{ (g/cc)}$ , the compaction level is defined as "fully compacted."
- If the container CPR density (g/cc)  $\leq .1846 \text{ (g/cc)}$ , the compaction level is defined as "non-compacted."

The WDS determines the compaction level of an overpack container to be the highest level of compaction present in the individual containers in the overpack container. Refer to the *Constants Reference Data Report* for a listing of minimum/maximum values and units of conversion for reported radionuclide values that are used in the WDS.

## **5.2 Land Disposal Restriction Notification**

If any waste stream profile associated with a shipment has not appeared on a previously sent shipment, or if any hazardous waste number has not appeared on a previously sent shipment in the waste stream profile associations present on a shipment, Land Disposal Restrictions (LDR) paperwork is required for the shipment. As an enhancement to ensure compliance with HWFP requirements regarding LDR notification, a message will appear on the shipment screen to prompt the user to initiate an LDR notification when needed.

### 5.3 MgO Excess Factor and MgO Excess/Deficit

The software calculates the MgO excess for a specified emplacement location (panel and room) using the following equation:

$$\text{MgO Excess/Deficit (lbs)} = [ m_{MgO} - [ t_{p,r} \times 6 \times [ [ m_c + m_r + (1.7m_p) ] \div 162 ] \times 40.3 ] ] \times 2.205$$

where

- $m_{MgO}$  = Total mass of MgO sacks in the specified Panel/Room (kg)
- $m_c$  = Total mass of cellulose (kg):  
Cellulose in waste + cellulose in packaging + cellulose in MgO sacks + cellulose in emplacement assembly
- $m_r$  = Total mass of rubber (kg):  
Rubber in waste + rubber in packaging + rubber in MgO sacks + rubber in emplacement assembly
- $m_p$  = Total mass of plastic (kg):  
Plastic in waste + plastic in packaging + plastic in MgO sacks + plastic in emplacement assembly
- $t_{p,r}$  = Target excess factor for panel and room

The software calculates the MgO Excess Factor for a specified emplacement location (Panel and Room) using the following equation:

$$\text{Excess Factor} = m_{MgO} / [ 6 \times [ [ m_c + m_r + (1.7m_p) ] \div 162 ] \times 40.3 ]$$

where

- $m_{MgO}$  = Total mass of MgO sacks in the specified Panel/Room (kg)
- $m_c$  = Total mass of cellulose (kg):  
Cellulose in waste + cellulose in packaging + cellulose in MgO sacks + cellulose in emplacement assembly
- $m_r$  = Total mass of rubber (kg):  
Rubber in waste + rubber in packaging + rubber in MgO sacks + rubber in emplacement assembly
- $m_p$  = Total mass of plastic (kg):  
Plastic in waste + plastic in packaging + plastic in MgO sacks + plastic in emplacement assembly

## 6.0 DASHBOARD SUMMARIES


Depending upon assigned database privileges, the user will have the option to select one or more dashboards from the main menu. When the desired dashboard is selected, the user will then have the option to select the Functions tab to view the links to the functions and the Reports tab to view the links to the reports that are available from the dashboard. Screen-level and context-level help is available from the dashboard.

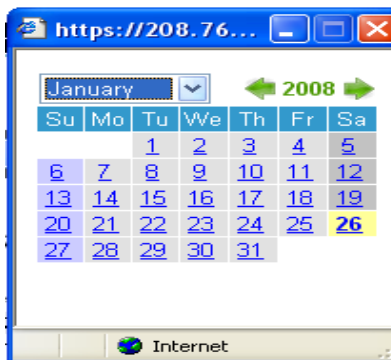
### 6.1 General Report Structure

The following items are displayed on all reports:


- Title page fields: report date/time, report title, version of the report, WDS instance on which the report was executed, User ID of the current user, total number of pages in the report, select criteria (as applicable)
- Header of each page: report title, "Waste Isolation Pilot Plant," page number

Reports are available in portable document format (PDF) unless otherwise specified. The default selection criteria are set to a wildcard (%) or NULL value (blank). When a wildcard or NULL value is used for the selection criterion, the WDS will not restrict the query by that parameter. The default date is set to 1/1/1999 for all start date criteria fields, unless otherwise specified. The default date is set to the current date for all end date and single date selection criteria, unless otherwise specified by the user at the time the report is generated. When a container number, payload ID, or shipment number is input or otherwise displayed, the user is provided direct access to the corresponding container report (e.g., *container data report*, *overpack data report*, *canister data report*, *payload report*, or *shipment summary report*).

When establishing parameters to run reports in the WDS, the user may have the option to filter the report being run with a specified date range. This is accomplished using the date calendar function. The user clicks the  icon to open the calendar. The calendar for the current month with the current date highlighted appears on the screen (see Figure 6-A).



**Figure 6-A – WDS Date Calendar Example**

To insert a date into the date field, the user clicks the desired day on the calendar. If the start or end date of a different month is needed, the user selects the desired month from the dropdown list.  If either the start date or end date for the previous calendar year is required, the user uses the green arrows to toggle back to previous years. When the day, month, and year have been selected, the user clicks on the highlighted day to insert the date into the field on the report form.

## 6.2 General User Roles/Access to Reports

DA, [Shipper/GeneratorSG](#), and Packaging users are allowed to access reports for container, overpack, canister, payload, and shipment records without regard to status.

Confirmation users and Transportation users are allowed to access shipment reports for shipments without regard to status. All other report types are restricted to approved or completed records only (containers, overpacks, payloads).

All other users (Waste Handling Operations, Transportation, New Mexico Environment Department (NMED), EPA, Carlsbad Field Office (CBFO), Safety and Emergency Response, and General WIPP User and Business Reports users) are restricted to reports for approved or completed records only (containers, overpacks, payload, shipments). Access to reports concerning inter-site shipments is restricted to Business Reports, DA, [Shipper/GeneratorSG](#), and Packaging users.

**NOTE**

If reference data are not available for a site due to assignment of privileges, refer to the User's Reference Data Report to review assigned privileges.

Refer to screen-level and context-level help for details about all reports that are available from all dashboards.

The following table outlines the user roles and the characteristics of users who perform the roles. A brief description of the role function is also provided.

**Table 1 – WDS Roles and User Characteristics**

| <b>WDS Role</b>           | <b>Typical User Role and Characteristics</b>  |
|---------------------------|---|
| Acceptable Knowledge (AK) | The AK dashboard is accessible to users who have the AK role. The dashboard provides access to the CCEM Data Entry, CCEM Review, AK Assessment Date Verification screens, and the Basis of Knowledge Evaluation (BOKE). Users with the additional Chemical Administration role also can access the Master Chemical/Material List Administration screen. |
| Business Reports          | The Business Reports role provides reports to support contract objectives.  |



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**DOE/WIPP-09-3427, Rev. 17**

| <b>WDS Role</b>               | <b>Typical User Role and Characteristics</b>  |
|-------------------------------|---|
| Carlsbad Field Office         | The CBFO dashboard is accessible to the users with CBFO role. It provides access to the Summary, Emplacement, Shipment, and Chemical Compatibility Reports.   |
| Chemical Administrator        | Access to the Master Chemical/Material List Admin function is restricted to users who are assigned the AK user role.  |
| Confirmation                  | The Shipment Confirmation users are members of the Regulatory Environmental Services group at WIPP that monitor shipments for compliance with the Hazardous Waste Facility Permit. The Confirmation group performs container data review on a shipment-waste stream basis. Shipment confirmation approval is required for each to-WIPP shipment processed in the WDS. |
| Data Administrator (DA)       | The DAs are members of the National TRU Program's Waste Information Tracking Systems group with background and training in both the software and applicable regulatory documentation.   |
| EPA                           | The EPA role provides system access for users who are from or who represent the EPA. Read only access to query and report functionality is provided to the users from the perspective of compliance with EPA regulations.   |
| General WIPP User             | WIPP user may include individuals in management, technical support, or <a href="#">Quality Assurance (QA)</a> positions within the DOE complex who have a need to review container, payload, or shipment data from an individual record or report perspective on an occasional basis.   |
| NMED                          | The NMED role provides system access for users who are from or who represent the NMED. Read only access to query and report functionality is provided to the users from the perspective of compliance with the HWFP.  |
| Packaging                     | The Packaging Implementation and Technical Support group at WIPP is involved with reviewing containers, payloads, and shipments for compliance with the TRAMPAC documentation.  |
| Safety and Emergency Response | The Safety and Emergency Response dashboard is accessible to users with the Safety and Emergency Response role. The dashboard provides access to the General Query function, the Nuclide Report, and the On-Site Waste Location Report.   |
| Shipper/Generator (SG)        | Users in the SG role are typically Waste Certification Officials (WCOs) and/or Transportation Certification Officials (TCOs). WCOs supervise the entry of payload container data into the WDS. TCOs focus on the data entry required for the design of payloads and shipments.  |
| Transportation                | Transportation Management personnel at WIPP are involved with the scheduling and receipt of shipments to and from the WIPP facility.  |
| Waste Handling Operations     | Waste Handling Operations personnel at WIPP are involved with the processing and emplacement of waste, and the emplacement of MgO.  |

### **6.3 Shipper/Generator Dashboard Functions**

The functions and reports available from the [Shipper/Generator-SG](#) dashboard are shown in Figure 6-B. Additional details about the functions performed by [Shipper/Generator-SG](#) users are described in screen-level help. Screen-level help provides additional details about reports accessible from this dashboard.

The WDS will allow users to upload container data, plan and create payloads using uploaded containers, and plan and create shipments using approved payloads. Access to the shipment data entry function is restricted to the [Shipper/Generator-SG](#) user group. The [Shipper/Generator-SG](#) user can create a new shipment record or edit an existing shipment record. Options are provided to allow the user to indicate the inclusion of dunnage in a shipment due to weight limitation, fissile gram equivalent (FGE) limitation, Gas Generation limitation, or other limitation.

The user can associate one or more payloads with a shipment in the New Shipment (NEW\_SHIP) status. The user can delete payloads and all associated packaging data, from the active shipment record if the shipment has a (NEW\_SHIP) status. The WDS automatically populates the shipment Governing Shipping Period field with the minimum governing shipping period for the payloads associated with the shipment. Visual attributes are provided to enable users to distinguish containers (and their associated assemblies and/or payloads if applicable) in Pending Certification Data Approval status from those in Certification Data Approved status within the shipment data entry function.

