

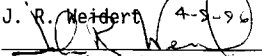
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Page 1 of 2

Proj.
ECN

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13a. Justification (mark one)

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WRAP Module 1 Data Management System (DMS) Software Design Description (SDD)

J. R. Weidert

Westinghouse Hanford Company, Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-87RL10930

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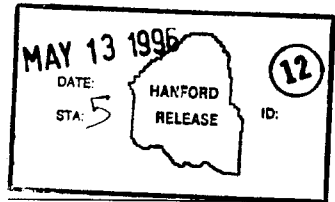
Abstract: The WRAP 1 DMS SDD describes the logical and physical architecture of the system specified in WHC-SD-W026-CSRS-001, *WRAP 1 DMS Software Requirements Specification (SRS)*, Rev. 0 (WHC 1994). The *WRAP 1 DMS SDD* formally partitions the elements of the system described in the *WRAP 1 DMS SRS* into design objects and describes the key properties and relationships among the design objects and interfaces with external systems such as the WRAP Plant Control System (PCS). The WRAP 1 DMS system is being developed to assist the Project W-026, Waste Receiving and Processing Module 1, in their management functions. The WRAP 1 DMS is required to collect, store, and report data related to certification, tracking, packaging, repackaging, processing, and shipment of waste processed or stored at the WRAP 1 facility. The *WRAP 1 DMS SDD* is used as the primary medium for communicating software design information.

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WRAP Module 1 Data Management System
PRELIMINARY SOFTWARE DESIGN DESCRIPTION (PSDD)

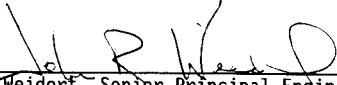
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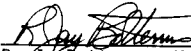
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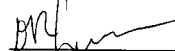
Prepared by:  4-5-96
J. R. Weidert, Senior Principal Engineer Date

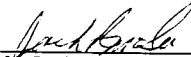
Contractor Approval:


 4/10/96
C. K. Rosnick, Date
Software Engineer

 4/9/96
M. E. Palmer, Date
Principal Scientist

 4/9/96
R. J. Bottenus, Manager Date
New Facilities Startup

 4/9/96
D. R. Lucas Date
WRAP 1 Project

 4/10/96
J. R. McGee Date
Quality Assurance

 4/10/96
J. S. Trent Date
Information Resource Management

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OVERVIEW

Revision 2 of the Waste Receiving and Processing (WRAP) Module 1 Data Management System (DMS) Preliminary Software Design Description (PSDD) provides a high-level design description of the system. The title of this document has been amended to reflect the pre-release design and development phase status of the WRAP 1 DMS system. This release provides design descriptions for the following process modules produced under Phase 1 of the development effort:

- Receiving Drum or Box Containers
- Process Routing and Picklists
- Waste Inventory by Location and/or Container Relationships
- LLW Process Glovebox
- Facility Radiologic Material Inventory Check (partial)
- Shipping (partial production)
- Drum or Box NDE Operations
- Drum or Box NDA Operations
- Data Review (partial production).

In addition, design descriptions are included for the following process modules scheduled for development under Phases 2 and 3:

- Activity Comment
- LLW RWM Glovebox
- Sample Management
- TRU Process Glovebox
- TRU RWM Glovebox
- TRUPACT Processing.

Detailed design descriptions for Reports and Facility Metrics have also been provided for in Revision 2 of this document. The shipping documentation/reports defined for screens DMSS0601 and DMSS0604 in the Shipping module have been placed on hold pending the resolution of data requirements for shipping documentation. This function will be performed manually upon startup of the WRAP facility.

Responsibility for issuance of the completed as-built detailed Software Design Description (SDD) shall lie with the BCSR software development project team.

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APPENDICES

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- B. Report Design Details
- C. Data Dictionary
- D. Relationship Model
- E. DMS Communications Design Details
- F. Process Model
- G. (Deleted)
- H. SWITS/DMS Data Interfaces

GLOSSARY

The definitions and terminology used in this document are documented in ANSI/IEEE 729-1983, *Standard Glossary of Software Engineering Technology* (ANSI/IEEE 1989). Definitions which may be of special interest to the reader, deviations, and additions are defined in this section. Acronyms and initialisms are also defined.

ACRONYMS AND INITIALISMS

ANSI	American National Standards Institute
AS/RS	Automatic Stacker/Retriever System
BWAS	Boxed Waste Assay System
Ci	Curies
DBA	Database Administrator
DBMS	database management system
DMS	Data Management System
FIPS	Federal Information Processing Standard
GEA	gamma energy assay
GUI	graphical user interface
HLAN	Hanford Local Area Network
IEEE	Institute of Electrical and Electronics Engineers
LAN	local area network
LLW	low-level waste
MSDS	Material Safety Data Sheet
NDA	non-destructive assay
NDE	non-destructive examination
OOM	Object-Oriented Methodology
PAM	Packet Assay Monitor
PAN	Passive Active Neutron
PC	personal computer
PCS	Plant Control System
PIN	Package Identification Number
QA	Quality Assurance
RDBMS	relational database management system
RSR	radioactive shipment record
RWM	restricted waste management
SA	System Administrator
SDD	Software Design Description
SIE	System Integration Equipment
SII	Systems Interface, Inc.
SPMP	Software Project Management Plan
SQL	Structured Query Language
SRS	Software Requirements Specification
SWB	Solid Waste Box
SWITS	Solid Waste Information and Tracking System
SWSDR	Solid Storage Disposal Record
TRU	Transuranic
TSD	treatment, storage, and disposal (facility)

UHM	Uniform Hazardous Waste Manifest
WHC	Westinghouse Hanford Company
WIPP	Waste Isolation Pilot Plant (Carlsbad, NM)
WLAN	WRAP Local Area Network
WRAP	Waste Receiving and Processing

DEFINITIONS

- Application.** The data manipulation and processing operations that are related to specific requirements of an information system. Software or program that is specific to the solution of a specific business problem or process.
- Application System.** A collection of applications that uses the services provided by the human-computer interface, communications facility, and data management system to perform the processing necessary to meet the requirements of the information system.
- Architecture.** The manner in which hardware, software, or data are structured. Architecture typically describes how the system or program is constructed, how its components fit together, and the protocols and interfaces used for communication and cooperation among modules or components of the system.
- Archive.** To save data for possible later use.
- Attribute.** Any detail that serves to qualify, identify, classify, quantify, or express the state of an entity. Or, any description of a 'thing of significance'. Attributes are extracted into database elements.
- Audit Trail.** The capability to report manual data entry and database changes at the data field level. The audit trail provides a record of the date, time, previous value (for data changes), current value, and the identity of the person entering the data (identified through the signature password).
- Background Drums** (also referred to as "white" drums). Drums containing an uncontaminated waste matrix. Drums are assayed at the start of each operating shift.
- Cardinality.** Describes the number of instances between two objects.
- Certification.** The process of certifying that waste is compliant with the regulatory requirements for shipment and/or disposal of the waste.
- Certification data.** Waste data used to certify that the waste is compliant with the regulatory requirements for shipment and/or disposal of the waste.
- Certification drums.** (1) Drums generated in the WRAP 1 Process Area. The assay data generated in WRAP for these drums will be the certification data that is used to support disposal of the waste

in a final repository. Radionuclide abundance data will not be available for verification by the SIE (except for LLW pucks). (2) Drums comprised of newly-generated wastes which have been shipped to WRAP for verification of the waste certification data provided by the waste generator. These drums do not go into the Process Area. Radionuclide abundance data will be available and will be verified by the SIE.

Characterization/Default data. Data is expressed as a decimal fraction representing the Ci of activity attributed to a given isotope divided by the Ci of activity attributed to the entire waste package. Also referred to as **Relative** abundance data.

Example: Pu-239 0.22

Collection Container. A container used in the restricted waste management (RWM) gloveboxes to collect liquids from aerosol cans for sampling and storage prior to treatment. Collection containers are stored in transfer drums.

Commit. The process of storing new, changed, or deleted records from the work space to a table in the database.

Computer System. A collection of hardware that is managed as a single unit by software such as an operating system, which may also provide common services such as access control, interprocess communications, and a graphical user interface.

Context Diagram. A drawing that shows the boundaries of a system and the interfaces associated with the system.

Data Dictionary. (1) A description of the characteristics of data. The system tables that contain descriptions of the database objects and how they are structured. (2) An inventory that describes, defines, and lists all the data elements that are stored in a database.

Data Element. The logical definition of a unit of information, apart from its actual use (that is, physical rendering) within any given program, file, database report, screen, and so on; the smallest unit of physical data about which attributes are defined; the lowest level of addressable data in which data value(s) are physically stored.

Data Flow. A representation of the passage of data or relationships among business processes, data stores, data flows, and external entities.

Data Flow Diagram. A graphical representation, following a certain style, of business processes, data stores, data flows, and external entities.

Data Integrity. The ability to preserve the completeness, currency, and accuracy of the data without unintentional changes; the ability to produce results that are correct to a predefined level and to

maintain data availability; conformance of data values to a specified set of rules.

Data Standards. The definition of how facts are to be referred to, how they are to be represented, what they will mean, and the rules governing their informational use throughout the enterprise.

Database. (1) A collection of data logically organized to meet the information and time requirements of a universe of users. (2) A collection of interrelated, largely unique data items or records, in one or more computer files, that may be processed by many different application programs.

Database Management System (DBMS). A computerized system consisting of numerous components which have as their collective purpose the implementation, processing, management, and protection of databases.

Design. The process of defining the software architecture, components, modules, interfaces, test approach, and data from a software system to satisfy requirements.

Domain. The range of values, format constraints, and other properties that apply to an attribute.

Drums for processing. Drums containing a contaminated waste matrix. Drums are destined for processing in the WRAP 1 facility and require an assay to support the processing of the waste. Waste drums are generally "retrieved" from the burial grounds, however, approximately 10% of these drums will be newly-generated waste which is processed to remove non-compliant items or verify generator's waste.

Entity. Any external system which may communicate with the WRAP 1 DMS system.

Field. In a table, the information stored at the intersection of a row and a column. In a block, a highlighted or underlined area on the screen that can display an output value or accept an input value.

File. (1) A collection of related data that is stored and retrieved by an assigned name. Synonymous with data set. (2) A collection of rows (or records) that have associated columns (or files). The logical equivalent of a table. (3) A named set of records stored or processed as a unit.

Foreign key. One or more columns in a table that implement a many to one relationship that the table in question has with another table. This concept allows the two tables to be joined together.

Hardware. All or part of the physical components of an information system or computer environment.

- Isotopic Quantity Data.** A data value that defines the actual mass of an isotope present in an item. Units are grams for TRU isotopes and Curies for all other isotopes.
- Local Area Network (LAN).** A local area network connects information processing equipment, such as PCs and printers, in a limited geographical area to allow high-speed communications for information resource sharing.
- Module.** (1) A program unit that is discrete and identifiable with respect to compiling, combining with other units and loading. (ANSI); (2) A logically separable part of a program.
- Network.** A computer communications system linking a series of computer elements. A system of interconnected computing devices that can communicate and share resources. Networks may be private (for one user) or shared (for many users).
- Object.** A physical thing or component that best represents process boundaries. Design objects are abstractions which, in the final stage of design, evolve into database structures.
- Object-Oriented Methodology.** A disciplined approach to the development of software which involves the conscious and deliberate use of the notion of an object as an organizing criteria for the data abstractions and the procedures which act on those abstractions.
- One Trip Drum.** A 55-gallon drum used for TRU loadout.
- Oracle.** A commercial relational database management software package. It includes software for data entry, database queries, and reports from the database.
- Overpack Drum.** An 85-gallon drum containing a 55-gallon waste drum. An 85-gallon drum used to contain waste or pucks is not an overpack drum, but an 85-gallon waste drum.
- Packet.** A package containing non-compliant or suspected non-compliant waste which has been removed from a waste drum in a process glovebox. Each packet is labeled and placed in a transfer drum for transfer to an RWM glovebox.
- Pallet.** A platform used to hold up to four drums during transport and storage in the Automatic Stacker/Retriever System (AS/RS). Pallets are not uniquely identified.
- Pig.** A labeled shielded container used to transport purge ports and samples.
- Pop-Up.** Screen area that overlays all or a portion of the display screen. Pop-ups have unique functionality, but all pop-ups display information to the user while maintaining context in the session.

Primary Key. The set of mandatory columns within a table that is used to enforce uniqueness of rows, and that is normally the most frequent means by which rows are accessed.

Process. (1) A predetermined course of events defined by its purpose or by its effect, achieved under given conditions. (2) An active component of an information system.

Puck. A supercompacted drum containing low level waste. All pucks are low level waste and are placed in 85 gallon drums for storage and/or disposal.

Purge Port. A container used to remove and transport samples from gloveboxes. The purge port acts as an air-lock and provides contamination control.

Relational database. (1) A database that is organized and accessed according to relationships between data items. (2) A data structure perceived by its users as a collection of tables. A relational database consists of tables, rows, and columns. Most mini-computers and mainframes today have relational database systems available for business use. Relational databases differ from non-relational databases in that there are no system dependencies stored within the data; for example, hierarchical databases are not relational because they contain pointers to other data. Oracle is a relational database management system (RDBMS).

Revisit Drum. Drum that has been assayed in WRAP prior to receipt of characterization data. The drum may be shipped from the WRAP facility, but the assay data is retained in the SIE until such time as the characterization data becomes available. The original assay is then revisited and the final assay results generated.

Sample. A labeled package of material to be transported to the laboratory for analysis. Samples may be random confirmatory samples from the process gloveboxes or restricted waste samples from the RWM gloveboxes. Samples may be returned from the laboratory when analysis is complete. Returned restricted waste samples are treated with the corresponding parent item.

Set. A group of like objects.

Software. (1) A compilable piece of code. (2) All or part of the programs, procedures, rules, and associated documentation of an information system.

Software Design Description (SDD). A representation of a software system created to facilitate analysis, planning, implementation, and decision making. A blueprint or model of the software system. The SDD is used as the primary medium for communication of software design information. SQL is defined in Federal Information Processing Standard (FIPS) publication 127-1, *Database Language SQL*.

Structured Query Language (SQL). A standardized language for requesting data from a database.

Table. A tabular view of data, which may be used on a relational database management system to hold one or more columns to data. It is often an implementation of an object.

Transaction Log. In conjunction with the system backup capability, can be used to facilitate reconstruction of the database if the disk is damaged. The system records the transaction log of a disk other than the one this database is on.

Transfer Drum. A 55 gallon Drath & Schrader drum used to move and store packets, parent items, and collection containers.

Treatment Container. A container used in the RWM gloveboxes to collect parent items and samples for treatment.

TRUPACT Assembly. A seven drum or single box assembly forming the upper or lower portion of a TRUPACT cask load.

TRUPACT Cask. The shipping container used to transport TRU waste to the Waste Isolation Pilot Plant (WIPP). A TRUPACT cask can be used to transport 14 drums or two boxes.

Unique Key. Any combination of attributes and/or relationships that serves, in all cases, to uniquely identify an occurrence of an object.

Verification. Comparing newly generated waste characterization data with existing certification data to insure the values are within a specified tolerance.

Verification data. Data collected to verify existing certification data.

Verification drums (also referred to as "pink" drums or "QC" drums). Drums containing a waste matrix with known levels of radionuclide quantities. Drums are assayed at the start and the end of each operating shift. There are two different Verification drums: a high standard and a low standard.

Waste Drum. A labeled 55-gallon or 85-gallon drum containing waste.

X Windows. X Windows is a bit mapped user display. It uses the client-server model, where the client is the windowed application and the server is the window system. The client-server model allows the user almost complete machine independence. Although X Windows is currently a de facto standard, the National Institute of Standards and Technology plans to adopt the X Windows System as a Federal Information Processing Standard (FIPS).

WRAP MODULE 1 DATA MANAGEMENT SYSTEM
SOFTWARE DESIGN DESCRIPTION

1.0 INTRODUCTION

The *Waste Receiving and Processing (WRAP) Module 1 Data Management System (DMS) Preliminary System Design Description (PSDD)* describes the logical and physical architecture of the system specified in WHC-SD-WO26-CSRS-001, *WRAP 1 DMS Software Requirements Specification (SRS)*, Rev. 1 (WHC 1995).

The *WRAP 1 DMS PSDD* formally partitions the elements of the system described in the *WRAP 1 DMS SRS* into design modules and describes the key properties and relationships among the data elements within these modules as well as the modules interfaces with external systems such as the WRAP Plant Control System (PCS). The *WRAP 1 DMS PSDD* can be thought of as a detailed blueprint for implementation activities.

The *WRAP 1 DMS PSDD* is formally reviewed in compliance with the Quality Assurance (QA) program WHC-CM-4-2, *Quality Assurance*, (WHC 1989) QI 3.2. This document will be reviewed against the *WRAP 1 DMS SRS* and revised as necessary to reflect changes in the *WRAP 1 DMS* requirements.

The organization and contents of this document are in compliance with WHC-CM-3-10, *Software Practices* (WHC 1993) and follow the guidance in American National Standards Institute (ANSI)/Institute of Electrical and Electronics Engineers (IEEE) Standards 1016-1987, *Software Design Descriptions* (ANSI/IEEE 1989).

1.1 PURPOSE

Each function in the *WRAP 1 DMS SRS* has been partitioned into database tables and elements which can be traced to design modules in the *WRAP 1 DMS PSDD*. The design modules identified are judged best able to meet *WRAP 1 DMS SRS* objectives within the constraints identified in Section 1.2 below. The purpose of this document is to describe the content and relationships of the design modules to which *WRAP 1 DMS SRS* system functions have been allocated. The *WRAP 1 DMS PSDD* is used as the primary medium for communicating software design information.

This document is a sustainable deliverable and shall be maintained by revision throughout the design and development phase of the Waste Receiving and Processing Module 1 (WRAP 1) Data Management System (DMS). Applicability of the *WRAP 1 DMS PSDD* shall begin immediately when released for issue. At project completion, this document will be revised to reflect the structure of the as-built system and will be released as the *WRAP 1 DMS Software Design Description (SDD)*. It will be a sustainable deliverable and shall be maintained by revision for the life of the *WRAP 1 DMS*, including the phase of system operation and maintenance following project completion.

1.2 SCOPE

The design descriptions contained within this document will describe, in detail, the software products that will be developed to assist the Project W-026, Waste Receiving and Processing Module 1, in their management functions. The WRAP 1 DMS is required to collect, store, and report data related to certification, tracking, packaging, repackaging, processing, and shipment of waste processed or stored at the WRAP 1 facility. The software products to be produced are: 1) the WRAP 1 DMS applications software; 2) communications software between the DMS and other WRAP 1 facility systems; and 3) Solid Waste Information and Tracking System (SWITS) interface software. Appendix H provides a description of the necessary changes to the SWITS system to support the WRAP 1 DMS.

The scope of this document is limited to a description of the software design for the WRAP 1 DMS, and this document is used as the primary medium for communicating software design information. Host hardware and operating software, terminal devices, communications hardware and software, and host software products will be provided for systems developers.

The WRAP 1 DMS project development efforts progress in accordance with the latest approved version of WHC-SD-W026-SDP-001, *Waste Receiving and Processing Facility Module 1 Data Management System Software Project Management Plan* (SPMP) (WHC 1994).

1.3 OVERVIEW

The general structure of this document supports the concept of design modules with multiple design views by organizing data tables and their associated attributes and behaviors into separate design views. Each design view represents a separate concern about the software system. Both logical and physical representations of the design are presented in the *WRAP 1 DMS SDD*. The *WRAP 1 DMS SDD* is organized into six chapters.

Chapter 1.0 provides an introduction to the document.

Chapter 2.0 describes the division of the software system into design modules. This chapter describes how the system has been structured and the purpose and function of each module.

Chapter 3.0 describes the relationships and behavior among the design modules and their associated database tables and data elements. This chapter defines the interaction among design objects and provides the information needed to easily perceive why, how, where and at what level system actions occur.

Chapter 4.0 describes internal and external system interfaces. The human-machine interface is addressed in this chapter.

Chapter 5.0 describes the internal details and attributes of the design modules. This chapter provides the developers with specific programming instructions.

Chapter 6.0 provides references to related project documentation.

The appendices contain additional supporting information including Screen Details (Appendix A), Report Details (Appendix B), Data Dictionary (Appendix C), Relationship Models (Appendix D), DMS Communications (DMSCOM) Details (Appendix E), Process Models (Appendix F), and SWITS/DMS Data Interfaces (Appendix H). The information in the appendices will be revised as appropriate as the software design phase is completed and development progresses.

An Object-Oriented Methodology (OOM) was initially used in the WRAP 1 DMS design. During each revision of the PSDD, the prior models have been revised to reflect impacts generated as a result of subsequent module definition and interfaces. The subsequent design efforts have addressed the design from a functional perspective as defined by the software modules and database structure. This functional perspective also facilitates the phased approach utilized in the detailed design and development process, with development following design definition for related modules; therefore, there is no clear break between preliminary and detailed design phases. However, this iterative method has provided the developers with a comprehensive understanding of the system requirements, the discovery of new or mis-stated requirements, and issue resolution prior to implementation.

The WRAP 1 DMS design and development documentation was not broken down into Preliminary and Detail SDDs as advocated by WHC-CM-3-10, *Software Practices*. Because of this inequity, several versions of the PSDD have been issued throughout the development cycle. This release, Rev. 2, provides the final preliminary detailed design description for the original scope of the WRAP 1 DMS. Any future DMS enhancements or software changes shall be documented on Software Change Requests. Once the WRAP 1 DMS system has been documented in the completed detailed SDD and released for implementation, it will be left up to the document custodian to determine when these changes are to be formally incorporated into the SDD and whether or not an ECN or a document revision will be used to incorporate the changes.

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2.0 DECOMPOSITION DESCRIPTION

The WRAP 1 DMS is composed of several system and process modules. This chapter describes the purpose and function of each module. The purpose of this chapter is to provide a high level understanding of the system, which will provide the primary data collection, tracking, presentation, and storage capability for waste stored at the WRAP 1 facility.

2.1 MODULE DECOMPOSITION

Design modules result from decomposition of system requirements. The objective of functional decomposition is to divide the system into separate modules that can be implemented, changed, maintained, and tested with minimal effect on the other design modules. The WRAP 1 DMS functional areas have been separated into individual design modules which are structurally and functionally distinct.

The WRAP 1 DMS functional areas include both process modules and system modules. Each module contains one or more of the following data processing elements: Updates, Displays, and/or Reports. These elements will be described in greater detail in Chapter 5.0.

2.1.1 Process Modules

The WRAP 1 DMS process modules encompass the tracking and maintaining of regulated solid waste information as specified in the *WRAP 1 DMS SRS* and associated deliverables. Process modules encompass the following functions: Receiving; Non-destructive Examination/Non-destructive Assay (NDE/NDA) Operations; Process Operations; Sample Management; Shipping; and Process Routing and Pick Lists. Each function is comprised of one or more independent modules (see Figure 2-1).

2.1.1.1 Receiving. Receiving consists of the processing of waste drums, waste boxes, and empty drums into the WRAP 1 facility at the receiving dock. This process ensures that the container labels are all intact, the location/relocation history on SWITS is confirmed and associated data is downloaded, the waste container is on a process pick list, the waste container has been assigned a routing code, and the curie inventory for the facility is updated with each waste container's curie loading. The module that encompasses Receiving is Receiving Drum or Box Containers.

2.1.1.2 NDE/NDA Operations. NDE/NDA Operations provides operational data and data collection functions for the non-destructive examination/non-destructive assay (NDE/NDA) operations. NDE/NDA operations are conducted in two different areas. Boxes are evaluated in the Box NDE system and the Boxed Waste Assay System (BWAS). Drums are routed through the drum NDE/NDA area, which is further segmented into Drum NDE, Passive Active Neutron (PAN) and Gamma Energy Assay (GEA) operations. The modules that encompass NDE/NDA Operations are:

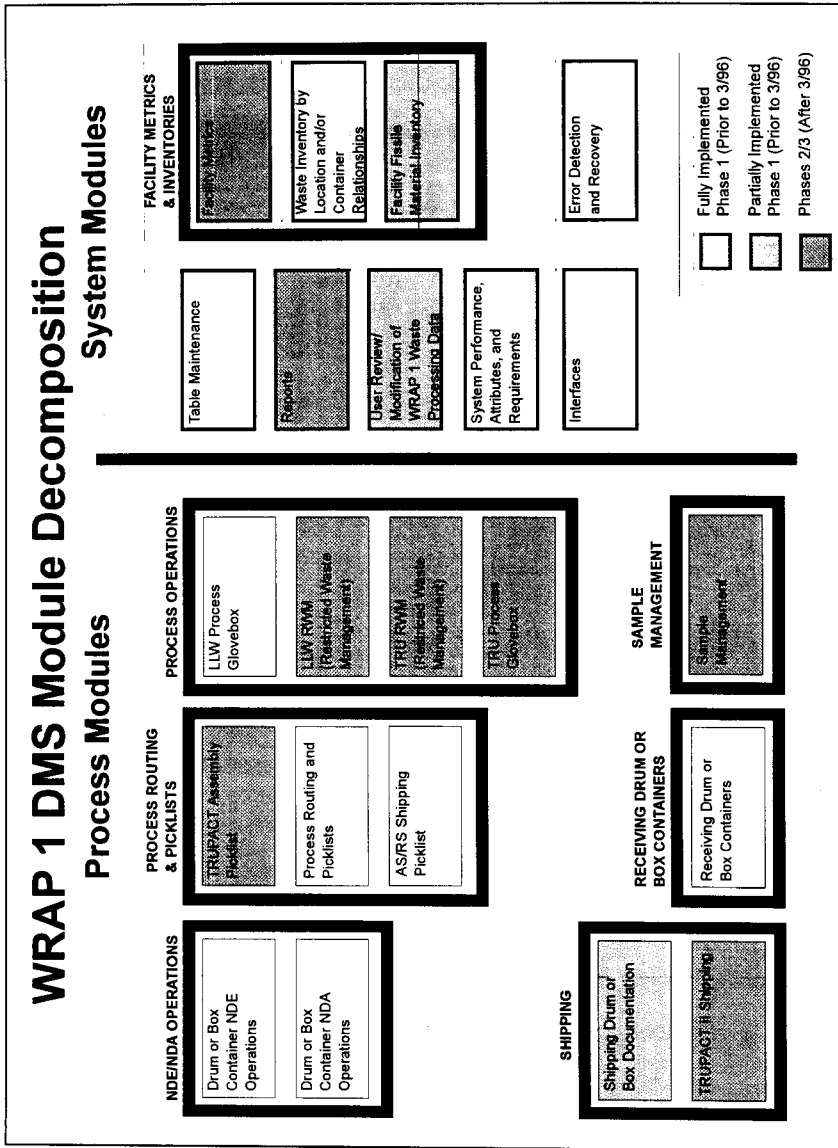


Figure 2-1. WRAP 1 DMS Module Decomposition.

Drum or Box Container NDE Operations; Drum or Box Container NDA Operations; and NDA Verification and Background Containers.

2.1.1.3 Process Operations. Process Operations provides operational data and data collection functions for the process area gloveboxes. Waste drums are removed from overpack containers when applicable, and are opened and emptied. Waste drum contents are sorted, sampled, repackaged, and compacted when possible. Limited waste treatment capabilities will be provided in the RWM gloveboxes. The modules that encompass Process Operations are: Low-Level Waste (LLW) Process Glovebox; LLW Restricted Waste Management; TRU Process Glovebox; and TRU Restricted Waste Management.

2.1.1.4 Sample Management. Sample Management manages the analytical sample data from the point of generation to the final disposal. Activities will include sample tracking and manually updating the WRAP I DMS with waste type designators and treatment procedures to be used in the restricted waste management (RWM) gloveboxes. Laboratory analytical results will not be loaded into the WRAP I DMS. Updating of sample container locations as they leave the Process Area and as they are received back from the laboratories will also be addressed in this module. The module that encompasses the Sample Management function is Sample Management.

2.1.1.5 Shipping. Shipping supports the shipment of empty drums, waste drums and waste boxes from the WRAP I facility by providing the proper shipping documentation, verification that the correct drums are in the shipment, and updates to SWITS with certification data, shipping data, and location data. The modules that encompass Shipping are: Shipping Drum or Box Documentation and TRUPACT II Shipping.

2.1.1.6 Process Routing and Pick Lists. This function assists the operations personnel with the creation and maintenance of the various container process routing designations and pick lists for the Automatic Stacker/Retriever System (AS/RS). As the pick lists are selected, they will be uploaded to the PCS. If a pick list or routing code is modified, the modified pick list is uploaded to the PCS. It is assumed that the PCS will overwrite an existing pick list with the new one for that activity. The modules that encompass Process Routing and Picklists are: Process Routing and Picklists; AS/RS Shipping; and TRUPACT Assembly Picklist.

2.1.2 System Modules

The WRAP I DMS system modules encompass those functions which are integral to the system operation and maintenance and which are incorporated into each of the process modules. The system modules are: Waste Inventory by Location and/or Container Relationships; User Review/Modification of WRAP I Processing Data; Reports; Table Maintenance; Error Detection and Recovery; Interfaces and Communications, System Attributes, Requirements, and Performance; and Activity Comment.

2.1.2.1 Waste Inventory by Location and/or Container Relationships. The PCS will send a number of data messages to the WRAP I DMS over the WRAP Local Area Network (WLAN) that will be sorted into message types and then operated on according to the type and the data. A major function of the PCS messages is to maintain a dynamic inventory of all waste items and empty drums by interior

location at the WRAP 1 facility. The next major function is to maintain relationship records between associated waste items at the WRAP 1 facility. Each location record update or relationship record generated will also include the current date and time elements.

This function also provides radiological loading audits and checks for the WRAP 1 facility. Radiological limits tracking in WRAP 1 includes tracking total facility inventory and inventory inside the TRU and TRU RWM gloveboxes.

2.1.2.2 User Review/Modification of WRAP 1 Processing Data. The WRAP 1 users will review the WRAP 1 DMS data as applicable to verify that all data required to be generated in WRAP 1 was in fact obtained. Data to be reviewed include all associated waste container tables. Other tables may be added to the user review process as needed. Missing or incorrect data elements will be manually entered or corrected. Once the waste containers have been processed through the WRAP 1 facility and returned to the Shipping Area, satisfactory completion of this activity will allow the waste container to be flagged as "data review complete".

2.1.2.3 Reports. Reports to be generated by the WRAP 1 DMS encompass facility performance data reporting, waste data reporting, reference table reporting, and ad hoc reports. The descriptions for the various reports are in Chapter 5.0. In general, reports generated can be viewed on the screen, printed, or sent to a file.

2.1.2.4 Table Maintenance. Maintenance functions that need to be performed to ensure the efficient and correct operation of the WRAP 1 DMS include SWITS compatible table maintenance and WRAP 1 DMS table maintenance. These functions will be performed by the WRAP 1 System Administrator (SA) and/or the Database Administrator (DBA).

2.1.2.5 Error Detection and Recovery. Error detection and recovery shall be an integral part of the design. Diagnostic software to test the health of the WRAP 1 DMS and the status of the communication interfaces will be provided. Software will also be provided to facilitate restoration to normal operation following a failure. Specific error detection and recovery functions to be provided will be determined during software construction.

2.1.2.6 Interfaces. The DMS will include three general interface types: message communications within the DMS and with other WRAP 1 facility systems (e.g., PCS, SIE, and BWAS); interfaces with SWITS; and user interface.

2.1.2.7 Performance, Attributes, and Requirements. This module encompasses systemic WRAP 1 DMS characteristics including programmed function keys, error and update messages, data acceptance checks, security features, system and data maintenance and administration, transaction log, system backup, and the audit trail. It also addresses the ability of the system to meet the static and dynamic numerical requirements placed on the software or on human interaction with the software as a whole.

2.1.2.8 Activity Comment. The ability for an operator to assign a comment to any DMS activity that he is performing will be accommodated by this module. All activity comments will be associated with specific waste containers being processed within the WRAP facility; i.e. this module is not to be used for a general operator diary of the day's events. Data associated with packaged

waste that is not appropriate for other data tables and modules may be entered using the activity comment module.

2.2 CONCURRENT PROCESS DECOMPOSITION

All modules and processes within each module will be able to operate concurrently; however, operations on any given waste item are performed sequentially. A multiple screen capability shall be available to allow the user to skip to other screens to perform separate functions while suspending the operations on the current screens. It will also allow the system to pop-up another screen to alert the user or request data on an immediate basis. The concurrent process decomposition for each module is described in Appendix F.

2.3 DATA OBJECT DECOMPOSITION

The records and tables comprising the WRAP 1 DMS will be implemented using Oracle products. The individual data design objects and object attributes are defined in detail in the appendices. Both logical and physical data definitions are described in models and accompanying descriptions. The logical definition is comprised of the Relationship Models, while the physical definition is comprised of the Process Models, Screen Details, Report Details, and Data Dictionary.

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3.0 OBJECT-ORIENTED DESIGN DESCRIPTION

This chapter defines the interaction among design objects (database tables and elements) and provides the information needed to easily perceive why, how, where, and at what level system actions occur. The object-oriented design description will be expressed through a series of object models. These models define the relationships between objects (Relationship Model) and physical data structure (Process Models).

3.1 INTERMODULE AND INTERPROCESS DEPENDENCIES

This design is structured around modules utilizing shared objects that will function individually and independently. Each module and database process is dependent on Objects, and may depend upon the results from other modules or processes. These dependencies are related to the container (drum or box) moving from one process area to the next by the routing applied to that container.

For example, the NDE/NDA process is dependent upon the SWITS data downloaded during the previous Receiving process. This is then carried forward to the gloveboxes in the Process area where the NDE/NDA data determines which glovebox to go to and what non-compliant items to look for on the sorting table. The treatments to apply to the non-compliant items are dependent upon the Sample Management process laboratory results. The final process, Shipping, is dependent upon the data collected in the Process Operations area and the NDA process.

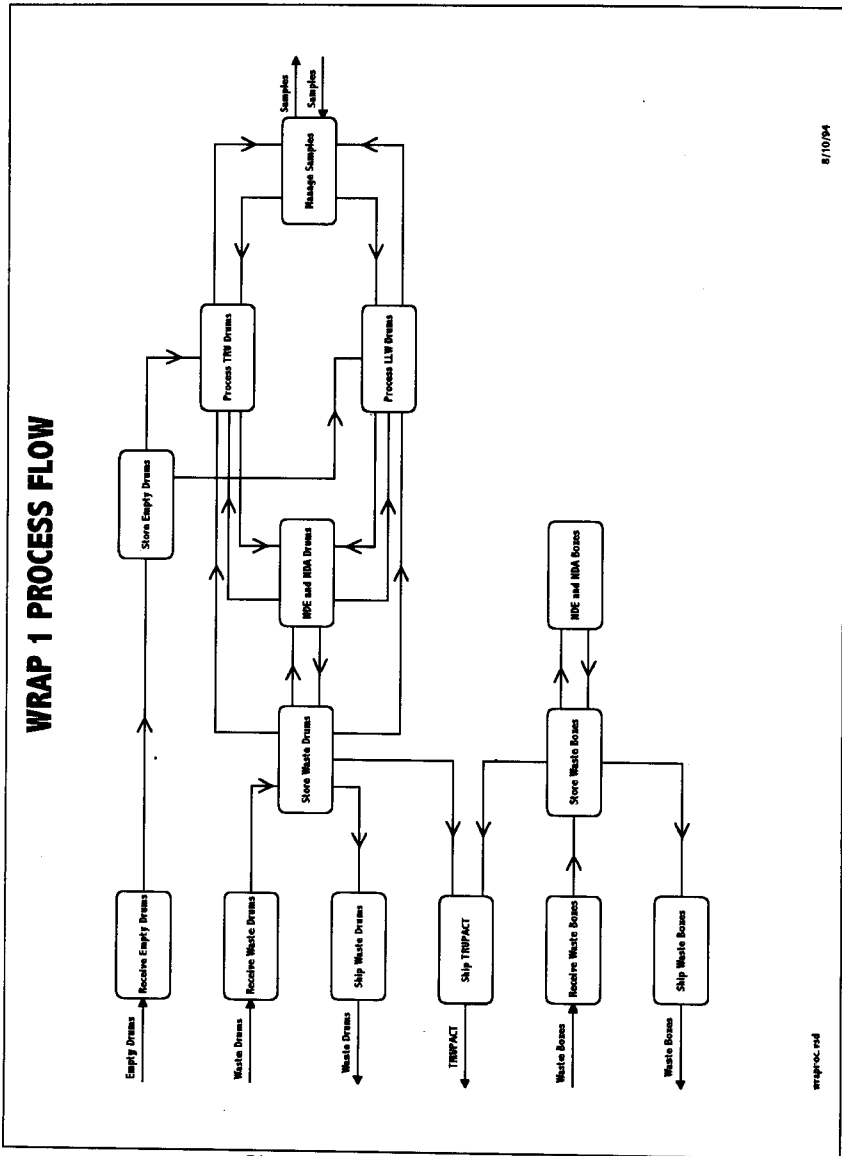
Data dependencies within a process are tightly coupled. These dependencies are discussed in Section 3.3 of this document. This section will discuss the high-level relationships among the WRAP 1 DMS modules and processes as well as the key data elements.

3.1.1 Work Flow Description

A top-level WRAP 1 process flow diagram is shown in Figure 3-1. The planned mode of operation for the WRAP 1 facility is described in WHC-SD-W026-SD-001, *Waste Receiving and Processing Module 1 Operating Plan* (WHC 1994).

3.1.2 Data Sources

Data sources utilized by the WRAP 1 DMS system include SWITS, the WRAP PCS, the SIE, the BWAS, the HLAN time clock, and user input.



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Figure 3-1. WRAP 1 Process Flow.