The WDS automatically populates the Handling Material Weight field with the Handling Material Weight specified in the Packaging/Container Types reference table for the given packaging and container type of the payload as the default value. Inner Containment Vessel/Inner Vessel (ICV/IV) Closure Date must include the time of closure. The WDS automatically provides a candidate list of payloads, where the selection criteria include all completed payloads saved to the database with the Shipping Program ID, Current Location, and Destination Site ID of the active shipment that have not been assigned to a shipment. As payloads are added to the shipment, the WDS limits the list of payload candidates to payloads of the same handling code of the payloads already assigned to the shipment. For each candidate payload, the WDS displays the payload governing shipping period and PCB indicator flag.

The WDS calculates and displays the following total fields for the payloads associated with the active shipment: Package Weight, Payload Weight and Error (kg), FGE and 2 x Error, Decay Heat & Error (W), and Pu-239 Equivalent Curies (PE-Ci). For each total shipment error field, the WDS automatically calculates the total as the Root Sum Square, or square root of the sum of the squares of the payload errors.

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The user has access to the payload data (via the *Payload Data Report*) for each payload associated with the active shipment. The user can save the shipment record without submitting the record. The WDS enables the save function if a unique shipment number has been entered. Upon successful save of a shipment that has not previously been saved, the WDS sets the shipment record to New Shipment status and records the insertion into the database in the shipment status history table. The overall shipment status is displayed (i.e., New, In Review, Complete, En Route, or Received). The overall shipment status is displayed with respect to the following three subcomponents of the shipment status: confirmed status, DA review status, and shipment data finalized status. When the shipment is submitted to the review process, the WDS executes the preliminary shipment edit/limit check evaluation. If the shipment passes the preliminary shipment edit/limit check evaluation, the WDS automatically sets the shipment status to In Review, records the status change in the shipment status history table, sends an email to the Confirmation Team distribution list stating that the shipment is ready for confirmation review (WIPP destination site only), and sends an email to the Data Administrator Team distribution list stating that the shipment is ready for DA review (WIPP destination site only). If the shipment fails the preliminary shipment edit/limit check evaluation, the WDS provides access to the detailed results for the shipment edit/limit check evaluation. The user can submit the active shipment to the final shipment edit/limit check evaluation if the shipment data have not already been finalized. The WDS updates the shipment data finalized status to TRUE and records the shipment finalization in the shipment status history table if the shipment passes the final shipment edit/limit check evaluation. If the shipment fails the final shipment edit/limit check evaluation, the user is provided access to the detailed results for the shipment edit/limit check evaluation.

All shipment data, with the exception of Send Date, are protected from update for a shipment record with shipment data finalized status = TRUE. The user can update a shipment in Complete (COMPLETE\_SHIP) status to En Route status and record the change in status in the shipment status history table. All shipment data, including the Send Date, are protected from update for a shipment with an En Route status. The applicable errors from the most recent shipment edit/limit check evaluation are displayed. The user can delete shipment records in New Shipment status or shipment records in In-Review status that are not confirmed and not DA approved. The WDS automatically clears all payload associations to the shipment when a shipment is deleted. The user can reset the shipment status to New Shipment for the active shipment and the WDS will automatically record the reset in the shipment status history table if it is in "In Review" status and has not been confirmed. If the shipment has DA approval, the WDS automatically removes the approval and sends an email to the confirmation team distribution list stating that the shipment is no longer available for confirmation review (WIPP destination site only).

The user can set the shipment data finalized status to FALSE if the shipment is in a status prior to En Route status. When the shipment data finalized status is set to FALSE, the WDS updates the shipment status to "In Review" and records the status change in the shipment status history table.

The user has access to the *Payload Assembly Transportation Certification Document* (PATCD) reports for one or more TRUPACT or HalfPACT payloads assigned to the active shipment. The user has access to the *Payload Transportation Certification Document* (PTCD) report for one or more RH 72-B payloads assigned to the active shipment. The user can access the *Payload Container Transportation Certification Document/Overpack Payload Container Transportation Certification Document* (PCTCD/OPCTCD) report for all payload containers assigned to the active shipment and for all payload containers and associated inner containers (as applicable) assigned to the highlighted payload. The user can access the *Shipment Summary Report* for the displayed shipment.

## **Exporting Files**

The [Shipper/Generator-SG](#) dashboard provides access to the following file export functions:

- Containers meeting the selected overpack candidate query parameters
- Containers meeting the selected canister candidate query parameters
- Containers meeting the selected payload candidate query parameters
- Container activity query function that displays the total number of containers inserted, approved (first time DA certification approval), and shipped that meet the selected query criteria
- Container activity query results
- Containers in presubmittal certification status query
- Certified containers not shipped query
- Containers assigned to shipment query
- Shipment PE-Ci and FGE query

# Waste Data System User's Manual

## DOE/WIPP-09-3427, Rev. 17

**WDS**  
WASTE DATA SYSTEM

Users Manual RICHEY, LINDA KAY (KATIE)  
05/11/2016 07:54

DASHBOARD AD-HOC QUERY SCRIPT INTERFACE REPORT BUILDER

Dashboard SHIPPER GENERATOR DASHBOARD

Container

**FUNCTIONS**

- Container Characterization Data Submittal
- Container Certification Data Submittal
- Canister Planning & Completion
- Overpack Planning & Completion
- Payload Planning & Completion
- Shipment Data Entry
- Data Upload Function
- Dunnage Container Data Entry
- Intersite Shipment Receipt

**REPORTS**

- > Container Certification Approval/Rejection Report
- > Containers with Conditional Status List
- > Containers in Certification Pre-submittal Status
- > Containers Certification Approved - Not Yet Shipped
- > Containers Certification Approved - Assigned to Shipment
- > Shipment FGE and PE-Ci Totals
- > Shipment Summary Report
- > Container and Shipment Query
- > Reference Table Reports
- > TRUCON Help
- > Master Chemical/Material List Report
- > CCEM Report
- > CCEM by Waste Stream Profile Report

Figure 6-B – Shipper/Generator Dashboard

## 6.4 Waste Handling Operations Dashboard

The functions and reports that are available from the WIPP Waste Handling Operations dashboard are shown in Figure 6-C. Details about the Shipment Receipt function performed by WIPP Waste Handling Operations and Transportation users are described in an approved WIPP TRU waste receipt procedure. The Manual Emplacement function must be used for emplacement of RH waste containers. Details about waste emplacement at WIPP are provided in WIPP Waste Handling Operations procedures. Screen-level and context-level help provides additional details about generating reports that are accessible from this dashboard.

**WDS**  
WASTE DATA SYSTEM

Users Manual JONES, LAURA LOG OUT

11/30/2016 08:01 HELP

DASHBOARD AD-HOC QUERY SCRIPT INTERFACE REPORT BUILDER

Container SEARCH

Dashboard WASTE HANDLING OPERATIONS DASHBOARD

**FUNCTIONS**

- Site Derived Waste Container Data Submittal
- WIPP Shipment Receipt
- Manual Emplacement
- Barcode Application

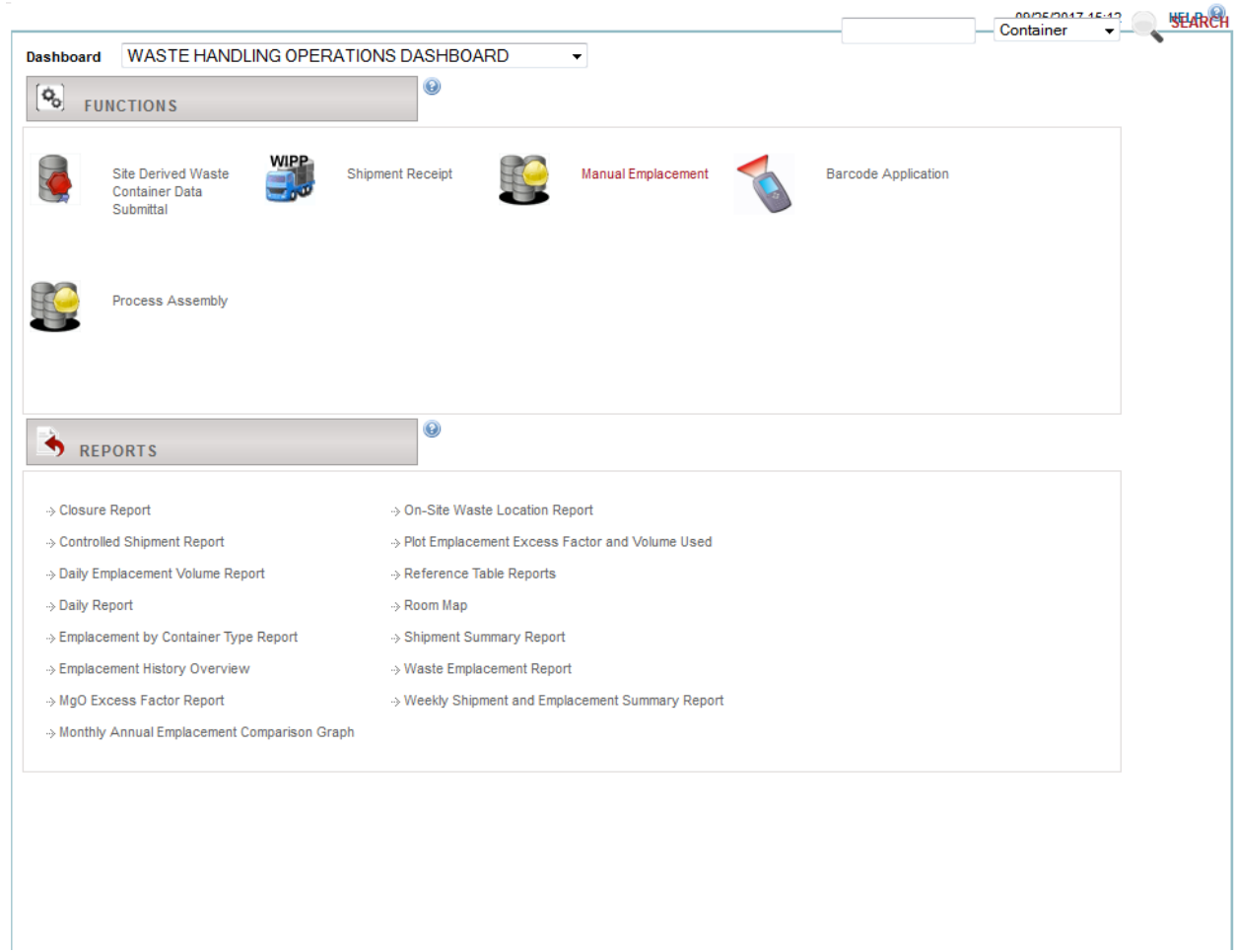
**REPORTS**

- Closure Report
- On-Site Waste Location Report
- Controlled Shipment Report
- Plot Emplacement Excess Factor and Volume Used
- Daily Emplacement Volume Report
- Reference Table Reports
- Daily Report
- Room Map
- Emplacement by Container Type Report
- Shipment Summary Report
- Emplacement History Overview
- Waste Emplacement Report
- MgO Excess Factor Report
- Weekly Shipment and Emplacement Summary Report
- Monthly Annual Emplacement Comparison Graph