3.1.3 WRAP 1 DMS System Administration Context Diagram

The *WRAP 1 DMS SRS* is used as the basis for development of the system administration data flow. The system administration context diagram (Figure 3-2) presents a high level view of the interfaces of users and systems manager(s) with the administrative functions of the WRAP 1 DMS. The interfaces to the system's administration activities of the WRAP 1 DMS are:

WRAP 1 Operations Personnel (Operational Users). Operational users are those persons, authorized access to the WRAP 1 DMS, who use the data presentation and data entry screens to perform the functional activities supported by the system.

WRAP 1 Operations Management and Support Personnel. Management and support personnel utilize the WRAP 1 DMS data presentation and data entry screens to review and update data and to generate reports.

System Administrator(s). The system administrator is a high level user who has been granted additional authority to maintain portions of the database that affect overall operation of the system. These include determining the processing authority of other system users, maintaining data validation tables, and tracking system activity.

Operating System Access Controls. The operating system of the computer platform on which the WRAP 1 DMS operates implements security constraints that restrict who may utilize the computer. These constraints must be managed for WRAP 1 DMS users.

WRAP 1 DMS Access Controls. The WRAP 1 DMS system has a more restrictive set of security controls. Access to the WRAP 1 DMS may be by user job function and/or personal authorization.

Developers. The WRAP 1 DMS developers have the responsibility of creating, implementing, and maintaining the Oracle application modules supporting the users' requirements.

The system administration context diagram identifies the processes supporting both administrative and functional users of the WRAP 1 DMS system. These include the following processes performed as part of the system administration activities:

Log on to a DMS-enabled workstation. Before accessing any WRAP 1 DMS functions, the potential user must successfully either log on to a PC which is connected to the HLAN and is set up as a DMS client, or log on to the computer on which the WRAP 1 DMS system resides through an X-terminal.

Log onto the WRAP 1 DMS. Based on the security criteria established in the system portion of the WRAP 1 DMS database, each user must log onto the WRAP 1 DMS prior to performing any activity.

Execute WRAP 1 DMS user database transactions. Authorized users execute database transactions to perform those functions required to support their assigned duties in the operation of the WRAP 1 facility.

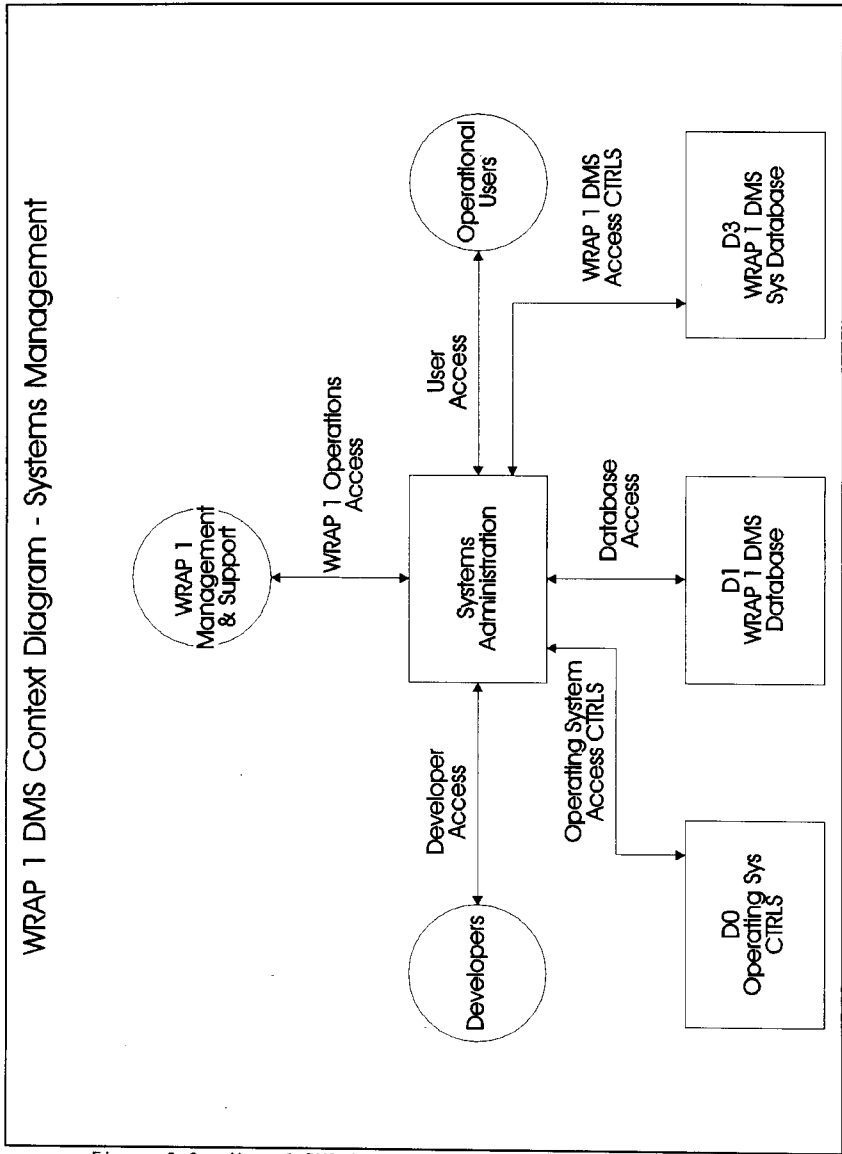


Figure 3-2. Wrap 1 DMS System Administration Context Diagram.

Execute WRAP 1 DMS system manager transactions. Authorized system managers execute database transactions to maintain control, data integrity, and effective use of the overall system.

3.2 OBJECT MODEL DIAGRAMS

Object model diagrams present a view of the processes, data flows, and interfaces supported by the WRAP 1 DMS. The overall business supported by the WRAP 1 DMS can be viewed through Relationship and Process data models. These data models describe the cardinalities, relationships, and data flows between objects. This section describes the object model diagram approach. Detailed object model diagrams are found in Appendices D and F of this document.

3.2.1 Data Dictionary

The Data Dictionary was developed by abstracting all the needed data elements from the Objects and the forms required to process waste at Hanford. The Data Dictionary contains a summary list of all the data tables and data elements in the WRAP 1 DMS system, as well as an expanded list providing each data element's description and domain (character, number). A large portion of the WRAP 1 DMS data elements were abstracted from the SWITS database and incorporated into the WRAP 1 DMS. The Data Dictionary is provided in Appendix C.

3.2.2 Relationship Model

The purpose of the Relationship Model is to create one model that represents an entire system or an entire sub-system or an entire module of a system. The Relationship Model documents the significant connections, associations, or relationships between and among objects. The relationships represent data abstractions between objects that have similar sets of constraints and characteristics. A relationship exists when some number of instances are connected in a significant manner. Relationships can be thought of as a mapping between members of a set (Set Theory); given a member of set A, is a member of set B associated to it?

Relationships use a layered square box to notate objects and a rectangle box to show software systems. Relationships are bi-directional, and utilize cardinality (multiplicity) to show dependencies or conditionality. Appendix D includes all WRAP 1 DMS module Relationship Models.

3.2.3 Process Model

The Process Model is comprised of a diagram displaying the Physical Unit Processes occurring in a module and a columnar table describing the Unit Processes in the order that they occur. Revision 2 of this document reformatted the Unit Processes to provide a separate line item for each module trigger and associated processing.

Each major process is represented in the diagram with a circle that describes the process. A line with an arrowhead pointing to or from a

Process or Data Store represents the data flow direction. Information provided in the columnar table is summarized in Table 3-1. Process Models are presented in Appendix F.

Table 3-1. WRAP 1 DMS Process Model Data.

Column	Description
1.	Process sequence number
2.	Unit Process name
3.	Screens and Reports utilized by the Process
4.	User or system triggers for updates
5.	Conditions and events (or Sub-Unit Processes), including special instructions for the developers (pseudo-code)
6.	Data Stores (actual database table names)
7.	Each attribute in each table that is updated by that Process

3.3 DATA DEPENDENCIES

Computer databases are made up of associated groups of data. The association of data is made at two basic levels, "object" and "database".

Individual data items (or data elements) that support a common function or activity are brought together. This grouping is commonly known as a record or table. In its early design stage, this group is known as an "object."

Groups of related objects are brought together to form a "database." A database may be made up of a single object or many objects linked together.

The linking of multiple objects is accomplished by defining the relationship between objects. The Relationship Model (see Appendix D) is the resulting graphical representation of the database's objects and relationships.

3.3.1 Object Dependency Descriptions

This section describes object dependencies. Dependencies described in this section are preliminary, and will be updated as the system is developed. Appendix C, the Data Dictionary, provides definitions of all WRAP 1 DMS objects.

3.3.1.1 Functional Database Objects. Functional database objects can be grouped according to their support of the primary function object, the CONTAINER object.

3.3.1.1.1 The CONTAINER Object. The CONTAINER object is the central object of the WRAP 1 DMS database. It provides unique information about each waste container and its contents. This is the core object of the database. The main purpose of the WRAP 1 DMS system is to maintain and track occurrences of this object, representing physical waste containers and their contents.

The CONTAINER object encompasses the following container types: box, overpack drum, product drum, empty container, waste container, transfer drum, aerosol can, collection container, calibration drum, packet, purge port, treatment container, and transfer pig.

The CONTAINER object is comprised of the Container and Content Record (WASTE) and Container and Content Extension Record (WASTEXT) tables in the database.

3.3.1.1.2 Objects Dependent on CONTAINER. The following objects are dependent on the CONTAINER object for their existence. Occurrences of these objects will not exist unless there is a corresponding occurrence of the CONTAINER object. The objects dependent on CONTAINER are:

- Activity Comment
- Applicable Material Safety Data Sheet (MSDS)
- Bin List
- Chain of Custody Transfer
- Hazardous Chemical Component Record
- Container and Content Extension Record
- Container Location
- Container Relationship Record
- Container Treatment
- Discharge Conveyor List
- Field Screening Record
- Hazardous Waste Container Detail Record
- Radioactive Isotope Quantity Record
- Metrics Record
- NDA Assay Results
- NDA Assay Isotopic Records
- NDE Results
- Not Process List
- Not Ship Pick List
- Isotopic Distribution
- Payload Container Certification Record
- Payload Assembly Certification Record
- Physical Component Record
- Package Dangerous Waste Numbers Record
- Radioactive Waste Container Detail Record
- Sample Data Relationship Record
- Shipment History Record
- Shipping Pick List
- TRUPACT Waste Container Record
- Verification Record
- Worksheet Item.

3.3.1.1.3 Objects Independent of CONTAINER CONTENT. The following objects can occur independent of the CONTAINER object. These objects support data that has value in its own right, regardless of the status of the

CONTAINER object. The objects that may exist independent of CONTAINER CONTENT are:

- Bottle Analysis Record
- Bottle Data Record
- Chain of Custody
- Field Analysis
- Message Log Record
- Process Pick List
- Processing Add List
- Radiological Material Inventory
- Receiving Display Record
- Sample Analysis Request
- Sample Data Record
- Sample Bottle Location Record
- Shipment Item Record
- Shipment Record
- Treatment Worksheet
- TRUPACT Shipping Record
- TRUPACT Shipping Pick List
- WRAP Shipment Record.

3.3.1.2 Systems Management Objects. The systems management objects are those whose primary purpose is to enable the system to attain its functional requirements. These objects are seldom visible to the functional user of the WRAP 1 DMS. Instead, the systems management objects support the functionality of the system software. The systems management objects are divided into the following groups.

3.3.1.2.1 Security and Access Control Objects. The security and access control objects identify authorized users and those system activities and data that each may utilize. It is important to recognize that WRAP 1 DMS data must withstand public comment. The security and access control objects are:

- Role Table
- Role Screen Table
- Screen Table
- User Table
- User Role Table
- User Signature Password Table.

3.3.1.2.2 Functional Support Objects. Functional support objects provide background data to support the application software. The functional support objects are:

- Communication Table
- Error Message Table
- Field Help Table
- Form Help Table
- Report Table.

3.3.1.2.3 Data Integrity and Validation Objects (Look-Up Tables). Data integrity and validation objects are used by the software to dynamically validate the content of data entered by the functional user. By using data objects instead of hard coding the validation values into the software,

changes in valid value ranges over time can be quickly and economically handled by simple validation table changes. Appendix G contains a listing of the contents of the look-up tables. The look-up table objects are:

- Miscellaneous Code Table
- Company Table
- Container Size Table
- Container Type Table
- DOT Container Specification Table
- Dangerous Waste Number Table
- Facility Table
- Field Analysis Type
- Hazardous Chemical Component Table
- Isotope Table
- Laboratory Table
- Laboratory Analysis
- Location Table
- Material Group Code Table
- Material Safety Data Sheets
- Person Table
- Physical Component Description Table
- Package Status Table
- Primary Waste Type Code Table
- Generator Assay Profile Table
- Profile Isotopic Table
- Route Description Table
- Sample Container Type
- Sample Matrix
- Sampling Method
- Secondary Waste Type Code Table
- Shipment Picklist Type Table
- SIE Isotopic Name Table
- State Table
- Storage Category Table
- Treatment Procedure
- TRU Container Code Table
- TRU Shipping Category Table
- TSD Facility Table
- WRAP Miscellaneous Code Table.

3.3.1.2.4 The Miscellaneous Code (CODECHECK) and WRAP Miscellaneous (WRAPMISC) Tables. A number of data elements need validity checks for which there are so few valid values that it is not advantageous to establish a separate table for them. In general, if a table would have only two elements (the code value and its description) and there would be only a few entries, the values are put into either the CODECHECK table or the WRAPMISC table with a code field name to identify the group of valid values. The CODECHECK table is used for SWITS controlled table miscellaneous codes, and the WRAPMISC table is used for DMS-only table miscellaneous codes. These value sets and the fields to which they apply are listed in Appendix C.

3.3.2 Object Relationship Descriptions

This section describes the relationships between objects. These descriptions include specifying the number of instances of a particular object that may relate to a specified number of instances of another object (cardinality).

A number of objects have description names which have been assigned a short form for ease of use in the data models. The following objects and their corresponding short names have been utilized in this section:

- | | |
|---------------------------------------|-----------|
| • Container Relationship | ConRel |
| • Hazardous Chemical Component | ChemComp |
| • Hazardous Waste Container Detail | HazDetail |
| • Radioactive Isotope Quantity Record | IsoQty |
| • Radioactive Waste Container Detail | RadDetail |
| • Radiologic Material Inventory | RadMat |
| • Sample Analysis Request | SAR |
| • WRAP Shipment Record | SHIPWRAP |
| • Treatment, Storage, or Disposal | TSD. |

3.3.2.1 Functional Database Relationships. Functional database relationships are associated with functional database objects. These relationships support the associations of data that comprise the operational system functions within the database. This section also identifies the process functions (see Section 2.1.1) in which each type of relationship is valid. The relationships in this group are:

Chain of Custody-Sample. A chain of custody transmits one or many samples. A sample is transmitted by zero or one chain of custody.

Company-Container. A company may generate zero, one, or many containers. A container is generated by one and only one company.

Company-Person. A company may employ zero, one, or many persons. A person may be employed by one and only one company.

Company-Shipment (1). An offsite company may receive zero, one, or many shipments. A shipment may be received by zero or one offsite company. (Shipping)

Company-Shipment (2). A transportation company may transport zero, one, or many shipments. A shipment may be transported by one and only one transportation company.

Container-Activity Comment. A container may relate zero, one, or many activity comments. An activity comment relates to one and only one container. (Receiving; NDE/NDA; Process Operations; Sample Management; Shipping)

Container-Applicable MSDS. A container may apply zero, one, or many applicable MSDSs. An applicable MSDS applies to one and only one container.

Container-Bin List. A container is located by zero or one bin list. A bin list locates one to four containers. (Process Routing and Picklists)

Container-Chain of Custody Transfer. A container may be related to zero, one, or many chain of custody transfer records. A chain of custody transfer record relates one and only one container. (Sample Management)

Container-ChemComp. A container may be related to zero, one, or many hazardous chemical component records. A hazardous chemical component record relates one and only one container. (Shipping)

Container-Container Extension (1). A (overpack) container is related to one container extension record. A container extension record relates zero or one (overpack) container.

Container-Container Extension (2). A (waste) container is related to one container extension record. A container extension record relates one and only one (waste) container.

Container-Container Location. Each container location may relate to zero, one, or many containers. A container is related to one and only one container location. (Receiving; NDE/NDA; Process Operations; Sample Management; Shipping; Process Routing and Pick Lists)

Container-Container Relationship. A container may be related to zero, one, or many container relationships. A container relationship relates two containers ("from" container and "to" container). (Receiving; NDE/NDA; Process Operations; Sample Management; Shipping; Process Routing and Pick Lists)

Container-Container Treatment. A container may be related to zero, one, or many container treatments. A container treatment relates to one and only one container. (Process Operations)

Container-Discharge Conveyor List. A container may be located on zero or one discharge conveyor lists. A discharge conveyor list locates one and only one container.

Container-Field Screening. A container relates zero, one, or many field screening records. A field screening record is related to one and only one container. (Sample Management)

Container-HazDetail. A container may relate zero or one hazardous waste container detail records. A hazardous waste container detail record relates to one and only one container. (Sample Management; Process Routing and Pick Lists; Shipping)

Container-IsoQty. A container may relate zero, one, or many radioactive isotope quantity records. A radioactive isotope quantity record relates to one and only one container. (NDE/NDA; Shipping)

Container-Isotopic Distribution Record. A container may relate zero or one isotopic distribution (PAM) record. An isotopic distribution record relates to one and only one container. (NDE/NDA)

Container-Metrics Record. A container may relate zero, one, or many metrics records. A metrics record relates to one and only one container.

Container-NDA Assay Results. A container relates to zero, one, or many NDA assay results records. NDA assay results records are related to one and only one container. (NDE/NDA)

Container-NDE Results. A container may be related to zero, one, or many NDE results records. An NDE results record relates to one and only one container record. (NDE/NDA)

Container-Not Process List. A container may be listed on zero or one Not Process List. A Not Process List lists one and only one container. (Process Routing and Pick Lists)

Container-Not Ship Pick List. A container may be listed on zero or one Not Ship Pick List. A Not Ship Pick List lists one and only one container. (Process Routing and Pick Lists)

Container-Package Dangerous Waste Numbers Record. A container may relate zero, one, or many package dangerous waste numbers records. A package dangerous waste numbers record relates to one and only one package.

Container-Payload Container Certification Record. A container may be supported by zero or one payload container certification record. A payload certification record supports one and only one container. (Shipping)

Container-PhysComp. A container relates to zero, one, or many physical component records. A physical component record is related to one container. (Process Operations; Shipping)

Container-RadDetail. A container relates to zero or one radioactive waste container detail records. A radioactive waste container detail record is related to one container. (NDE/NDA; Process Operations; Process Routing and Pick Lists; Shipping)

Container-RadMat. A container may relate zero, one, or many radiologic material inventories. A radiological material inventory is related to one and only one container. (Process Operations)

Container-Sample. A container relates zero, one, or many sample records. A sample record is related to one and only one container. (Sample Management)

Container-Sample Relationship. A container may relate zero, one, or many sample relationships. A sample relationship relates one or many samples to a container. (Sample Management)

Container-Shipment History. A container may relate to zero or one shipment history records. A shipment history record is related to one or many containers. (Shipping)

Container-Shipping Pick List. A container may be selected by zero or one shipping pick list. A shipping pick list selects one and only one container. (Process Routing and Pick Lists; Shipping)

Container-Verification Record. A container may be reviewed by zero, one, or many verification records. A verification record reviews one and only one container.

Container-Worksheet Item. A container may be specified by zero or one worksheet items. A worksheet item specifies one and only one container. (Process Operations)

Container Size-Container. A container size may apply to zero, one, or many containers. A container applies one and only one container size.

Container Type-Container. A container type may describe zero, one, or many containers. A container is described by one and only one container type.

Container Type-Container Size. A container type may apply one or many container sizes. A container size may apply to one and only one container type.

Container Type-Payload Container Certification Record. A container type may be recorded by zero, one, or many payload container certification records. A payload container certification record records one and only one container type. (Shipping)

Container Type-Sample Container Type. A container type may describe zero, one, or many sample container types. A sample container type is described by one and only one container type.

Dangerous Waste Number-Package Dangerous Waste Numbers Record. A dangerous waste number may relate zero, one, or many package dangerous waste numbers records. A package dangerous waste numbers record relates to one and only one dangerous waste number.

DOT Specification-Container. A DOT specification may apply to zero, one, or many containers. A container applies one and only one DOT specification.

Facility-Container (1). A facility may locate zero, one, or many containers. A container is located at one and only one facility.

Facility-Container (2). A facility may generate zero, one, or many containers. A container is generated by one and only one facility.

Facility-Shipment. An onsite facility may receive zero, one, or many shipments. A shipment may be received by zero or one onsite facility. (Shipping)

Facility-SHIPWRAP. A facility may receive zero, one, or many WRAP shipments. A WRAP shipment may be received by one and only one facility. (Shipping)

Facility-TSD Facility. A facility may be zero or one TSD facility. A TSD facility may be one and only one facility.

Field Analysis Type-Field Analysis. A field analysis type relates zero, one, or many field analyses records. A field analysis record is related to one and only one field analysis type. (Sample Management)

Field Screening-Field Analysis. A field screening sample may apply zero, one, or many field analyses. A field analysis is applied to one and only one field screening sample. (Sample Management)

HazComp-ChemComp. A hazardous chemical component (HazComp) may relate zero, one, or many hazardous chemical component records (ChemComps). A hazardous chemical component record relates to one and only one hazardous chemical component.

Isotope-IsoQty. An isotope may relate zero, one, or many radioactive isotope quantity records. A radioactive isotope quantity record relates to one and only one isotope.

Isotope-SIE Isotopic Name. An isotope is described by zero or one SIE isotopic names. An SIE isotopic name describes one and only one isotope. (NDE/NDA)

Laboratory Analysis-Bottle Analysis Record. A laboratory analysis may be relate to zero, one, or many bottle analysis records. A bottle analysis record relates one and only one laboratory analysis.

Laboratory Analysis-SAR. A laboratory analysis may define zero, one, or many sample analysis requests. A sample analysis request is defined by one and only one laboratory analysis. (Sample Management)

Laboratory-Chain of Custody. A laboratory is designated by zero, one, or many chain of custody records. A chain of custody record designates zero or one laboratory. (Sample Management)

Location-Container Location. A location is associated with zero, one, or many container locations. A container location associates with one and only one location. (Receiving; NDE/NDA; Process Operations; Sample Management; Shipping; Process Routing and Pick Lists)

Location-Field Screening. A location may locate zero, one, or many field screening records. A field screening record is located by one and only one location. (Sample Management)

Location-Sample. A location may relate zero, one, or many samples records. A sample record relates to one and only one location. (Sample Management)

Location-Sample Bottle Location. A location is associated with zero, one, or many sample bottle locations. A sample bottle location associates with one and only one location. (Sample Management)

Material-Container Extension. A material group may apply to zero, one, or many container extension records. A container extension record applies one and only one material group.

MSDS-Applicable MSDS. An MSDS may apply to zero, one, or many applicable MSDSs. An applicable MSDS applies to one and only one MSDS.

NDA Assay Results-NDA Assay Isotopic Record. An NDA assay results record may relate zero, one, or many NDA assay isotopic records. An NDA assay isotopic record relates to one and only one NDA assay results record. (NDE/NDA)

Package Status-Container. A package status may apply to zero, one, or many containers. A container applies one and only one package status.

Payload Assembly-Payload. A payload assembly may relate one or many payload records. A payload record is related to one and only one payload assembly.

Person-Chain of Custody. A person may be the company contact for zero, one, or many chains of custody. A chain of custody has one and only one company contact person. (Sample Management)

Person-Field Screening. A person may take zero, one, or many field screenings. A field screening is taken by one and only one person. (Sample Management)

Person-Sample. A person may take zero, one, or many samples. A sample is taken by one and only one person. (Sample Management)

Person-SHIPWRAP (1). A person may transport zero, one, or many WRAP shipments. A WRAP shipment is transported by one and only one person. (Shipping)

Person-SHIPWRAP (2). A person may be responsible for sending zero, one, or many WRAP shipments. A WRAP shipment may be sent by one and only one person. (Shipping)

Person-SHIPWRAP (3). A person may receive zero, one, or many WRAP shipments. A WRAP shipment is received by one and only one person. (Shipping)

Person-TSD Facility (1). A person may be a scheduler for zero or one TSD facility. A TSD facility may have zero or one scheduler.

Person-TSD Facility (2). A person may be a supervisor for zero or one TSD facility. A TSD facility may have zero or one supervisor.

Person-User. A person may be zero, one, or many WRAP 1 DMS users. A WRAP 1 DMS user may be zero or one person.

Physical Component Description-PhysComp. A physical component description may apply to zero, one, or many physical component records. A physical component record applies one and only one physical component description.

Primary Waste Type-Container. A primary waste type may apply to zero, one, or many containers. A container applies one and only one primary waste type.

Profile-Container Extension. A generator assay profile may relate zero, one, or many container extension records. A container extension record relates to one and only one generator assay profile. (NDE/NDA)

Profile-NDA Assay Results. A generator assay profile defines zero, one, or many NDA assay results records. An NDA assay results record is defined by one and only one generator assay profile. (NDE/NDA)

Profile-Process Pick List. A generator assay profile is selected by zero, one, or many process pick lists. A process pick list selects one and only one generator assay profile. (Process Routing and Pick Lists)

Profile-Processing Add List. A generator assay profile is selected by zero, one, or many processing add lists. A process pick list selects one and only one generator assay profile. (Process Routing and Pick Lists)

Profile-Profile Isotope. A generator assay profile is supported by zero, one, or many profile isotopes. A profile isotope may support one and only one generator assay profile. (NDE/NDA)

Route-Container Extension. A route may apply to zero, one, or many container extension records. A container extension record applies one and only one route.

Route-Process Pick List. A route may direct zero, one, or many process pick lists. A process pick list is directed by one and only one route. (Process Routing and Pick Lists)

Route-Processing Add List. A route may direct zero, one, or many process pick lists. A processing add list is directed by one and only one route. (Process Routing and Pick Lists)

Sample-Sample Bottle. A sample may be contained in one or many sample bottles. A sample bottle may contain one and only one sample. (Sample Management)

Sample-SAR. A sample record may relate zero, one, or many sample analysis requests. A sample analysis request is related to one and only one sample record. (Sample Management)

Sample Bottle-Bottle Analysis Record. A sample bottle may be relate to zero, one, or many bottle analysis records. A bottle analysis record relates one and only one sample bottle.

Sample Bottle-Sample Relationship (1). A sample bottle is related to one parent waste container (packet or drum) sample relationship. A sample relationship relates a sample bottle to one and only one parent waste container. (Sample Management)

Sample Bottle-Sample Relationship (2). A sample bottle may be related to one purge port sample relationship. A sample relationship relates a sample bottle to one and only one purge port container. (Sample Management)

Sample Bottle Location-Sample Bottle. A sample bottle location may be related to one or many sample bottles. A sample bottle relates one and only one sample bottle location.

Sample Container Type-Laboratory Analysis. A sample container type may be specified by zero, one, or many laboratory analyses. A laboratory analysis specifies one and only one sample container type. (Sample Management)

Sample Matrix-Sample. A sample matrix may define zero, one, or many samples. A sample is defined by one and only one sample matrix. (Sample Management)

Sampling Method-Field Screening. A sampling method may relate zero, one, or many field screening records. A field screening record relates to one and only one sampling method. (Sample Management)

Sampling Method-Sample. A sampling method may collect zero, one, or many samples. A sample is collected by one and only one sampling method. (Sample Management)

Secondary Waste Type-NDA Assay Results. A secondary waste type group describes zero, one, or many NDA assay results records. An NDA results record is described by zero or one secondary waste type group. (NDE/NDA)

Secondary Waste Type-RadDetail. A secondary waste type may relate zero, one, or many radioactive waste container detail records. A radioactive waste container detail record may relate to zero or one secondary waste type.

Shipment Item-Shipment History Record. A shipment item relates to one shipment history record. A shipment history record is related to one and only one shipment item. (Shipping)

Shipment Picklist Type-Container Extension Record. A shipment picklist type may apply to zero, one, or many container extension records. A container extension record applies one and only one shipment picklist type. (Process Routing and Pick Lists)

Shipment-Container. A shipment (manifest) may list one or many containers. A container may be listed by zero or one shipment.

Shipment-Shipment History Record. A shipment relates to one or many shipment history records. A shipment history record is related to one and only one shipment. (Shipping)

Shipment-Shipment Item. A shipment may contain one or many shipment items. A shipment item is contained by one and only one shipment. (Shipping)

Shipment-SHIPWRAP. A shipment may manifest zero or one WRAP shipment. A WRAP shipment may be manifested by one and only one shipment. (Shipping)

SHIPWRAP-Shipping Pick List. A WRAP shipment record relates one or many shipping pick lists. A shipping pick list is related to one and only one WRAP shipment record.

SHIPWRAP-TRUPACT Shipping Record. A WRAP shipment record may relate zero or one TRUPACT shipping record. A TRUPACT shipping record is related to one and only one WRAP shipment record. (Shipping)

SIE Isotope Name-NDA Assay Isotopic Record. An SIE isotope name may relate zero, one, or many NDA assay isotopic records. An NDA assay isotopic record relates to one and only one SIE isotope name. (NDE/NDA)

SIE Isotope Name-Profile Isotope. An SIE isotope name describes zero or one profile isotope. A profile isotope is described by one and only one SIE isotope name. (NDE/NDA)

State-Company. A state may address zero, one, or many companies. A company record may be addressed by one and only one state.

State-Person. A state may address zero, one, or many persons. A person is addressed by one and only one state.

Storage Category-Container. A storage category may apply to zero, one, or many containers. A container applies one and only one storage category.

Treatment Procedure-Treatment Worksheet. A treatment procedure may apply to zero, one, or many treatment worksheets. A treatment worksheet applies one and only one treatment procedure. (Process Operations)

Treatment Worksheet-Container Treatment Record. A treatment worksheet may be applied to zero, one, or many container treatment records. A container treatment record applies one and only one treatment worksheet.

Treatment Worksheet-Worksheet Item. A treatment worksheet records one or many worksheet items. A worksheet item is recorded by one and only one treatment worksheet. (Process Operations)

TRU Container Code-Container Extension Record. A TRU container code may apply to zero, one, or many container extension records. A container extension record may apply zero or one TRU container codes.

TRU Container Code-Payload. A TRU container code may apply to zero, one, or many payload records. A payload record applies one and only one TRU container codes.

TRU Shipping Category-Payload. A TRU shipping category may apply to zero, one, or many payload records. A payload record applies one and only one TRU shipping category.

TRU Shipping Category-Payload Assembly. A TRU shipping category may apply to zero, one, or many payload assemblies. A payload assembly applies one and only one TRU shipping category.

TRUPACT Shipping Record-Payload Assembly. A TRUPACT shipping record relates one, two, or three payload assemblies. A payload assembly is related to one and only one TRUPACT shipping record.

User-Activity Comment Record. A user may record zero, one, or many activity comment records. An activity comment record is recorded by one and only one user. (NDE/NDA; Process Operations; Sample Management)

User-Chain of Custody Transfer (1). A user may receive zero, one, or many chain of custody transfer records. A chain of custody transfer record is received by one and only one user. (Sample Management)

User-Chain of Custody Transfer (2). A user may relinquish zero, one, or many chain of custody transfer records. A chain of custody transfer record is relinquished by one and only one user. (Sample Management)

User-Container Treatment. A user may perform zero, one, or many container treatments. A container treatment is performed by one and only one user. (Process Operations)

User-NDE Results. A user may generate zero, one, or many NDE results records. An NDE results record is generated by one and only one user. (NDE/NDA)

3.3.2.2 Systems Management Relationships. Systems management relationships are associated with the corresponding objects. These relationships support the functional association of data that provides the background systems services for the WRAP 1 DMS system. The relationships in this group are:

Role-Role Screen. A role may relate zero, one, or many role screens. A role screen is related to one and only one role.

Role-User Role. A role may relate zero, one, or many user roles. A user role is related to one and only one role.

Screen-Role Screen. A screen may relate zero, one, or many role screens. A role screen is related to one and only one screen.

User-Person. A WRAP 1 DMS User may or may not be a Person. A Person may or may not be a WRAP 1 DMS User.

User-User Signature Password. A user relates zero or one user signature passwords. A user signature password is related to one and only one user.

User-User Role. A user may relate zero, one, or many user roles. A user role is related to one and only user.

3.4 PHYSICAL DATA MODEL

The physical data model translates the object/relationship definition into the form acceptable to the DBMS being used. The WRAP 1 DMS data model is translated into a series of Oracle tables and indexes. In general, objects become tables and relationships become indexes.

Complex applications often require unusual combinations of data in order to achieve the requirements of the user. Special definition subsets of the database may be identified to meet these requirements. Such subsets are known as "views." There is no limit to the number of views that may be defined in support of a relational database.

This section describes the physical database model, the database tables, the indexes that make accessing the database more efficient, and the specialized views of the database that have been defined to further simplify processing.

3.4.1 Data Dictionary

The data dictionary (see Appendix C) identifies the database tables and the indexes supporting each table. Each index is identified as either unique or foreign (non-unique).

3.4.2 Indexes

Indexes are pathways through the database that permit the user to quickly access specific data without having to physically look at every record (row) of a table in order to locate desired data. Indexes are normally sorted

on a data item in the table. While ascending order is the most common, descending order may be selected. Indexes are of two basic types: unique and non-unique.

3.4.2.1 Unique Indexes. A unique index cannot contain any duplicate key values. This feature ensures that one and only one table occurrence exists for a particular key value. The unique index is always used to identify the primary key of a table. Primary keys are identified in the Data Dictionary, Appendix C.

3.4.2.2 Foreign Indexes. This type of index is used to provide other pathways through the database to support specific requirements (i.e., searching, sorting, joining). Typically, foreign key fields have non-unique indexes defined.

3.5 NETWORK DEPENDENCIES

The WRAP 1 DMS system will primarily support users at the WRAP 1 facility, although some users will be located throughout the Hanford Site. Users will access the system through the WRAP Local Area Network (WLAN) or the Hanford Local Area Network (HLAN). The WRAP 1 DMS will access the SWITS through the HLAN. This section describes those features of the WLAN and HLAN networks that will be utilized in support of WRAP 1 DMS processing.

WRAP 1 plant terminals accessing the WRAP 1 DMS database will utilize the WLAN network for access to the database computer. Some terminals external to the WRAP 1 facility will utilize the HLAN to access the WRAP 1 DMS database. The network diagram is provided in Figure 3-3.

The WRAP 1 DMS will interface to the SWITS database over HLAN to acquire the initial data on drums and boxes arriving at the WRAP 1 facility and will update the SWITS database with the necessary certification data on shipments of waste from the WRAP 1 facility. The WRAP 1 DMS will communicate with the WRAP 1 PCS, the SIE, and the BWAS over the WLAN to provide these other systems with required data and to receive location and characterization data. Terminals located throughout the plant will be used to review and enter data. Figure 3-3 presents a system architecture layout showing the WRAP 1 DMS communication interfaces, and Figure 3-4 presents a context diagram showing the WRAP 1 DMS data interfaces. The WRAP 1 DMS database will reside on a computer connected to the WLAN. The WRAP 1 DMS computer (server) must communicate with all of the computers and terminals represented in this figure.

An electronic interface may be implemented for waste data package transmission to the Waste Isolation Pilot Plant (WIPP). Details of this interface have not been defined at this time.

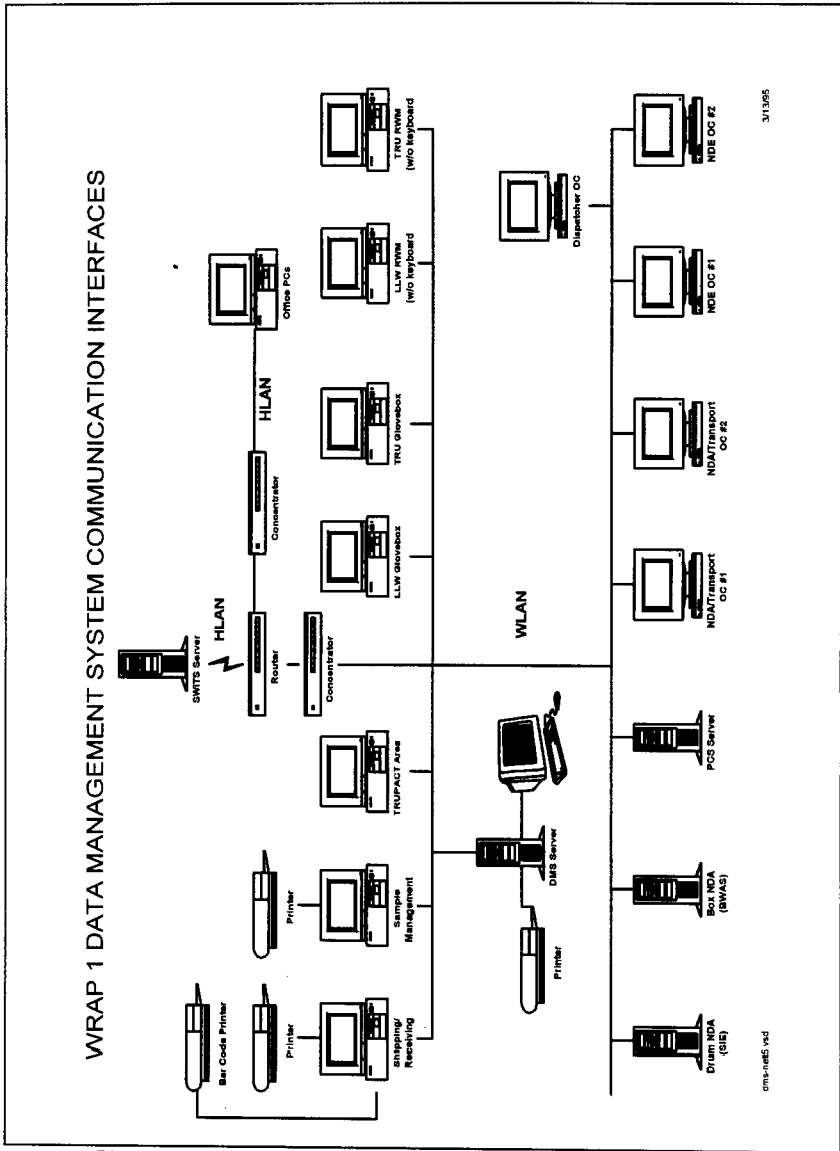
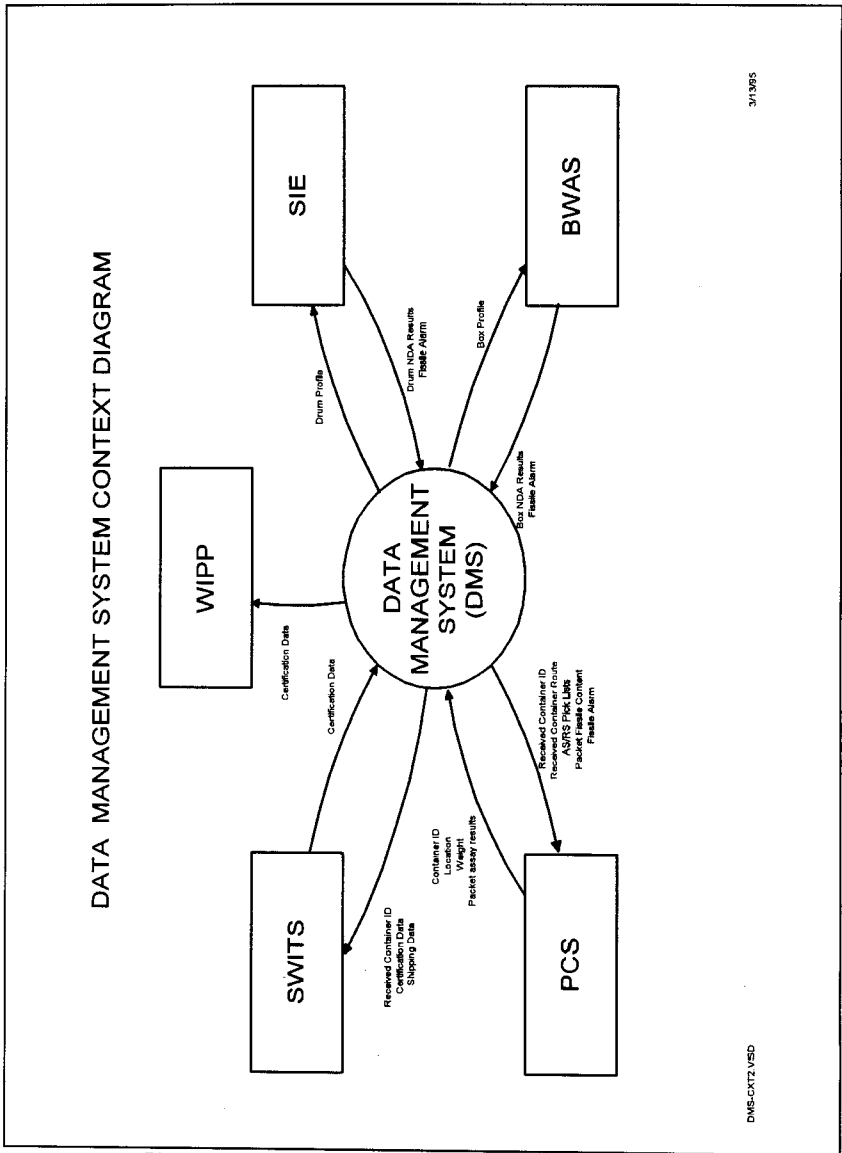


Figure 3-3. Data Management System Communications Interface.



3/13/95

DMS:CKTZ:MSD

Figure 3-4. Data Management System Context Diagram.

3.6 CONVERSION DEPENDENCIES

Due to the similarity of the WRAP 1 DMS data and reporting requirements with those of SWITS, the WRAP 1 DMS will, where applicable, copy/duplicate the data structures of the SWITS Oracle database. The WRAP 1 DMS design will also incorporate appropriate SWITS applications and reports. Final screens and reports will be reviewed by the users online during construction. The WRAP 1 DMS system will comply with current SWITS data standards and data element naming criteria.

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4.0 INTERFACE DESCRIPTION

Chapter 4.0 provides a high-level description of the interfaces inherent in the WRAP 1 DMS. Internal, external, and human/machine interfaces are utilized by the WRAP 1 DMS. These interfaces enable needed access to WRAP 1 DMS data by persons and other computer systems.

4.1 INTERNAL INTERFACES

The ORACLE relational database management system provides the management of the WRAP 1 DMS data. Oracle Forms Version 4.0 and Oracle Reports Version 1.1 are the principal programming tools.

4.2 EXTERNAL INTERFACES

External interfaces are those interfaces outside the WRAP 1 DMS software application product. These interfaces include other software products, systems enabling communication with external systems, and the associated hardware.

4.2.1 Software Interfaces

Software interfaces are interactions between the WRAP 1 DMS application software and other software products, such as data management systems, operating systems, process and equipment control systems, or other application systems. Interfaces also include those with the vendor supplied software products, i.e., Pro-C, C, and Oracle and its interface products including Oracle Forms, Oracle Reports, and SQL*Net.

The WRAP 1 DMS software interfaces include SQL*NET calls to and from the SWITS database to allow remote access. The remote access to and from the PCS, SIE, and BWAS will be handled by the WRAP 1 DMS Interface module. Software interfaces describe the application software interfaces to the vendor supplied software products, such as the use of Oracle and its interface products such as SQL*Forms, SQL*Reports, and SQL*Net.

4.2.2 Communications Interfaces

The communication interfaces to the WRAP 1 DMS are the HLAN and WLAN. Operations users and development staff access the WRAP 1 DMS server through the Ethernet connections to one of the available LANs. The WRAP 1 DMS will interface to the SWITS database over the HLAN to acquire the initial data on drums and boxes arriving at the WRAP 1 facility. The WRAP 1 DMS will also update the SWITS database with the necessary certification data on shipments of waste from the WRAP 1 facility. The WRAP 1 DMS will communicate with the WRAP 1 PCS, the drum NDA SIE and the box NDA BWAS over the WLAN to provide the

other systems with required data and to receive location and characterization data. Terminals located throughout the plant will be used to review and enter data.

An electronic communications interface may be implemented for waste data package transmission to the Waste Isolation Pilot Plant (WIPP). Details of this interface have not been defined at this time.

4.2.3 Hardware Interfaces

Hardware interfaces describe the interface of the application software with the hardware, such as devices to be supported and protocols to be used. The WRAP 1 DMS host hardware has been selected to meet anticipated capacity and performance requirements (disk space, main memory, and peripheral devices) of the system. The DMS will run on a Hewlett Packard HP-9000 Model 800/E35 computer using the HP-UX (UNIX) operating system. User access will be from HP Vectra 486DX/66 personal computers (PCs) and HP ENVIZEX A Series X stations. The interfaces with the hardware will be transparent to most users. The users access the host using IBM-PC compatible personal computers and/or X-terminals operating over the WLAN. Each user is required to have a username/password and a signature password in order to update or modify critical data. The specific steps required for computer access will be provided in the *WRAP 1 DMS User Manual*.

4.3 MAN/MACHINE INTERFACES

The interface between the user and the WRAP 1 DMS system is necessary to assure the effective utilization of the system. This section describes the characteristics of the human interfaces to the system.

4.3.1 WRAP 1 DMS Security

The primary purpose of the Data Management System (DMS) security system is to prevent unauthorized production, modification, validation, or use of data. This function is performed by granting permission via signature password to users who have the proper training and authority to perform critical data manipulation functions. A secondary purpose of security is to prevent nonessential functions from bogging down the system. This purpose is achieved by defining a set of user groups and granting access to various DMS functions based on the job descriptions of the system users included in the groups. A logon password would be assigned to each user which would identify the appropriate user group. Both the signature password and the logon password are described in the DMS SRS. The following user groups have been defined:

System Administrator (SADMIN). DMS superuser and system administrator. This person is not technically a group since no functions are restricted. Read and write access is provided to all fields and data structures in the DMS as well as access to DMS and "C" development functions. This group would be responsible for setting up and maintaining the database structure including the tables and displays. This group is authorized to change anything within the system and consequently, any existing DMS security will be bypassed.

Engineering Development (ENGDEV). This group should have read access to all screens and data fields as well as write access to the Lookup and data validation table entries but not table or database structures. No write access would be provided to actual waste data records. Access to DMS and the "C" development would be provided on a development system functions. This group would recommend and design changes to improve the system or meet new requirements. The design work would be performed on a development system prior to implementation by the system administrator. Security is by individual user ID logon.

Operations Administrator (OPSSADM). This group should have read access to all screens and data fields. Write access should be provided for planning and scheduling functions. These functions include shipping and receiving, pick list/processing list maintenance, sample data, and reports. This group would be responsible for scheduling waste to be received and shipped. This includes facilitating paperwork assembling and ensuring that SWITS data is sufficient to allow processing in WRAP 1. Security is by individual ID logon.

SWOC Administrator (SWCOPSADM). This group should have read and write access only to the screens where waste being shipped to WRAP 1 is assembled. The screens filled in by this group are used by the receiving operators accept shipments into WRAP 1. This is primarily a waste planning function for SWOC. Another function of this person could be to verify that SWITS has sufficient information for the waste to be processed at WRAP 1 prior to sending it there. Security is by individual ID logon.

NDA Analyst (NDAANL). This group should have read access to all screens and data fields. This group has write access to all NDA data and will be required to validate all NDA data. Security is by individual ID logon.

NDE Technician (NDEANL). This group should have read access to all screens and data fields. This group has write access to all NDE data and will be required to validate all NDE data. Security is by individual ID logon.

Operations Supervisor (OPSSUP). This group should have read and write access to all screens and data fields regarding waste data including ability to change alarm setpoints and clear alarms. Security is by individual user ID logon.

General Operator (GENOPS). This group should have read access to all screens and data fields regarding waste data well as write access to non alarm setpoints and control functions as guided by procedure. Write access is also allowed for data entry and controlled by a signature password. Report printing required by procedure to is also allowed. Security is by group ID logon which will be the normal logon state of the terminal during operation.

Monitor (MONITR). This group should have read only access to all screens and data fields. Printing of limited reports should be allowed. Security is by group ID logon.

Table 4-1. DMS Screen/Data Access Table.

DMS Category No.	Screen/Data Description	Access Privileges	
		Read	Write
1	Shipping	All Groups	SADMIN, and w/sig password OPSADM, OPSSUP, GENOPS
2	Receiving	All Groups	SADMIN, and w/sig password OPSADM, OPSSUP, GENOPS
3	NDE/NDA	All Groups	SADMIN, NDAANL and w/sig password OPSADM, OPSSUP, GENOPS
4	Process Operations	All Groups	SADMIN, and w/sig password OPSADM, OPSSUP, GENOPS
5	Sample Management	All Groups	SADMIN, and w/sig password OPSADM, OPSSUP, GENOPS
6	Fissile Inventory	All Groups	SADMIN
7	Process Data Review	All Groups	SADMIN, and w/sig password OPSADM, OPSSUP, GENOPS
8	Bar Code Labels	All Groups	SADMIN, OPSADM, OPSSUP, GENOPS
9	Reports	All Groups	SADMIN, and w/sig password ENGDEV, OPSADM, NDAANL, OPSSUP, GENOPS, MONITR
10	Pick Lists	All Groups	SADMIN, and w/sig password OPSADM, OPSSUP, GENOPS
11	Process Routes	All Groups	SADMIN, and w/sig password OPSADM, OPSSUP, GENOPS
12	Data Validation Tables	All Groups	SADMIN, ENGDEV, OPSADM
13	System Administration	All Groups	SADMIN

4.3.2 User Interfaces

User interfaces consist of the inputs, outputs, and displays on a display terminal used or seen by a WRAP I DMS user. All user interfaces will be tailored to the needs of the functional user. Selecting a particular option would allow access to data, provided the user has appropriate privileges.

All primary screens will have a "fast access" capability. Each screen displayed will be structured for ease of use. Navigational aids will be available to assist the user in maneuvering through the system. Error

messages, along with possible resolution options, will be displayed on the screen when the system detects an error. User training will be addressed in the WRAP 1 DMS training and users manuals.

Printing of reports will not be suspended when user transfers to another screen. In some instances, the system will automatically display a message screen to alert the user or to request user input.

User reports fall into two categories: reports that generate certification and transportation papers for disposal and transport; and reports that support facility operations such as drum/box inventories, fissile material inventory for the facility, AS/RS pick lists, etc. Provisions will be made to assure that the printing of reports will not adversely impact facility operations.

4.3.3 Developer Interface

Responsibilities of the WRAP 1 DMS development staff include creating, implementing, and maintaining the Oracle application modules supporting the user's requirements. By the nature of these responsibilities, developers must have a high-level access authority to the WRAP 1 DMS system.

4.3.3.1 Data/Database Administration. The data/database administrator has authority to update the database structure, perform global data manipulation, and maintain the data dictionary.

4.3.3.2 Developers. Developers have authority to modify the application software, perform pre-authorized global data manipulation, maintain and access a development/test database, and access the production database.

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5.0 DETAILED DESIGN

This chapter describes the internal details and specifications of the design modules and their associated objects. This chapter provides the developers with general programming guidelines and standards, including the mechanisms used in the navigation within the WRAP 1 DMS system. It also provides specifications for the processing modules, reports, and supporting utilities.

5.1 GENERAL DESIGN SPECIFICATIONS

This section describes the general design guidelines and standards that will be used in the development of the WRAP 1 DMS system. These design rules are to be applied to all development processes, including both the online screens and the generated reports. Any deviation to these guidelines is documented indicating where the guideline is not being followed. The general design rules are as follows:

- All data fields will translate to Uppercase, except where specified.
- All Date type fields will be displayed in MM/DD/YY format.
- All fields described as FLOAT will be displayed in scientific notation four significant digits (i.e., -x.xxxE-xx) unless specified otherwise.
 Example: 123.4 is 1.234E+02
 1.234 is 1.234E+00
 .1234 is 1.234E-01
- All fields described as NUMBER with precision specified will be displayed appropriately.
- All enterable screen fields will make use of the Autohint feature, which displays a message upon entering the field. Applicable units of measure will be indicated in this message.
- All container-related fields will make use of the Journal feature, which records a history of all changes.
- On formatted screens (update and display), the Tab and Backtab functions cause the cursor to go from field to field for all enterable fields on the screen.
- All screens will have a similar appearance. They will contain the screen number, the WRAP 1 DMS title, date, time, and a message line.
- All reports will be in a similar format. The report number, WRAP 1 DMS title, date, time, page number, and report headings will appear in the same relative position.

- All quantities for volumes, weights, and areas will be stored in metric units (cubic meters, kilograms, square meters).

5.1.1 Screens

All screens will be constructed using Oracle Forms 4.0. Microsoft graphical user interface (GUI) User Standards will be applied as development standards where possible.

5.1.2 Error and Message Handling

Individual and detailed error and message handling is described in Appendix F. Additional data error reporting functions will be defined by the DMS developers during software implementation. Basic error checking to assure valid data entry will be performed. This feature is incorporated into the design of individual modules.

5.1.3 System Security

The first level of security will be provided by the necessity to have a valid user identifier and password to access the host computer. This feature is part of the host operating system.

The second level of security will require that the database administrator provide a user identifier to the WRAP 1 DMS system. An Oracle User Identifier and Password will be used to verify users in logging into the Oracle RDBMS.

The third level of security will be provided by the necessity to have internal user roles and privileges. Users will have limited authorized access to the functional modules in the WRAP 1 DMS based on their logon role.

5.1.4 System Administration

System administration will be managed by two different functions: database administrator (DBA) and system administrator (SA). The database administrator is responsible for maintaining the integrity of the data records contained within the WRAP 1 DMS. The system administrator is responsible for maintenance of the software system, communications, and hardware.

5.2 SYSTEM NAVIGATION

The WRAP 1 DMS online system navigation will be provided through the use of Oracle Forms 4.0 menus and the use of the fast access feature described in Section 4.3.1.

All screen functions assume that all the data placed into databases in any input function is available for the screens. The specific data elements and parameters are specified in Appendix F for the individual screens. The screen interface diagram is provided in Figures 5-1 and 5-2.

WRAP 1 DMS Screen Menu Hierarchy (Phase 1 Only)

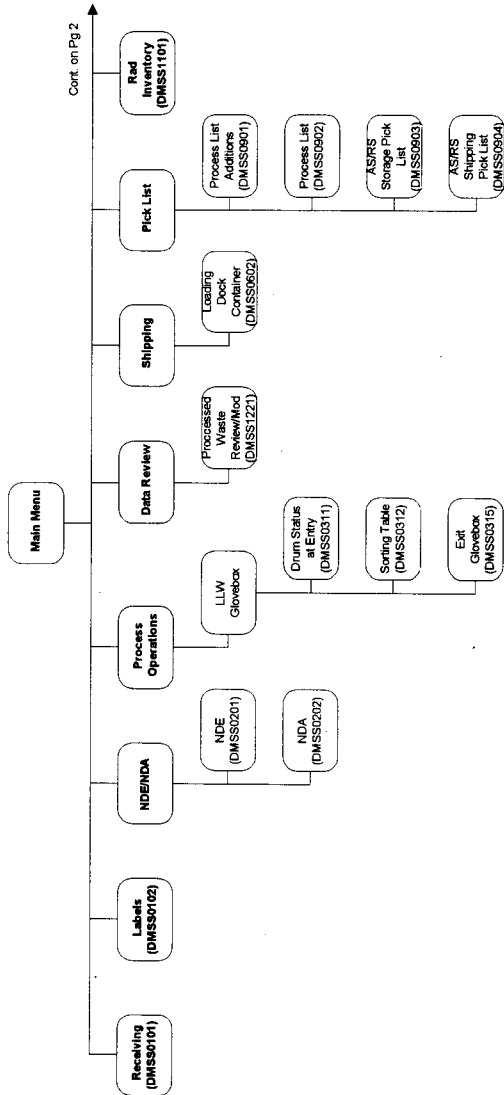


Figure 5-1. WRAP 1 DMS Screens Interface Diagram (Page 1 of 2).

WRAP 1 DMS Screen Menu Hierarchy (Phase 1 Only)

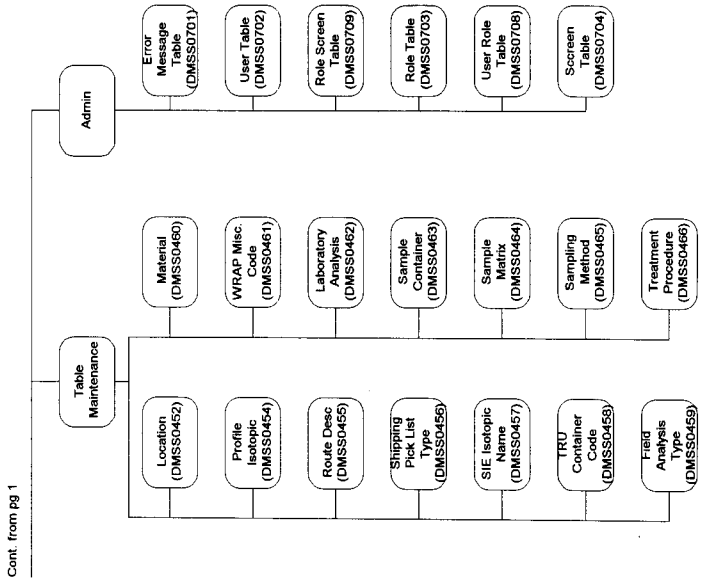


Figure 5-2. WRAP 1 DMS Screens Interface Diagram (Page 2 of 2).

5.2.1 WRAP 1 DMS System Screen - WRAP 1 DMS User Menu

The function of this menu is to allow the user to identify the general task to be performed. Selection of a task will bring up subordinate menus or screens prompting the user for the data required to perform the task. The selections available from this menu include:

- Receiving
- Labels
- NDE/NDA Operations
- Process (Glovebox) Operations
- Table Maintenance
- Sample Management
- Shipping
- System Administration
- Reports
- Pick List
- Facility Inventories
- Process Data Review
- Activity Comment.

Layouts of the DMS screens can be seen in Appendix A. A hierarchy of the DMS menu and screen structure is also provided in this appendix.

5.2.2 Receiving Screens

The screens described in this section are utilized by the Receiving function.

5.2.2.1 Container Receiving (DMSS0101). The function of this screen is to allow the user to identify the empty drums, waste drums, or waste boxes (SWBs) in a shipment and accept them into the facility. Acceptance of the containers includes the following operations, the completion of which can be displayed on the same screen as a set of messages or check marks:

- Logging the containers into the facility for comparison to the hardcopy shipping papers.
- Updating the SWITS database as to the location of the containers. This includes SWITS confirmation that the update was successful.
- Creating records on the WRAP 1 DMS for the received containers.
- Downloading the existing certification data on the containers from SWITS into the newly created records.
- Flagging containers not on a processing pick list.
- Updating the curie inventory of the facility and display of any appropriate alarms on a pop-up screen.

This screen is generated upon selection of "Container Receiving" from the "WRAP 1 DMS User Menu" screen.

5.2.2.2 Bar Code Generator (DMSSO102). This screen is generated upon selection of "Labels" from the DMS Main Menu or from the Receiving Menu. The function of this screen is to allow the user to produce a bar code label to replace a missing or damaged one. This function would normally be performed upon receipt of a container but should be available anytime in case a label is damaged within WRAP 1.

5.2.3 NDE/NDA Operations Screens

The screens described in this section are utilized by the NDE/NDA Operations function.

5.2.3.1 NDE (DMSSO201). The function of this screen is to allow the user to retrieve existing NDE information about the drum or box for verification as well as to add data discovered during the WRAP 1 NDE to the database. This screen is generated upon selection of "NDE" from the "WRAP 1 DMS User Menu" screen.

5.2.3.2 NDA (DMSSO202). The function of this screen is to allow the user to retrieve existing NDA information about the drum or box for verification, as well as to specify certification data as required to properly characterize the containers. The operator may use this screen to request assay revisits for specific waste containers. This screen is generated upon selection of "NDA" from the "WRAP 1 DMS User Menu" screen.

5.2.4 Process Operations Screens

The screens described in this section are utilized by the Process Operations function.

5.2.4.1 Glovebox Operations Menu. The function of this menu is to allow the user to select the glovebox at which operations are to be performed. The selections available from this menu include:

- LLW Process Glovebox
- LLW RWM Process Glovebox
- TRU Process Glovebox
- TRU RWM Process Glovebox.

This screen is generated upon selection of "Glovebox Operations" from the "WRAP 1 DMS User Menu" screen.

5.2.4.2 LLW Process Glovebox Menu. The function of this menu is to allow the user to select the area of the LLW process glovebox at which operations are to be performed. This menu is generated upon selection of "LLW Process Glovebox" from the "Glovebox Operations Menu" screen. The selections available from this menu include:

- LLW Glovebox Status at Entry
- LLW Sorting Table
- LLW Exit Glovebox

5.2.4.3 LLW Drum Status at Entry (DMSS0311). The function of this screen is to display the PIN of the inner drum, if any, for verification and to notify the operator whether sorting is required. The sorting display is based on whether or not the drum is compliant and whether sampling is required. This screen is generated upon selection of "LLW Drum Status at Entry" from the "LLW Process Glovebox" menu.

5.2.4.4 LLW Sorting Table (DMSS0312). The function of this screen is to provide the user with the information from the drum necessary for separating the compliant waste from the non-compliant waste, and to select other displays for sampling and for modification of the waste inventory. This screen will allow the user to select five subordinate screens: LLW Non-Compliant Packet screen; sample screen; chemical component screen; and physical component screen. There is also a pop up display for viewing the NDE results. This screen is generated upon selection of "LLW Sorting Table" from the "LLW Process Glovebox" menu.

5.2.4.5 LLW Non-Compliant Packet (Pop-up). This screen shows the Packet PINs, the drum PIN from which the packets came, and the transfer drum PIN into which the packets went along with the user description of the contents of the packet and the material group code. This screen is generated upon selection of "LLW Non-compliant Packet" from the "LLW Sorting Glovebox" screen.

5.2.4.6 Sample Data (DMSS0501). See Section 5.2.6.2 for screen definition.

5.2.4.7 LLW Physical Component (Pop-Up). The function of this screen is to display and allow the user to modify the physical composition for the drum being sorted.

5.2.4.8 LLW Chemical Component (Pop-Up). The function of this screen is to display and allow the user to modify the chemical composition for the drum being sorted. Since the user cannot observe chemical concentrations, the user can change volume percents and delete chemical records only. If all chemical records are deleted, then the waste is no longer non-compliant.

5.2.4.9 LLW NDE Results (Pop-up). The function of this pop-up screen is to display the NDE results.

5.2.4.10 LLW Exit Glovebox (DMSS0315). The function of this screen is to fill in the data for product drums with pucks or uncompacted drums. The user is allowed to modify the outer drum waste description, and enter the dose rate, seal number, and void code. This screen also displays information for up to six pucks. The information displayed for each puck include puck PIN, PIN of drum before it was crushed, puck height, and puck weight. The puck height displayed is a default system setup parameter, and is the only field for the puck that is user modifiable. This screen is generated upon selection of "LLW Exit Glovebox" from the "LLW Process Glovebox" menu.

5.2.4.11 LLW RWM Process Glovebox Menu. The function of this menu is to allow the user to select the area of the LLW RWM Process Glovebox at which operations are to be performed. This screen is generated upon selection of "LLW RWM Process Glovebox" from the "Glovebox Operations Menu" screen. The selections available from this menu include:

- LLW RWM Waste Sorting
- LLW RWM Compliant Waste Load Out
- LLW RWM Treatment Item Assembly.

5.2.4.12 LLW RWM Waste Sorting (DMSS0321). This screen shows the transfer drum PIN for the LLW RWM transfer drum currently connected to the transfer port. This screen lists the PINs of the packets contained in the transfer drum as well as their waste descriptions. The screen also lists those packets which have been removed from the transfer drum and placed at the RWM sampling location. Newly generated non-compliant waste packets will also be displayed as being located at the RWM sampling location. User modification of the transfer drum storage category (based on waste added to or subtracted from the drum) is also allowed from this screen. This screen is generated upon selection of "LLW RWM Waste Sorting" from the "LLW RWM Process Glovebox" menu.

5.2.4.13 LLW RWM Repackaging (DMSS0322). This screen provides the operator the ability to enter applicable waste packet data as non-compliant packets from the RWM transfer drum are repackaged. This screen lists the PIN of the packet being repackaged as well as the container type, material group, and waste description for the original packet. For waste packets which have compliant and non-compliant components, the PINs for the new containers along with the container type are displayed. The material group and waste description for the new containers may be modified by the user. This screen also displays the PIN of the compliant waste drum currently mated to the glovebox and the associated waste description which is available for operator entry of data. Container relationships between the packet being repackaged and the compliant loadout drum may be established from this screen via a check box. This screen is generated upon selection of "Repackage" from the "LLW RWM Waste Sorting" screen.

5.2.4.14 Sample Data (DMSS0501). See Section 5.2.6 for screen definition.

5.2.4.15 LLW RWM Compliant Waste Loadout (DMSS0323). This screen shows the PIN and contents inventory for the LLW RWM transfer drum currently connected to the transfer port. The screen allows the user to input new information and comments to describe the items placed in the compliant waste loadout drum.

The DMSS0323 screen is used when the packets are opened and the packet contents are sorted into compliant and non-compliant items. A general drum waste description may be entered via the DMSS0322 screen. The compliant items are described in greater detail on the DMSS0323 screen if necessary. Appropriate DMS records (PHYSCOMP) are updated, and the items are placed in a product drum which is also identified. Summary level drum data such as dose rate is entered via this screen. This screen is accessed via the LLW RWM Repackaging screen or the "LLW RWM Process Glovebox" menu.

5.2.4.16 LLW RWM Treatment Item Assembly (DMSS0324). This screen is used once the laboratory analysis is complete, processing instructions are available, and the RWM waste is scheduled for treatment. This screen assists the user in identifying and removing the appropriate packets and samples from their associated overpack containers. The operator will remove the items from their drums/purge ports and stage the waste at the LLWRWM treatment station. The operator will select the "Treatment" and "Compliant Loadout" screens from this screen. This screen will alert operator if a waste container scanned for

treatment is not listed on the current worksheet. This screen is accessed via the "LLW RWM Process Glovebox" menu.

5.2.4.17 LLW RWM Processing Instructions (DMSS0325). The function of this screen is to display a set of treatment instructions developed by the facility chemist specifically for a given set of non-compliant waste items on the LLW RWM Glovebox Monitor. This monitor is mounted on the back side of the RWM glovebox. This screen is generated upon selection of "Treatment" from the "LLW RWM Treatment Item Assembly" screen.

5.2.4.18 LLW RWM Treatment (DMSS0326). The function of this screen is to support waste treatment operations in the RWM glovebox. This screen will allow the user to input information concerning the progress of the treatment, addition of items to the treatment container, treatment container material group and treatment results. This screen also allows the user to place waste in the compliant loadout drum during treatment and update the loadout drum waste description accordingly. This screen is generated upon selection of "Treatment" from the "LLW RWM Treatment Item Assembly" screen.

5.2.4.19 LLW RWM Treated Waste Loadout (DMSS0328). The purpose of this screen is to allow the user to fill the treated waste product drum with waste as treatments are completed. Treatment container data may be reviewed and used to update the loadout drum waste description. This screen is also used to enter general drum data such as the drum dose rate. This screen is accessed via the "LLW RWM Treatment Item Assembly" screen or the "LLW RWM Process Glovebox" menu.

5.2.4.20 TRU Process Glovebox Menu. The function of this menu is to allow the user to select the area of the TRU Process Glovebox at which operations are to be performed. This screen is generated upon selection of "TRU Process Glovebox" from the "Glovebox Operations Menu" screen. The selections available from this menu include:

- TRU Glovebox Status at Entry
- TRU Sorting Glovebox
- TRU Exit Gloveboxes.

5.2.4.21 TRU Drum Status at Entry (DMSS0331). This screen shows the PIN of the inner and outer drums located at the TRU Entry Port. The radiological inventory of the drum at the entry port, glovebox radiological inventory status, and glovebox radiological inventory limit is also provided. This screen is accessed via the "TRU Process Glovebox" menu.

5.2.4.22 TRU Sorting Glovebox (DMSS0332). The function of this screen is to provide the user with the information from the drum necessary for separating the compliant waste from the non-compliant waste, obtain waste samples if required, and to select other displays for sampling and for modification of the waste inventory. This screen will allow the user to select four subordinate screens: TRU Non-Compliant Packet screen; sample screen; chemical component screen; and physical component screen. There is also a pop up display for viewing the NDE results. This screen is accessed via the "TRU Process Glovebox" menu.

5.2.4.23 TRU Non-compliant Packet. The drum PIN from which the packets came, the transfer drum PIN into which the packets went, and the transfer drum

material group code are displayed.. The PINs of all the packets placed in the transfer drum along with their waste description is also displayed on this screen for user modification. Results from the Packet Assay Monitor are also displayed on this screen.

5.2.4.24 Sample Data (DMSS0501). See Section 5.2.6.2 for screen definition.

5.2.4.25 TRU Chemical Component (DMSS0333). This screen shows the chemical composition for the drum currently on the sorting table and allows the user to select which loadout port (309 or 310) chemical component records should be displayed. User modification of data is allowed.

5.2.4.26 TRU Physical Component (DMSS0334). This screen shows the physical composition for the drum currently on the sorting table and allows the user to select which loadout port (309 or 310) physical component records should be displayed. User modification of data is allowed.

5.2.4.27 TRU Exit Glovebox (DMSS0335). This screen is used to define the product drum data such as Beta-Gamma dose rate and QC seal numbers. There are three TRU Exit ports; 308 (compacts), 309, and 310. Based on the port selected, the screen is refreshed using the drum PIN for the selected port. This screen is accessed via the "TRU Process Glovebox" menu.

5.2.4.28 TRU RWM Process Glovebox Menu. The function of this screen is to allow the user to select the area of the TRU RWM Process Glovebox at which operations are to be performed. This screen is generated upon selection of "TRU RWM Process Glovebox" from the "Glovebox Operations Menu" screen. The selections available from this menu include:

- TRU RWM Waste Sorting
- TRU RWM Compliant Waste Load Out
- TRU RWM Treatment Item Assembly.

5.2.4.29 TRU RWM Waste Sorting (DMSS0341). This screen shows the transfer drum PIN for the TRU RWM transfer drum currently connected to the transfer port. This screen lists the PINs of the packets contained in the transfer drum as well as their waste descriptions. The screen also lists those packets which have been removed from the transfer drum and placed at the RWM sampling location. Newly generated non-compliant waste packets will also be displayed as being located at the RWM sampling location. User modification of the transfer drum storage category (based on waste added to or subtracted from the drum) is also allowed from this screen. This screen is accessed via the "TRU RWM Process Glovebox" menu.

5.2.4.30 TRU RWM Waste Repackaging (DMSS0342). This screen provides the operator the ability to enter applicable waste packet data as non-compliant packets from the RWM transfer drum are repackaged. This screen lists the PIN of the packet being repackaged as well as the container type, material group, and waste description for the original packet. For waste packets which have compliant and non-compliant components, the PINs for the new containers along with the container type are displayed. The material group and waste description for the new containers may be modified by the user. This screen also displays the PIN of the compliant waste drum currently mated to the glovebox and the associated waste description which is available for operator entry of data. Container relationships between the packet being repackaged

and the compliant loadout drum may be established from this screen via a check box. This screen is accessed via the "TRU RWM Waste Sorting" screen.

5.2.4.31 Sample Data (DMSS0501). See Section 5.2.6 for screen definition.

5.2.4.32 TRU RWM Compliant Waste Loadout (DMSS0343). This screen shows the PIN and contents inventory for the TRU RWM transfer drum currently connected to the transfer port. The screen allows the user to input new information and comments to describe the items placed in the compliant waste loadout drum.

The DMSS0343 screen is used when the packets are opened and the packet contents are sorted into compliant and non-compliant items. A general drum waste description may be entered via the DMSS0342 screen. The compliant items are described in greater detail on the DMSS0343 screen if necessary. Appropriate DMS records (PHYSCOMP) are updated, and the items are placed in a product drum which is also identified. Summary level drum data such as dose rate is entered via this screen. This screen is accessed via the "TRU RWM Waste Sorting" screen or the "TRU RWM Process Glovebox" menu.

5.2.4.33 TRU RWM Treatment Item Assembly (DMSS0344). This screen is used once the laboratory analysis is complete, processing instructions are available, and the RWM waste is scheduled for treatment. This screen assists the user in identifying and removing the appropriate packets and samples from their associated overpack containers. The operator will remove the items from their drums/purge ports and stage the waste at the TRURWM treatment station. The operator will select the "Treatment" and "Compliant Loadout" screens from this screen. This screen will alert operator if a waste container scanned for treatment is not listed on the current worksheet. This screen is accessed via the "TRU RWM Process Glovebox" menu.

5.2.4.34 TRU RWM Processing Instructions (DMSS0345). The function of this screen is to display a set of treatment instructions developed by the facility chemist specifically for a given set of non-compliant waste items on the TRU RWM Glovebox Monitor. This monitor is mounted on the back side of the RWM glovebox. This screen is generated upon selection of "Treatment" from the "TRU RWM Treatment Item Assembly" screen.

5.2.4.35 TRU RWM Treatment (DMSS0346). The function of this screen is to support waste treatment operations in the RWM glovebox. This screen will allow the user to input information concerning the progress of the treatment, addition of items to the treatment container, treatment container material group and treatment results. This screen also allows the user to place waste in the compliant loadout drum during treatment and update the loadout drum waste description accordingly. This screen is accessed via the "TRU RWM Treatment Item Assembly" screen.

5.2.4.36 TRU RWM Treated Waste Loadout (DMSS0348). The purpose of this screen is to allow the user to fill the treated waste product drum with waste as treatments are completed. Treatment container data may be reviewed and used to update the loadout drum waste description. This screen is also used to enter general drum data such as the drum dose rate. This screen is accessed via the "TRU RWM Treatment Item Assembly" screen or the "RWM Process Glovebox" menu.

5.2.5 Data Validation Table Maintenance Screens

The screens described in this section are utilized by the Data Validation Table Maintenance function. The DMS will not have table maintenance screens for the data validation tables received from SWITS. A new copy of the SWITS data validation table will be loaded on the DMS whenever the table is updated on SWITS.

5.2.5.1 Profile/Profile Isotope Tables (DMSS0454). Screen DMSS0454 is used to maintain the Profile and Profile Isotope tables.

5.2.5.2 Route Description Table (DMSS0455). Screen DMSS0455 is used to maintain the Route Description table.

5.2.5.3 Shipment Picklist Description Table (DMSS0456). Screen DMSS0456 is used to maintain the Shipping Pick List Type table.

5.2.5.4 SIE Isotopic Name Table (DMSS0457). Screen DMSS0457 is used to maintain the SIE Isotopic Name table.

5.2.5.5 TRU Container Code Table (DMSS0458). Screen DMSS0458 is used to maintain the TRU Container Code table.

5.2.5.6 Field Analysis Type Table (DMSS0459). Screen DMSS0459 is used to maintain the Field Analysis Type table.

5.2.5.7 Material Table (DMSS0460). Screen DMSS0460 is used to maintain the Material table.

5.2.5.8 WRAP Miscellaneous Table (DMSS0461). Screen DMSS0461 is used to maintain the WRAP Miscellaneous table.

5.2.5.9 Laboratory Analysis Table (DMSS0462). Screen DMSS0462 is used to maintain the Laboratory Analysis table.

5.2.5.10 Sample Container Table (DMSS0463). Screen DMSS0463 is used to maintain the Sample Container table.

5.2.5.11 Sample Matrix Table (DMSS0464). Screen DMSS0464 is used to maintain the Sample Matrix table.

5.2.5.12 Sampling Method Table (DMSS0465). Screen DMSS0465 is used to maintain the Sampling Method table.

5.2.5.13 Treatment Procedure Table (DMSS0466). Screen DMSS0466 is used to maintain the Treatment Procedure table.

5.2.6 Sample Management Screens

The screens described in this section are utilized by the Sample Operations function.