MESSAGES | [USERS MANUAL](#) | [USER PREFERENCES](#) --- LAST LOGIN: 11/29/2016 13:49 - # OF FAILED LOGINS SINCE: 0

INSTANCE: prd05.wipp.carlsbad.nm.us  
BUILD: WDS\_20160906

# Waste Data System User's Manual DOE/WIPP-09-3427, Rev. 17



**Figure 6-C – Waste Handling Ops Dashboard**

## 6.5 Shipment Confirmation Dashboard

The Shipment Confirmation dashboard allows a user to view a series of detailed data reports on individual shipments. Requirements for TRU-Mixed waste confirmation are described in the WIPP HWFP, Att. C(7). The functions and reports available from the Shipment Confirmation dashboard are shown in Figure 6-D. Details about use of the functions that are available from this dashboard, as well as details about generating the reports are further explained in screen-level and context-level help.

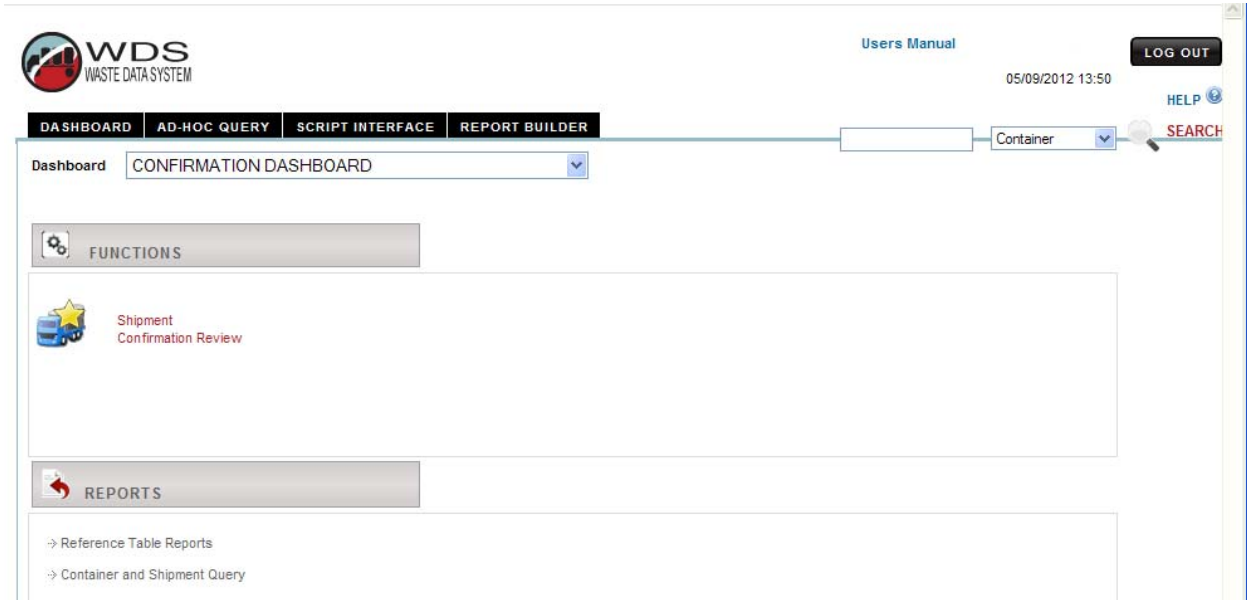


Figure 6-D – Confirmation Dashboard


The Shipment Confirmation Review page also provides several other report links:

The *Payload Container List* report generates a PDF listing of the container number and container type for each container in the shipment grouped by waste stream and payload.

After the confirmation process is complete, the user presses the confirm button located at the bottom of the form. The user is given the opportunity to cancel or to continue with the “confirmation” action. The shipment status will then be updated to Confirmed. Additional details about the functions performed by WIPP Shipment Confirmation users are contained in the WIPP HWFP and approved WIPP procedures for waste stream shipment confirmation. Screen-level and context-level help provides additional details about the reference table reports accessible from the Confirmation dashboard.



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Users Manual  
05/09/2012 13:57  
LOG OUT

DA SHBOARD

AD-HOC QUERY

SCRIPT INTERFACE

REPORT BUILDER

SEARCH

**SHIPMENT CONFIRMATION REVIEW**

Shipment Number

- [IN110489](#)
- [IN110490](#)
- [IN110491](#)
- [IN110492](#)
- [LA110163](#)
- [OR110013](#)

Selected Shipment: **IN110490**

**Reset/Rejection Reasons**

| Date | Type | Reason |
|------|------|--------|
|      |      |        |

**Reports**

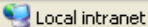
- Shipment Data Report
- Shipment Container Data Report
- Confirmation Container Data Report
- Payload Container List
- TRU Waste Confirmation Module Report

✓ **The Waste Confirmation Module has been run.**

Containers

Selected
Pending
Approved

| Waste Stream (Container Count) | Payload Num | #     | Container Num              | Rep                        | Container Type                  |                                 |
|--------------------------------|-------------|-------|----------------------------|----------------------------|---------------------------------|---------------------------------|
| BNS10.1(15)                    | 95414       | 1     | <a href="#">BN10399746</a> |                            | 23 - 100 GAL DRUM (DIRECT LOAD) |                                 |
|                                |             | 2     | <a href="#">BN10422745</a> |                            | 23 - 100 GAL DRUM (DIRECT LOAD) |                                 |
|                                |             | 3     | <a href="#">BN10422856</a> |                            | 23 - 100 GAL DRUM (DIRECT LOAD) |                                 |
|                                | 95418       | 95418 | 4                          | <a href="#">BN10420143</a> |                                 | 23 - 100 GAL DRUM (DIRECT LOAD) |
|                                |             |       | 5                          | <a href="#">BN10422854</a> |                                 | 23 - 100 GAL DRUM (DIRECT LOAD) |
|                                |             |       | 6                          | <a href="#">BN10424484</a> |                                 | 23 - 100 GAL DRUM (DIRECT LOAD) |
|                                |             |       | 7                          | <a href="#">BN10424857</a> |                                 | 23 - 100 GAL DRUM (DIRECT LOAD) |
|                                |             |       | 8                          | <a href="#">BN10424861</a> |                                 | 23 - 100 GAL DRUM (DIRECT LOAD) |
|                                |             |       | 9                          | <a href="#">BN10424909</a> |                                 | 23 - 100 GAL DRUM (DIRECT LOAD) |
|                                |             |       | 10                         | <a href="#">BN10423432</a> |                                 | 23 - 100 GAL DRUM (DIRECT LOAD) |



**Figure 6-E – Shipment Confirmation Review Page**

## **6.6 Packaging Dashboard**

**NOTE**

The Chemical Administrator link can only be viewed if the user has the Chemical Administrator role.

The functions and reports available from the Packaging dashboard are shown in Figure 6-F. Additional details about functions performed by WIPP Packaging Engineering users are described in approved procedures and in screen-level and context-level help. The dashboard provides access to the Master Chemical/Material List Administration function, limited to those in the Chemicals Administrator role. The dashboard also provides access to the PCTCD, OPCTCD, PATCD, and PTCD reports when viewing DA-approved containers or overpacks that are associated with completed payloads (PCTCD, OPCTCD). The dashboard provides access to the Reference Table Reports. Screen-level and context-level help provides details about generating the reports that are accessible from the Packaging dashboard.

# Waste Data System User's Manual

## DOE/WIPP-09-3427, Rev. 17

The screenshot displays the WDS dashboard for user RICHEY, LINDA (KATE). The interface includes a top navigation bar with 'Users Manual', 'LOG OUT', and a date/time stamp of '06/13/2017 11:01'. Below this is a secondary navigation bar with 'DASHBOARD', 'AD-HOC QUERY', 'SCRIPT INTERFACE', and 'REPORT BUILDER'. The main content area is titled 'Dashboard' and 'PACKAGING DASHBOARD'. It features a table of 'Shipments Submitted for Review (11)' with columns for Shipment Number, Current Location, Destination Site ID, Shipping Program ID, DA Approved?, Confirmed?, Finalized?, Handling Code, Package Type(s), Send Date, Controlled Shipment?, High-Wattage Shipment?, Packaging Reviewed?, and Update Review Status. A 'FUNCTIONS' section contains icons for 'Execute TRAMPAC Test Payloads', 'Filters Administration', 'TRUCON Relationships Administration', 'Certification Data Trending', and 'Master Chemical/Material List Admin'. A 'REPORTS' section lists several report options: 'Payloads of Interest Report', 'Containers with Conditional Status', 'Emplacement by Container Type Report', 'Reference Table Reports', 'TRUCON Help', and 'Master Chemical/Material List Report'. The footer contains system information: 'MESSAGES | USERS MANUAL | USER PREFERENCES --- LAST LOGIN: 06/12/2017 08:36 - # OF FAILED LOGINS SINCE: 0' and 'INSTANCE: prd01.wipp.carlsbad.nm.us BUILD: WDS\_20170601\_PR282'.

**WDS**  
WASTE DATA SYSTEM

Users Manual RICHEY, LINDA (KATE) LOG OUT

06/13/2017 11:01 HELP

DASHBOARD AD-HOC QUERY SCRIPT INTERFACE REPORT BUILDER

Container SEARCH

Dashboard PACKAGING DASHBOARD

Shipments Submitted for Review (11) SHOW

| Shipment Number | Current Location | Destination Site ID | Shipping Program ID | DA Approved? | Confirmed? | Finalized? | Handling Code | Package Type(s) | Send Date | Controlled Shipment? | High-Wattage Shipment? | Packaging Reviewed? | Update Review Status |
|-----------------|------------------|---------------------|---------------------|--------------|------------|------------|---------------|-----------------|-----------|----------------------|------------------------|---------------------|----------------------|
|-----------------|------------------|---------------------|---------------------|--------------|------------|------------|---------------|-----------------|-----------|----------------------|------------------------|---------------------|----------------------|

**FUNCTIONS**

- Execute TRAMPAC Test Payloads
- Filters Administration
- TRUCON Relationships Administration
- Certification Data Trending
- Master Chemical/Material List Admin

**REPORTS**

- Payloads of Interest Report
- Containers with Conditional Status
- Emplacement by Container Type Report
- Reference Table Reports
- TRUCON Help
- Master Chemical/Material List Report

MESSAGES | USERS MANUAL | USER PREFERENCES --- LAST LOGIN: 06/12/2017 08:36 - # OF FAILED LOGINS SINCE: 0

INSTANCE: prd01.wipp.carlsbad.nm.us  
BUILD: WDS\_20170601\_PR282

# Waste Data System User's Manual DOE/WIPP-09-3427, Rev. 17

Dashboard **PACKAGING DASHBOARD** Container **SEARCH**

Shipments Submitted for Review (5) **SHOW**

| Shipment Number | Current Location | Destination Site ID | Shipping Program ID | DA Approved? | Confirmed? | Finalized? | Handling Code | Package Type(s) | Send Date | Controlled Shipment? | High-Wattage Shipment? | Packaging Reviewed? | Update Review Status |
|-----------------|------------------|---------------------|---------------------|--------------|------------|------------|---------------|-----------------|-----------|----------------------|------------------------|---------------------|----------------------|
|-----------------|------------------|---------------------|---------------------|--------------|------------|------------|---------------|-----------------|-----------|----------------------|------------------------|---------------------|----------------------|

**FUNCTIONS**

- Execute TRAMPAC Test Payloads
- Filters Administration
- TRUCON Relationships Administration
- Certification Data Trending
- Master Chemical/Material List Admin

**REPORTS**

- > CCEM Report
- > CCEM by Waste Stream Profile Report
- > Containers with Conditional Status
- > Emplacement by Container Type Report
- > Master Chemical/Material List Report
- > Payloads of Interest Report
- > RGN Reference Data Report
- > Reference Table Reports
- > TRUCON Help

Figure 6-F – Packaging Dashboard

## 6.7 WIPP User Dashboard

The reports that are available to users from the WIPP User dashboard are shown in Figure 6-G. The WIPP user may view reports but does not perform any data input functions using the WDS. Screen-level and context-level help contains additional details about generating reports that are accessible from the WIPP User dashboard.



Figure 6-G – WIPP User Dashboard

## 6.8 CBFO Dashboard

The CBFO dashboard is accessible to users with the CBFO role. The CBFO dashboard provides access to the reports as shown in Figure 6-H. The CBFO user may view reports but does not perform any data input functions using the WDS. Screen-level and context-level help contains additional details about generating reports that are accessible from the CBFO dashboard.

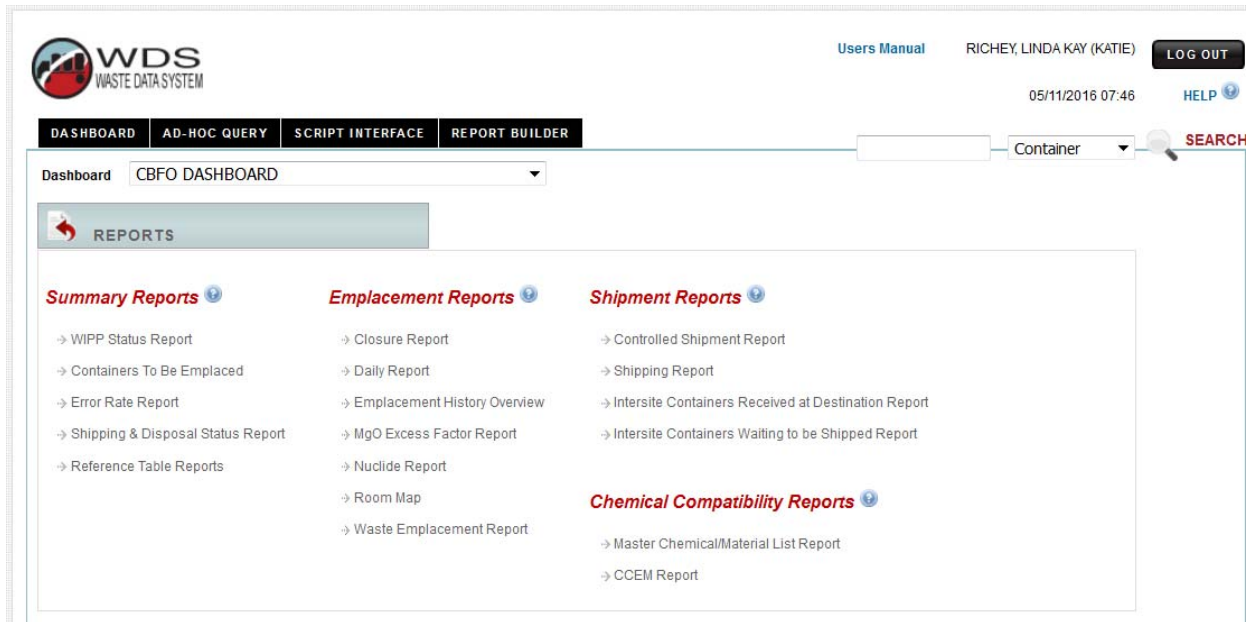


Figure 6-H – CBFO Dashboard

## 6.9 Data Administrator Dashboard

The functions and reports are available from the WIPP Data Administrator dashboard. Additional details about the Container/Shipment Review and Approval functions are summarized in an approved WIPP WITS program plan. Details about the Data Administration Reference Table maintenance functions are described or summarized in an approved WIPP WITS program plan.

## 6.10 New Mexico Environment Department Dashboard

The reports that are available to users from the NMED dashboard are shown in Figure 6-I. The NMED users have access to reports but do not perform any data entry functions using the WDS. Refer to screen-level and context-level help for additional details about generating reports that are accessible from the NMED dashboard.

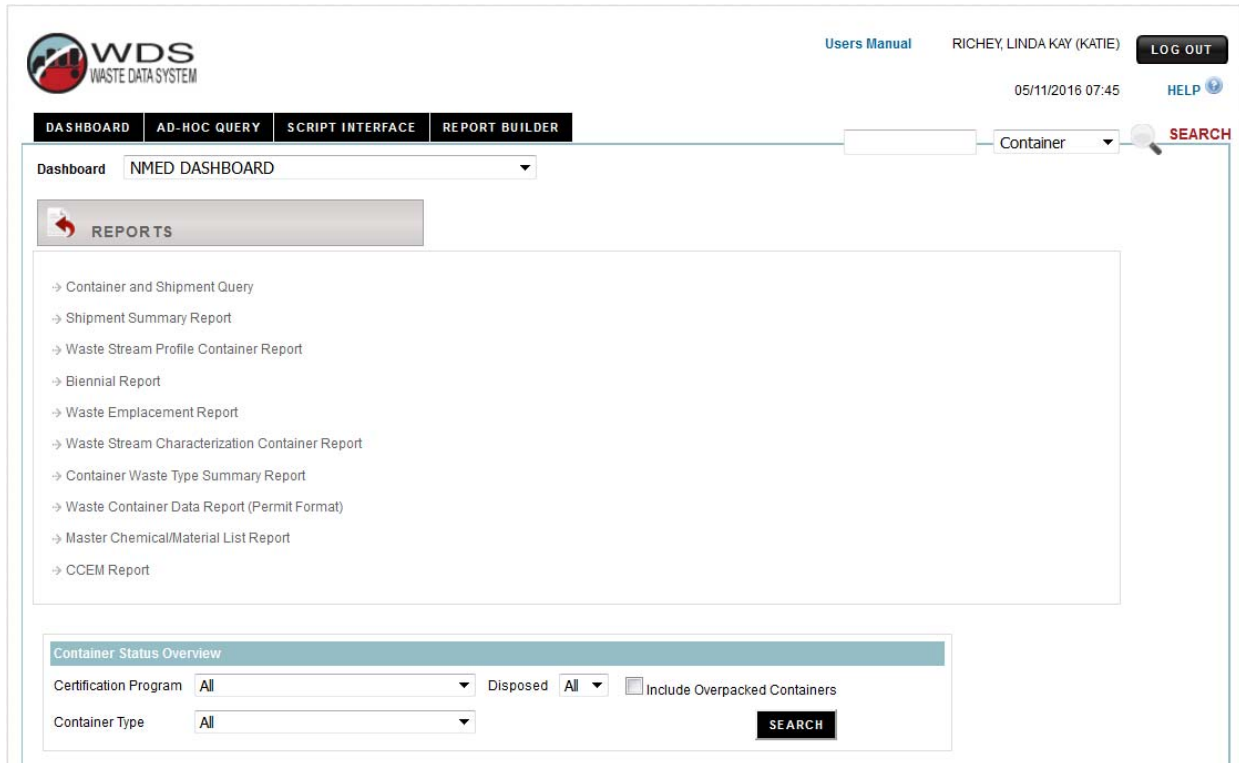


Figure 6-I – NMED Dashboard

## 6.11 Environmental Protection Agency Dashboard

The reports that are available to users from the EPA dashboard are shown in Figure 6-J. Screen-level and context-level help provides additional details about generating reports that are accessible from the EPA dashboard.