5.2.6.1 Sample Management Menu. The function of this menu is to allow the user to select the sample management activity to be performed. This screen is

generated upon selection of "Sample Management" from the "WRAP 1 DMS User Menu" screen. The selections available from this menu include:

- Chain of Custody
- Sample Analysis Request
- Waste Designation
- Worksheet Data Entry
- Sample Management and Chain of Custody
- Sample Labels
- Sample/Bottle Tracking
- Purge Port/Transfer Pig Location.

5.2.6.2 Sample Data (DMSS0501). This screen allows the user to obtain a sample and document the relevant chain of custody data such as sampler, source of the sample, purge port into which the sample was placed, date and time of sampling, etc. This screen is generated upon selection of "Sample Data" from any of the following screens:

- LLW Non-Compliant Packet
- LLW RWM Repackaging
- TRU RWM Non-Compliant Packet
- TRU RWM Repackaging.

5.2.6.3 Electronic Chain of Custody (DMSS0502). This screen allow the user to update the electronic chain of custody form as custody of a sample, purge port, or sample pig is transferred from one user to another. This record will be maintained for the life of the sample from the time it is obtained to the time it is disposed of. The lab will be treated as a single custodian for the purpose of the WRAP 1 facility tracking since they will maintain their own internal tracking system. This screen will also allow the user to enter specific data related to the handling of the samples.

5.2.6.4 Field Screening (DMSS0503). This screen provides the operator with a means to perform field screening in the RWM gloveboxes and record the applicable data upon completion of those tasks.

5.2.6.5 Sample Analysis Request (DMSS0504). This screen provides for the definition of the items being sampled, the applicable sample/bottle numbers, and analyses available for the sample. The screen will allow the user to review the various analyses and choose those which are applicable for the sample in question.

5.2.6.6 Waste Designation (DMSS0505). This screen will allow the user to update the applicable packet waste descriptions and designation codes in the WRAP 1 DMS database according to the results of the field screening analyses. This screen is generated upon selection of "Waste Designation" from the "Sample Management" menu.

5.2.6.7 Worksheet Data Entry (DMSS0506). This screen will allow the user to specify treatment instructions and identify them with a treatment process number. The instructions will be developed by the facility chemist based on the results of sample analyses for the parent items. Upon completion of the worksheet definition, the waste packets will be scheduled for processing, transferred to the glovebox, and the worksheet instructions displayed on the DMS monitor mounted on the back of the RWM gloveboxes. This screen is

generated upon selection of "Worksheet Data Entry" from the "Sample Management" menu.

5.2.6.8 Sample Management and Chain of Custody (DMSS0507). This screen will allow the user to update the COC form and to enter sample management data such as priority for processing, safety hazards, etc. Documentating the shipment of the COC samples is also performed from this form. This screen is generated upon selection of "Sample Management/COC" from the "Sample Management" menu.

5.2.6.9 Sample Labels (DMSS0508). This screen will allow the user to select specific sample lables to be printed out on a sample management bar code printer. This screen is generated upon selection of "Sample Labels" from the "Sample Management" menu.

5.2.6.10 Sample/Bottle Tracking (DMSS0509). This screen will allow the user to track the status of samples/bottles generated in the WRAP facility. When lab results are available and the sample/bottle is returned to WRAP for final disposal, this screen will be used to document that status on the DMS. This screen is generated upon selection of "Sample/Bottle Tracking" from the "Sample Management" menu.

5.2.6.11 Purge Port/Transfer Pig Location (DMSS0510). This screen will allow the user to update sample purge port and transfer pig locations in the DMS database as these containers are removed from the Process Area into Sample Management and as they are returned from the labs to the Sample Management Area. There is no PCS interface in Sample Management to provide this location update. This screen is generated upon selection of "Purge Port/Transfer Pig" from the "Sample Management Menu" screen.

5.2.7 Shipping Screens

The screens described in this section are utilized by the Shipping function.

5.2.7.1 Shipping Menu. The function of this menu is to allow the user to select the shipping activity to be performed. This screen is generated upon selection of "Shipping" from the "WRAP I DMS User Menu" screen. The selections available from this menu include:

- Loading Dock Shipping Data
- Loading Dock Container Shipping
- TRUPACT Cask Loading/Certification
- TRUPACT Shipping Documentation.

5.2.7.2 Loading Dock Shipping Data (DMSS0601). The function of this screen is to generate the shipping papers and documentation required to send a shipment of empty drums, waste drums, or waste boxes out of the facility through the loading dock. The PINs for which data is recalled or entered will be found on a pick list based on the shipping schedule. The screen will prompt the user for any additional data required to complete the appropriate shipping forms. The user will be allowed to reroute drums back through the process to collect missing data. The forms to be completed and printed from this screen include:

- Uniform Hazardous Waste Manifest (UHWM)
- Radioactive Shipment Record (RSR)
- Solid Waste Storage/Disposal Record (SWSDR).

5.2.7.3 Loading Dock Container Shipping (DMSS0602). The function of this screen is to allow the user assemble a set of containers for shipment out of the WRAP 1 facility through the loading dock. This screen will display a list of PINs scheduled for shipment and allow the user to perform and check off the following items and activities required to ship those containers:

- Retrieve the containers from storage to the loading dock.
- Scan the containers and compare them to the shipping schedule and prepared paperwork.
- Update container location.
- Authorize shipment.
- Update SWITS.

5.2.7.4 TRUPACT Cask Loading/Certification (DMSS0603). The function of this screen is to support the loading of the assembled 14 pack of TRU drums or 2 TRU SWBs into a particular TRUPACT II shipping cask. The screen will have the applicable shipping/payload assembly data entered. The screen will be printed and taken to the TRUPACT loading bay where the data will be manually recorded on the screen print. The data sheet will then be taken back to a DMS terminal for entry into the DMS. Approval to ship the TRUPACTs will be documented via this screen.

5.2.7.5 TRUPACT Shipping Documentation (DMSS0604). The function of this screen is to allow the user to print the applicable TRUPACT shipping documentation to support the shipment of TRUPACTs from the WRAP 1 facility. As the final WIPP requirements, data format, and method of data transmittal has not been defined at this time, the details of this screen are TBD. This screen will also provide for a data upload to SWITS upon actual shipment of the TRUPACTs.

5.2.8 System Administration Tables

These screens are used to maintain the WRAP 1 DMS Administration Tables. These tables are used to maintain the error messages, system status, users, procedures, reports, security, and system bulletins. All of these tables are accessed through the System Administration menu.

5.2.8.1 Error Message Table (DMSS0701). This screen is used to maintain the Error Message table. The Error Message Table contains all error and information messages that pop up as windows for the user. This includes information messages that display in the status line at the bottom of the screen.

5.2.8.2 User Table (DMSS0702). This screen is used to maintain the User Table. The User table contains information specific to a user such as User ID, logon date, and terminal type. Most of the user fields are not currently used by the DMS, but are included for possible future use.

5.2.8.3 Role Table (DMSS0703). This screen is used to maintain the Role table. Roles must be added to this table before they can be assigned to users.

5.2.8.4 Screen Table (DMSS0704). This screen is used to maintain the Screen table. This table contains an entry for all the DMS screens. Screens need to be added to this table before they can be linked to roles in the Role Screen table.

5.2.8.5 Report Table (DMSS0705). This screen is used to maintain the Report table.

5.2.8.6 User Role Table (DMSS0708). This screen is used to assign roles to users.

5.2.8.7 Role Screen Table (DMSS0709). This screen is used to define which screens a role has access to and whether the access is for update or read only.

5.2.8.8 Field Help Table (DMSS0710). This screen is used to maintain the Field Help table. This table consists of the table name, field name, data type, and description.

5.2.8.9 Form Help Table (DMSS0711). This screen is used to maintain the Form Help Table. The table consists of the form name and description.

5.2.9 Report Screens

The screens described in this section support the Reports function. In addition, WRAP 1 DMS reports are available from applicable screens in the modules these reports support.

5.2.9.1 Reports Menu. The function of this screen is to allow the user to directly request any WRAP 1 DMS report.

5.2.10 Process Routing and Pick Lists Screens

The screens described in this section are utilized by the Process Routing and Pick Lists function.

5.2.10.1 Pick List Menu. The function of this screen is to allow the user to select the pick list management activity to be performed. The selections available from this menu include:

- Download Processing List
- Process Pick List
- AS/RS Storage Pick List
- AS/RS Shipping Pick List
- TRUPACT Assembly Pick List.

This screen is generated upon selection of "Pick Lists" from the "WRAP 1 DMS User Menu" screen.

5.2.10.2 Processing List Additions (DMSS0901). This screen is used by WRAP 1 scheduling to enter the drum information and processing sequence for a shipment into the DMS. Information from SWOC and the generators is used by the WRAP1 schedulers to compile this information and schedule waste to be processed. When appropriate, WRAP 1 scheduling appends this list to the end of the current process list. The user will enter container package ID, route code, sample flag, compliant flag, and profile ID. The user will have the ability to reorder and commit the list. This screen is generated upon selection of "Processing List Additions" from the "Pick List Menu" screen.

5.2.10.3 Process List (DMSS0902). The function of this screen is to allow the user to transfer processing pick lists from the WRAP 1 DMS to the PCS for incorporation into the PCS processing pick list as facility equipment becomes available. The user will have the ability to reorder the list according to the changing needs of the facility. This screen is generated upon selection of "Process List" from the "Pick List Menu" screen.

5.2.10.4 AS/RS Storage Pick List (DMSS0903). The function of this screen is to allow the user to store a drum in the AS/RS. Storage occurs from the transfer car.

Storage from the transfer car will occur when a drum reaches the end of the discharge conveyor. This screen will display the waste characteristics of the drum PIN on the discharge conveyor and a list of drums with similar characteristics on partially filled pallets in the AS/RS. The user will then select a PIN on partially filled pallet on which to place the discharged drum. This PIN is placed on the AS/RS retrieval via transfer car pick list and the pallet containing that PIN is retrieved. The drum is transferred from the discharge conveyor to the pallet on the transfer car by a jib crane and the pallet is stored in the AS/RS. Drum location information in the WRAP 1 DMS is updated. This screen is generated upon selection of "AS/RS Storage Pick List" from the "Pick List Menu" screen.

5.2.10.5 AS/RS Shipping Pick List Screen (DMSS0904). The function of this screen is to allow the user to group a set of drums into a shipment from the loading dock and assign a shipment ID# to the set. This screen provides the capability to ship drums from the WRAP 1 facility for any reason including Head Gas sampling and a LLW Burial. This list is uploaded to the PCS when all the necessary information for all drums in the shipment has been compiled and a truck has been scheduled to pick up the shipment. This screen is generated upon selection of "AS/RS Shipping Pick List" from the "Pick List Menu" screen.

5.2.10.6 TRUPACT Assembly Pick List (DMSS0905). The function of this screen is to allow the user to establish a sequence for retrieval of the drums from the AS/RS via the transfer stand for TRUPACT Assembly. This list is uploaded to the PCS when all the necessary information for all drums in the shipment has been compiled and a truck has been scheduled to pick up the shipment. After the TRUPACT assembly drums are retrieved from the AS/RS for assembly into payloads on the stretch wrapper, the operator will review this screen to identify those drums which have been assembled into the payload under construction. The operator may verify this by noting the updated locations on the screen (from TPSTAND to ACCVYR). This screen is generated upon selection of "TRUPACT Assembly Pick List" from the "Pick List Menu" screen.

5.2.11 Facility Inventories Screen

The screens described in this section support the Facility Inventories function.

5.2.11.1 Radiologic Inventory Summary (DMSS1101). The function of this screen is to allow the user to display, update, and print the current radiologic inventory for the entire Facility, the TRU glovebox, and the RWM glovebox along with the limits associated with each area. This screen is generated upon selection of "Radiologic Inventory Summary" from the "Facility Metrics and Inventories Menu" screen.

5.2.11.2 Container Location and Relationships (DMSS1102). The function of this screen is to allow the user to modify the facility location records for any given waste container being processed in the WRAP 1 facility. This screen is generated upon selection of "Container Location and Relationships" from the "Facility Metrics and Inventories Menu" screen.

5.2.12 Process Data Review Screens

The screens described in the following sections are utilized to review data.

5.2.12.1 Processed Waste NDA Data Review (DMSS1201). This screen is utilized by the User to review NDA data associated with waste drums which are "processed" in the WRAP 1 facility. The function of this screen is to allow the user to select a specific product drum assay for review for those drums leaving the Processing Area. This screen is generated upon selection of "Processed Waste NDA Data Review" from the "Process Data Review" menu.

5.2.12.2 Waste Puck NDA Data Review (DMSS1202). This screen is utilized by the User to review NDA data associated with individual waste pucks which comprise a product drum generated in the Process Area LLW Glovebox. This screen is generated upon selection of the "Compacted Drum Data" button from the "Processed Waste NDA Data Review" screen.

5.2.12.3 Verification NDA Data Review (DMSS1211). This screen is utilized by the User to review NDA data associated with waste drums which are not "processed" in the WRAP 1 facility. User will have the capability to select specific assays performed in WRAP for data review. This screen is generated upon selection of "Verification NDA Data Review" from the "Process Data Review" menu.

5.2.12.4 Certification & Verification NDA Data Review (DMSS1212). The function of this screen is to allow the user to compare NDA data provided by the waste generators against NDA data generated in the WRAP facility. This screen is generated upon selection of "Compare Certification and Verification Data" button from the "Verification NDA Data Review" screen.

5.2.12.5 Processed Waste Data Review & Modification (DMSS1221). The function of this screen is to allow the user to review and modify data for a specific product drums leaving the Processing Area. This screen is generated upon selection of "Processed Waste Data Review and Modification" from the "Process Data Review" menu.

5.2.12.6 Verification Data Review (DMSS1231). The function of this screen is to allow the user to review and modify data for a specific drum that has only undergone NDE and NDA exams in WRAP. Only WRAP generated data will be modified from this screen. Revised SWITS data may also be downloaded from this screen. This screen is generated upon selection of "Verification Data Review" from the "Process Data Review" menu.

5.2.13 Activity Comment Screen (DMSS1301)

This screen is utilized by the User to generate or review activity comments against waste containers processed in WRAP. This screen may be accessed from any WRAP DMS screens using a "fast access" function.

5.3 REPORTS

Reporting encompasses all required preprogrammed and preformatted WRAP 1 DMS reports. All reporting functions assume that all the data placed into databases in any input function is available at reporting time. Appendix B provides an outline of the projected WRAP 1 reporting menu and provides definition for those reports that will be required to support initial WRAP 1 operations. Appendix B will be updated as additional report requirements are defined by the WRAP 1 Operations groups.

5.4 DATA DETAIL DESIGN

The design details for each object are incorporated into the Data Dictionary (Appendix C) and the object model diagrams (Appendices D-G).

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APPENDIX A
SCREEN DESIGN DETAILS

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DMS SCREEN HIERARCHY

Receiving

DMSS0101 Container Receiving
Facility Curie Limit Alarm Pop-up

Labels

DMSS0102 Bar Code Generator

NDE/NDA

NDE

DMSS0201 NDE
WASTE pop-up
Physical Component Screen pop-up
Radiological Detail Record Screen pop-up

NDA

DMSS0202 NDA
NDA pop-up
NDAISO pop-up

Process Ops

LLW Glovebox

Drum Status at Entry

DMSS0311 LLW Glovebox Drum Status at Entry

Sorting Table

DMSS0312 LLW Sorting Table
LLW Non-Compliant Screen pop-up
DMSS0501 Lab Sample Acquisition
DMSS0502 Chain of Custody
DMSS0504 Sample Analysis Request
DMSS0508 Sample Bottle Labels
Chemical Component Screen pop-up
Physical Component Screen pop-up
NDE Comments Screen pop-up

Exit Glovebox

DMSS0315 LLW Exit Glovebox

LLW RWM Glovebox

RWM Waste Sorting

DMSS0321 LLW RWM Waste Sorting
DMSS0322 LLW RWM Waste Repackaging
DMSS0503 Field Screening
DMSS0504 Laboratory Sample Analysis Request
DMSS0508 Sample Bottle Labels
DMSS0501 Lab Sample Acquisition

DMSS0502 Chain of Custody
DMSS0504 Sample Analysis Request
DMSS0508 Sample Bottle Labels
DMSS0323 LLW RWM Compliant Waste Loadout
Physical Component Screen pop-up

RWM Compliant Loadout

DMSS0323 LLW RWM Compliant Waste Loadout
Physical Component Screen pop-up

RWM Treatment

DMSS0324 LLW RWM Treatment Item Assembly
DMSS0325 LLW RWM Processing Instructions (RWM glovebox monitor)
DMSS0326 LLW RWM Treatment
DMSS0323 LLW RWM Compliant Waste Loadout
Physical Component Screen pop-up
DMSS0328 LLW RWM Treated Waste Loadout
Physical Component Screen pop-up
Chemical Component Screen pop-up

RWM Treated Loadout

DMSS0328 LLW RWM Treated Waste Loadout
Physical Component Screen pop-up
Chemical Component Screen pop-up

TRU Glovebox

TRU Entry

DMSS0331 TRU Glovebox Drum Status at Entry

TRU Sorting

DMSS0332 TRU Sorting Table
TRU Non-Compliant Packet pop-up
DMSS0501 Lab Sample Acquisition
DMSS0504 Sample Analysis Request
DMSS0508 Sample Bottle Labels
DMSS0502 Chain of Custody
DMSS0333 TRU Chemical Composition
DMSS0334 TRU Physical Components
DMSS0334 TRU Physical Components
DMSS0333 TRU Chemical Composition
NDE Comments Screen pop-up

TRU Exit

DMSS0335 TRU Exit

TRU RWM Glovebox

RWM Waste Sorting

DMSS0341 TRU RWM Waste Sorting
DMSS0342 TRU RWM Repackaging
DMSS0503 Field Screening
DMSS0504 Laboratory Sample Analysis Request
DMSS0508 Sample Bottle Labels

DMSS0501 Lab Sample Acquisition
DMSS0502 Chain of Custody
DMSS0504 Sample Analysis Request
DMSS0508 Sample Bottle Labels
DMSS0343 TRU RWM Compliant Waste Loadout
Physical Component Screen pop-up

RWM Compliant Loadout

DMSS0343 TRU RWM Compliant Waste Loadout
Physical Component Screen pop-up

TRU Treatment

DMSS0344 TRU RWM Treatment Item Assembly
DMSS0345 TRU RWM Processing Instructions (RWM glovebox monitor)
DMSS0346 RWM Treatment
DMSS0343 TRU RWM Compliant Waste Loadout
Physical Component Screen
DMSS0348 TRU RWM Treated Waste Loadout
Physical Component Screen
Chemical Component Screen

Sample Mgmt

Internal Chain of Custody

DMSS0502 Chain of Custody

Sample Analysis Request

DMSS0504 Laboratory Sample Analysis Request
DMSS0503 Field Screening
DMSS0508 Sample Bottle Labels

Waste Designation

DMSS0505 Packet Waste Designation Request
HDET pop-up
Chemical Component Screen pop-up
MSDS Data pop-up

Worksheet Entry

DMSS0506 Worksheet Data Entry
DMSS0505 Packet Waste Designation
Select Packets for Treatment pop-up
Select Samples for Treatment pop-up
HDET pop-up
Chemical Component Screen pop-up
MSDS Data pop-up

External Chain of Custody

DMSS0507 Sample Management and COC
COC Sample Selection pop-up

Sample Labels

DMSS0508 Sample Bottle Labels

Sample Tracking

DMSS0509 Sample/Bottle Tracking Data

Purge Port Location

DMSS0510 Purge Port/Transfer Pig Location

Returned Samples

DMSS0511 Samples Returned From Lab

Data Review

Processed Waste NDA Data

DMSS1201 Processed Waste NDA Data Review and Modification

DMSS1202 Compacted Drum NDA Data Review

Physical Component Screen pop-up

RADETAIL pop-up

ISOQTY pop-up

Verification NDA Data

DMSS1211 Verification of NDA Data for newly generated waste

RADETAIL pop-up

Physical Component Screen pop-up

DMSS1212 Certification and Verification NDA Data Review

Processed Waste Data Review

DMSS1221 Processed Waste Data Review and Modification

DMSS0505 Waste Packet Designation

APPMSDS pop-up

Chemical Component Screen pop-up

CONREL pop-up

HDET pop-up

ISOQTY pop-up

Physical Component Screen pop-up

RADETAIL pop-up

WASTE pop-up

Verification Data Review

DMSS1231 Verification Data Review

Shipping

Loading Dock Shipping

DMSS0601 Loading Dock Shipping Data

RSR pop-up

LLWSDR pop-up

RMWAS pop-up

UHWL pop-up

Loading Dock Container

DMSS0602 Loading Dock Container Shipping

TRU Waste Shipping

DMSS0603 TRUPACT Cask Loading/Certification

TRUPACT Documentation

DMSS0604 - TRUPACT Shipping Documentation

Box and Empty Drum Shipping

DMSS0605 - Loading Dock Box and Empty Drum Container Shipping

Pick List

Process List Additions

DMSS0901 Process List Additions

Process List

DMSS0902 Process List

AS/RS Storage Pick List

DMSS0903 AS/RS Storage Pick List

AS/RS Shipping Pick List

DMSS0904 AS/RS Shipping Pick List

TRUPACT Assembly List

DMSS0905 TRUPACT Assembly List

Box/Empty Drum Shipping Pick List

DMSS0906 - Box/Empty Drum Shipping Pick List

Activity Comment

DMSS1301 Activity Comment

Rad Inv

Radiological Inventory

DMSS1101 Radiologic Inventory Summary

Container Location

DMSS1102 Container Location and Relationships

Reports

(TBD)

Table Maint

Location

DMSS0452 Location Table

Profile Isotopic

DMSS0454 Profile/Profile Isotopic

Route Desc

DMSS0455 Route Description Table

Shipping Pick List Type

DMSS0456 Shipping Pick List Type

SIE Isotopic Name

DMSS0457 SIE Isotope Name

TRU Container Code

DMSS0458 TRU Container Code Table

Field Analysis Type

DMSS0459 Field Analysis Type

Material

DMSS0460 Material

WRAP Misc. Code

DMSS0461 WRAP Miscellaneous Table

Laboratory Analysis

DMSS0462 Laboratory Analysis

Sample Container

DMSS0463 Sample Container

Sample Matrix

DMSS0464 Sample Matrix

Sampling Method

DMSS0465 Sampling Method

Treatment Procedure

DMSS0466 Treatment Procedure

Admin

Error Message Table

DMSS0701 Error Message Table

User Table

DMSS0702 User Table

Role Screen Table

DMSS0709 Role Screen Table

Report Table

DMSS07xx Report Table

Role Table

DMSS0703 Role Table

User Role Table

DMSS0708 User Role Table

Screen Table

DMSS0704 Screen Table

Field Help Table

DMSS07xx Field Help Table

Form Help Table

DMSS07xx Form Help Table

New User Setup

DMSS07xx New User Setup

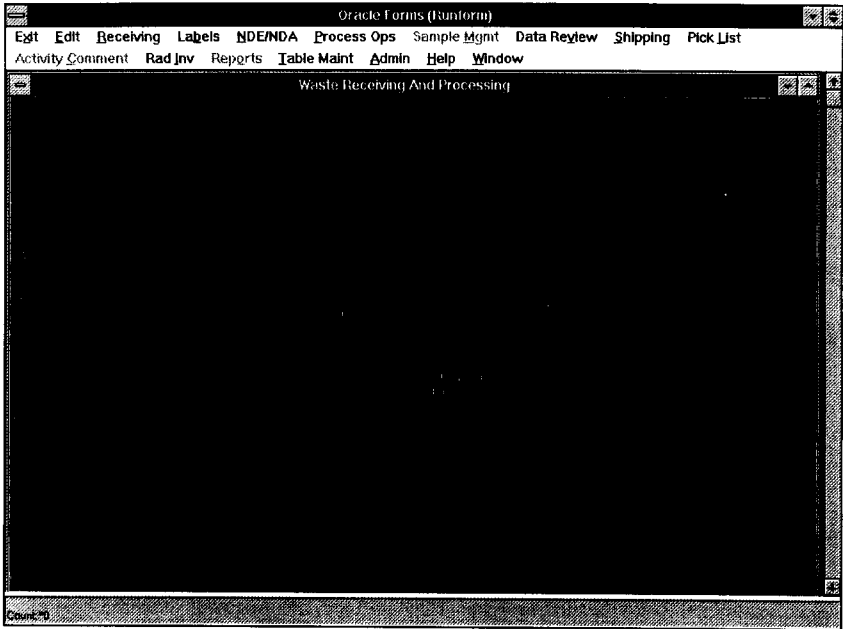


Figure A-1. WRAP 1 DMS Main Menu Screen.

Oracle Forms (Runform)

DMSS0101 Container Receiving

03/11/1998 09:45:03

Signature: [Blank]

Date: [Blank]

Date PIR	Inner PIR	Error Status

Buttons: Confirm Data, Request Pack Data, DMSS0101, DMSS0101

Figure A-2. DMSS0101 Container Receiving Screen.

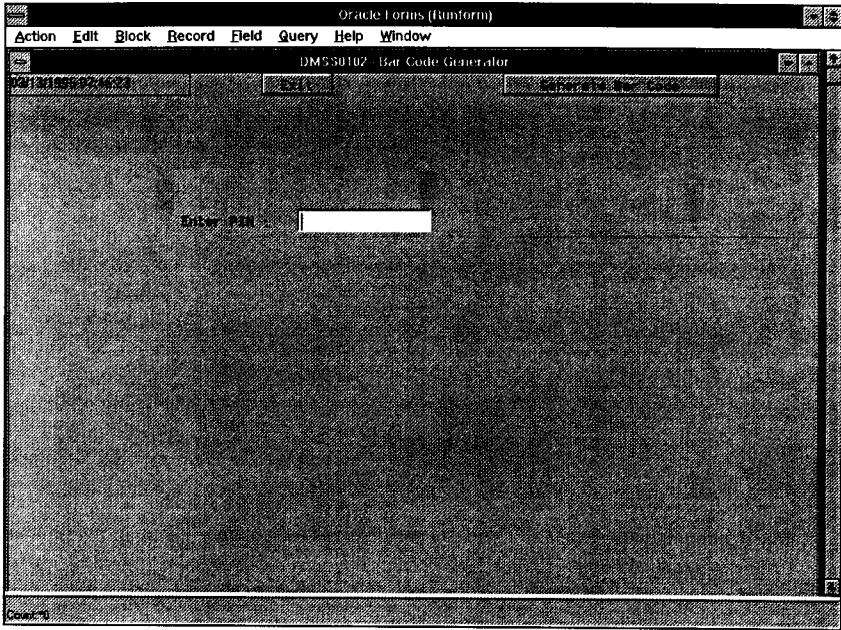


Figure A-3. DMSS0102 Bar Code Generator Screen.

Oracle Forms (Runform)

Action Edit Block Record Field Query Help Window

DMSS0201 NDL

Current NDE Date: Date:

NDE Results

File: Location:

Date: Operator:

Uided Disk File: Uided Tape No:

Uided Disk No: Uided Tape Start:

NDE Comments:

Uided Results NDE Results

File: Results Count:

File	Results Count

DMSS0201 NDE
Count: 0

Figure A-4. DMSS0201 NDE Screen.

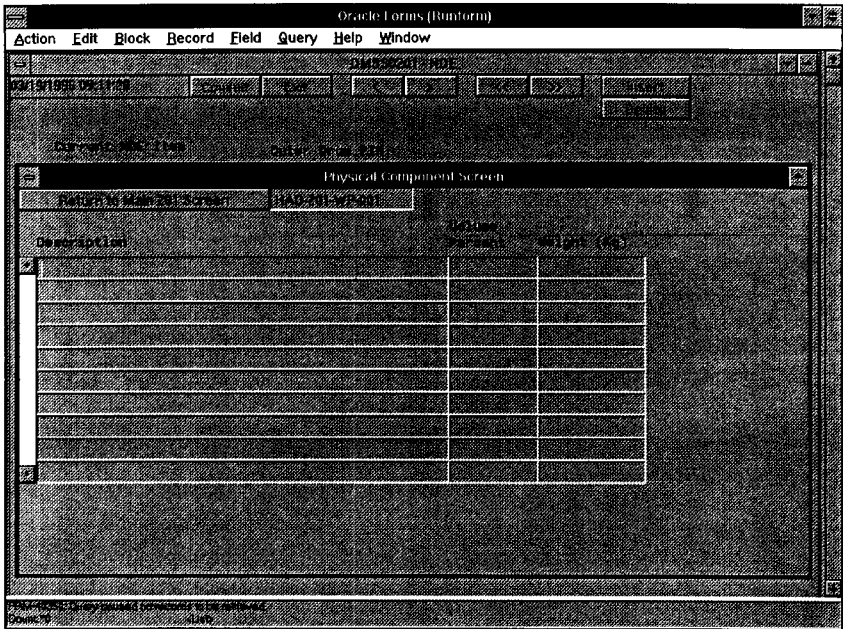


Figure A-6. MDSS0201 NDE Screen Physical Component Screen Pop-Up.

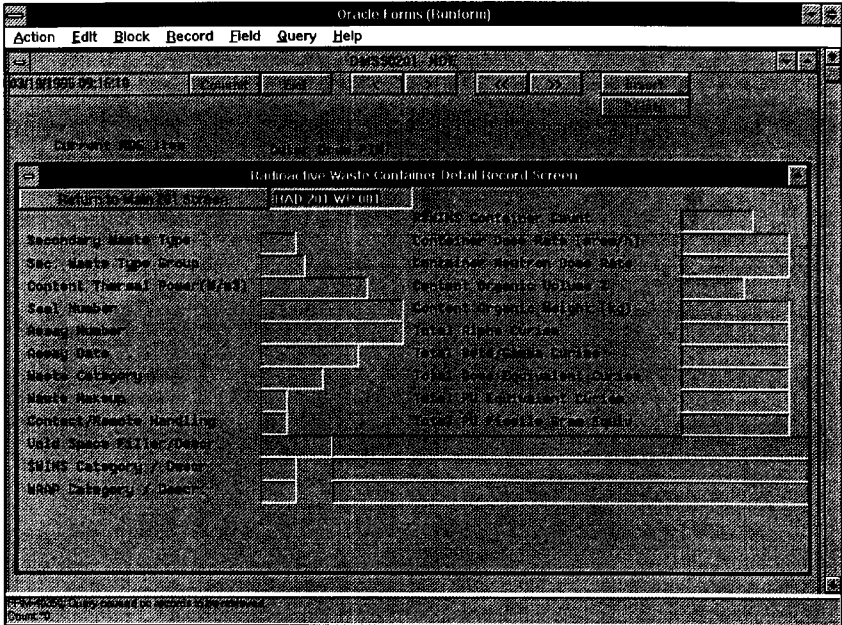


Figure A-7. DMSS0201 NDE Screen Radioactive Waste Container Detail Record Screen.

Oracle Forms (Runform)

Action Edit Block Record Field Query Help Window

DMSS0202 NDA

Generator Information

Generator ID: [] Generator Name: [] Generator Description: [] Generator Comments: [] Profile ID: []

Container Data

Container Type: [] Generator Description: [] Profile ID: []

Health Check

Secondary Waste Type: [] Waste Category: [] Radio Check Acceptable: []

Waste Verification

Secondary Waste Type: [] Waste Category: [] Radio Check Acceptable: [] Thermal Power: []

Request Service NDA History Export Data

Figure A-8. DMSS0202 NDA Screen.

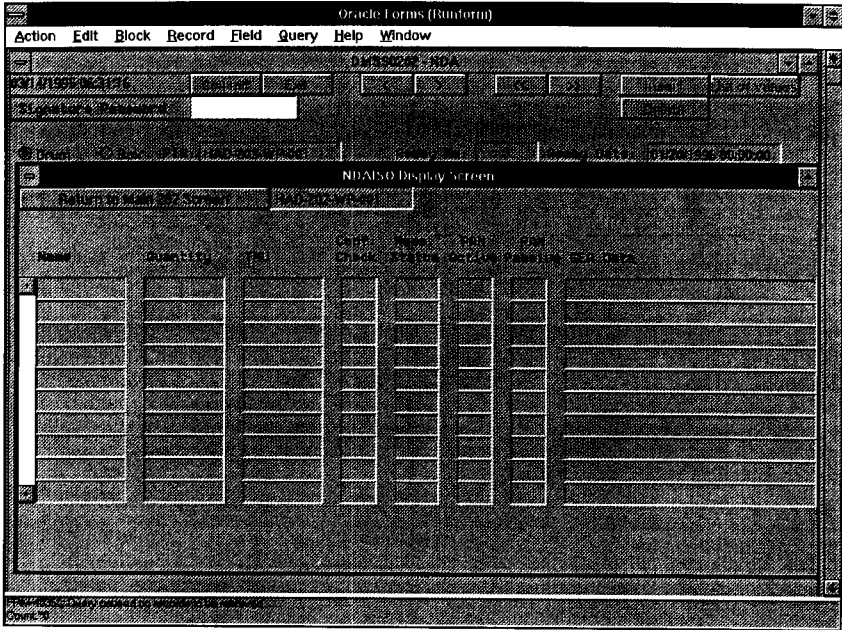


Figure A-10. DMSS0202 NDA Screen NDAISO Display Screen Pop-Up.

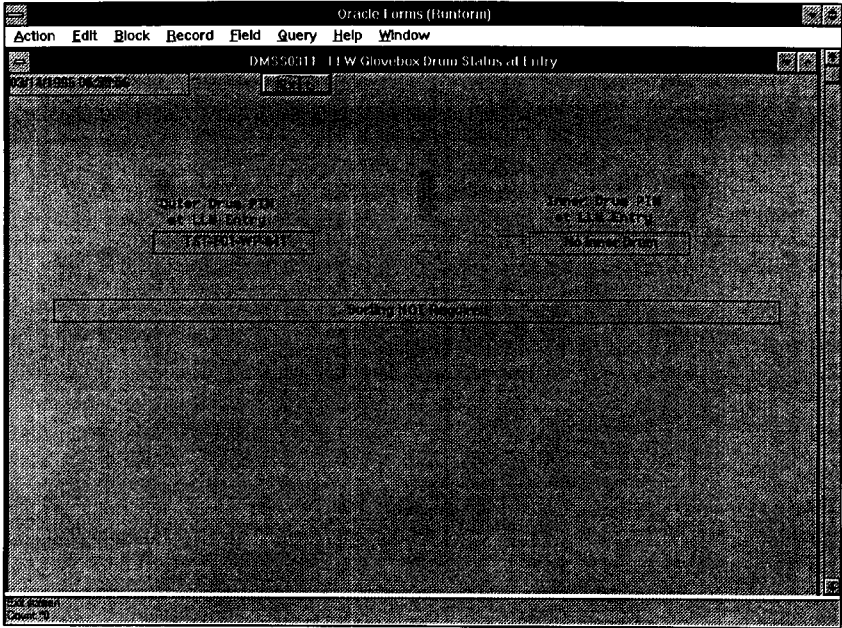


Figure A-11. DMSS0311 LLW Glovebox Drum Status at Entry Screen.

Oracle Forms (Runform)

Action Edit Block Record Field Query Help Window

DMSS0312 LLW Sorting Table

Display New Records

Print

Newly Description

Sample? Complete?

Description	Date Entered
-------------	--------------

Figure A-12. DMSS0312 LLW Sorting Table Screen.

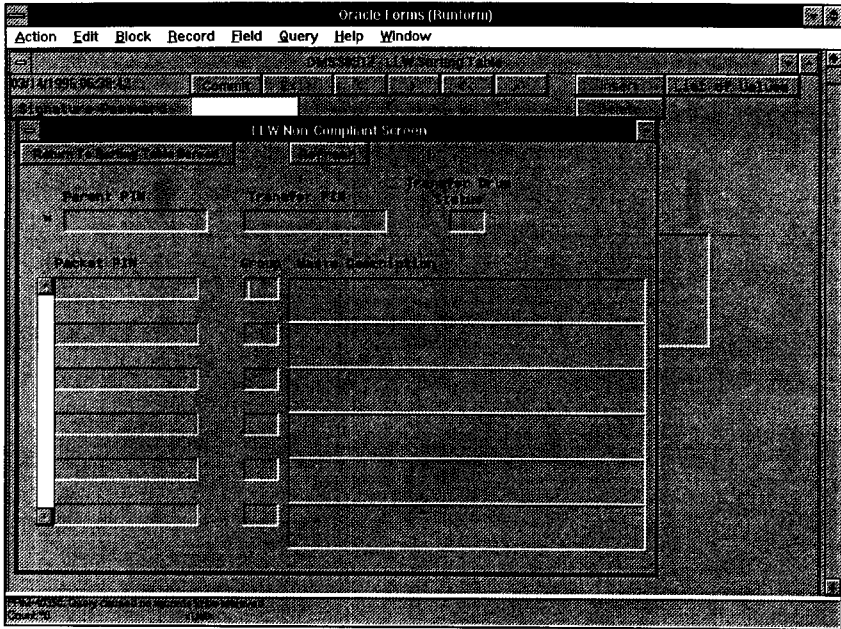


Figure A-13. DMSS0312 LLW Sorting Table Screen
LLW Non-Compliant Screen Pop-Up.

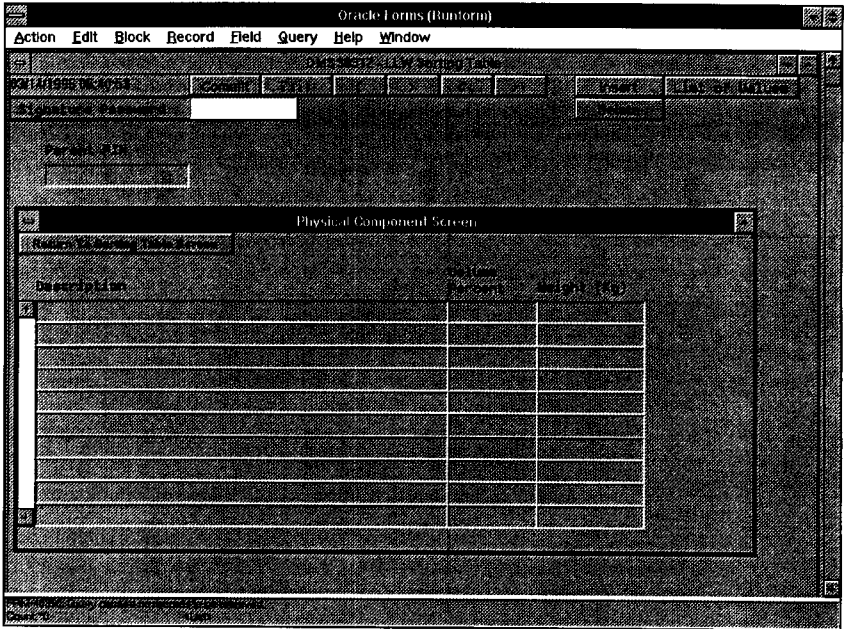


Figure A-15. DMSS0312 LLW Sorting Table Screen
Physical Component Screen Pop-Up.

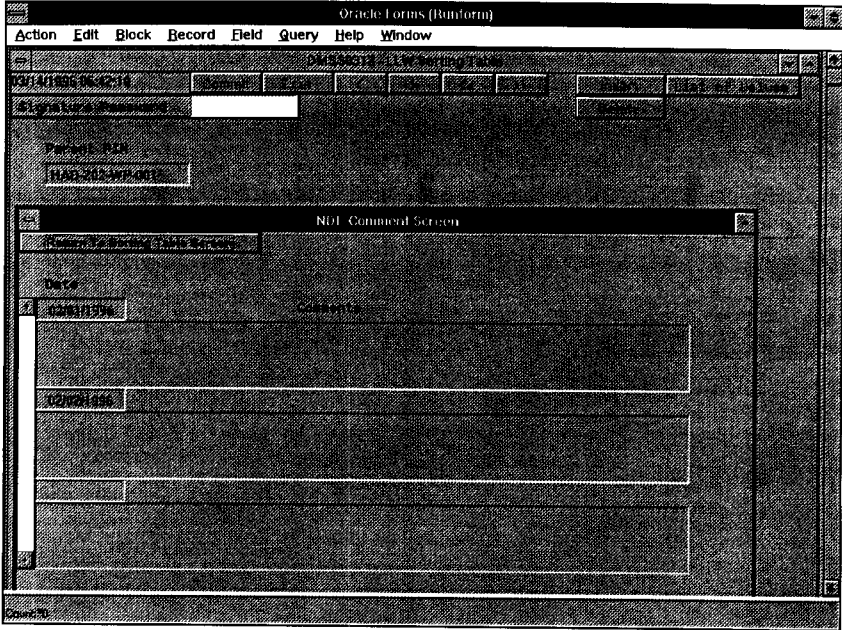


Figure A-16. DMSS0312 LLW Sorting Table Screen NDE Comment Screen Pop-Up.

Oracle Forms (Runtime)

Action Edit Block Record Field Query Help Window

DMSS0315 LLW Exit Glovebox

Signature: []

Location Data

File: []

Estimated Gross Weight (kg): []

Estimated Volume (m³): []

Estimated Length (m): []

Estimated Width (m): []

Estimated Height (m): []

MARKET

File	Description	Unit Weight (kg)	Volume (m³)

Go Back to Main Menu

Exit

Figure A-17. DMSS0315 LLW Exit Glovebox Screen.

Grade Forms (100 form)

Action Edit Block Record Field Query Help Window

DMSS0321 - LLW RWM Waste Sorting

Signature Password

Transfer Drum PIN

Storage Category

Transfer Drum Packets	
PIN	Packet Description

Sample Station Packets	
PIN	Packet Description

Refresh Cancel OK

Figure A-18. DMSS0321 LLW RWM Waste Sorting Screen.

The screenshot shows an Oracle Forms application window titled "DMSS0322 - LLW RWM Waste Repackaging". The window has a menu bar with "Action", "Edit", "Block", "Record", "Field", "Query", "Help", and "Window". Below the menu bar is a toolbar with buttons for "Previous", "Edit", "Next", "Cancel", "OK", and "Delete". The main area contains a "Signature Password" field and a "Date" field. There are three main sections:

- Original Container:** Fields for PNL, Container Type, Material Group, and Waste Description.
- New Container:** Fields for PNL, Container Type, Material Group, and Waste Description.
- Compliant Loadout Drum:** Fields for PNL, Waste Description, and a "Compliant Waste" checkbox. Below these fields is a grid of buttons.

Figure A-19. DMSS0322 LLW RWM Waste Repackaging Screen.

Oracle Forms (Random)

Action Edit Block Record Field Query Help Window

DMSS0323 - LLW RWM Compliant Waste Loadout

Signature Password

Cancel Exit

Insert Delete

PH: []

Waste Description: []

Void Filter: [] Filter Weight: [] Kg Primary Waste Type: [] Hot Waste Storage Cat.: []

Seal No.: [] Beta/Gamma Dose Rate: [] mrem/hr Assay Profile No.: []

[] []

Figure A-20. DMSS0323 LLW RWM Compliant Waste Loadout Screen.

The screenshot displays the Oracle Forms interface for 'DMSS0324 - LLW RWM Treatment Item Assembly'. The window title bar shows 'Oracle Forms (Run Form)'. The menu bar includes 'Action', 'Edit', 'Block', 'Record', 'Field', 'Query', 'Labels', 'Help', and 'Window'. The form header contains the ID 'DMSS0324' and a 'Signature' field with a 'PASSWORD' label. Below this is a 'Worksheet ID:' field. The main form area is divided into two primary sections: 'Item Containers To Be Retrieved' and 'Packets/Samples of Treatment Station'. The 'Item Containers' section has a radio button for 'Packets' (unselected) and a radio button for 'Samples' (selected). It contains three sub-sections: 'Transfer Pip PNs:' with one text field, 'Purge Pod PNs:' with one text field, and 'Sample PNs:' with a list of five text fields. The 'Packets/Samples' section contains two columns: 'Packets:' with a list of five text fields and 'Samples:' with a list of five text fields. At the bottom of the form, there are two buttons: 'OK' and 'Cancel'. The status bar at the very bottom of the window displays 'Current'.

Figure A-22. DMSS0324 LLW RWM Treatment Item Assembly ('Samples' Selected).

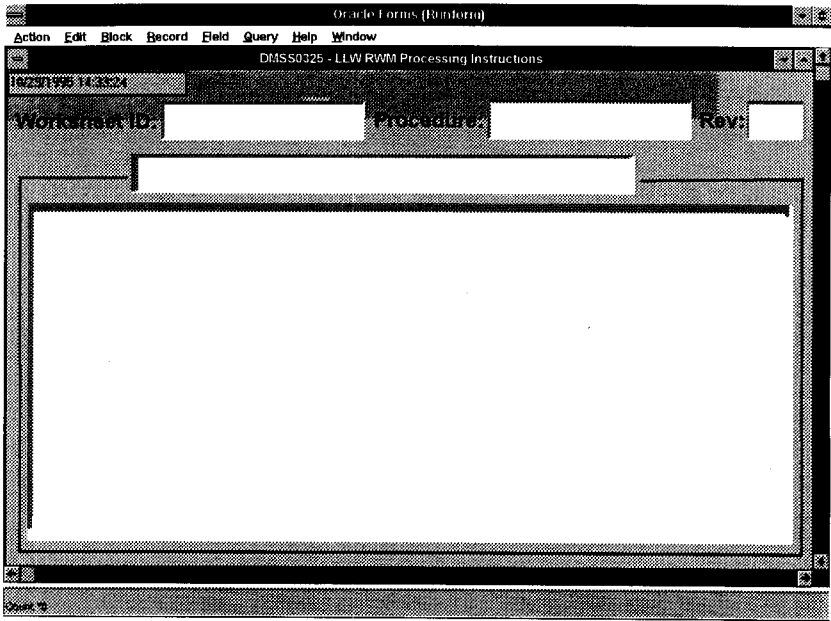


Figure A-23. DMSS0325 LLW RWM Processing Instructions Screen.

Oracle Forms (Runform)
Action Edit Block Record Field Query Help Window
DMSS0326 - LLW RWM Treatment

Signature Password

Treatment Container

PIN:
Material Group:
Waste Description:
Treatment Comments:

Waste ID:

Compliant Leadout Drum

PIN:
Waste Description:

Items in Treatment Container

Compliant?	PIN	Material Group	Waste Description
<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Figure A-24. DMSS0326 LLW RWM Treatment Screen.

Oracle Forms (Runform)
DMSS0328 - LLW RWM Treated Waste Loadout

Signature Password:

Treatment Container

P/N:
Material Group:
Waste Description:
Treatment Comments:

Treated Waste Loadout Drum

P/N: Profile:
Waste Description:
Waste Filter: Filter Weight:
Primary Waste Type: Max. Waste Storage Cap.:
Seal No.:
Data/Current Date Rate:

Figure A-25. DMSS0328 LLW RWM Treated Waste Loadout Screen.

The screenshot displays an Oracle Forms window titled "DMSS0331 - TRU Glovebox Drum Status at Entry". The window includes a menu bar with options: Action, Edit, Block, Record, Field, Query, Labels, Help, and Window. The current date and time are shown as 10/29/1996 14:33:24. The main form area contains five input fields arranged in two columns:

- Outer Drum PIN at TRU Entry
- Inner Drum PIN at TRU Entry
- Entry Drum FGE
- TRU Glovebox FGE
- TRU Glovebox FGE Limit

A "List of Values" button is located in the top right corner of the form area. The status bar at the bottom left shows "Count: 0".

Figure A-26. DMSS0331 TRU Glovebox Drum Status at Entry Screen.

Oracle Forms (Runform)

Action Edit Block Record Field Query Help Window

DMSS0332 - TRU Sorting Table

10/23/1995 14:33:24 Commit Exit

Signature Password

Parent PIN:

Waste Description:

Sample? Compliant?

Non-Compliant Sample Compliant Commit Physical Commitment N/A Commit

Count: 0

Figure A-27. DMSS0332 TRU Sorting Table Screen.

Oracle Forms (Runform)

Action Edit Block Record Field Query Help Window

TRU Non-Compliant Packet

10/23/1995 14:33:24

TRU Non-Compliant Packet

Current Sorting Table Drum PIN: Transfer Drum PIN: Transfer Drum Status:

Empty
 Partial
 Full

Non-Compliant Packets

Packet PIN	Material Group	EQE (g)	Waste Description
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Return Return

Count: 0

Figure A-28. DMSS0332 TRU Sorting Table Screen
 TRU Non-Compliant Packet Pop-Up.

Oracle Forms (Runform)

Action Edit Block Record Field Query Help Window

DMSS0333 - TRU Chemical Composition

Current Sorting Table Data

Loadout Part

PIN: []

Waste Description: []

Mix Component

PPM: []

Weight (kg): [] Wt. %: []

Mix Component

PPM: []

Weight (kg): [] Wt. %: []

Physical Components Waste

Loadout Part Loadout Mix

Figure A-29. DMSS0333 TRU Chemical Composition Screen.

Oracle Forms (Random)

DMSS0334 - TRU Physical Components

Current Berthing Table Deck

Part:

Part Description:

Component	Volume % Weight (%)

Loadout Port

Part:

Part Description:

Component	Volume % Weight (%)

Buttons: Cancel, OK, Apply, Loadout Port

Figure A-30. DMSS0334 TRU Physical Components Screen.

Oracle Forms (Runform)
Action Edit Block Record Field Query Help Window
DMSS0335 - TRU Exit Glovebox

Signature Password: []

Location: []

PIN: []

Generator Waste Description: []

Beta/Gamma Dose Rate: [] rads/hr

Container QC Seal No.: []

Primary Waste Type: []

Haz Waste Storage Cat.: []

Profile ID: []

Default Profile?: []

Drum Filter Installed?: []

Drum Filter Model: []

Liner Venting Method:
 Punches
 Filter
 No Liner

Buttons: [] [] [] []

Figure A-31. DMSS0335 TRU Exit Glovebox Screen.

Oracle Forms (Runtime)

Action Edit Block Record Field Query Help Window

DMSS0341 - TRU RWM Waste Sorting

1/12/2006 14:32:24

Signature Password

Transfer Drum P#:

Storage Category:

Transfer Drum Packets		
P#	Packet Description	P#

Sample Station Packets		
P#	Packet Description	P#

Buttons: [Back] [Forward] [Delete]

Figure A-32. DMSS0341 TRU RWM Waste Sorting Screen.

Oracle Forms (Random)

Action Edit Block Record Field Query Help Window

DMSS0342 - TRU RWM Waste Repackaging

180231595 14:32:24

Signature Password

Original Container

PIN: []

Container Type: []

Material Group: []

Waste Description: []

New Container

PIN: []

Container Type: []

Material Group: []

Waste Description: []

Compliant Lowford Drum

PIN: []

Waste Description: []

Compliant Waste:

Print Print as HTML

Figure A-33. DMSS0342 TRU RWM Waste Repackaging Screen.

The screenshot shows a standard Oracle Forms interface. At the top, the title bar reads 'Oracle Forms (Run form)'. Below it is a menu bar with 'Action', 'Edit', 'Block', 'Record', 'Field', 'Query', 'Help', and 'Window'. The main window title is 'DMSS0343 - TRU RWM Compliant Waste Loadout'. A toolbar contains buttons for 'Commit', 'Edit', and navigation arrows. Below the toolbar is a 'Signature Password' field and a 'Validate' button. The main form area is enclosed in a large rectangular frame. Inside this frame, there is a 'File' field, a 'Waste Description' field (a large text area), and several data fields: 'Void Filter', 'Filter Weight' (with a unit 'Kg'), 'Primary Waste Type', 'Max Waste Storage Out', 'Seed No.', 'Beta/Gamma Dose Rate' (with a unit 'mrem/hr'), and 'Assay Profile No.'. At the bottom of the form frame are two buttons: 'Print Query' and 'Refresh'. The status bar at the very bottom of the window shows 'Form 1'.

Figure A-34. DMSS0343 TRU RWM Compliant Waste Loadout Screen.

Oracle Forms (Platform)

Action Edit Block Record Field Query Labels Help Window

DMSS0344 - TRU RWM Treatment Item Assembly

Signature Password: [Text Field]

Worksheet ID: [Text Field]

Item Containers To Be Retrieved
 Packets Samples

Treatment Drum P/N: [Text Field]

Packet P/Ns: [List Box]

Packets/Samples at Treatment Station

Packets: [List Box]

Samples: [List Box]

Print Exit

Figure A-35. DMSS0344 TRU RWM Treatment Item Assembly Screen ('Packets' Selected).

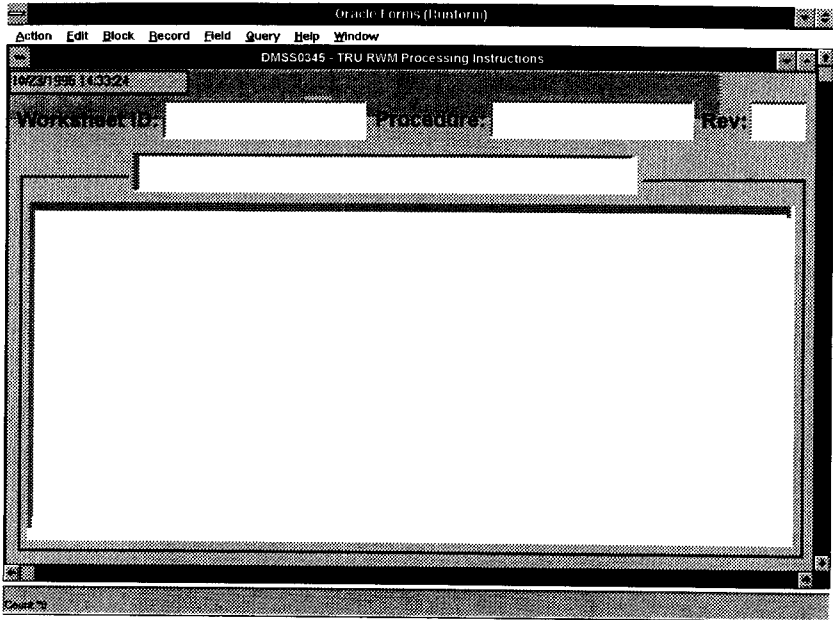


Figure A-37. DMSS0345 TRU RWM Processing Instructions Screen.

Oracle Forms (Runtime)

Action Edit Block Record Field Query Help Window

DMS0346 - TRU RWM Treatment

DMZ01995 14:55:24 Commit Exit < > << >> Insert Refresh

Signature Password:

Treatment Container

PIN:

Material Group:

Waste Description:

Treatment Comments:

Worksheet ID:

Compliant Loading Drum

PIN:

Waste Description:

Buttons

Compliant Loading

Cancel

Items in Treatment Container

Compliant	PIN	Mat. Group	Waste Description
<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Buttons

Compliant Loading

Cancel

Figure A-38. DMSS0346 TRU RWM Treatment Screen.

Oracle Forms (Bamform)

Action Edit Block Record Field Query Help Window

DMSS0348 - TRU RWM Treated Waste Loadout

Signature Password

Treatment Containers

Pkg:

Material Group:

Waste Description:

Treatment Comments:

Treated Waste Loadout Drum

Pkg: Profile:

Waste Description:

Void Filter: Filter Weight:

Primary Waste Type: Haz Waste Storage Cat.:

Serial No.:

Batch/Container Date Rate:

DMSS0348

Figure A-39. DMSS0348 TRU RWM Treated Waste Loadout Screen.

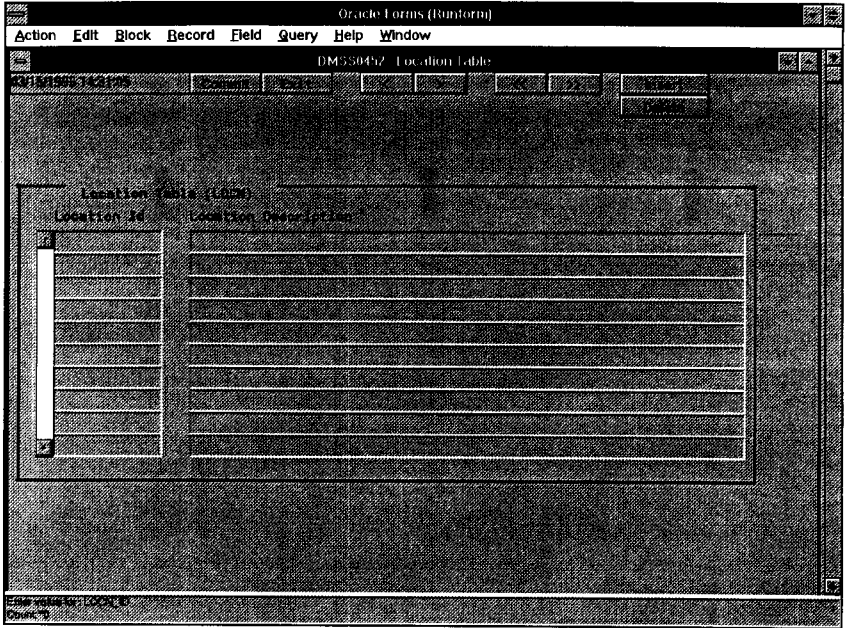


Figure A-40. DMSS0452 Location Table Screen.

The screenshot shows an Oracle Forms window titled "DMSS0454 Profile / Profile Isotope". The window has a menu bar with the following items: Action, Edit, Block, Record, Field, Query, Help, and Window. Below the menu bar, there is a title bar with the text "DMSS0454 Profile / Profile Isotope". The main content area is divided into several sections:

- At the top, there are several buttons: "Generate", "Save", "Print", "Cancel", and "OK".
- Below the buttons, there is a section titled "Generate Profile Table (PROFILE)" with a vertical scroll bar on the left. It contains two input fields: "Profile ID" and "Profile Name".
- Below this section, there is a section titled "Profile Instance Table (PROFILEINST)" with a vertical scroll bar on the left. It contains three tables: "Profile Instance", "Profile Occurrence", and "Profile Data". Each table has a vertical scroll bar on its left side.
- To the right of the "Profile Instance Table" section, there is a button labeled "Print of Instance".

Figure A-41. DMSS0454 Profile/Profile Isotope Screen.

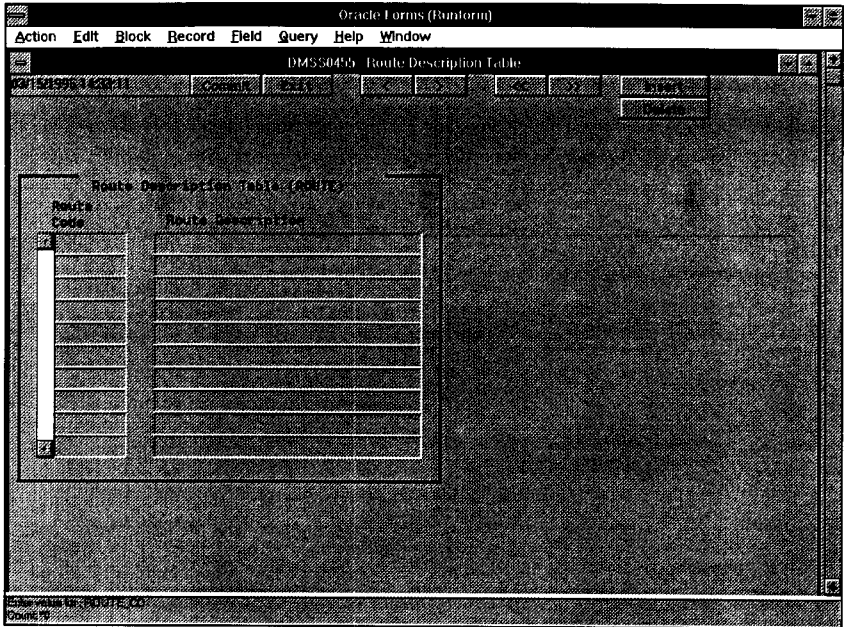


Figure A-42. DMSS0455 Route Description Table Screen.

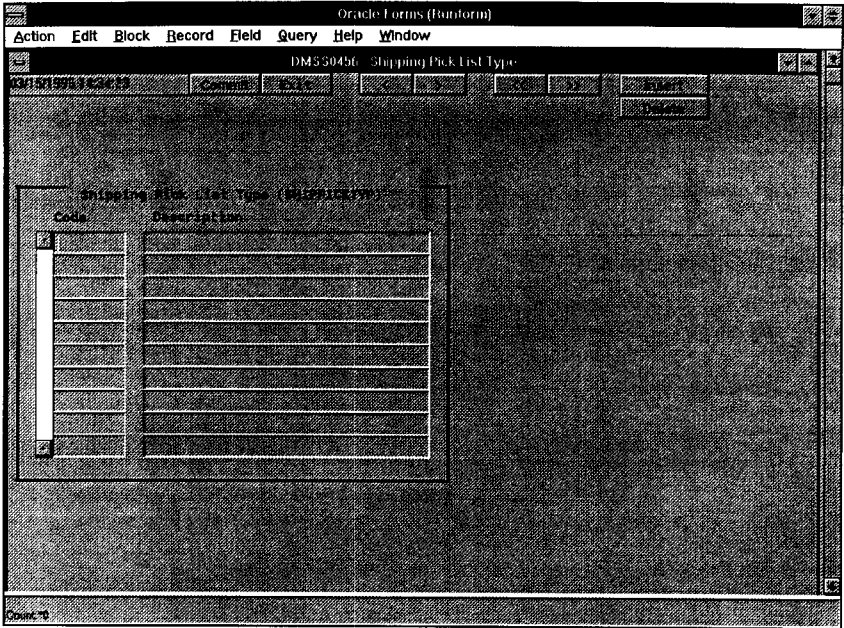


Figure A-43. DMSS0456 Shipping Pick List Type Screen.

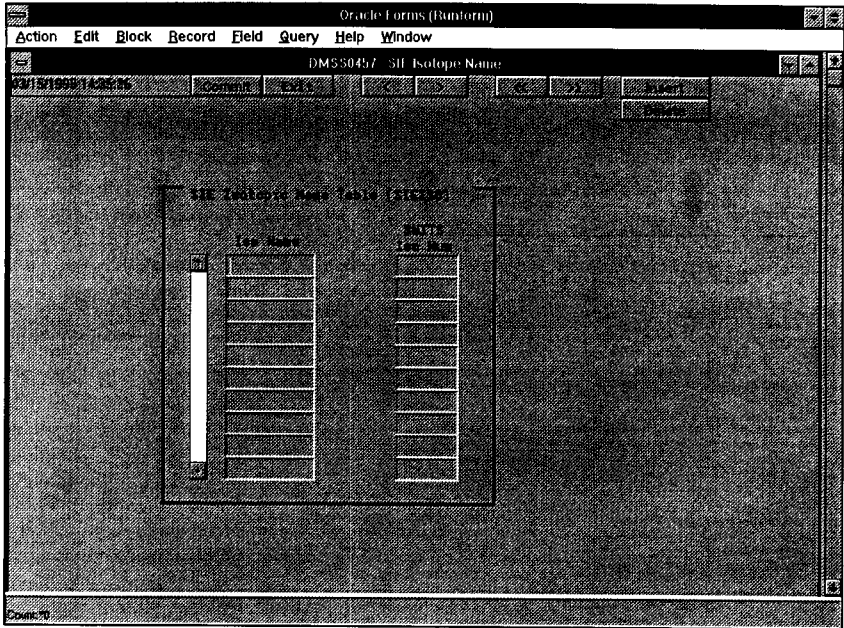


Figure A-44. DMSS0457 SIE Isotope Name Screen.

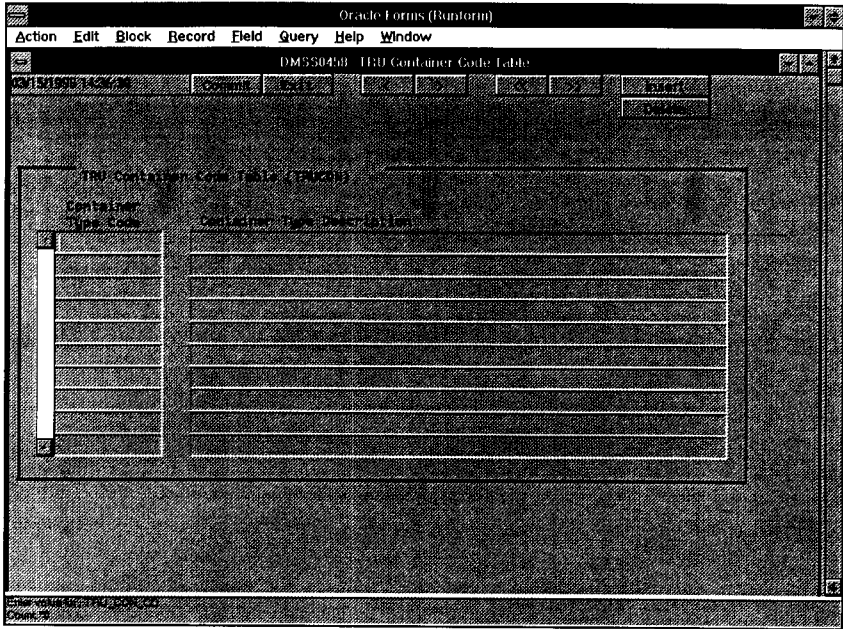


Figure A-45. DMSS0458 TRU Container Code Table Screen.

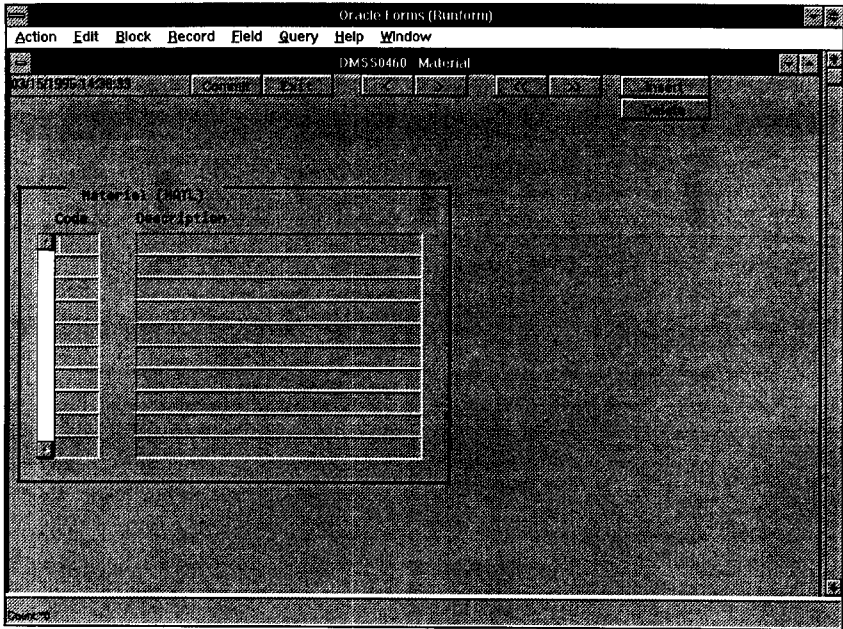


Figure A-47. DMSS0460 Material Screen.

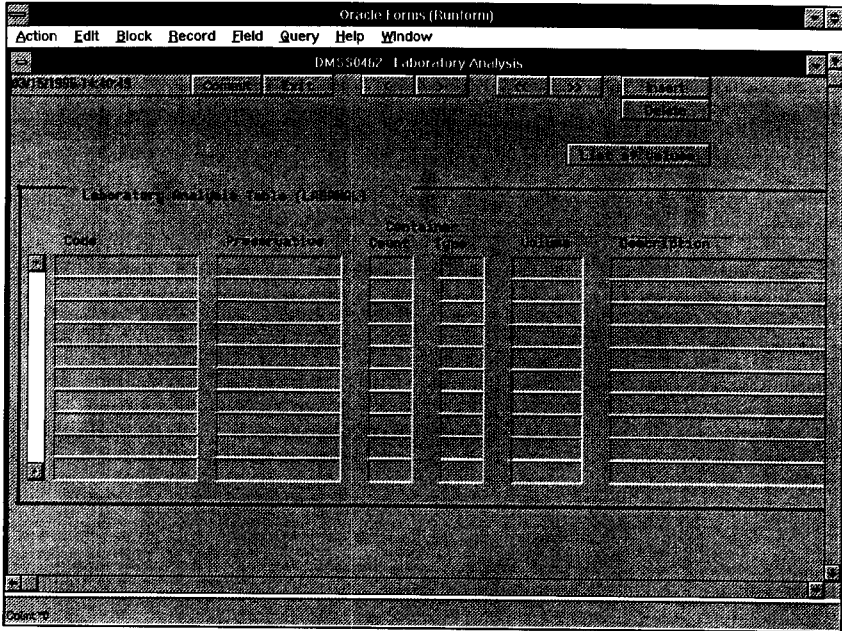


Figure A-49. DMSS0462 Laboratory Analysis Screen.

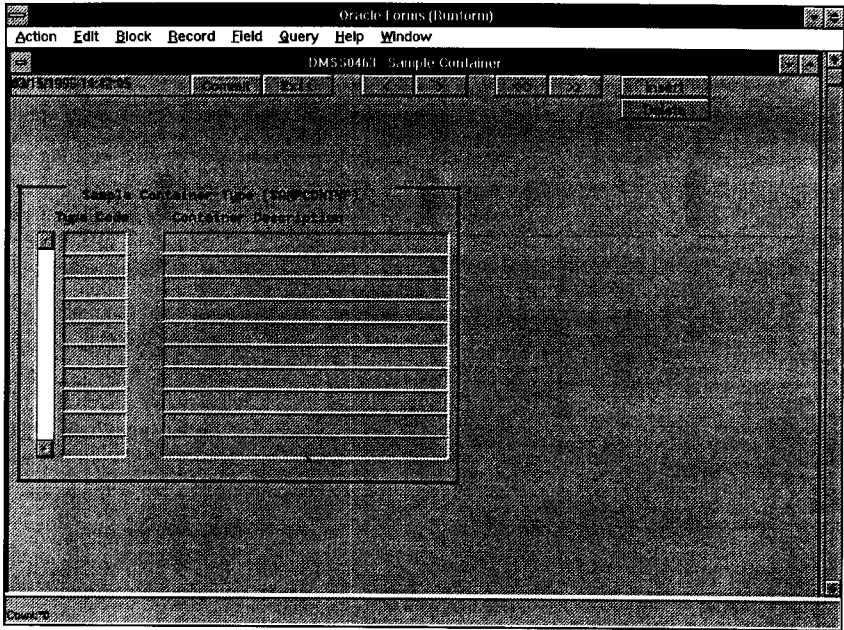


Figure A-50. DMSS0463 Sample Container Screen.

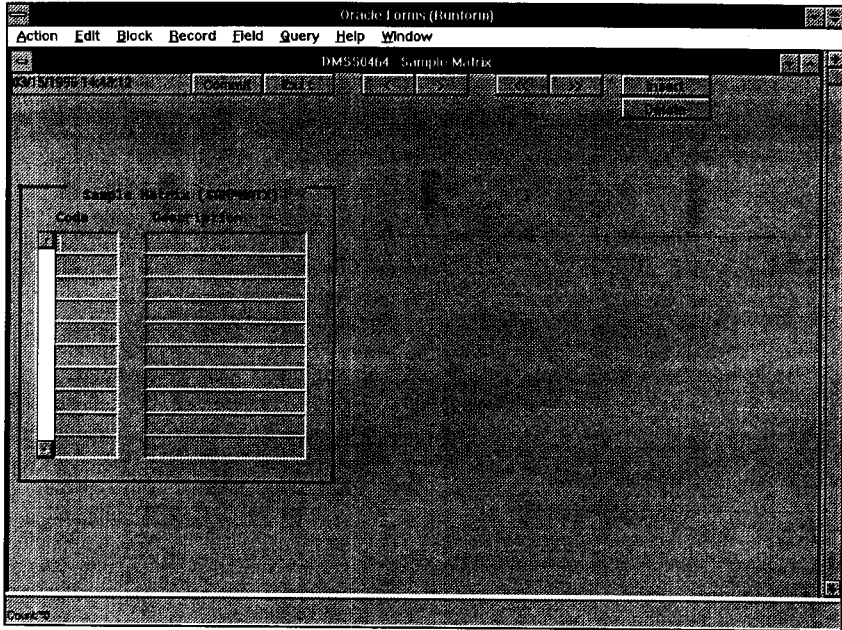


Figure A-51. DMSS0464 Sample Matrix Screen.

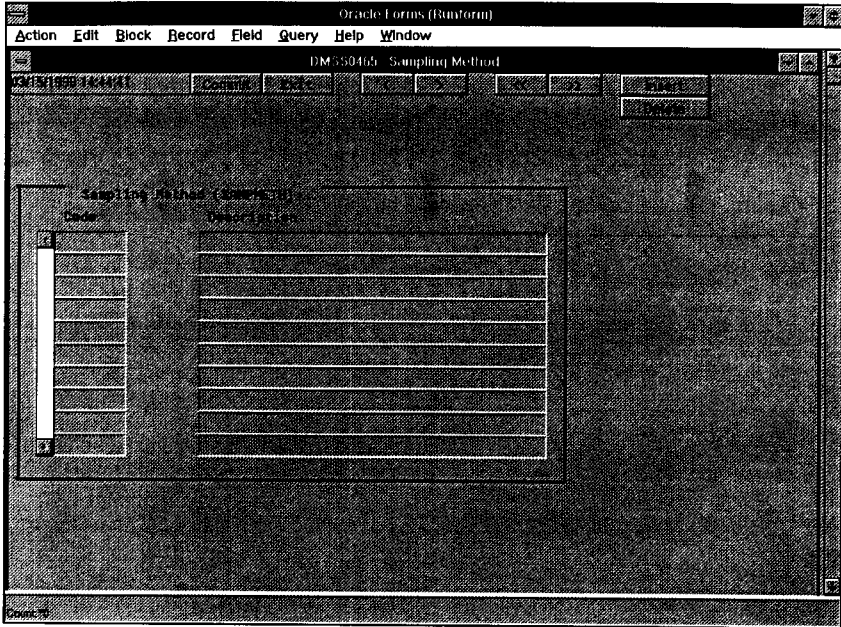


Figure A-52. DMSS0465 Sampling Method Screen.

The screenshot shows an Oracle Forms window titled "DMSS0466 Treatment Procedure Table". The window has a menu bar with "Action", "Edit", "Block", "Record", "Field", "Query", "Help", and "Window". Below the menu bar, there is a title bar "DMSS0466 Treatment Procedure Table" and a toolbar with icons for "Query", "Block", "Record", "Field", "Help", and "Window". The main area of the form contains a table with the following columns: "Number", "Description", "Author", "Revision Number", and "Expiration Date". The table is currently empty. The form is displayed in a "Runform" mode, as indicated by the title bar.

Figure A-53. DMSS0466 Treatment Procedure Table Screen.