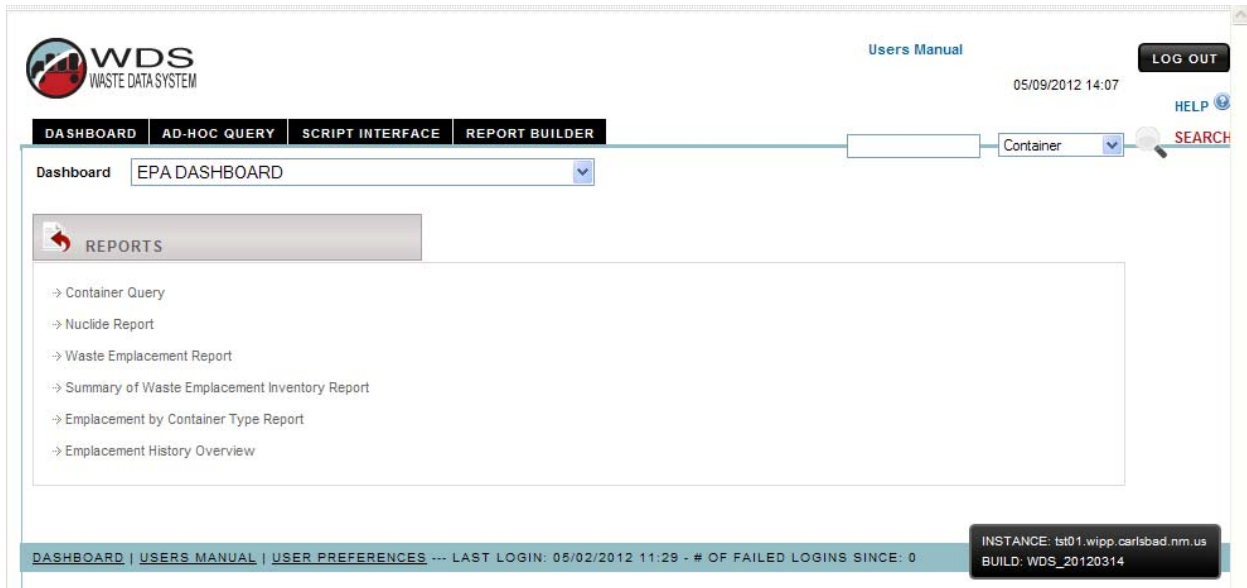
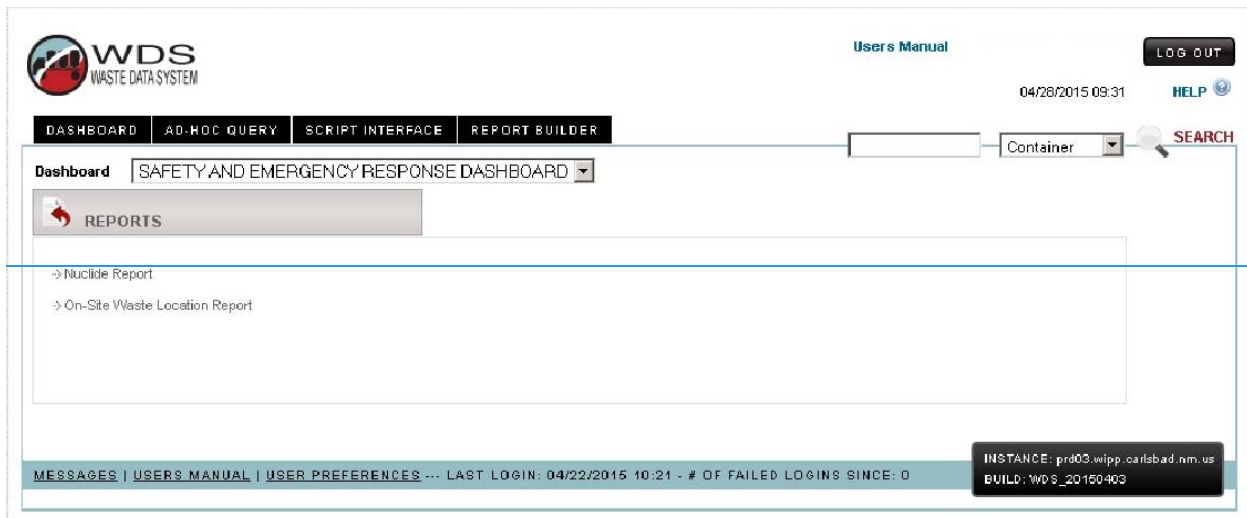


Figure 6-J – EPA Dashboard

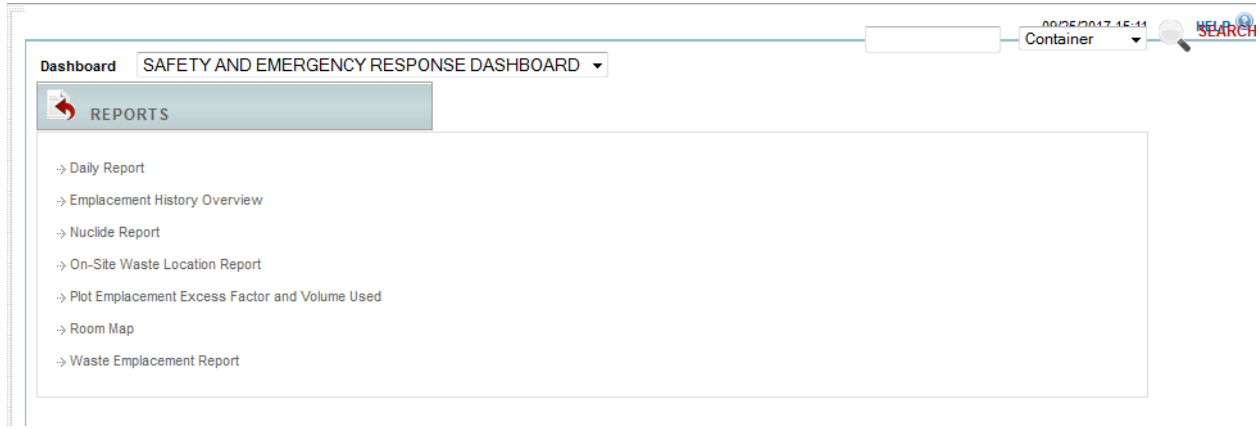
## 6.12 WIPP Safety and Emergency Response Dashboard

The reports that are available to users from the Safety and Emergency Response dashboard are shown in Figure 6-K. Screen-level and context-level help provides additional details about generating reports that are accessible from this dashboard.





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**Figure 6-K – Safety and Emergency Response Dashboard**

### 6.13 WIPP Site Transportation Dashboard

The functions and reports that are available to WIPP personnel from the Transportation dashboard are shown in Figure 6-L. Additional details about the Shipment Receipt function and the Tractor/Trailer Administration functions that are performed by Transportation users are summarized in approved WIPP procedures and in screen-level and context-level help. Details about the shipment receipt process at WIPP are described in an approved WIPP TRU waste receipt procedure and in screen-level and context-level help. Screen-level and context-level help provides additional details about generating reports that are accessible from the Transportation dashboard.

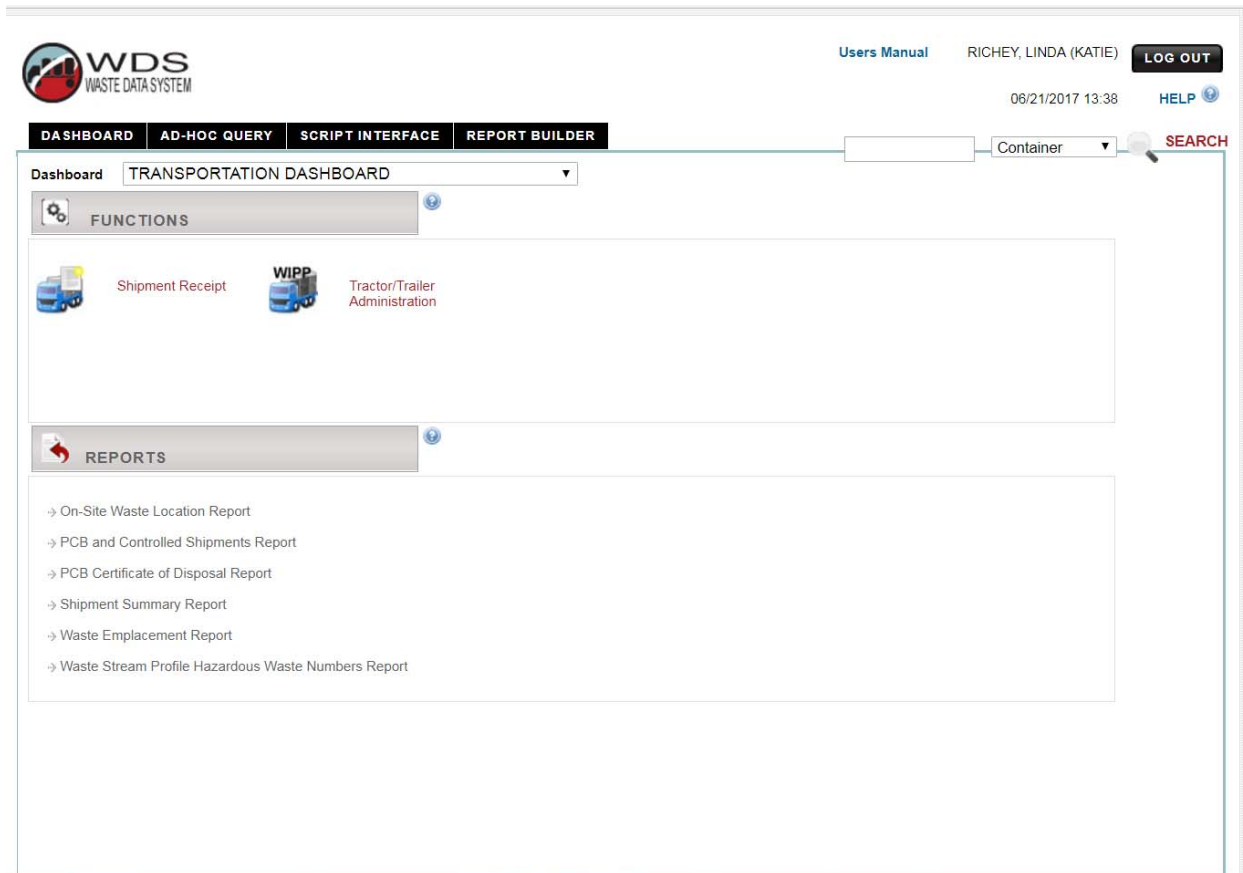


Figure 6-L – Transportation Dashboard

## 6.14 Business Reports Dashboard

The Business Reports dashboard is accessible only to users with the Business Reports role. The dashboard provides access to the reports shown in Figure 6-M. Screen-level and context-level help provides additional details about generating reports that are accessible from this dashboard.

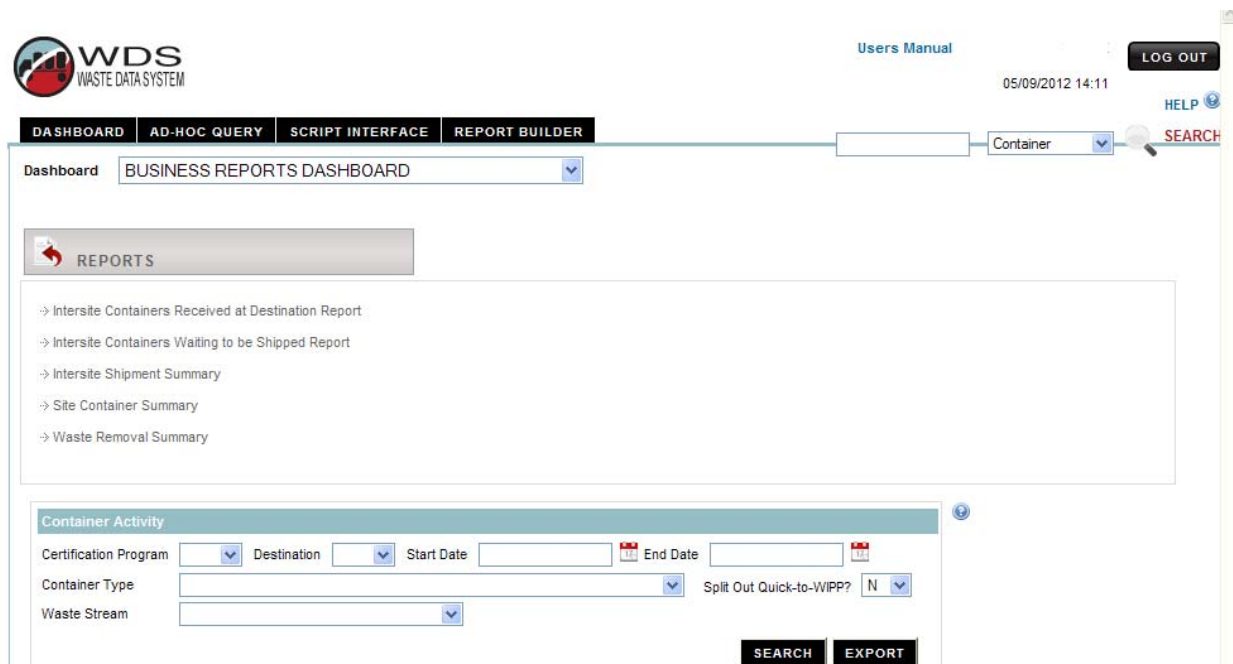


Figure 6-M – Business Reports Dashboard

## 6.15 Acceptable Knowledge Dashboard

The AK dashboard provides access to the [Chemical Compatibility Evaluation Memorandum \(CCEM\)](#) Administration function, access to the CCEM Review function, and the [Basis of Knowledge Evaluation \(BOKE\)](#). The dashboard also provides access to the AK Assessment Date Review function. The dashboard provides access to the Master Chemical List report, the Reactivity Group Numbers reference data report, the CCEM report, and the CCEM by Waste Stream Profile report. Screen-level and context-level help provides additional details to the users about data entry functions and generating reports that are accessible from this dashboard as shown in Figure 6-N, AK Dashboard.

As part of the process for characterizing and certifying TRU waste for disposal at WIPP, it is necessary to consider the range of possible chemical combinations that could occur in each waste stream. The evaluation considers potential adverse chemical reactions (e.g., generation of fire, explosion, heat, or fumes) from chemicals which may be present in the waste to assure safe and compliant transportation and waste management. The evaluation considers compatibility of waste materials and chemicals performed to assess the RCRA characteristics for ignitable (D001), corrosive (D002), and reactive (D003) wastes. Site procedures provide an Example Form and Content

# Waste Data System User's Manual

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Guide for the CCEM and provide a template for the preparation of a CCEM to document the assessment. Revisions to the AK Summary Report include a description of the results described in the CCEM in the Chemical Content Identification section. The Site Project Manager reviews and approves the CCEM.

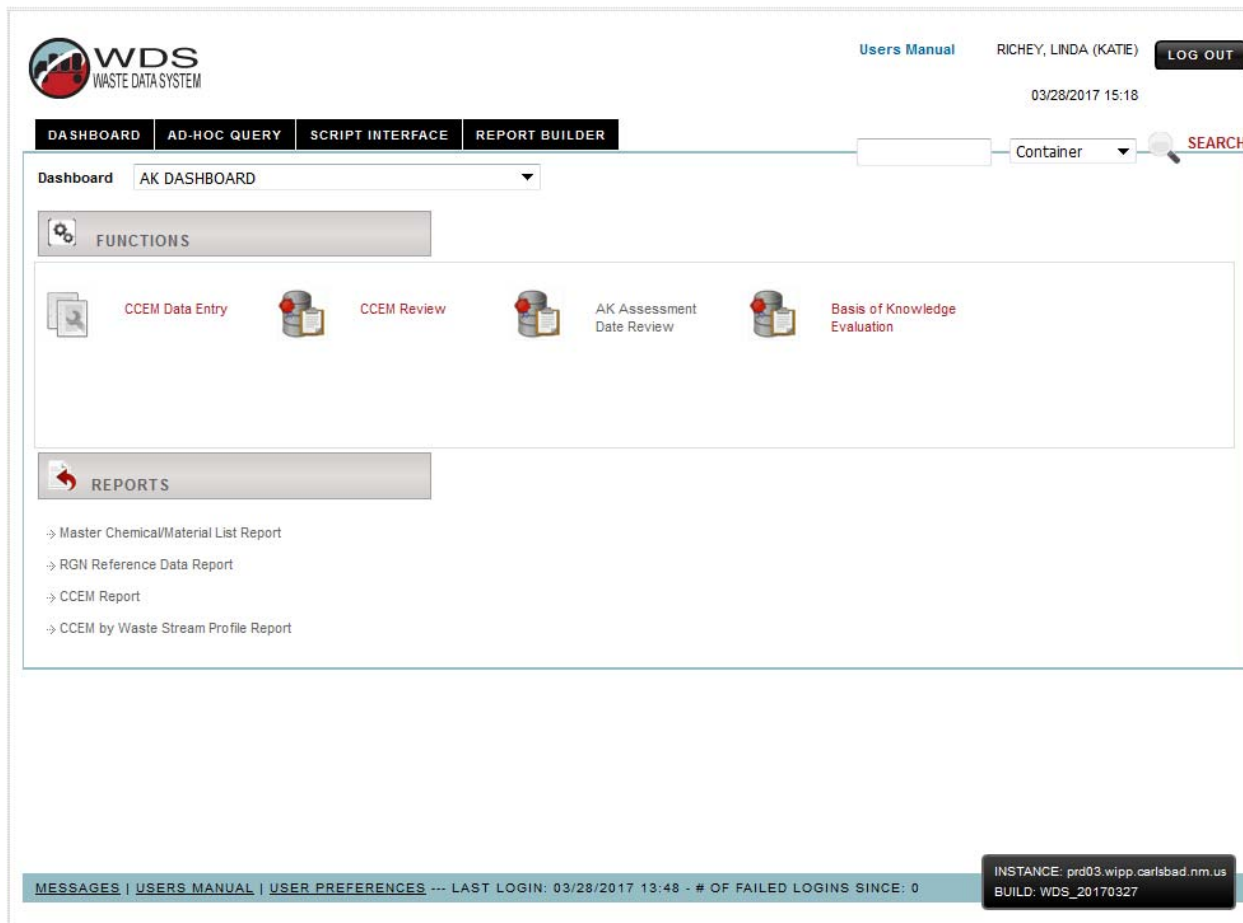


Figure 6-N – AK Dashboard

## 7.0 SUMMARY OF WDS EVENT CODES

The following event codes are applicable to WDS container, shipment, and disposal data. Users can also refer to the *Event Codes Reference Data Report* for an online summary of the codes and a summary description of each code.

**Pre-Submittal to Characterization Approval (PRESUB\_CHARZ)** – Initial status for containers to be submitted for evaluation before a waste stream profile is approved. The data have been "saved" (but not yet "submitted") to the database.

When a container record is initially entered in the WDS, and if container data are never "saved," but are "submitted" instead, the pre-submittal status will never be assigned to that container. When a "submit" function is performed, a "save" function is also automatically performed.

**Pending Characterization Data Approval (PENDING\_CHARZ)** – When a user "submits" a container record to the WDS for characterization approval, and the container data pass the edit/limit checks, this status is automatically assigned to the container. The container record is now available to the DA for potential characterization data approval, and cannot be modified by the user.

**Holding for Characterization Data Approval (HOLDING\_CHARZ)** – A DA has placed the container record "on hold" while the [Shipper/Generator SG](#) is investigating a container data issue. The user who submitted the container record will receive a notification from the database whenever the hold status is applied. Depending on the results of the investigation, the DA will approve or reject the container data. Data for containers with this status cannot be modified by the user. The database design incorporates functionality for the DA to describe data issues and resolutions.

**Characterization Data Approved (APPROVED\_CHARZ)** – This status is assigned by the WDS to a container record after a DA has reviewed and approved the data, and after the new waste stream profile is approved.