Oracle Forms (Bartom)

Action Edit Block Record Field Query Help Window

DMSS0501 - Lab Sample Acquisition

Signature Password: []

Drum/Packet PIN: [] Purge Port PIN: []

Sample for Lab Analysis

Bottle PIN: []

Sampling Method: []

Analysis Description: []

Preservative: []

Container Type: [] Volume Required: [] ml

Room Temperature: [] Deg C Sample Matrix: []

Comments: []

Samples in Purge Port

Bottle PIN	Taken By

New Sample Analysis Required Print Remove Sample from Purge Port Purge Port Check for Outlets

Figure A-54. DMSS0501 Lab Sample Acquisition Screen.

Oracle Forms (Runform)

Action Edit Block Record Field Query Help Window

DMSS0502 - Chain of Custody

10/23/1995 14:33:24 Commit

Purge Part PIN: Pig PIN: Location:

	Relinquished By	Received By	Date
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Signature: Password Signature: Password

Return

Count: 0

Figure A-55. DMSS0502 Chain of Custody Screen.

Oracle Forms (Runform)

Action Edit Block Record Field Query Help Window

DMSS0504 - Laboratory Sample Analysis Request

10/23/1995 11:43:12

Packet/Drum P/N: Sample No.: Number of Bottles:

Analysis: **List of Values**

Description:

Preservative:

Container Type:

No. of Containers:

Required Volume: ml

Analysis Selected

<input type="text"/>
<input type="text"/>
<input type="text"/>
<input type="text"/>
<input type="text"/>
<input type="text"/>
<input type="text"/>

Total Volume Required: ml

Add Sample Delete Sample

Add Analysis Delete Analysis

Client ID

Figure A-57. DMSS0504 Laboratory Sample Analysis Request Screen.

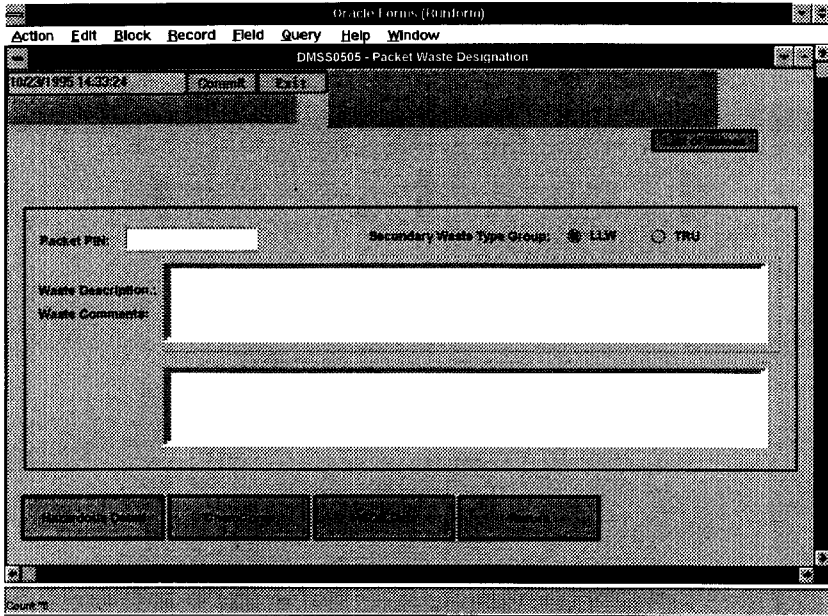


Figure A-58. DMSS0505 Packet Waste Designation Screen.

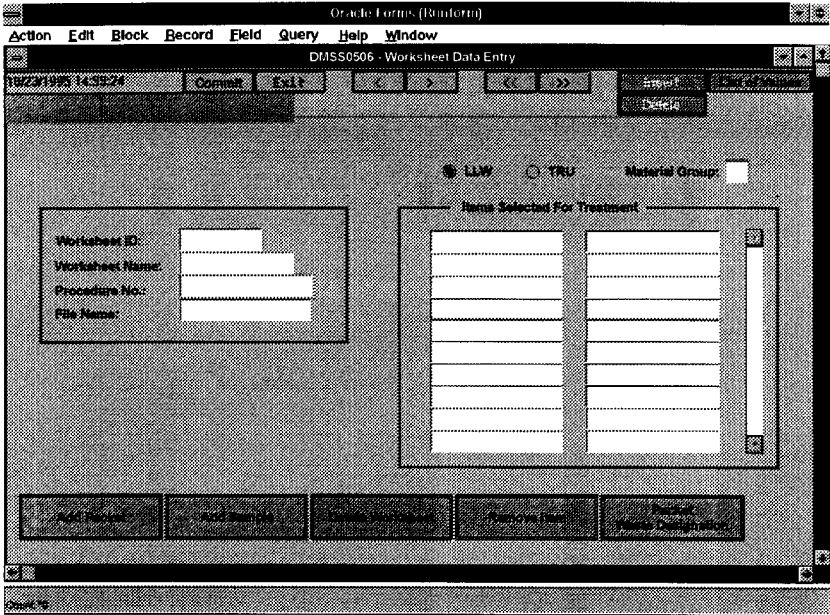


Figure A-59. DMSS0506 Worksheet Data Entry Screen.

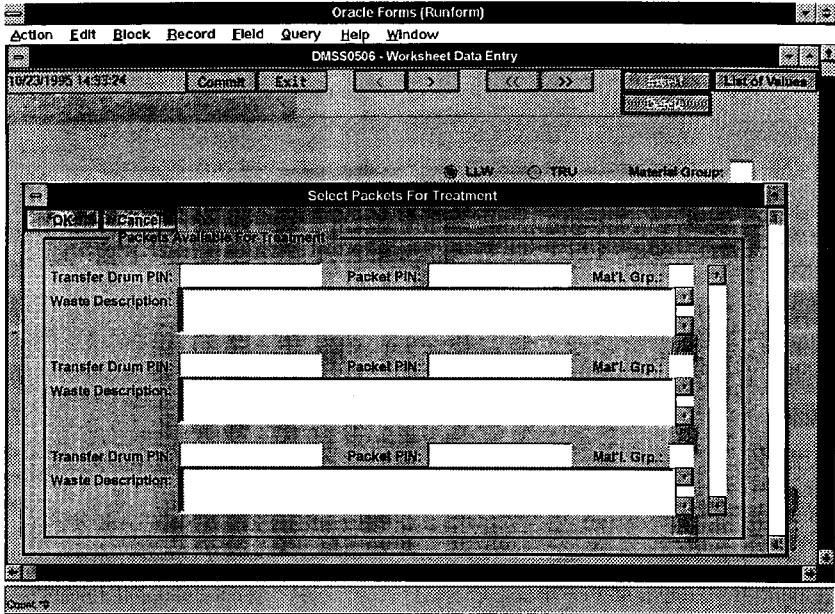


Figure A-60. DMSS0506 Worksheet Data Entry Screen
Select Packets For Treatment Pop-Up.

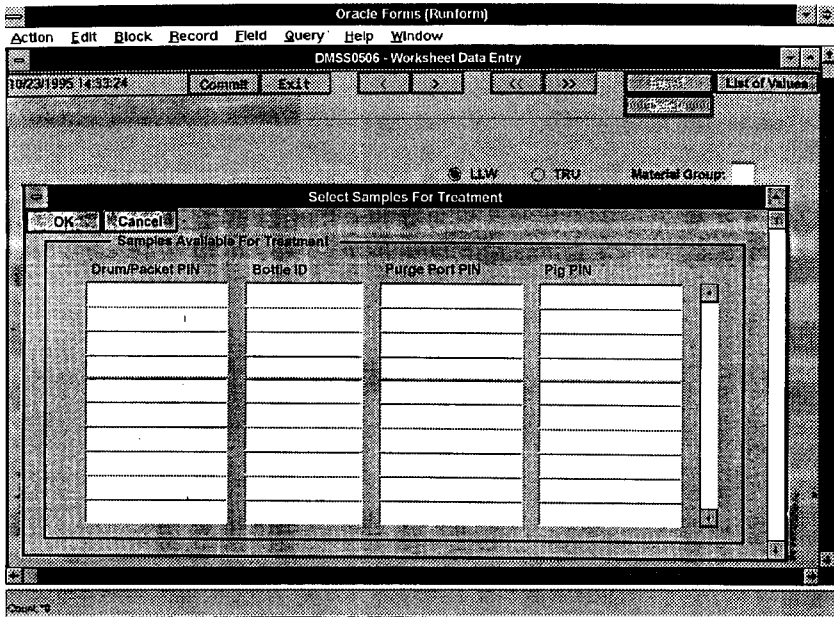


Figure A-61. DMSS0506 Worksheet Data Entry Screen
Select Samples For Treatment Pop-Up.

Oracle Forms (Runform)

Action Edit Block Record Field Query Help Window

DMSS0507 - Sample Management and COC

10/23/1995 14:33:21 Commit Exit

List of Values

COC Form No.

Activity Description: Transfer Container No.:

Sample Hazards:

Special Instructions:

Date Forwarded: Transfer Container No.:

Shipped To: COC Ship Date:

Method of Shipment: Requester's Name:

Requester's Name: Requester's Phone No.:

Count: 0

Figure A-62. DMSS0507 Sample Management and COC Screen.

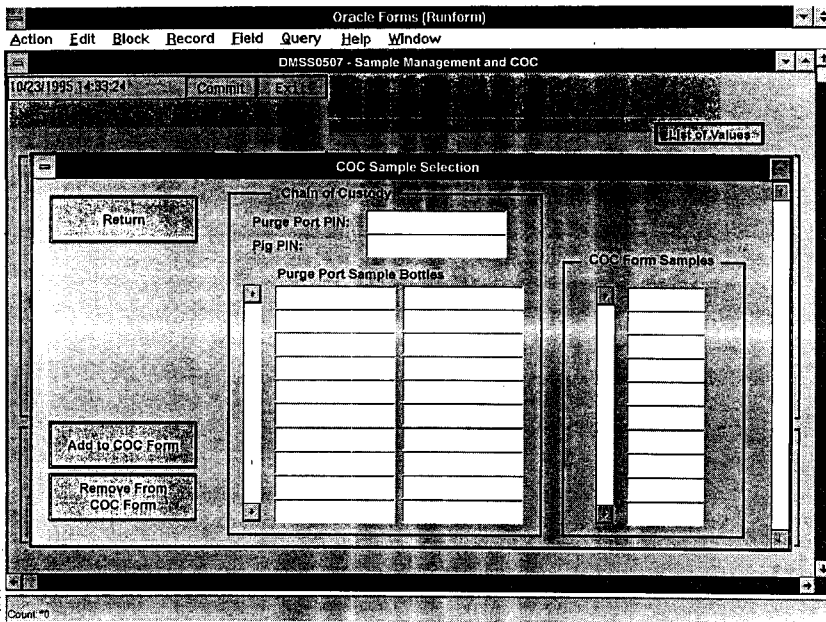


Figure A-63. DMSS0507 Sample Management and COC Screen
COC Sample Selection Pop-Up.

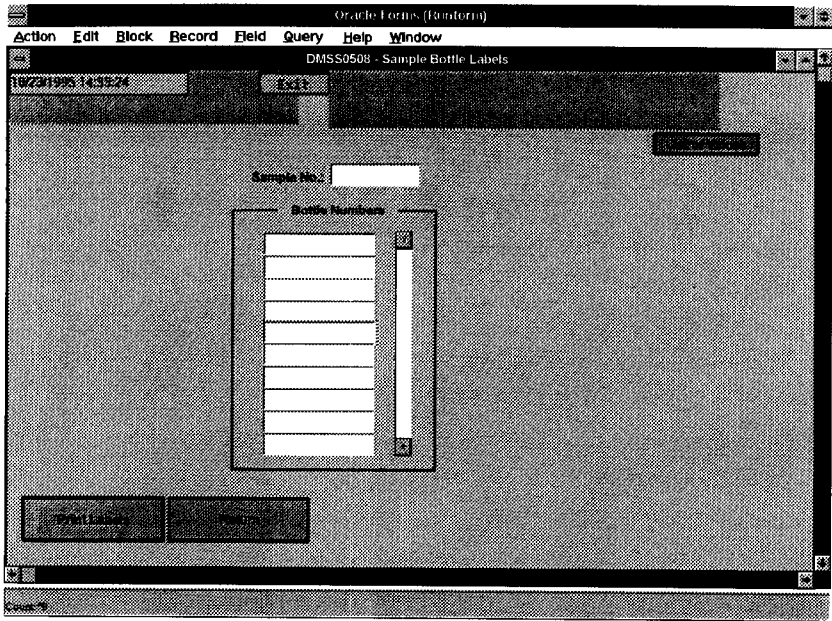


Figure A-64. DMSS0508 Sample Bottle Labels Screen.

Grade Forms (Reforming)

Action Edit Block Record Field Query Help Window

DMSS0509 - Sample/Bottle Tracking Data

10/23/1995 14:33:24

Purge Part RN:

Pig Part:

Sample Data

Sample ID:

Sample Closed:

Comments:

Date Report Received:

Sample Bottle Data

Bottle Part: OK at Lab: Return:

Disposal Method:

Comments:

Bottle Part: OK at Lab: Return:

Disposal Method:

Comments:

Bottle Part: OK at Lab: Return:

Disposal Method:

Comments:

Figure A-65. DMSS0509 Samples/Bottle Tracking Data Screen.

Oracle Forms (Uniform)

Action Edit Block Record Field Query Help Window

DMSS0510 - Purge Port/Transfer Pig Location

Transfer Pig PIN:

Purge Port PIN:

Change Location To:

- Sample Management
- Laboratory
- No Change

Sample Bottles

Insert
Delete

Figure A-66. DMSS0510 Purge Port/Transfer Pig Location Screen.

The screenshot shows an Oracle Forms window titled "DMSS0511 - Samples Returned From Lab". At the top, there is a menu bar with options: Action, Edit, Block, Record, Field, Query, Help, and Window. Below the menu bar, a status bar displays "MSS0511 14:33:24". The main content area contains several elements: a "Transfer Pig PIN" label followed by a text input field, a "Purge Port PIN" label followed by a text input field, and a "Sample Bottles" table. The table has 8 rows and a vertical scroll bar on the right side. In the top right corner of the main area, there are two buttons labeled "Insert" and "Delete". The window has a standard Windows-style title bar and window control buttons (minimize, maximize, close) in the top right corner.

Figure A-67. DMSS0511 Samples Returned From Lab Screen.

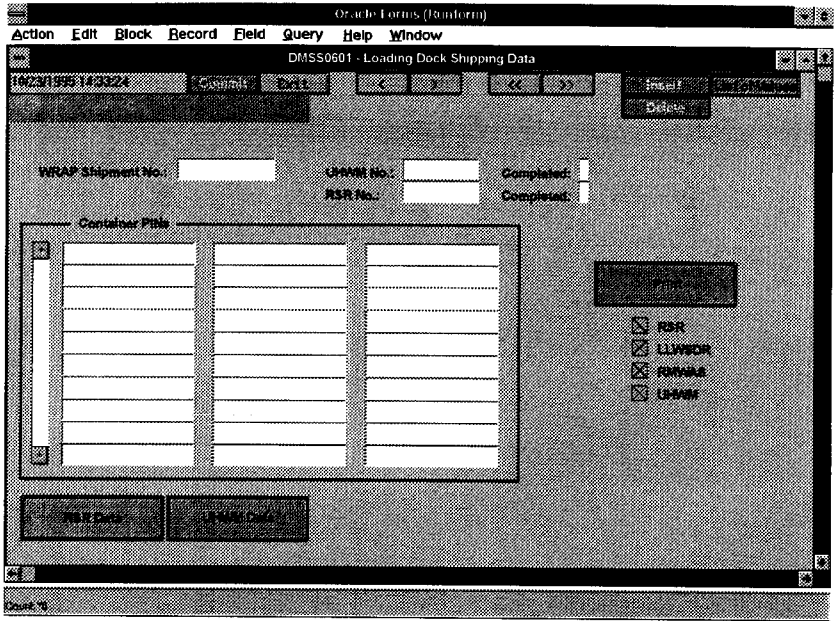


Figure A-68. DMSS0601 Loading Dock Shipping Data Screen.

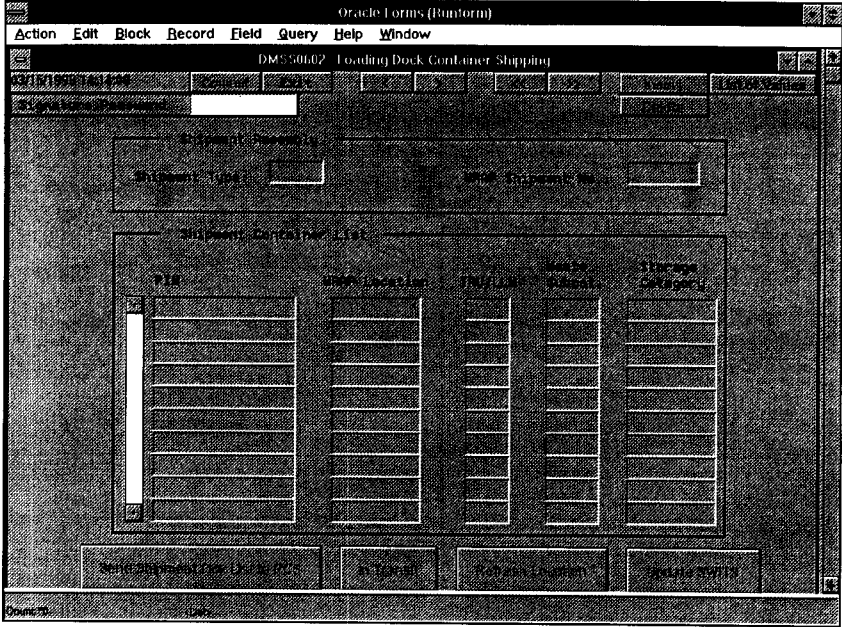


Figure A-69. DMS0602 Loading Dock Container Shipping Screen.

Oracle Forms (Uniform)

Action Edit Block Record Field Query Help Window

DMSS0603 - TRUPACT Cask Loading/Certification

Signature Password

TRUPACT Cask Data

TRUPACT Shipment No.:

TRUPACT Assembly No.: TRUPACT Assembly Position: Assembly Ready to Ship:

Contact Dose Rate: mrem/hr Dose Rate at 2m: mrem/hr

OCA Body ID No.: OCA Lid ID No.: IOV Closure Date:

TRUPACT Gross Weight: kg

Figure A-70. DMSS0603 TRUPACT Cask Loading/Certification Screen.

(To Be Defined)

Figure A-71. DMSS0604 TRUPACT Shipping Documentation Screen.

(To Be Defined)

Figure A-72. DMSS0605 Loading Dock Box and Empty Container Shipping Screen.

The screenshot shows an Oracle Forms window titled "Oracle Forms (RunForm)". The menu bar includes "Action", "Edit", "Block", "Record", "Field", "Query", "Help", and "Window". The main title bar reads "DMSS0702 User Table". Below the title bar, there are several buttons: "New", "Delete", "Insert", "Update", "Cancel", "OK", and "Help". The main area of the form is a grid of input fields for user data. The fields are arranged in two columns and six rows. The first row is labeled "USER" and contains "User Account" and "User Account". The second row contains "User Name" and "User Name". The third row contains "User Password" and "User Password". The fourth row contains "User First Name" and "User Last Name". The fifth row contains "User Initial" and "User Initial". The sixth row contains "User Title" and "User Title". Each field is represented by a rectangular box with a label to its left.

USER	
User Account	User Account
User Name	User Name
User Password	User Password
User First Name	User Last Name
User Initial	User Initial
User Title	User Title

Figure A-74. DMSS0702 User Table Screen.

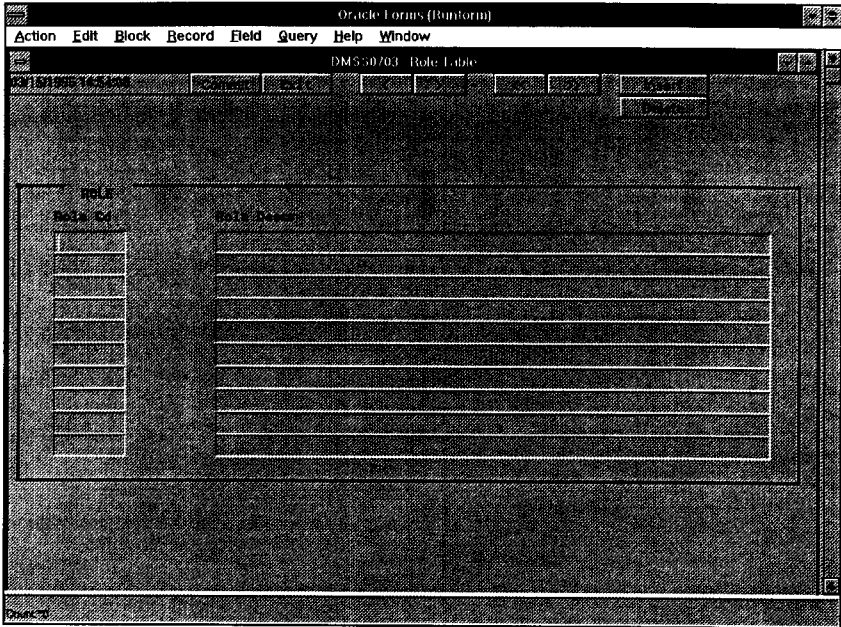


Figure A-75. DMSS0703 Role Table Screen.

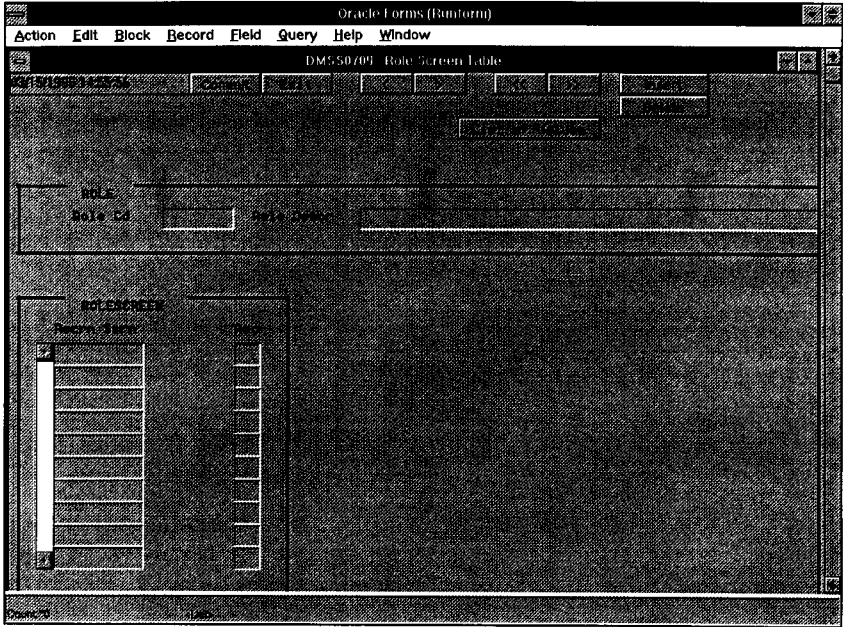


Figure A-76. DMSS0709 Role Screen Table Screen.

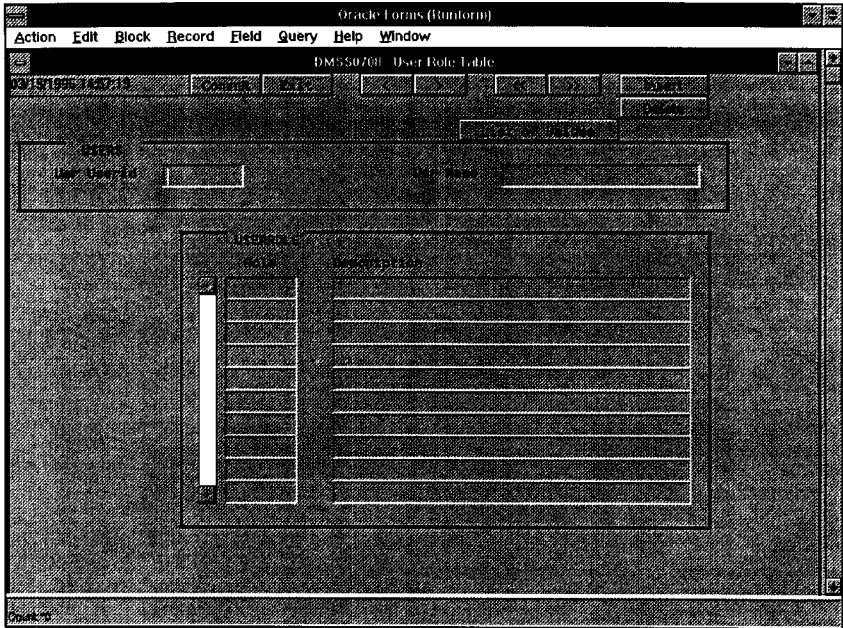


Figure A-77. DMSS0708 User Role Table Screen.

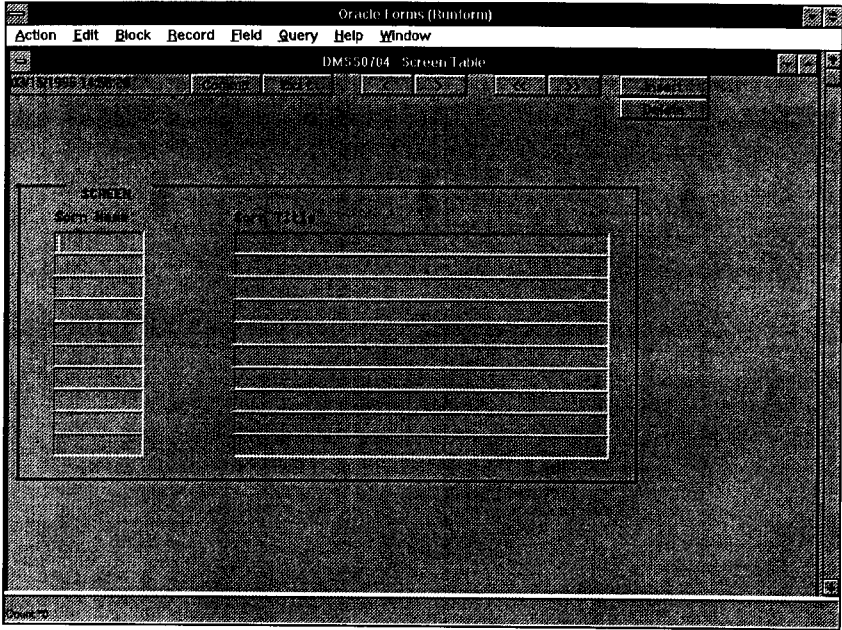


Figure A-78. DMSS0704 Screen Table Screen.

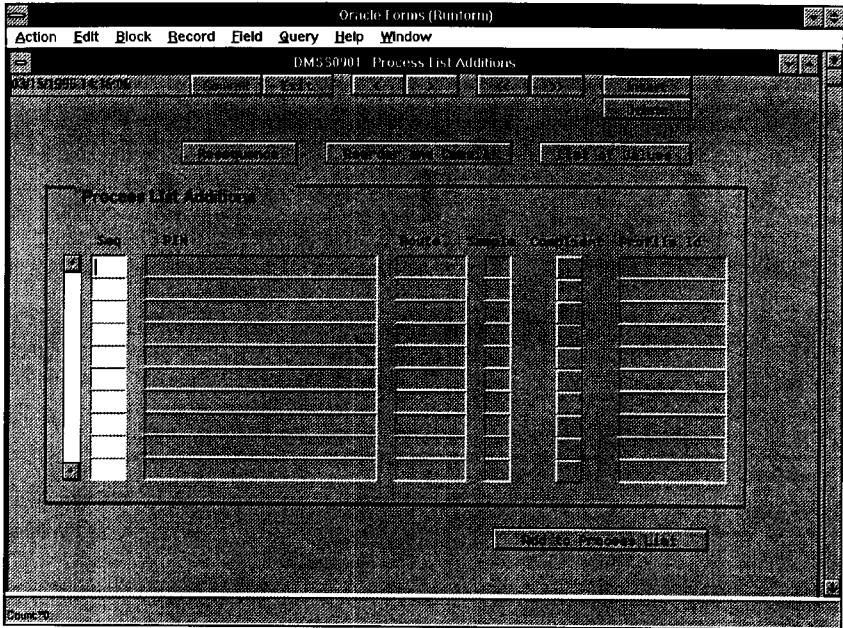


Figure A-79. DMSS0901 Process List Additions Screen.

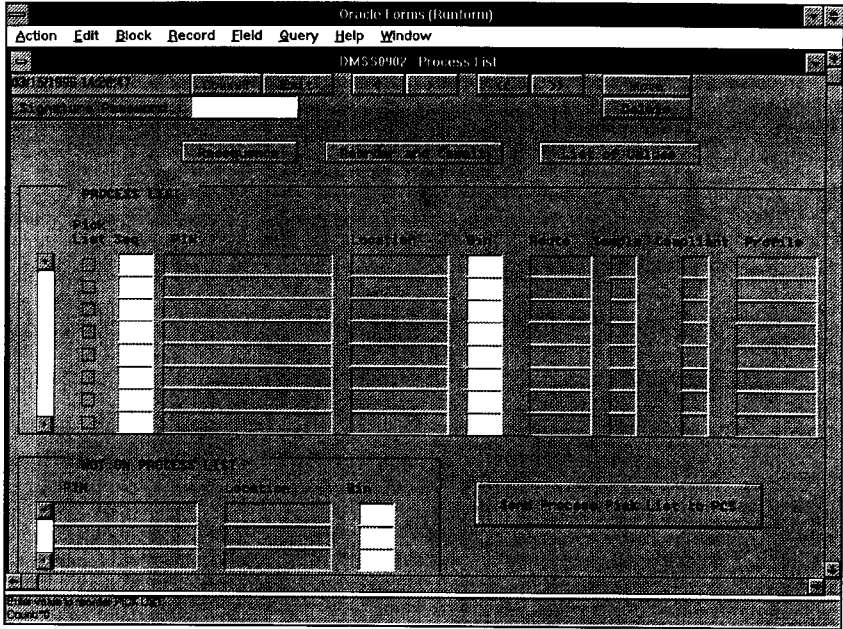


Figure A-80. DMSS0902 Process List Screen.

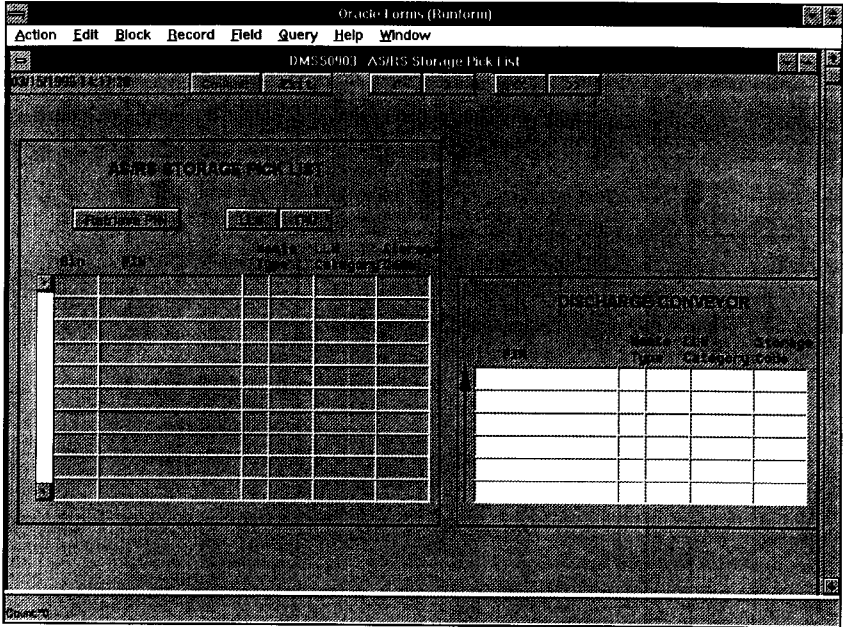


Figure A-81. DMSS0903 AS/RS Storage Pick List Screen.

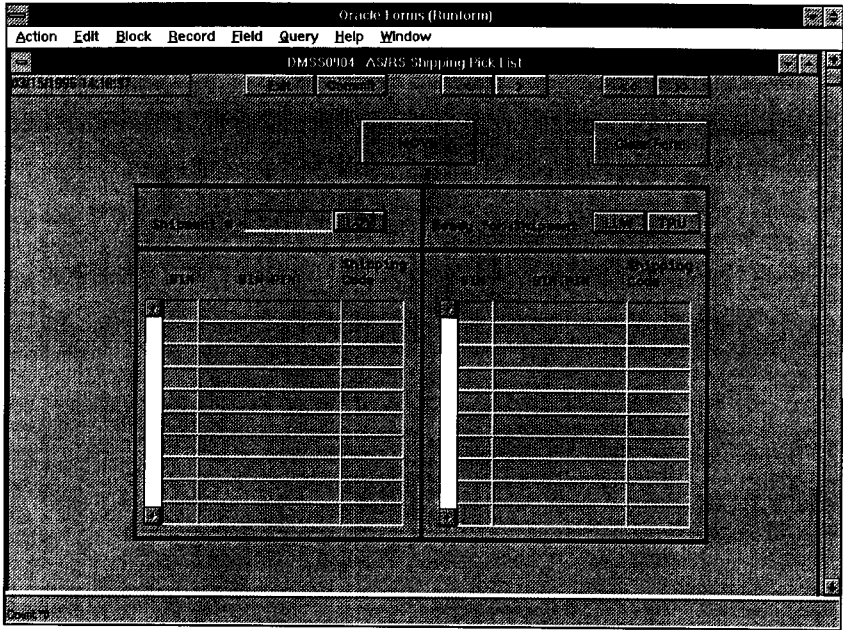


Figure A-82. DMSS0904 AS/RS Shipping Pick List Screen.

Oracle Forms (Bandform)

Action Edit Block Record Field Query Help Window

DMSS0905 - TRUPACT Assembly List

TRUPACT Shipment No. []

Case Assembly ID: []

TRUPACT Position: []

Sequence	PIN	Location
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		

Figure A-83. DMSS0905 TRUPACT Assembly List Screen.

(To Be Defined)

Figure A-84. DMSS0906 Box/Empty Drum Shipping Pick List Screen.

Oracle Forms (Runform)

Action Edit Block Record Field Query Help Window

DMSS1101 Radiologic Inventory Summary

Area	Date	Qty	Unit	Value

Comp.

Figure A-83. DMSS1101 Radiologic Inventory Summary Screen.

Oracle Forms [Random]

Action Edit Block Record Field Query Help Window

DMSS1102 - Container Location and Relationships

Container Type:

PIN:

Location:

From PIN	To PIN	Type	Date

Figure A-86. DMSS1102 Container Location and Relationships Screen.

Oracle Forms (31/10/01)

Action Edit Block Record Field Query Help Window

DMSS1201 - Processed Waste NDA Data Review and Modification

INQUIRE 143124

Commit Exit

Insert Delete

TRU
 Composites
 Reviewed
 All

WRAP NDA Records Assay Date:

Assay No.:

 Vials Col.:

 Sec. Waste Type:

 Future Eval. Req.:

 Profile ID:

Total Isotope Records:

 Ratio Pu 238Pu 240:

 NLL Det. D:

 Revise:

 Profile:

Thermal Power:

 TMI Alpha Ct:

 Total Pu Ct:

 Total Pu PDE:

TMI Thermal Power:

 TMI Alpha Ct:

 TMI Pu Ct:

 TMI Pu PDE:

WRAP Isotopic Data

Isotope	Quantity	TMI	Dirt. Mass Check Status	PAN Active	PAN Passive	DEA Data

Cancel
 OK
 Print
 Refresh
 Help

Figure A-87. DMSS1201 Process Waste NDA Data Review and Modification Screen.

Oracle Forms (Runform)

Action Edit Block Record Field Query Help Window

DMSS1202 - Compacted Drum NDA Data Review

MC21923 14/03/2014

Product Drum PIN: Compacted Drum PIN:

Assay Date:

WRAP NDA Results

Assay No.: Waste Cat.: Ben. Waste Type: Future Eval. Req.: Profile ID:

Total Isotope Records: Radio Pu S&P/PE Cl: NLL Det. Dt: Results: Profile:

Thermal Power: Total Alpha Cl: Total PE Cl: Total Pu FGE:

TMU Thermal Power: TMU Alpha Cl: TMU PE Cl: TMU Pu FGE:

WRAP Isotopic Data

Isotope	Quantity	TMU	Cont. Check	Passive	PAN Active	PAN Passive	OEA Data

SWTS Isotopic Data

Isotope	Quantity	TMU	Alpha Cl	PE Cl	Pu FGE	Unknown

Figure A-88. DMSS1202 Compacted Drum NDA Data Review Screen.

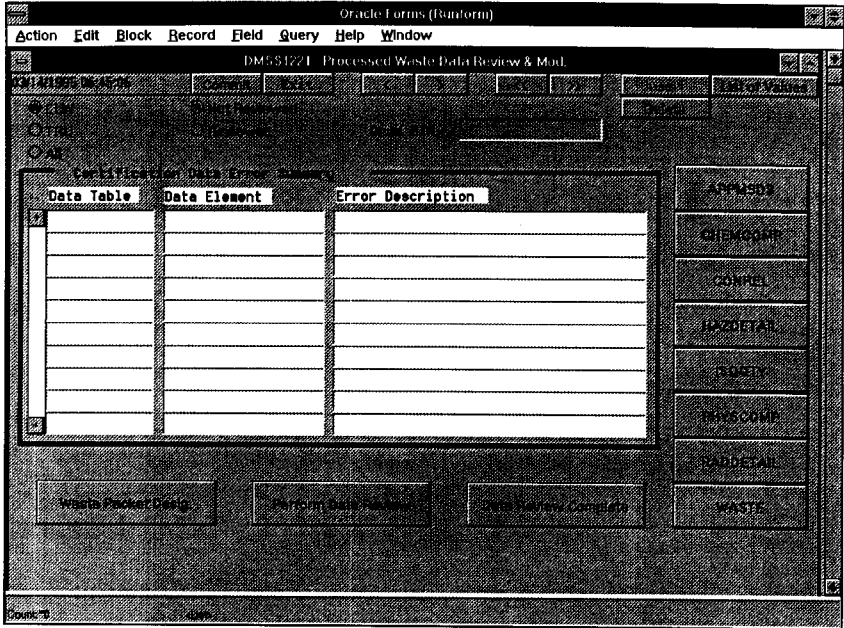


Figure A-91. DMSS1221 Processed Waste Data Review & Mod. Screen.

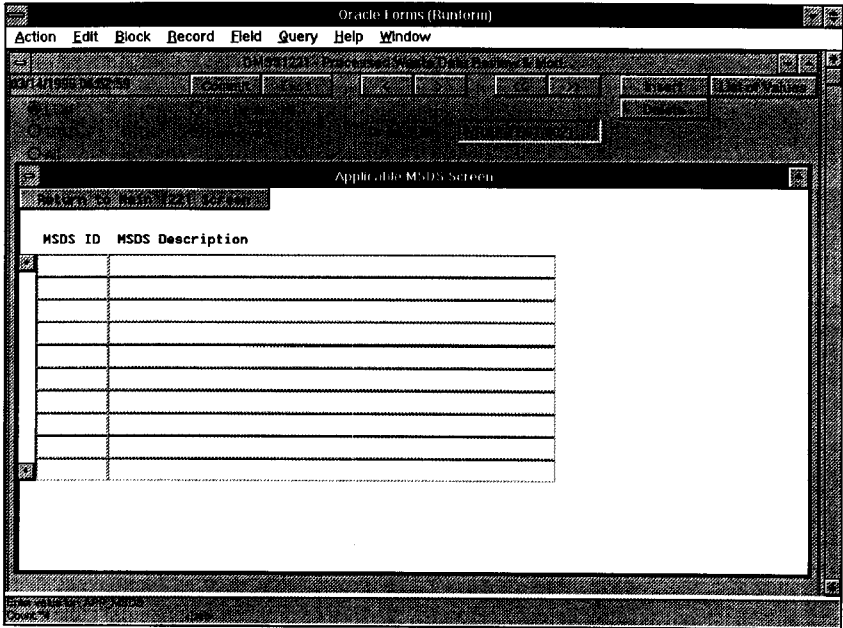


Figure A-92. DMSS1221 Processed Waste Data Review & Mod. Screen
Applicable MSDS Screen Pop-Up.

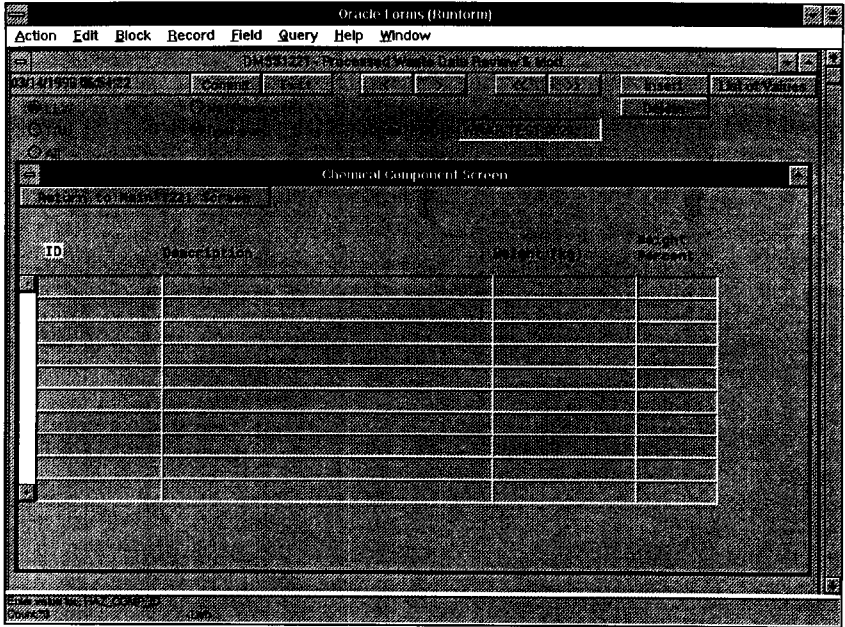


Figure A-93. DMSS1221 Processed Waste Data Review & Mod. Screen
Chemical Component Screen Pop-Up.

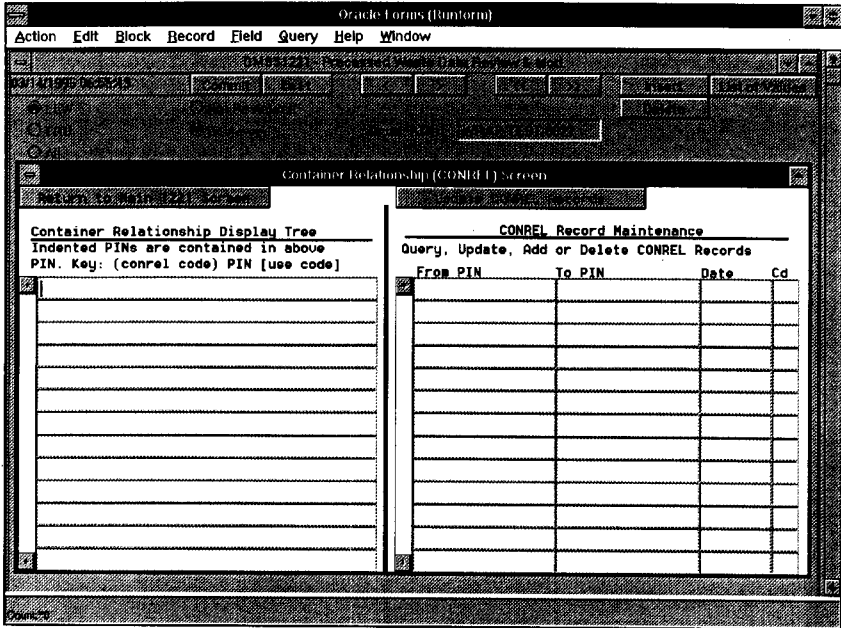


Figure A-94. DMSS1221 Processed Waste Data Review & Mod. Screen
Container Relationship (CONREL) Screen Pop-Up.

Oracle Forms (Runtime)

Action Edit Block Record Field Query Help Window

DMSS1221

Hazardous Waste Container Detail Record (HAZDETAIL) Screen

Waste Status	<input type="text"/>	Dangerous Waste Numbers and Information	
Container Status	<input type="text"/>	Read Only (to change use DM_NUM button) <input type="button" value="DM_NUM"/>	
Waste Volume (m3)	<input type="text"/>	<input type="text"/>	
Haz. Property Code	<input type="text"/>	Landban	<input type="text"/>
Flashpoint	<input type="text"/>	Other Landban 1	<input type="text"/>
pH	<input type="text"/>	Other Landban 2	<input type="text"/>
Designation Code	<input type="text"/>	Other Landban 3	<input type="text"/>

for PCB Waste Only

Item Type	<input type="text"/>
Subtype	<input type="text"/>
Contents/Description	<input type="text"/>
Removed from Service	<input type="text"/>
Concentration (ppM)	<input type="text"/>
PCB Waste Weight (kg)	<input type="text"/>

Figure A-95. DMSS1221 Processed Waste Data Review & Mod. Screen
 Hazardous Waste Container Detail Record (HAZDETAIL) Screen Pop-Up.

Oracle Forms (Runform)

Action Edit Block Record Field Query Help Window

Package Dangerous Waste Numbers Record Screen

DW Number	Description	Landban	Sort Order

Figure A-96. DMSS1221 Processed Waste Data Review & Mod. Screen
Package Dangerous Waste Numbers Record Screen Pop-Up.

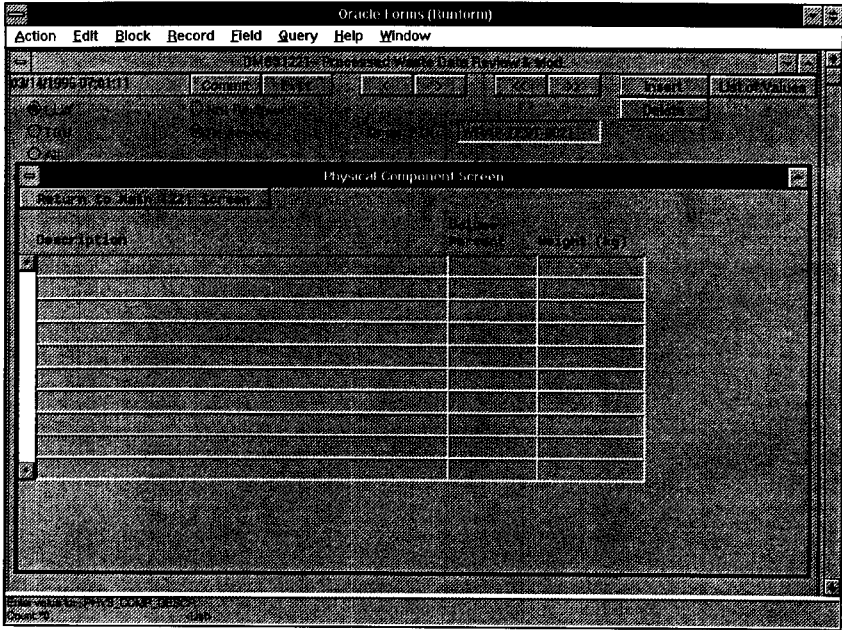


Figure A-98. DMSS1221 Processed Waste Data Review & Mod. Screen Physical Component Screen Pop-Up.

Oracle Forms (Runform)

Action Edit Block Record Field Query Help Window

Radioactive Waste Container Detail Record Screen

Secondary Waste Type	<input type="text"/>	RSWIMS Container Count	<input type="text" value="1"/>
Sec. Waste Type Group	<input type="text"/>	Container Dose Rate (µrem/h)	<input type="text"/>
Content Thermal Power(W/m3)	<input type="text"/>	Container Neutron Dose Rate	<input type="text"/>
Seal Number	<input type="text"/>	Content Organic Volume %	<input type="text"/>
Assay Number	<input type="text"/>	Content Organic Weight (kg)	<input type="text"/>
Assay Date	<input type="text"/>	Total Alpha Curies	<input type="text"/>
Waste Category	<input type="text"/>	Total Beta/Gamma Curies	<input type="text"/>
Waste Makeup	<input type="text"/>	Total Dose Equivalent Curies	<input type="text"/>
Contact/Remote Handling	<input type="text" value="C"/>	Total Pu Equivalent Curies	<input type="text"/>
Void Space Filler/Descr.	<input type="text"/>		
SWIMS Category / Descr.	<input type="text"/>		
WRAP Category / Descr.	<input type="text"/>		

Figure A-99. DMSS1221 Processed Waste Data Review & Mod. Screen
Radioactive Waste Container Detail Record Screen Pop-Up.

Oracle Forms (Runform)

Action Edit Block Record Field Query Help Window

Container and Content Record (WASTE) screen

Primary Waste Type		Accumulation Date	
Chemical Nature		Package Date	
Storage Category		Treatment Date	
Package Status		TSD Accept Date	
Labpack Flag		Source Company ID	
Routine		Source Facility ID	
Gross Weight (kg)			
Waste Weight (kg)			
Secondary PIN			
Generator Comment			
Waste Description			

Figure A-100. DMSS1221 Processed Waste Data Review & Mod. Screen
Container and Content Record (WASTE) Screen.

Oracle Forms (44x60m)

Action Edit Block Record Field Query Help Window

DMSS1231 - Waste Verification Data Review

TRU SON Reviewed Date: MM/DD/YY

AB

NCE Verified?

Assay Verified?

Bravo Weight Verified?

Waste Compliant?

Verification Method:

Verification Pass/Fail:

Failure Reason:

Ready to Ship?

Continue to Data Entry

Continue to Data Review

Figure A-101. DMSS1231 Waste Verification Data Review Screen.

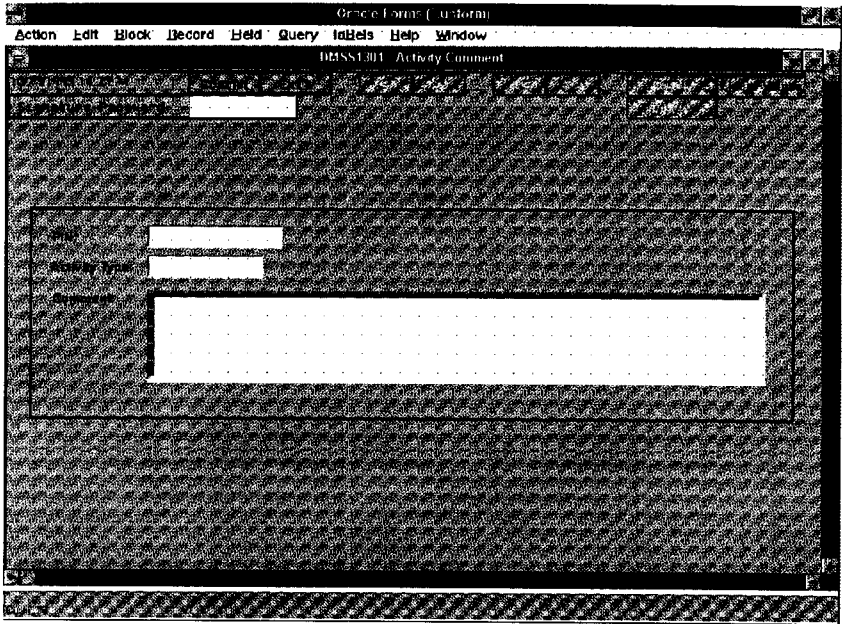


Figure A-102. DMSS1301 Activity Comment Screen.

APPENDIX B
REPORT DESIGN DETAILS

This page intentionally left blank.

DMS REPORT HIERARCHY

- 1.0 Receiving
DMSR01XX
- 2.0 NDE/NDA
DMSR02XX
- 3.0 Process Ops
 - LLW Glovebox
DMSR031X
 - LLW RWM Glovebox
DMSR032X
 - TRU Glovebox
DMSR033X
 - TRU RWM Glovebox
DMSR034X
 - Misc Processing Reports
DMSS0351 Transfer Drum Status Report
- 4.0 Table Maint
DMSR04XX
- 5.0 Sample Mgmt
DMSR0501 Open Sample Status Detail Report
- 6.0 Shipping
DMSR06XX
- 9.0 Pick List
DMSR09XX
- 10.0 Process Route
DMSR10XX
- 11.0 Facility Metrics
 - DMSR1101 Empty Container Inventory Report
 - DMSR1102 Building Inventory Report
 - DMSR1103 Waste Package Location History Report
 - DMSR1104 WRAP Processing Report
- 12.0 Process Data Review
DMSR1201 Container Listing Report for Package ID

3.51 Transfer Drum Status Report (DMSR0351)

The Transfer Drum Status Report (DMSR0351) provides an inventory of all WRAP 1 transfer drums used to transfer waste between the Processing Area gloveboxes. The status of the drums (i.e. transfer drum full, partially full, or empty) is provided along with drum PIN, and inner package PINs. A sample report layout is shown below.

<u>Report Data Element Name</u>	<u>DMS Database Data Element Name</u>
Waste Type	CON PWTYP_CD and RDET_SWTYP_GROUP
Drum status	CONEXT_CNTNR_STATUS
Package ID	CON_PKG_ID
WRAP Location	CONLOC_LOCN_ID
Location Date	CONLOC_DT
Inner Package PINs	CONR_FROM_PKG_ID
Sort Sequence:	CONEXT_CNTNR_STATUS, CON_PKG_ID
User Queries:	Waste Type (as input by user), default = all
Data Selects:	CONEXT_USE_CD = "TD"
Schedule:	N/A
Frequency:	As required
Volume:	1-5 pages
Totals:	Containers per status (Empty, partially full, full) and facility total
Break Groups:	Group 1: CONEXT_CNTNR_STATUS
Page Break:	As required
Requestor/Org Name:	TBD
Special Form/Font:	hpstd
Report Distribution:	TBD
Programmer Notes:	CONLOC_DT for current CONLOC_LOCN_ID is displayed

DMSR0351	WRAP 1 Data Mangement System				MM/DD/YY HH:MM page: 1
Transfer Drum Status Report					
Primary Waste Type: XX					
Secondary Waste Type: XXX					
Drum Status	Package ID	Drum Location	Location Date	Location Time	Inner Package ID
X	XXXXXXXXXXXXXX	XXXXXXXXXXXX	MM/DD/YY	HH:MM:SS	XXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXX
X	XXXXXXXXXXXXXX	XXXXXXXXXXXX	MM/DD/YY	HH:MM:SS	XXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXX
X	XXXXXXXXXXXXXX	XXXXXXXXXXXX	MM/DD/YY	HH:MM:SS	XXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXX
Container status subtotal: 9999					
Facility total: 9999					

Transfer Drum Status Report (DMSR0351)

5.01 Open Sample Status Detail Report (DMSR0501)

The Open Sample Status Detail Report (DMSR0501) lists all open samples for the WRAP 1 facility. Report is printed by package/drum identification (parent article that the sample was taken from) in ascending order. The sample information and related dates are given for each sample. A sample report layout is provided below.

<u>Report Data Element Name</u>	<u>DMS Database Data Element Name</u>
Package ID	SAMREL_PKG_ID
Sample ID	SAM_SAMPLE_ID
Sample Date	SAM_TAKEN_DT
Sample Taken By	SAM_TAKEN_BY
Sent to Lab	COC_SHIP_DT
Lab ID	COC_LAB_ID
Analysis Returned	SAM_REPORT_DT
Comments	SAM_COMMENTS
Sort Sequence:	SAMREL_PKG_ID, SAM_SAMPLE_ID ascending
User Queries:	None, default to WRAP 1 users
Data Selects:	SAM_CLOSED_FLAG = 'N'
Schedule:	None
Frequency:	As Required (weekly)
Volume:	TBD
Totals:	TBD
Break Group:	SAMREL_PKG_ID
Page Break:	As Required
Requestor/Org Name:	TBD
Special Form/Font:	hplsc
Report Distribution:	TBD
Programmer Notes:	N/A

11.01 Empty Container Inventory Report (DMSR1101)

The Empty Container Inventory Report (DMSR1101) provides an inventory of empty or used-empty containers located within the WRAP facility. A sample report layout is shown below.

<u>Report Data Element Name</u>	<u>DMS Database Data Element Name</u>
Cont Type	CON_CNTYP_CD
Container Size	CON_SIZE_DESCR
Package ID	CON_PKG_ID
Facility Receipt Date	CONLOC_DT for CONLOC_LOCN_ID = "RECKCK" or ("LLW_ENTRY or "TRU_ENTRY") if later than "RECDCK"
WRAP Location	CONLOC_LOCN_ID
Sort Sequence:	CON_CNTYP_CD, CON_SIZE_DESCR
User Queries:	CONLOC_LOCN_ID (default is all WRAP locations)
Data Selects:	CONEXT_USE_CD = "EC" or CONEXT_CNTNR_STATUS = "E"
Schedule:	N/A
Frequency:	As Required
Volume:	1-5 pages
Totals:	Containers per type/size combination within Facility
Break Groups:	Group 1: CONLOC_LOCN_ID Group 2: CON_CNTYP_CD, CON_SIZE_DESCR
Page Break:	as required
Requestor/Org Name:	TBD
Special Form/Font:	hpstd
Report Distribution:	TBD
Programmer Notes:	Use of the journaling/archiving functionality will be required to support the "Facility Receipt Date"

DMSR1101	WRAP 1 Data Mangement System			MM/DD/YY
				HH:MM
				page: 1
Empty Container Inventory Report				
Facility Location :XXXXXXXX				
<hr/>				
Cont			Facility	Facility
Type	Container Size	Package ID	Receipt Dt	Location
-----	-----	-----	-----	-----
XXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	MM/DD/YY	XXXXXXXXXX
XXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	MM/DD/YY	XXXXXXXXXX
XXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	MM/DD/YY	XXXXXXXXXX
XXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	MM/DD/YY	XXXXXXXXXX
XXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	MM/DD/YY	XXXXXXXXXX
XXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	MM/DD/YY	XXXXXXXXXX
XXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	MM/DD/YY	XXXXXXXXXX
XXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	MM/DD/YY	XXXXXXXXXX
XXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	MM/DD/YY	XXXXXXXXXX
Container type/size total: 9999				
Facility total: 9999				

Empty Container Inventory Report (DMSR1101)

11.02 Building Inventory Report (DMSR1102)

The Building Inventory Report (DMSR1102) provides building inventory by storage category, location, and waste type. The user enters the location and Storage Category on which the report is to be prepared. A sample report layout is shown below.

<u>Report Data Element Name</u>	<u>DMS Database Data Element Name</u>
Facility Location	CONLOC_LOCN_ID
Storage Category	CON_SCAT_CD
Container Use Code	CONEXT_USE_CD
Category Description	SCAT_CATEGORY
Container Type Code	CON_CNTYP_CD
Total Number of Containers	count (CON_PKG_ID)
Package ID. Number	CON_PKG_ID
Waste Type	CON_PWTYP_CD and RDET_SWTYP_GROUP

Sort Sequence: CONLOC_LOCN_ID, CON_SCAT_CD, CONEXT_USE_CD, CON_PKG_ID

User Queries: CONLOC_LOCN_ID, default = all WRAP 1 locations
 CON_SCAT_CD, default = all CON_SCAT_CDs
 CONEXT_USE_CD

Data Selects: All WRAP 1 containers

Schedule: N/A

Volume:

Frequency: TBD

Volume: Approximately 1 to 30 pages

Totals: CON_PKG_ID by CONLOC_LOCN_ID & CON_SCAT_CD

Page Break: Containers by location

Requestor/Org Name: TBD

Special Form/Font: hp304

Report Distribution: TBD

Programmer Notes: Category description in header left blank if Storage Category is not filled in by user

DMSR1102	WRAP 1 Data Management System				MM/DD/YY HH:MM Page: 1
Building Inventory Report: for WRAP Location: XXXXXXXXX for Storage Category: XXXXXXXX for Container Use Code: XX					
Total for Facility/Quadrant: 99999					
Category Description		Total Number of Containers			
-----		-----			
XXXXXXXXXXXXXXXXXXXX		99999			
Container Location	Storage Category	Container Use Code	Package ID. Number	Container Type Code	Waste Type Description
-----	-----	-----	-----	-----	-----
XXXXXXXXXX	XXXXXXXX	XX	XXXXXXXXXXXXXXXX	XX	XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXX	XXXXXXXX	XX	XXXXXXXXXXXXXXXX	XX	XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXX	XXXXXXXX	XX	XXXXXXXXXXXXXXXX	XX	XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXX	XXXXXXXX	XX	XXXXXXXXXXXXXXXX	XX	XXXXXXXXXXXXXXXXXXXX
Container Count Subtotal for Location and Storage Category: 99999					

Building Inventory Report (DMSR1102)

11.03 Waste Package Location History Report (DMSR1103)

The Waste Package Location History Report (DMSR1103) provides a history of the relocation of a specific waste package within the WRAP facility. The history will include the locations, date/time.

<u>Report Data Element Name</u>	<u>DMS Database Data Element Name</u>
Package ID	CONLOC_PKG_ID
WRAP Location	CONLOC_LOCN_ID
WRAP Relocation Date	CONLOC_DT
Sort Sequence:	CONOC_DT
User Queries:	CONLOC_PKG_ID
Data Selects:	All CONLOC_LOCN_ID for input PIN
Schedule:	N/A
Frequency:	As Required

Volume: 1 page
Totals: N/A
Break Groups: N/A
Page Break: As Required
Requestor/Org Name: TBD
Special Form/Font: hpstd
Report Distribution: TBD
Programmer Notes: Use of the journaling/archiving functionality will be required to support the Location History function

DMSR1103	WRAP 1 Data Mangement System	MM/DD/YY HH:MM page: 1
Waste Container Location History Report		
Waste Container ID :XXXXXXXXXXXXXX		
Facility Location	Relocation Date	Relocation Time
-----	-----	-----
XXXXXXXXXX	MM/DD/YY	HH:MM:SS
XXXXXXXXXX	MM/DD/YY	HH:MM:SS
XXXXXXXXXX	MM/DD/YY	HH:MM:SS
XXXXXXXXXX	MM/DD/YY	HH:MM:SS
XXXXXXXXXX	MM/DD/YY	HH:MM:SS
XXXXXXXXXX	MM/DD/YY	HH:MM:SS
XXXXXXXXXX	MM/DD/YY	HH:MM:SS
XXXXXXXXXX	MM/DD/YY	HH:MM:SS
XXXXXXXXXX	MM/DD/YY	HH:MM:SS
XXXXXXXXXX	MM/DD/YY	HH:MM:SS
XXXXXXXXXX	MM/DD/YY	HH:MM:SS
XXXXXXXXXX	MM/DD/YY	HH:MM:SS
XXXXXXXXXX	MM/DD/YY	HH:MM:SS
XXXXXXXXXX	MM/DD/YY	HH:MM:SS
XXXXXXXXXX	MM/DD/YY	HH:MM:SS
XXXXXXXXXX	MM/DD/YY	HH:MM:SS

Waste Container Location History Report (DMSR1103)

11.04 WRAP Processing Report (DMSR1104)

The WRAP Processing Report (DMSR1104) summarizes the number of containers received, verified, processed. The summary is keyed by primary and secondary waste type and provides a subtotal for each waste type and a total of all container in each category for a given time period. A sample report layout is shown below.

<u>Report Data Element Name</u>	<u>DMS Database Data Element Name</u>
Container Use Code	CONEXT USE_CD
Waste Type	CON_PWTYP_CD and RDET_SWTYP_GROUP
Package ID	CON_PKG_ID
Facility Receipt Date	CONLOC_DT for CONLOC_LOCN_ID = "RECDCK"
Processed Date	CON_ACCUM_DT, "AIRCYR_A3" or "AIRCYR_B1" (see notes below)
Shipped Date	CON_SHIP_DT
Certified/Verified	VER_PASS

- Sort Sequence: Primary sort by CONEXT_USE_CD and Waste Type, if not specified, secondary sort by VER_PASS
- User Queries: CONEXT_USE_CD and Waste Type
- Data Selects: CONEXT_USE_CD = "PD", "BX", "WP" "WV"). Time frame bounded by "Report Period Start" and "Report Period End" dates specified by the user.
- Schedule: N/A
- Frequency: TBD
- Volume: TBD
- Totals: Containers Received, Processed, Shipped, and Verified
- Break Groups: Group 1: Waste type, CONEXT_USE_CD
- Page Break: Waste Type and as required
- Requestor/Org Name: TBD
- Special Form/Font: hpstd
- Report Distribution: TBD
- Programmer Notes: Provide all CON_PKG_ID records with dates between those specified by the user in the report header.
 - If the "WV" or "BX" use codes are specified, no processed dates will be displayed.
 - If the "WP" use code is specified, no shipped date or certified date will be displayed. The

- processed date should be set = CONLOC DT for CONLOC_LOCN_ID = "AIRCYYR_A3" or "AIRCYYR_B1"
- If the "PD" use code is specified, no receipt date will be displayed. The processed date should be set = CON ACCUM DT
- Use of the journaling/archiving functionality will be required to support the "Facility Receipt Date"

DMSR1104	WRAP 1 Data Mangement System				MM/DD/YY	
					HH:MM	
					page: 1	
WRAP Processing Report						
Report Period Start: MM/DD/YY			Report Period End: MM/DD/YY			
Container Use Code (BX, LW, or PD):XX						
Waste Type (CON_PWTYP_CD and RDET_SWTYP_GROUP: XXXXXX						
Container Use Code	Waste Type	Package ID	Facility Receipt Dt	Processed Date	Shipped Date	Certified/ Verified
-----	-----	-----	-----	-----	-----	-----
XX	XXXXXX	XXXXXXXXXXXXXXXX	MM/DD/YY	MM/DD/YY	MM/DD/YY	X
XX	XXXXXX	XXXXXXXXXXXXXXXX	MM/DD/YY	MM/DD/YY	MM/DD/YY	X
XX	XXXXXX	XXXXXXXXXXXXXXXX	MM/DD/YY	MM/DD/YY	MM/DD/YY	X
Container use code, waste type, received subtotal: 9999						
Container use code, waste type, processed subtotal: 9999						
Container use code, waste type, shipped subtotal: 9999						
Container use code, waste type, certified subtotal: 9999						
Container use code total: 9999						

WRAP Processing Report (DMSR1104)

12.01 Container Listing Report for Package ID (DMSR1201)

The Container Listing Report for Package ID (DMSR1201) produces a complete list of all the data elements pertaining to an individual CON PKG ID. The selection screen permits any combination of selection data including:

- Package ID
- Waste location
- Waste Storage Category
- Primary Waste Type
- Secondary Waste Type.

Entry of any or all of the input parameters will cause the report program to select only data that matches user input. A sample report layout is shown in below.

Report Data Element Name DMS Database Data Element Name

Package ID	CON PKG ID
SDAR Approval Number	RDET SDAR APPRV_NUM
Primary Waste Type	CON PWTYT CD
Accumulation Date	CON ACCUM DT
Packaged Date	CON PKG DT
Package Status	CON PKG STATUS
Certification Date	RDET CERT DT
Physical State Code	CON PHYS STATE CD
Chemical Nature Code	CON CHEM NATURE CD
SWIMS Waste Description Code	RDET SWIMS CD
Backlog Flag	CON BACKLOG FLAG
Secondary Waste Type Code	RDET SWTYP CD
Secondary Waste Group	RDET SWTYP GROUP
Waste Type Description	-- Calculated
Container Type Code	CON CNTYP CD
/ Description	CON SIZE DESCR
% Organic Volume	RDET ORGANIC VOL_PCT
Container Volume (meters)	CON CNTR VOL
Waste Wt. (kg)	CON WASTE WGT
Organic Wt (kg)	RDET ORGANIC WGT
Container Empty Tare Wt. (kg)	CON TARE WGT
Container Total Wt. (kg)	CON GROSS WGT
Labpack Flag	CON LABPACK FLAG
Container Contents	CON GENER WASTE_DESCR

Generator Information:

Generating Company	CON SRCE CMPNY_ID
/ Company Title	-- Calculated
Company Type	CON SRCE CMPNY_TYPE
Organization	CON SRCE ORG
Source Facility	CON SRCE FACIL_ID

Charge Code	CON SRCE CHRG CD
Generator Comments	CON GENER COMMENT

DMSR1201	WRAP Data Management System		MM/DD/YY HH:MM Page: 1
	Container Listing for Package ID: XXXXXXXXXXXX		

Package ID: XXXXXXXXXXXX	SDAR Approval #: XXXXXXXXXXXX	Packaged Date: MM/DD/YY	
Primary Waste Type: XX	Accumulation Date: MM/DD/YY	Chemical Nature Code: XX	
Package Status: X	Certification Date: MM/DD/YY		
SWMS Waste Description Code: XX	Data Quality Code: XX		
Back Log Flag: X			
Secondary Waste Type Code: XX	Secondary Waste Group: XX		
Waste Type Description: XXXXXXXXXXXX			
Container Type Code / Description: XX / XXXXXXXXXXXX	% Organic Volume: 999		
Container Volume (meters): 999999.999	Waste Mt. (kg): 9999999.999		
Container Empty Tare Mt. (kg): 9999999.999	Container Total Mt. (kg): 9999999.999		
Lapback Flag: X			
Container Contents: XXXXXXXXXXXXXXXXXXXXXXXXXXXX			
Generator Information: XXXXXXXXXXXX			
Generating Code: XXXXX/XXXXXXXXXXXXXXXXXXXXXXXXX	Company Type: XX		
Generator Unit: 99999	Source Facility: XXXXXXXX	Charge Code: XXXX	
Generator Comments: XXXXXXXXXXXXXXXXXXXXXXXXXXXX			
Hazardous Package Detail: XXXXXXXX	Flashpoint: 9999	Hazardous Properties Cd: XX	
Designation Code: XX	Container Status: XX	Hazardous Waste Volume: 999999	
pH Value: 9999	Other Landban #1: XX	Other Landban #2: XX	
DJ Waste #: XXXX			
Landban: XX			
Radioactive Package Detail:			
Total Alpha (Ci): 9999999999	Total Beta-Gamma (Ci): 9999999999	Dose Rate: 9999999999	Content WRAP Category: XX
Total Pu Equivalent (Ci): 9999999999	Total Pu-FGE: 9999999999	Assay #: XXXXXXXXXXXX	Waste Make-Up Code: XX
Neutron Dose Rate: 9999999999	Thermal Power (M/cu.m.): 9999999999	Seal #: XXXXXXXXXXXXXXXX	Void Code: XX
Current Location Information:			
TSD Accept Date: MM/DD/YY	Area: XXXX	Facility ID: XXXXXX	
Storage Category: XXX			

Container Listing Report (DMSR1201) (Page 1 of 2).

Hazardous Package Detail:

Designation Code HDET_DESIG_CD
 Container Status HDET_CNTR_STATUS
 Flashpoint HDET_FLASHPOINT

Hazardous Properties Cd	HDET_HAZPROP_CD
pH Value	HDET_PH
Hazardous Waste Volume	HDET_WASTE_VOL
Waste Status	HDET_WASTE_STATUS
DW Waste #	HDET_DW_NUM
Landban	HDET_LANDBAN
Other Landban #1	HDET_OTHER_LANDBAN_1
Other Landban #2	HDET_OTHER_LANDBAN_2
Other Landban #3	HDET_OTHER_LANDBAN_3

Radioactive Package Detail:

Total Alpha (Ci)	RDET_TOT_ALPHA_CI
Total Beta-Gamma (Ci)	RDET_TOT_BG_CI
Dose Rate	RDET_BG_DOSE_RATE
Content WRAP Category	RDET_WRAP_CAT
Total Pu Equivalent (Ci)	RDET_TOT_PE_CI
Total Pu-FGE	RDET_TOT_PU_FGE
Assay Number	RDET_ASSAY_NUM
Waste Make-up Code	RDET_WASTE_MAKEUP
Neutron Dose Rate	RDET_NEUT_DOSE_RATE
Thermal Power (w/cubic meter)	RDET_THERMAL_POWER
Seal Number	RDET_SEAL_NUM
Void Code	RDET_VOID_CD

Current Location Information:

TSD Accept Date	CON_TSD_ACCEPT_DT
Area	CON_LOCN_FACIL_AREA
Facility ID	CON_LOCN_FACIL_ID
Storage Category	CON_SCAT_CD

Repackaging History:

Current Container	CONR_TO_PKG_ID
Previous Container(s)	CONR_FROM_PKG_ID
Date Repackaged	CONR_DT
Container Relationship	CONR_REL_CD

Isotope Information:

Isotope Number	RAD_ISO_NUM
Isotope Name	ISO_NAME
Alpha Ci	RAD_ALPHA_CI
PE-Ci	RAD_PE_CI
PU-FGE	RAD_PU_FGE
Isotope Activity	RAD_QTY
Unit	ISO_UNIT

Hazardous Chemical Components:

Component ID	HAZ_COMP_ID
Component Text	HAZ_COMP_TEXT
PPM	HAZ_COMP_PPM
Weight (kg)	HAZ_COMP_WGT
Weight %	HAZ_COMP_WGT_PCT
EPCRA	HAZ_EPCRA_FLAG

Physical Components:

Content Description	PHYS_COMP_DESCR
---------------------	-----------------

Volume % PHYS_COMP_VOL_PCT
 Weight (kg) PHYS_COMP_WGT

Manifest/Shipping Information:

Type SHPMNT_MFST_TYPE_CD
 Manifest Number SHPHST_MFST_NUM
 Item Number SHPITM_ITEM_NUM
 RSR Number SHPHST_RSR_NUM
 RSR Type SHPMNT_RSR_TYPE
 Profile Number SHPITM_PROFILE_NUM
 NRC 741 Number SHPHST_741_NUM
 NMIT Number SHPHST_NMIT_NUM
 DOT Specification CON_DOT_SPEC
 Shipment Scheduled SHPMNT_SCHED_DT
 Date Shipped SHPMNT_SHIP_DT
 Manifest Returned SHPMNT_MFST_RET_DT
 Transportation Company SHPMNT_TRANSP_CMPNY_ID
 Transportation Type SHPMNT_TRANSP_CMPNY_TYPE
 Destination Company SHPMNT_OFFSITE_CMPNY_ID
 Destination Type SHPMNT_OFFSITE_CMPNY_TYPE
 Receiving Facility SHPMNT_REC_V_FACIL_ID
 Shipment Return SHPHST_RETURN

Sort Sequence: CON_PKG_ID

User Queries: CON_PKG_ID

Data Selects: As defined above

Schedule: TBD

Frequency: TBD

Volume: 2 pages per CON_PKG_ID (Could be as many as 200 to 300
 containers for some runs)

Totals: total HAZ_COMP_WGT, total PHYS_COMP_WGT

Break Groups:

Page Break: As Required

Requestor/Org Name: TBD

Special Form/Font: hp310

Report Distribution: TBD

Programmer Notes: N/A

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APPENDIX C
DATA DICTIONARY

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C.0 DATA DICTIONARY

The Data Dictionary describes the data elements that make up the DMS database. The data elements are grouped into records of related data. In the front of a data name, an [*] indicates a unique key for the record in which the data element occurs, a [+] indicates a foreign key to which the data element refers, and a [U] indicates a unique non-key index. An [R] following the data element size and type indicates that data is required in that element (the element value cannot be null).

Table C-1 summarizes the WRAP 1 DMS data records, along with the phase in which each is planned for implementation, DMS or SWITS origin, and whether the record is journalled. Section C.1 lists the data elements included in each data record and look-up data table and provides the name and size for each data element. Section C.2 contains definitions of each of the data elements.

Table C-1. DMS Data Records and Lookup Tables.