**Pre-Submittal to Certification Approval (PRESUB\_CERT)** – This is the initial status for waste containers that have been entered into the WDS and "saved" (but not yet "submitted") to the database. This status is applicable to waste containers that were not part of the characterization submittal and containers that were successfully submitted for certification approval and subsequently reset by a DA or the [Shipper/Generator SG](#) user. Resetting container records from APPROVED\_CERT to PRESUB\_CERT is done to allow for correction of data entry errors that are discovered as part of the data quality checks conducted by the sites.

When container data are initially entered in the WDS, and if container data are never "saved," but are "submitted" instead, this status will never be assigned to that container. When a "submit" function is performed, a "save" function is also automatically performed. A container that has a pending certification data approval or certification data approved status can be reset by the DA to pre-submittal to certification approval status.

**Pending Certification Data Approval (PENDING\_CERT)** – This status is assigned by the WDS to a container record when the [Shipper/Generator SG](#) user "submits" a complete set of container data to the database for approval. When the container record is submitted, the data are evaluated by the automated WDS edit/limit checks and the CH-TRAMPAC Evaluation Software (CHTES) or RH-TRAMPAC Evaluation Software (RHES) container evaluation checks. This status is automatically assigned to the container record after the data have passed all automated edit/limit checks. The container record is now available to the DA for potential Certification Data Approval, and cannot be modified by the user.

**Holding for Certification Data Approval (HOLDING\_CERT)** – The database design allows the DAs to place containers "on hold" to allow the [Shipper/Generator\\_SG](#) to investigate a container data issue identified during the data review without deleting the container record from the database. Depending on the results of the investigation, the DA will approve or reject the container data. Data for containers with this status cannot be modified by the user. The database design incorporates functionality for the DAs to describe data issues and resolutions. The user who submitted the container record will receive a notification from the database whenever the hold status is applied.

**Certification Data Approved (APPROVED\_CERT)** – The WDS automatically sends an e-mail message to the user who entered the certification data to provide notification/confirmation that the container has been approved. Approved waste containers then become available for selection for assignment into shipment payloads.

If a certified waste container, such as a damaged 55-gallon drum, is designated to-be-overpacked (TBO) into a larger payload container, such as a [standard waste box \(SWB\)](#) or [ten-drum-overpack \(TDOP\)](#), the APPROVED\_CERT status will be the final status for those inner containers, and the WDS container status for the overpack will be modified further during the shipping and WIPP emplacement processes.

**New Shipment (NEW\_SHIP)** – This is the initial status for shipments that have been "saved" but not yet "submitted" in the WDS.

Data must be entered into the Shipment Number data field before a shipment may be "saved." Shipment data may be added, deleted, and modified by the user while the status of the shipment is NEW\_SHIP.

**NOTE**

The following data fields may be NULL when a shipment is submitted: Manifest Number, Shipment Send Date, Tractor ID, Trailer ID, Transporter Name, Package Numbers, Outer Containment Assembly (OCA)/outer container(OC) Lid Numbers, [Inner Containment Vessel \(ICV\)](#)/~~inner vessel (IV)~~ Closure Dates, Dose Rates, Surface Contamination measurement results, and U.S. [Department of Transportation \(DOT\)](#) Description. These fields must be populated by the shipper in order to finalize the shipment. By design, shipments that have not been finalized cannot be electronically received at the Destination Site.

**Pending Shipment Data Approval (PENDING\_SHIP)** – When a user "successfully submits" a shipment in the WDS, the shipment status becomes pending approval. The container status for each waste container assigned to that shipment is automatically set to pending shipment data approval by the database. The shipment data are now available to the DA for potential approval and an email message is automatically sent to the Confirmation Team stating that the shipment is ready to undergo waste stream shipment confirmation.

**Shipment Complete (COMPLETE\_SHIP)** – This status is automatically assigned to a shipment after all of the required shipment data fields have been entered and submitted in the WDS, and after a DA and the Confirmation Team have reviewed the shipment data and completed the required approval steps. It is imperative that each shipment be finalized prior to its actual arrival at WIPP in order to enable WIPP operations personnel to perform their functions in accordance with procedures for shipment receipt.

**Shipment En Route (EN\_ROUTE)** – This status is assigned to a shipment after the shipment has been finalized and has departed the shipper site.

**Shipment Has Been Received (RECEIVED\_SHIP)** – When a shipment is received at the destination site, operations personnel enter the receipt date into the appropriate field on the shipment form. When the date is saved, the status for each waste container in that shipment is automatically set by the database to "Shipment Received." When waste containers are emplaced at WIPP, the disposal date and emplacement location information is recorded at the assembly level. A container is considered emplaced when its emplacement assembly has a non-NULL disposal date. An overpack payload container is considered emplaced when the overpack emplacement assembly has a non-NULL disposal date.

## 8.0 ROLES AND SITE PRIVILEGES

A user must obtain authorization from a sponsor and be familiar with the system before being allowed to log onto the database. Each user is assigned a role and site access privileges. Each [Shipper/Generator-SG](#) user must be assigned both the [Shipper/Generator-SG](#) role and access privileges for the site. Table 2 is a list of site IDs and locations. Refer also to the *Sites/Programs Reference Data Report* for additional details regarding site IDs and locations.

**Table 2 – Site IDs and Locations**

| Site ID | Location  |
|---------|---|
| AE      | Argonne National Laboratory – East              |
| BC      | Battelle-Columbus                               |
| BE      | Bettis Laboratory (BAPL)                        |
| BN      | Advanced Mixed Waste Treatment Facility – Idaho |
| C1      | CCP at Savannah River Site – CH Waste           |
| C2      | CCP at Argonne National Laboratory – East       |
| C3      | CCP at Nevada Test Site                         |

**Table 2 – Site IDs and Locations**

| Site ID | Location   |
|---------|--|
| C4      | CCP at Los Alamos National Laboratory                |
| C5      | CCP at Lawrence Livermore National Laboratory        |
| C6      | CCP at Oak Ridge National Laboratory – CH Waste      |
| C7      | CCP at Oak Ridge National Laboratory – RH Waste      |
| C8      | CCP at Idaho National Laboratory – CH Waste          |
| C9      | CCP at Idaho National Laboratory – RH Waste          |
| CA      | CCP at Los Alamos National Laboratory – RH Waste     |
| CB      | CCP at Savannah River Site – RH Waste                |
| CC      | CCP at GE Vallecitos – RH Waste                      |
| CD      | CCP at GE Vallecitos – CH Waste                      |
| CF      | CCP at Hanford                                       |
| CG      | CCP at Bettis Laboratory – RH Waste                  |
| CH      | CCP at Sandia National Laboratories – CH Waste       |
| CI      | CCP at Nuclear Radiation Development, LLC – CH Waste |
| CJ      | CCP at Sandia National Laboratories – RH Waste       |
| GE      | GE Vallecitos Nuclear Center                         |
| IN      | Idaho National Laboratory                            |
| LA      | Los Alamos National Laboratory                       |
| LB      | Lawrence Berkeley National Laboratory                |
| LL      | Lawrence Livermore National Laboratory               |
| MD      | Mound Site   |
| MU      | University of Missouri Research Reactor              |
| NT      | Nevada Test Site                                     |
| NR      | Nuclear Radiation Development, LLC                   |
| OR      | Oak Ridge National Laboratory                        |
| RF      | Rocky Flats  |
| RL      | Hanford Site   |
| SR      | Savannah River Site                                  |
| WCS     | Waste Control Specialists, LLC                       |
| WI      | Waste Isolation Pilot Plant                          |

The following definitions have been developed for business management purposes:

**Generator Site ID:** Site that generated the waste.

**Current Location Site:** Site where the waste is physically located.



**NOTE**

The physical location of the waste containers is submitted to the database with the certification data and does not automatically change as container data moves through the WDS system.

**Certification Program ID:** Program that certifies the waste data prior to submittal to WIPP.

**Shipping Program ID:** Program that performs shipping activities and ships the waste.

**Destination Site ID:** Site that will be receiving a waste shipment for treatment, characterization, certification, or disposal.

Refer to the dropdown menus on the data entry forms or the *Sites/Programs Reference Data Report* for a list of valid entries. Due to the variety of valid entries for a single location, site management should provide [Shipper/Generator SG](#) users with guidance for correct site entries prior to submittal of container and shipment data to the WDS.

## 9.0 AD HOC QUERIES

Access to ad hoc query is granted to users who are authorized for ad hoc query use by the DA when setting up the user account in WDS. Management approval for ad hoc query access is not required. NMED users and EPA users have ad hoc query built into the functions that are available from the dashboard and special access to ad hoc query is not required for these users. The ad hoc query functions may be accessed by clicking the Ad-Hoc Query tab on the dashboard as shown in Figure 9-A. Details for all types of ad hoc queries are described in screen-level and context-level help.



Figure 9-A – Ad Hoc Query Tab

A query may be performed for a container, payload, or shipment, based on the input of a specific container ID, payload ID, or shipment ID using the input field and the dropdown menu at the top right-hand corner of the screen.

## **10.0 SHIPMENT RECEIPT AT WIPP**

The WIPP Emplacement Tracking Software tracks CH waste received and emplaced at WIPP. The WDS presents the list of shipments in En Route status with WIPP as the destination site. When a shipment arrives at WIPP, the shipment is considered received when a trained technician at WIPP enters the receipt date and time into the WDS. When each payload is unloaded, the payload is scanned or entered into the emplacement tracking software, where the status of each container is updated to the received status in the WDS. During the shipment receipt process, all container numbers are verified to ensure that the correct waste was received (correct packages on the shipment, correct assemblies in each package on the shipment, and correct containers in each assembly in the packages).

## **11.0 EMPLACEMENT OF WASTE AT WIPP**

When the waste is emplaced in the repository, the WDS updates the status of each container and assigns and stores a unique location ID for each waste container to enable full traceability of all received and emplaced waste. Details about operation of the barcode reader software and the waste emplacement process are covered in approved WIPP procedures. Appendix A provides a summary of the Emplacement Tracking System barcode application and the WDS Manual Emplacement Screen.

## **12.0 REPORT BUILDER**

Access to the report builder functionality is limited to users who have been authorized for report builder use by management. Refer to report builder screen-level help for additional details about use of the report builder function

## **13.0 RECORDS**

The records listed below that are generated as a result of implementing this manual are considered ~~quality assurance (QA)~~ records and shall be identified, classified, and maintained in accordance with WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Document*, and other implementing program documents/procedures at the sites. The following documents are maintained as QA records:

- Waste stream profiles and/or process knowledge documentation that are approved by the destination site prior to first shipment of waste from the shipper site.
- Various reports from data management systems as required by the shipper's QA program including, but not limited to, dose rate measurement reports and surface contamination records for all waste containers.

- Data entry spreadsheets (include formula copies of worksheets and supporting documentation of formula calculation validations, if any formulas were used in data entry).
- Container approval/rejection reports, copies of any e-mail correspondence, or both. Other correspondence explaining the rejection of a waste container should also be maintained.

The following transportation documentation should be maintained in accordance with established site records management program requirements and procedures.

- PCTCD/OPCTCD/PATCD/PTCD
- Payload Assembly approval/rejection reports
- Shipment approval/rejection reports and results from scripts that generate data used for the purpose of documenting compliance with regulatory compliance parameters.
- Hazardous Waste Manifests or Bills of Lading

#### **14.0 ACCEPTANCE CRITERIA**

Proper completion and submittal of the records described in section 13 provides evidence of satisfactory implementation of QA record requirements.

#### **15.0 TRAINING**

All WDS [Shipper/Generator-SG](#) users shall receive on-the-job training (OJT). Other personnel who have access to the WDS will be provided training to support the work they are assigned to perform in accordance with site-specific procedures. Training on the contents of this program document is provided as a required reading OJT activity. Special training will be available on a case-by-case basis and is documented accordingly.

APPENDIX A – WIPP EMPLACEMENT TRACKING SOFTWARE

## **A.1    Placement of Magnesium Oxide (MgO Sacks)**

The WIPP Emplacement Tracking Software (ETS) calculates the amount of MgO required in each room being populated with waste based on the amount of CPR included in the emplaced waste material and packaging material. The ETS displays the amount of MgO required, the amount emplaced, and the excess or deficit amount currently in the room. For full MgO traceability, the ETS also assigns and stores a unique sack ID and location data for each sack of MgO emplaced in the repository.

Other features of the ETS include automatic checks that verify that all emplaced waste has been assigned a unique location ID and has the correct status. The ETS performs automatic and manual gap checks to ensure that all empty emplacement locations are identified while it is still possible to fill them, or to indicate they are intentionally empty. The ETS performs automatic calculation and display of required MgO for expected shipments for production planning. The ETS performs user authorization checking and control to ensure that all users are properly authorized. The ETS provides full reporting capability for all open and closed room data, automatic emailing for daily report tracking, and process management support.

## **A.2    Barcode Reader**

To use the barcode reader or the ETS, the user is required to log on to the system by entering a username and password, pressing the Login button, and reading/accepting the security acknowledgement.

## **A.3    WIPP ETS Home Page**

Once a user is logged on, the WIPP ETS Home Page provides access to all emplacement tracking screens and functions. Functional areas include shipment unload data tracking and validation, emplacement data tracking and validation for waste containers, MgO sacks and dunnage containers, review functions to validate emplacement location data, and report functions for the generation of room closure reports, open room daily reports, MgO balance reports, and graphical room display reports. The Home Page also provides access to the manual gap check and manual review check functions to provide further validation of emplacement data accuracy.

The *Unload* function is used to access the Shipment Unload screen. This allows the user at the destination site to unload the payload from the shipping package.

The *Emplace* function is used to access the Emplacement screen. This allows the WIPP Waste Handling Operations user to emplace waste containers, dunnage assemblies, and MgO sacks. Section A.8 describes the manual emplacement function.

The *Review* function is used by the WIPP Waste Handling Operations user to access the Emplacement Location Review screen. This allows the user (usually a supervisor or crew leader) to review and validate the accuracy of emplacement location data for waste containers.

The *Reports* function allows the user to access the Report Selection screen to retrieve the following reports:

- *MgO Balance Report*
- *Graphical Room Display Report*

The *Review Check* function allows the user to access the Manual Review Check screen and manually perform a location data validation review on a specific row in the selected panel/room combination.

#### **A.4 Barcode Reader/ETS Assembly Validation Screen**

The Assembly Validation screen displays the assemblies and associated waste containers recorded in the database to be in the selected package. The user scans in or manually enters a container number from the assembly, and the ETS validates that the entered number is actually included in the displayed list. After the user enters a container ID and presses the Validate button, the ETS compares the entered value with the recorded data to validate that the entered container number is associated with one of the displayed assemblies. If the entered number is invalid (not associated with any of the displayed assemblies), the Supervisor Reset screen is displayed for the Supervisor to acknowledge the data discrepancy and reset the system before the user can continue. After the Supervisor resets the system, the display returns to the Package Unload screen for the user to select another package to unload. If the entered container number passes the validation, the Assembly Accept/Reject screen is displayed to provide the user with the ability to validate additional containers in the assembly or accept or reject the entire assembly.

#### **A.5 WIPP ETS Emplacement Location Data Entry Screen**

The Emplacement Location Data Entry screen provides the user with the ability to display the current location of a container and associated assembly, assign emplacement location data to a waste container and associated assembly, or assign emplacement location data to a dunnage assembly or MgO sack. The ETS verifies that the assigned location is available for emplacement and prompts the user to enter a new location if the entered location is occupied. The software only allows emplacement where authorized for the different types of containers (Drums, Pipe Overpacks, SWBs, TDOPs, SLB2s, dunnage assemblies, MgO sacks, etc.). The screen is accessed by selecting the Emplace option on the Home Page.

## **A.6 WIPP Barcode Reader/ETS Emplacement Location Review**

The Emplacement Location Review screen provides the user with the functionality to review location data accuracy for newly emplaced assemblies (including dunnage assemblies) and MgO sacks by location data or container number. An automatic review check is executed by the ETS at the completion of the first emplacement in each row. The ETS performs the automatic review on an entire row, two rows back from the row that triggered the automatic review. If the automatic review finds one or more locations in the row that have a status of Review or Rejected, the ETS halts all further emplacement activity until the status of these locations is updated to Accepted by a reviewer using this screen and the following Location Accept/Reject screen. After data is entered on the Emplacement Location Review screen and the Review button is pressed, the Location Accept/Reject screen is displayed to enable the reviewer to accept or reject the location data under review.

## **A.7 Report Selection Screen**

The Report Selection screen provides access to all available WIPP ETS reports, including the *Balance Report* for MgO balance reporting on a specified room and the *Room Display Report*, which graphically displays occupancy and location status for all locations in a specified range of rows in a specified panel/room combination. The software provides the following location data entry fields: Panel Number, Room Number, Handling Type, Target Excess Factor, Expire Date, and Reason.

The report only displays closed rooms and includes all of the same parameters as displayed in a Daily Report.

## A.8 Manual Emplacement of Waste

**MANUAL EMPLACEMENT**

**Shipment Assemblies**

Shipment Assembly Num   
 Package Num   
 Ship Program  Handling Code   
 Exclude Dunnage Assembly

| Handling Code | Container Type | Package Number | Shipment Number | Assembly Num | Includes Dunnage | Dunnage Assembly |
|---------------|----------------|----------------|-----------------|--------------|------------------|------------------|
| CH            | 55 gal         | 512            | IN140044        | IN136332     | N                | N                |
| CH            | TDOP           | 203            | IN140041        | IN139266     | N                | N                |
| CH            | SWB            | 210            | IN140036        | IN139540     | N                | N                |
| CH            | SWB            | 210            | IN140036        | IN139541     | N                | N                |
| CH            | SWB            | 505            | IN140040        | IN139593     | N                | N                |
| CH            | TDOP           | 202            | IN140044        | IN139666     | N                | N                |
| CH            | TDOP           | 181            | IN140044        | IN139670     | N                | N                |

**On Site Created and Modified**

Emplacement Assembly Num

| Emplacement Assembly Num | Overpack/Cntr Number | Includes Dunnage | Dunnage Assembly |
|--------------------------|----------------------|------------------|------------------|
|                          | WISD002              | N                | N                |
|                          | WISD003              | N                | N                |
|                          | WISD004              | N                | N                |
|                          | WISD005              | N                | N                |
|                          | WISD006              | N                | N                |
|                          | WISD007              | N                | N                |
|                          | WISD008              | N                | N                |

|  | Container Number | Container Type | Dunnage |
|--|------------------|----------------|---------|
| Assembly Num:<br>Package Num:<br>Disposal Date:<br>Location: |                  |                |         |

**Emplacement Destination**

| Panel | Room | Row | Column | Height |
|-------|------|-----|--------|--------|
| 7     | 6    | 24  | 1      | Bottom |

Disposal Date:  (MT)

■ Selected ■ In Use ■ Emplaced ■ Selected Destination

**Emplacement Location Information**

Viewing: CH

Default Location:  
 Panel: 7 Room: 7 Row: 24

Show:  
 Panel: 7 Room: 7 Row: 24

MgO Without Location : 0 NCM Without Location : 6

| Panel: 7 Room: 7 Row: 24 |    |   |     |   |   |   |   |    |
|--------------------------|----|---|-----|---|---|---|---|----|
|                          | 1i | 1 | 2   | 3 | 4 | 5 | 6 | 6i |
| S2                       |    |   |     |   |   |   |   |    |
| S1                       |    |   | MGO |   |   |   |   |    |
| Top                      |    |   | SWB |   |   |   |   |    |
| Middle                   |    |   | SWB |   |   |   |   |    |
| Bottom                   |    |   | SWB |   |   |   |   |    |

MESSAGES | USERS MANUAL | USER PREFERENCES --- LAST LOGIN: 11/29/2016 13:49 - # OF FAILED LOGINS SINCE: 0

INSTANCE: prd05.wipp.carlsbad\_nm.us  
BUILD: WDS\_20160908

**Figure A-1 – Manual Emplacement Form**

Manual Emplacement is further described in approved WIPP Waste Handling Operations procedures and in screen-level online help.