Record Name	Database Table Name	Table Origin		DMS Devel. Phase			Journal
		SWITS	DMS	1	2	3	
Data Record Tables							
Activity Comment Record	ACTCOM		X		X		
Applicable MSDS	APPMSDS	X		X			X
Bin List	BIN		X	X			
Bottle Data Record	BOTTLE		X		X		X
Bottle Analysis Record	BOTANAL		X		X		
Hazardous Chemical Component Record	CHEMCOMP	X		X			X
Chain of Custody	COC		X		X		X
Chain of Custody Transfer	COXFR		X		X		
Communication Table	COMMUNICATIO N_TABLE		X	X			
Container Location	CONLOC		X	X			X
Container Relationship Record	CONREL	X		X			X
Container Treatment	CONTREAT		X		X		
Discharge Conveyor List	DISCHARGE		X	X			

Record Name	Database Table Name	Table Origin		DMS Devel. Phase			Journal
		SWITS	DMS	1	2	3	
Field Screening Record	FIELDSCRN		X		X		
Field Analysis	FIELDANAL		X		X		
Hazardous Waste Container Detail Record	HAZDETAIL	X		X			X
Radioactive Isotope Quantity Record	ISOQTY	X		X			X
Metrics Record	METRICS		X		X		
Message Log Record	MSGLOG		X	X			
NDA Assay Results	NDA		X	X			
NDA Assay Isotopic Records	NDAISO		X	X			
NDE Results	NDE		X	X			
Not Process List	NOTPROCLIST		X	X			
Not Ship Pick List	NOTSHIPPICK		X	X			
Isotopic Distribution	PAM		X			X	
Payload Container Certification Record	PAYLOAD		X			X	X
Payload Assembly Certification Record	PAYLOADASBLY		X			X	X
Physical Component Record	PHYSCOMP	X		X			X
Package Dangerous Waste Numbers Records	PKGDW	X		X			X
Process Pick List	PROCLIST		X	X			
Processing Add List	PROCADD		X	X			X
Radioactive Waste Container Detail Record	RAZDETAIL	X		X			X
Radiologic Material Inventory	RADMAT		X	X			X
Receiving Display Record	RECDISP		X	X			
Sample Bottle Location	SAMLOC		X		X		X
Sample Data Record	SAMPLE		X		X		X
Sample Data Relationship Record	SAMREL		X		X		X
Sample Analysis Request	SAR		X		X		X

Record Name	Database Table Name	Table Origin		DMS Devel. Phase			Journal
		SWITS	DMS	1	2	3	
Shipment History Record	SHIPHIST	X		X			
Shipment Item Record	SHIPITEM	X		X			
Shipment Record	SHIPMENT	X		X			
Shipping Pick List	SHIPPICK		X	X			
TRUPACT Shipping List Record	TRUSHIP		X			X	
Container and Content Record	WASTE	X		X			X
Container & Content Extension Record	WASTEXT		X	X			X
Treatment Worksheet	WORKSHEET		X		X		
Verification	VERIFICATION	X			X		X
Worksheet Item	WORKITEM		X		X		X
WRAP Shipment	SHIPWRAP		X	X			X
Data Look-Up Tables							
Miscellaneous Code Table	CODECHECK	X		X			
Company Table	COMPANY	X		X			
Container Size Table	CONSIZE	X		X			
Container Type Table	CONTYPE	X		X			
Field Help Table	DATADICT		X	X			
DOT Container Specification Table	DOTSPEC	X		X			
Dangerous Waste Number Table	DWNUM	X		X			
Error Message Table	ERRMESSAGE		X	X			
Facility Table	FACILITY	X		X			
Field Analysis Type Table	FLDANALTYP		X		X		
Form Help Table	FORMHELP		X	X			
Hazardous Chemical Component Table	HAZCOMP	X		X			
Isotope Table	ISOTOPE	X		X			
Laboratory Table	LAB	X			X		
Laboratory Analysis Table	LABANAL		X		X		

Record Name	Database Table Name	Table Origin		DMS Devel. Phase			Journal
		SWITS	DMS	1	2	3	
Location Table	LOCN		X	X			
Material Table	MATL		X	X			
Material Safety Data Sheets	MSDS	X		X			
Person Table	PERSON		X	X			
Physical Component Description Table	PHYSDESC	X		X			
Package Status Table	PKGSTAT	X		X			
Primary Waste Type Code Table	PRIWASTYPE	X		X			
Generator Assay Profile Table	PROFILE		X	X			
Profile Isotopic Table	PROFILEISO		X	X			
Report Table	REPORTABLE		X	X			
Role Table	ROLE		X	X			
Role Screen Relationship Table	ROLESCREEN		X	X			
Route Description Table	ROUTE		X	X			
Sample Container Type	SAMPCONTYP		X		X		
Sample Matrix Table	SAMPMATX		X		X		
Sampling Method	SAMPMETH		X		X		
Screen Table	SCREEN		X	X			
Secondary Waste Type Code Table	SECWASTYPE	X		X			
Shipping Pick List Type	SHIPPICKTYP		X	X			
SIE Isotopic Name Table	SIEISO		X	X			
State Table	STATE	X		X			
Storage Category Table	STORAGECAT	X		X			
Treatment Procedure	TREATPROC		X		X		X
TRUCON Code Table	TRUCON		X			X	
TRU Shipping Category Table	TRUSHIPCAT		X			X	
TSD Facility Table	TSDFACIL	X		X			
User Role Relationship Table	USERROLE		X	X			

Record Name	Database Table Name	Table Origin		DMS Devel. Phase			Journal
		SWITS	DMS	1	2	3	
User Table	USERS		X	X			
User Signature Password	USERSIGNPASS		X	X			
WRAP Miscellaneous Table	WRAPMISC		X	X			

C.1 DATA ELEMENT LIST

Section C.1.1 lists SWITS data records and data elements that appear appropriate for use in the DMS database along with those SWITS data records that have added DMS data elements and new DMS data records. Tables which are journalled are identified. The data records are listed alphabetically by data record name. Section C.1.2 lists the SWITS and DMS look-up tables in alphabetical order. In both these sections, new DMS data records and added DMS data elements are indicated by bold type.

C.1.1 Data Record Tables

Activity Comment Record (ACTCOM)

This table will track those data elements which will be used to record operator comments against specific waste containers and processing activities.

Activity Package ID	•*ACT_PKG_ID	VARCHAR2(14)	R
Activity Date	*ACT_DT	DATE	R
Activity Code	ACT_CD	VARCHAR2(10)	
Activity Comment	ACT_COMMENTS	VARCHAR2(255)	
Activity Operator ID	•*ACT_OP_ID	VARCHAR2(7)	

Applicable MSDS (APPMSDS) - SWITS Data Record (Journal)

This table lists any Material Safety Data Sheets which apply to chemicals referenced in the Hazardous Chemical Component table.

Applicable Package ID Number	•*APP_PKG_ID	VARCHAR2(14)	R
Applicable MSDS	•*APP_MSDS (MSDS_ID)	VARCHAR2(6)	R

Bin List (BIN)

This table is used to track the waste drums to specific AS/RS Bin locations.

Bin Number	*BIN_NUM	VARCHAR2(3)	R
Bin Package ID	U•*BIN_PKG_ID	VARCHAR2(14)	R

Bottle Data Record (BOTTLE) (Journal)

This table is used to track the bottle containers of a sample from the time of sampling through disposal.

Bottle ID	*BOT_BOTTLE_ID	VARCHAR2(12)	R
Bottle Sample ID	•BOT_SAMPLE_ID	VARCHAR2(8)	R
Bottle Comments	BOT_COMMENTS	VARCHAR2(255)	
Bottle Disposed By	BOT_DISP_BY	VARCHAR2(15)	
Bottle Disposal Date	BOT_DISP_DT	DATE	
Bottle Disposal Method	BOT_DISP_METHOD	VARCHAR2(25)	
Bottle OK at Laboratory	BOT_OK_AT_LAB	VARCHAR2(1)	
Bottle Returned to Package	BOT_RETURN_TO_PKG	VARCHAR2(1)	
Bottle Return Date	BOT_RETURN_DT	DATE	

Bottle Analysis Record (BOTANAL)

This table is used to record the analyses requested for and performed on each sample bottle.

Bottle Analysis Bottle ID	••BOTANAL_BOTTLE_ID	VARCHAR2(12)	R
Bottle Analysis Analysis Code	••BOTANAL_ANAL_CD	VARCHAR2(8)	R
Bottle Analysis Requested Flag	BOTANAL_REQUEST_FLAG	VARCHAR2(1)	
Bottle Analysis Performed Flag	BOTANAL_PERFORM_FLAG	VARCHAR2(1)	

Hazardous Chemical Component Record (CHEMCOMP) - SWITS Data Record (Journal)

This table identifies all chemical component names which may be used in describing hazardous and mixed waste.

Hazardous Package ID	••HAZ_PKG_ID	VARCHAR2(14)	R
Hazardous Chemical Component ID	••HAZ_COMP_ID	VARCHAR2(12)	R
Hazardous Chemical Component Parts Per Million	HAZ_COMP_PPM	VARCHAR2(7)	
Hazardous Chemical Component Text	HAZ_COMP_TEXT	VARCHAR2(70)	
Hazardous Chemical Component Weight	HAZ_COMP_WGT	NUMBER(12,4)	
Hazardous Chemical Component Weight Percent	HAZ_COMP_WGT_PCT	VARCHAR2(7)	
Hazardous Chemical Component Emergency Planning and Community Right-to-know Act (EPCRA) Flag	HAZ_EPCRA_FLAG	VARCHAR2(1)	

Chain of Custody (COC) (Journal)

This table contains information about the Chain of Custody for laboratory samples.

COC Form ID	*COC_FORM_ID	VARCHAR2(10)	R
COC Bill of Lading/Air Bill Number	COC_BILL_LADING	NUMBER(25)	
COC Ice Chest ID Number	COC_CHEST_ID	VARCHAR2(11)	
COC Possible Sample Hazard Remarks	COC_HAZ_REMARKS	VARCHAR2(255)	
COC Laboratory ID	•COC_LAB_ID	VARCHAR2(6)	
COC Log ID	COC_LOG_ID	VARCHAR2(20)	
COC Method of Shipment	COC_METH_SHIPMENT	VARCHAR2(20)	
COC Company Contact	•COC_PERS_ID	VARCHAR2(6)	
COC Project Designation	COC_PROJ_DESIG	VARCHAR2(25)	
COC Offsite Property Number	COC_PROPERTY_NUM	NUMBER(14)	
COC SAF Number	COC_SAF_NUM	NUMBER(10)	
COC Shipment Date	COC_SHIP_DT	DATE	
COC Special Handling or Storage	COC_SPEC_HANDLING	VARCHAR2(255)	

COC Special Instructions	COC_SPEC_INSTRUCTION	VARCHAR2(255)
COC Data Turnaround	COC_TURN_AROUND	VARCHAR2(1)

Chain of Custody Transfer (COCXFR)

This table provides the fields required to maintain an electronic chain of possession for samples within a purge port.

COC Transfer Pkg ID	•COCXFR_PKG_ID	VARCHAR2(14)	R
COC Transfer Date	•COCXFR_DT	DATE	R
COC Transfer Received By Operator	•COCXFR_RECVD_BY_OP_ID	VARCHAR2(6)	
COC Transfer Relinquished By Operator	•COCXFR_RELIN_BY_OP_ID	VARCHAR2(6)	

Communication Table (COMMUNICATION TABLE)

This table is used for communication between DMSCOM and SQL*FORMS programs.

Communication From	COMM_FROM	VARCHAR2(8)
Communication To	COMM_TO	VARCHAR2(8)
Communication Message ID	COMM_MSG_ID	VARCHAR2(20)
Communication Message Text	COMM_MSG_TEXT	VARCHAR2(80)
Communication Priority	COMM_PRIORITY	NUMBER(3)
Communication Date	COMM_DT	DATE

Container Location (CONLOC)

(Journal)

This table is used to record the current location of specific containers within WRAP.

Container Package ID	•CONLOC_PKG_ID	VARCHAR2(14)	R
Container Location Date	CONLOC_DT	DATE	
Container Location ID	•CONLOC_LOCN_ID	VARCHAR2(10)	

Container Relationship Record (CONREL) - SWITS Data Record

(Journal)

This table permits the system to track the separating, repackaging, and combining of containers. It identifies the source CONTAINER occurrence and the resulting CONTAINER occurrence. Through this entity, an unlimited number of combinations and recombinations of containers can be tracked.

Container Relationship From Package ID	•CONR_FROM_PKG_ID	VARCHAR2(14)	R
Container Relationship To Package ID	•CONR_TO_PKG_ID	VARCHAR2(14)	R
Container Relationship Date	*CONR_DT	DATE	R
Container Relationship Code	CONR_REL_CD	VARCHAR2(1)	

Container Treatment (CONTREAT)

This data record provides the data required to relate a specific treatment worksheet to the applicable waste container to be treated.

Container Treatment Package ID	•CONTREAT_PKG_ID	VARCHAR2(14)	R
Container Treatment Date	*CONTREAT_DT	DATE	R
Container Treatment Comments	CONTREAT_COMMENT	VARCHAR2(255)	
Container Treatment User ID	•CONTREAT_USER_ID	VARCHAR2(7)	
Container Treatment Worksheet ID	CONTREAT_WS_ID	VARCHAR2(8)	

Discharge Conveyor List (DISCHARGE)

This table is used to track the drums (by position) which are located on the WRAP 1 Discharge conveyor in the S&R Area.

Discharge Conveyor Sequence Number	*DISCHARGE_SEQ_NUM	NUMBER(12)	R
Discharge Conveyor Package ID	•DISCHARGE_PKG_ID	VARCHAR2(14)	

Field Screening Record (FIELDSCRN)

This record is used to record data associated with the field screening activities in the gloveboxes.

Field Screening Container ID Number	•*SCRN_PKG_ID	VARCHAR2(14)	R
Field Screening ID	*SCRN_ID	VARCHAR2(12)	R
Field Screening Comments	SCRN_COMMENTS	VARCHAR2(255)	
Field Screening Date	SCRN_DT	DATE	
Field Screening Location	•SCRN_LOCN_ID	VARCHAR2(10)	
Field Screening Person	•SCRN_PERS_ID	VARCHAR2(6)	
Field Screening Sample Volume	SCRN_SAMPLE_VOL	NUMBER(4)	
Field Screening Sampling Method Code	•SCRN_SAMPLING_METHOD_CD	VARCHAR2(4)	
Field Screening Verification Pass Flag	SCRN_VER_PASS_FLAG	VARCHAR2(1)	

Field Analysis (FIELDANAL)

This record is used to record the data associated with each analysis performed during field screening activities.

Field Analysis Screening ID	•*FIELD_SCRN_ID	VARCHAR2(12)	R
Field Analysis Code	•*FIELD_FAT_CD	VARCHAR2(4)	R
Field Analysis Results	FIELD_RES	VARCHAR2(30)	

Hazardous Waste Container Detail Record (HAZDETAIL) - SWITS Data Record(Journal)

This is a one-to-one entity, a single occurrence being present for those containers that hold hazardous or mixed waste. The entity is not required for containers holding only radioactive waste.

Hazardous Detail Package ID	•*HDET_PKG_ID	VARCHAR2(14)	R
Hazardous Detail Container Status	HDET_CNTR_STATUS	VARCHAR2(2)	
Hazardous Detail Designation Code	HDET_DESIG_CD	VARCHAR2(3)	
Hazardous Detail Dangerous Waste Number	HDET_DW_NUM	VARCHAR2(85)	
Hazardous Detail Flashpoint	HDET_FLASHPOINT	VARCHAR2(6)	
Hazardous Detail Hazardous Property Codes	HDET_HAZPROP_CD	VARCHAR2(6)	
Hazardous Detail Individual DOT ID Number	HDET_IND_DOT_ID_NUM	VARCHAR2(5)	
Hazardous Detail Individual Not Otherwise Specified Description	HDET_IND_NOS_DESCR	VARCHAR2(60)	
Hazardous Detail Individual Shipping Name	HDET_IND_SHIP_NAME	VARCHAR2(80)	
Hazardous Detail Land Banned	HDET_LANDBAN	VARCHAR2(17)	
Hazardous Detail Other Land Banned 1	HDET_OTHER_LANDBAN_1	VARCHAR2(8)	
Hazardous Detail Other Land Banned 2	HDET_OTHER_LANDBAN_2	VARCHAR2(8)	
Hazardous Detail Other Land Banned 3	HDET_OTHER_LANDBAN_3	VARCHAR2(8)	
Hazardous Detail PCB Description	HDET_PCB_DESCR	VARCHAR2(40)	
Hazardous Detail PCB Parts Per Million	HDET_PCB_PPM	VARCHAR2(6)	
Hazardous Detail PCB Removed Date	HDET_PCB_REMOVED_DT	DATE	
Hazardous Detail PCB Sub-Type	HDET_PCB_SUBTYPE	VARCHAR2(1)	

Hazardous Detail	PCB Type	HDET_PCB_TYPE	VARCHAR2(1)
Hazardous Detail	PCB Weight	HDET_PCB_WGT	NUMBER(12,4)
Hazardous Detail	PH	HDET_PH	VARCHAR2(5)
Hazardous Detail	Waste Status	HDET_WASTE_STATUS	VARCHAR2(2)
Hazardous Detail	Waste Volume	HDET_WASTE_VOL	NUMBER(10,4)

Radioactive Isotope Quantity Record (ISOQTY) - SWITS Data Record (Journal)

The radioactive isotopes present in a container are identified through this table. For each isotope present, one occurrence of this entity will exist.

Radioactive Package ID	**RAD_PKG_ID	VARCHAR2(14)	R
Radioactive Isotope Number	**RAD_ISO_NUM	NUMBER(3)	R
Radioactive Alpha CI	RAD_ALPHA_CI	FLOAT	
Radioactive PE CI	RAD_PE_CI	FLOAT	
Radioactive PU FGE	RAD_PU_FGE	FLOAT	
Radioactive Quantity	RAD_QTY	FLOAT	
Radioactive Qty Total Meas. Uncertainty	RAD_QTY_TMU	FLOAT	
Radioactive Unknown	RAD_UNKNOWN	FLOAT	

Metrics Record (METRICS)

Table for recording waste container data changes within the WRAP facility. The data contained in this table will be used to generate facility metrics reports.

Metric Package ID	**MET_PKG_ID	VARCHAR2(14)	R
Metric Date	**MET_DT	DATE	R
Metric Assay Verified Flag	MET_ASSAY_VER_FLAG	VARCHAR2(1)	
Metric Compliant Flag	MET_COMPLIANT_FLAG	VARCHAR2(1)	
Metric Hazardous Materials Ver. Flag	MET_HAZ_VER_FLAG	VARCHAR2(1)	
Metric Location	MET_LOCN_ID	VARCHAR2(10)	
Metric NDE Verified Flag	MET_NDE_VER_FLAG	VARCHAR2(1)	
Metric Secondary Waste Group	MET_SWTYP_GROUP	VARCHAR2(2)	
Metric Container Use Code	MET_USE_CD	VARCHAR2(2)	
Metric Waste Category	MET_WASTE_CAT	VARCHAR2(5)	
Metric WRAP Status Code	MET_WRAP_STAT_CD	VARCHAR2(2)	

Message Log Record (MSGLOG)

History table for intersystem message headers used whenever communication occurs between the DMS and other WRAP systems (PCS, SIE, BWAS).

Message Log Date	MSGLOG_DT	DATE	
Message Log Error	MSGLOG_ERROR_FLAG	VARCHAR2(2)	
Message Log General Type	MSGLOG_GEN_TYPE	VARCHAR2(8)	
Message Log Sequence Number	MSGLOG_SEQ_NUM	VARCHAR2(4)	
Message Log Specific Type	MSGLOG_SPEC_TYPE	VARCHAR2(4)	
Message Log String1-ASCII	MSGLOG_STRING1	VARCHAR2(2000)	
Message Log String2-HEX	MSGLOG_STRING2	LONG RAW	

NDE Container Video Tape Number	NDE_VTAPE_NUM	VARCHAR2(5)
NDE Container Video Tape Start	NDE_VTAPE_START	NUMBER(5)

Not Process List (NOTPROCLIST)

This table is used to control the DMSS0902 screen.

Not Process List Package ID	•*NOTPROC_PKG_ID	VARCHAR2(14)	R
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Not Ship Pick List (NOTSHIPPICK)

This table is used to control the DMSS0904 screen.

Not Ship Pick List Package ID	•*NOTSHIP_PKG_ID	VARCHAR2(14)	R
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Isotopic Distribution (PAM)

This data record provides those data elements required to support the operation of the Packet Assay Monitor (PAM).

PAM Package ID number	•*PAM_PKG_ID	VARCHAR2(14)	R
PAM Plutonium 239 Fissile Gram Equivalent	PAM_PU_FGE	FLOAT	
PAM Gram Quantity	PAM_QTY	FLOAT	
PAM Uncertainty	PAM_UNCERTAINTY	FLOAT	

Payload Container Certification Record (PAYLOAD) (Journal)

This data table provides data required to support the shipment of a specific waste container to WIPP.

Payload Package ID Number	•*PAYLOAD_PKG_ID	VARCHAR2(14)	R
Payload Package Assembly ID	•PAYLOAD_ASSEMBLY_ID	VARCHAR2(8)	R
Payload Certification Date	PAYLOAD_CERT_DT	DATE	
Payload Certification Official	PAYLOAD_CERT_OFFICIAL	VARCHAR2(25)	
Payload Container Type	•PAYLOAD_CNTYP_CD	VARCHAR2(3)	
Payload Decay Heat	PAYLOAD_DECAY_HEAT	FLOAT	
Payload Filter Model	PAYLOAD_FILTER_MODEL	VARCHAR2(10)	
Payload Filter Installed	PAYLOAD_FILTER_INSTLD	VARCHAR2(3)	
Payload Fissile Mass Error (2X)	PAYLOAD_FISSILE_ERROR	FLOAT	
Payload Gas Generation Rate	PAYLOAD_GAS_GEN_RATE	NUMBER(3)	
Payload Container Decay Heat Error	PAYLOAD_HEAT_ERROR	FLOAT	
Payload Decay Heat Limit	PAYLOAD_HEAT_LIMIT	FLOAT	
Payload Hydrogen Generation Rate	PAYLOAD_HYDROGEN_RATE	VARCHAR2(1)	
Payload Liner Punctured/Filtered	PAYLOAD_LINER_VNT	VARCHAR2(8)	
Payload Record Type	PAYLOAD_RECORD_TYPE	VARCHAR2(1)	
Payload Sequence Number	PAYLOAD_SEQ_NUM	NUMBER(2)	
Payload Approved To Ship	PAYLOAD_SHIP_APP_FLAG	VARCHAR2(1)	
Payload Shipping Category	•PAYLOAD_SHIP_CAT	VARCHAR2(10)	
Payload TRUCON Code	•PAYLOAD_TRUCON_CD	VARCHAR2(6)	
Payload Flammable VOC Concentration	PAYLOAD_VOC_CONC	NUMBER(3)	
Payload WAC Exception	PAYLOAD_WAC_EXCEPT	CHAR(7)	
Payload Container Weight Error	PAYLOAD_WGT_ERROR	NUMBER(10,2)	

Payload Assembly Certification Record (PAYLOADASBLY) (Journal)

This data table provides specific information required to support the loading and shipment of a TRUPACT waste container.

Assembly Number	•ASBLY_NUM	VARCHAR2(8)	R
Assembly Shipment Number	•*ASBLY_SHIPMENT_NUM	VARCHAR2(8)	R
Assembly Approved For Shipment Flag	ASBLY_APPROVED_SHIP_FLAG	VARCHAR2(1)	

Assembly Cert Date	ASBLY_CERT_DT	DATE
Assembly Cert Official	ASBLY_CERT_OFFICIAL	VARCHAR2(25)
Assembly Payload Configuration	ASBLY_CONFIGURATION	VARCHAR2(4)
Assembly Dose Rate - Pkg	ASBLY_DOSE_RATE	NUMBER(8,2)
Assembly Dose Rate at 2 m	ASBLY_DOSE_RATE_2M	NUMBER(8,2)
Assembly Date of ICV Closure	ASBLY_ICV_CLOSURE_DT	DATE
Assembly TRUPACT OCA Body Number	ASBLY_OCA_BODY_ID	VARCHAR2(8)
Assembly TRUPACT OCA Lid Number	ASBLY_OCA_LID_ID	VARCHAR2(8)
Assembly Position	ASBLY_POS	VARCHAR2(1)
Assembly Payload Shipping Category	•ASBLY_SHIP_CAT	VARCHAR2(10)
Assembly Decay Heat Limit - Ship Cat	ASBLY_SHIP_CAT_HEAT	LTFLOAT
Assembly Weight of TRUPACT	ASBLY_WGT_TRUPACT	NUMBER(10,2)

Physical Component Record (PHYSCOMP) - SWITS Data Record (Journal)

This entity identifies those physical components present within a container. One occurrence of the entity will exist for each different physical component present.

Physical Component Package ID	•*PHYS_PKG_ID	VARCHAR2(14) R
Physical Component Description	•*PHYS_COMP_DESCR	VARCHAR2(30) R
Physical Component Volume Percent	PHYS_COMP_VOL_PCT	NUMBER(6,3)
Physical Component Weight	PHYS_COMP_WGT	NUMBER(8,2)

Package Dangerous Waste Numbers Record (PKGDW) - SWITS Data Record (Journal)

The Dangerous Waste Numbers associated with a package of hazardous or mixed waste.

Dangerous Waste Package ID	•*PDW_PKG_ID	VARCHAR2(14) R
Dangerous Waste Number	•*PDW_NUM	VARCHAR2(4) R
Dangerous Waste Land Banned	PDW_LANDBAN	VARCHAR2(1)
Dangerous Waste Sort Order	PDW_SORT_ORDER	NUMBER(3)

Process Pick List (PROCLIST)

This table is used to generate a pick list of waste containers to be removed from the AS/RS for processing in WRAP.

Process List Package ID	*PROC_PKG_ID	VARCHAR2(14) R
Process List Compliant Flag	PROC_COMPLIANT_FLAG	VARCHAR2(1)
Process List PCS Flag	PROC_PCS_FLAG	VARCHAR2(1)
Process List Profile ID	•PROC_PROF_ID	VARCHAR2(6)
Process List Route Code	•PROC_ROUTE_CD	VARCHAR2(4)
Process List Sample Flag	PROC_SAMPLE_FLAG	VARCHAR2(1)
Process List Sequence Number	PROC_SEQ_NUM	NUMBER(4)

Processing Add List (PROCADD) (Journal)

This table is used to generate a listing of waste containers to be processed in WRAP. It also designates the route and sampling and processing requirements. This list is added to PROCLIST.

Processing Add List Package ID	*PROCADD_PKG_ID	VARCHAR2(14) R
Processing Add List Compliant Flag	PROCADD_COMPLIANT_FLAG	VARCHAR2(1)
Processing Add List Profile ID	•PROCADD_PROF_ID	VARCHAR2(6)
Processing Add List Route Code	•PROCADD_ROUTE_CD	VARCHAR2(4)
Processing Add List Sample Flag	PROCADD_SAMPLE_FLAG	VARCHAR2(1)
Processing Add List Sequence Number	PROCADD_SEQ_NUM	NUMBER(4)

Radioactive Waste Container Detail Record (RADDETAIL) - SWITS Data Record (Journal)

This is a one-to-one entity, a single occurrence being present for those containers that hold radioactive or mixed waste. The entity is not required for containers holding only hazardous waste.

Radioactive Detail	Package Id	*RDET_PKG_ID	VARCHAR2(14)	R
Radioactive Detail	Assay Date	RDET_ASSAY_DT	DATE	
Radioactive Detail	Assay Number	RDET_ASSAY_NUM	VARCHAR2(14)	
Radioactive Detail	Beta/Gamma Dose Rate	RDET_BG_DOSE_RATE	FLOAT	
Radioactive Detail	Certification Date	RDET_CERT_DT	DATE	
Radioactive Detail	Dose Equivalence Curie Flag	RDET_DE_CT_FLAG	VARCHAR2(1)	
Radioactive Detail	Handling	RDET_HANDLING	VARCHAR2(1)	
Radioactive Detail	Neutron Dose Rate	RDET_NEUT_DOSE_RATE	NUMBER(8,2)	
Radioactive Detail	Organic Volume Percent	RDET_ORGANIC_VOL_PCT	NUMBER(3)	
Radioactive Detail	Organic Weight	RDET_ORGANIC_WGT	NUMBER(8,2)	
Radioactive Detail	Property Disposal Request Number	RDET_PDR_NUM	VARCHAR2(9)	
Radioactive Detail	RSWIMS Count	RDET_RSWIMS_COUNT	NUMBER(4)	
Radioactive Detail	SDAR Approval No.	RDET_SDAR_APPRV_NUM	VARCHAR2(14)	
Radioactive Detail	Seal Number	RDET_SEAL_NUM	VARCHAR2(14)	
Radioactive Detail	Solid Waste Information Management System Code	RDET_SWIMS_CD	VARCHAR2(2)	
Radioactive Detail	Secondary Waste Type Code	*RDET_SWTYP_CD	VARCHAR2(2)	
Radioactive Detail	Secondary Waste Type Group	RDET_SWTYP_GROUP	VARCHAR2(3)	
Radioactive Detail	Thermal Power	RDET_THERMAL_POWER	FLOAT	
Radioactive Detail	Thermal Power TMU	RDET_THERMAL_POWER_TMU	FLOAT	
Radioactive Detail	Total Alpha Ci	RDET_TOT_ALPHA_CI	FLOAT	
Radioactive Detail	Total Alpha Ci TMU	RDET_TOT_ALPHA_CI_TMU	FLOAT	
Radioactive Detail	Total Beta/Gamma Ci	RDET_TOT_BG_CI	FLOAT	
Radioactive Detail	Total Dose Equivalence Curie	RDET_TOT_DE_CI	FLOAT	
Radioactive Detail	Total PE Ci	RDET_TOT_PE_CI	FLOAT	
Radioactive Detail	Total PE Ci TMU	RDET_TOT_PE_CI_TMU	FLOAT	
Radioactive Detail	Total PU FGE	RDET_TOT_PU_FGE	FLOAT	
Radioactive Detail	Total PU FGE TMU	RDET_TOT_PU_FGE_TMU	FLOAT	
Radioactive Detail	Void Code	RDET_VOID_CD	VARCHAR2(6)	
Radioactive Detail	Waste Category	RDET_WASTE_CAT	VARCHAR2(5)	
Radioactive Detail	Waste Makeup	RDET_WASTE_MAKEUP	VARCHAR2(1)	
Radioactive Detail	WRAP Category	RDET_WRAP_CAT	VARCHAR2(2)	

Radiologic Material Inventory (RADMAT) (Journal)

This table defines data elements required to track radiological levels within WRAP.

Area ID	*RADMAT_ID	VARCHAR2(1)	R
Area Alarm Flag	RADMAT_ALARM	VARCHAR2(1)	
Area Description	RADMAT_DESCR	VARCHAR2(50)	
Date & Time of calculation	RADMAT_DT	DATE	
Glovebox Package ID	*RADMAT_GB_PKG_ID	VARCHAR2(14)	
Area Limit	RADMAT_LIMIT	FLOAT	

Current Rad Total Units (FGE or CI)	RDMAT_RAD_TOT RDMAT_UNITS	FLOAT VARCHAR2(3)
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Receiving Display Record (RECDISP)

Table to record incoming PCS message of received container package IDs.
This table is an internal temporary data store used during the Receiving process.

Receiving Display Block Number	RECDISP_BLK_NUM	NUM
Receiving Display Inner Package ID	U RECDISP_INNER_PKG_ID	VARCHAR2(14)
Receiving Display Package ID	RECDISP_PKG_ID	VARCHAR2(14)
Receiving Display Error Status Message	RECDISP_ERROR_STATUS	VARCHAR2(50)

Sample Bottle Location (SAMLOC)

(Journal)

This table is used to record the current location of specific sample bottles within WRAP.

Sample Location Bottle ID	•*SAMLOC_BOTTLE_ID	VARCHAR2(12)	R
Sample Location Date	SAMLOC_DT	DATE	
Sample Location Location ID	•SAMLOC_LOCN_ID	VARCHAR2(10)	

Sample Data Record (SAMPLE) - SWITS Data Record (Data Elements Added)(Journal)

Statis data used to track samples through laboratory testing sites.

Sample ID	*SAM_SAMPLE_ID	VARCHAR2(8)	R
Sample COC Form ID	•SAM_COC_FORM_ID	VARCHAR2(10)	
Sample Package ID	•SAM_PKG_ID	VARCHAR2(14)	
Sample Closed Flag	SAM_CLOSED_FLAG	VARCHAR2(1)	
Sample Comments	SAM_COMMENTS	VARCHAR2(255)	
Sample Sampling Location	•SAM_LOCN_ID	VARCHAR2(10)	
Sample Matrix Code	•SAM_MATRIX_CD	VARCHAR2(3)	
Sample Report Date	SAM_REPORT_DT	DATE	
Sample To Be Returned	SAM_RETURN	VARCHAR2(1)	
Sample Sampling Method Code	•SAM_SAMPLING_METHOD_CD	VARCHAR2(4)	
Sample Taken By	•SAM_TAKEN_BY	VARCHAR2(6)	
Sample Taken Date	SAM_TAKEN_DT	DATE	
Sample Temperature	SAM_TEMP	NUMBER(2)	

Sample Data Relationship Record (SAMREL) - SWITS Data Record

(Journal)

The table linking containers to packages. Can be a many-to-many relationship.

Sample Relationship Bottle ID	•*SAMREL_BOTTLE_ID	VARCHAR2(12)	R
Sample Relationship Package ID	•*SAMREL_PKG_ID	VARCHAR2(14)	R
Sample Relationship Date	SAMREL_DT	DATE	
Sample Relationship Use Code	•SAMREL_USE_CD	VARCHAR2(2)	

Sample Analysis Request (SAR)

(Journal)

The table linking sample IDs to specific sample analyses.

Sample Analysis Request Sample ID	•*SAR_SAMPLE_ID	VARCHAR2(8)	R
Sample Analysis Request Analysis Code	•*SAR_ANAL_CD	VARCHAR2(8)	R

Shipment History Record (SHIPHIST) - SWITS Data Record

This entity records all shipments of a container. Combined with the FACILITY HISTORY and CONTAINER RELATIONSHIP entities, a complete history of all activity for a container is maintained.

Shipment History Manifest Number	*SHIPHST_MFST_NUM	VARCHAR2(10)	R
Shipment History Item Number	*SHIPHST_ITEM_NUM	VARCHAR2(4)	R
Shipment History Package ID	*SHIPHST_PKG_ID	VARCHAR2(14)	R
Shipment History Nuclear Material Item Transfer Number	SHIPHST_NMIT_NUM	VARCHAR2(10)	
Shipment History Return	SHIPHST_RETURN	VARCHAR2(1)	
Shipment History Radioactive Shipment Record Number	SHIPHST_RSR_NUM	VARCHAR2(10)	
Shipment History 741 Number	SHIPHST_741_NUM	VARCHAR2(11)	

Shipment Item Record (SHIPITEM) - SWITS Data Record

This entity identifies a specific line item within a waste shipment. One or more containers may be associated with the shipment through the SHIPMENT HISTORY entity.

Shipment Item Manifest Number	*SHIPITM_MFST_NUM	VARCHAR2(10)	R
Shipment Item Number	*SHIPITM_ITEM_NUM	VARCHAR2(4)	R
Shipment Item Container Count	SHIPITM_CNTR_COUNT	NUMBER(3)	
Shipment Item DOT Hazardous Class	SHIPITM_DOT_HAZ_CLASS	VARCHAR2(20)	
Shipment Item DOT ID Number	SHIPITM_DOT_ID_NUM	VARCHAR2(6)	
Shipment Item DOT Name	SHIPITM_DOT_NAME	VARCHAR2(100)	
Shipment Item Not Otherwise Specified Description	SHIPITM_NOS_DESCR	VARCHAR2(60)	
Shipment Item Profile Number	SHIPITM_PROFILE_NUM	VARCHAR2(10)	
Shipment Item Quantity Unit	SHIPITM_QTY_UNIT	VARCHAR2(1)	
Shipment Item Reportable Quantity Flag	SHIPITM_RQ_FLAG	VARCHAR2(1)	
Shipment Item Total Quantity	SHIPITM_TOT_QTY	NUMBER(12,4)	
Shipment Item TSD Process	SHIPITM_TSD_PROCESS	VARCHAR2(50)	

Shipment Record (SHIPMENT) - SWITS Data Record

This entity identifies a specific line item within a waste shipment. One or more containers may be associated with the shipment through the SHIPMENT HISTORY entity.

Shipment Manifest Number	*SHIPMNT_MFST_NUM	VARCHAR2(10)	R
Shipment Certification Date	SHIPMNT_CERT_DT	DATE	
Shipment Group ID	SHIPMNT_GGRP_ID	VARCHAR2(8)	
Shipment Manifest Return Date	SHIPMNT_MFST_RET_DT	DATE	
Shipment Manifest Type Code	SHIPMNT_MFST_TYPE_CD	VARCHAR2(3)	
Shipment Offsite Company ID	*SHIPMNT_OFFSITE_CMPNY_ID	VARCHAR2(4)	
Shipment Offsite Company Type	*SHIPMNT_OFFSITE_CMPNY_TYPE	VARCHAR2(3)	
Shipment Receiving Facility ID	*SHIPMNT_REC_V FACIL_ID	VARCHAR2(11)	
Shipment Radioactive Shipment Record Type	SHIPMNT_RSR_TYPE	VARCHAR2(2)	
Shipment Scheduled Date	SHIPMNT_SCHED_DT	DATE	
Shipment Ship Date	SHIPMNT_SHIP_DT	DATE	
Shipment Transportation Company ID	*SHIPMNT_TRANSP_CMPNY_ID	VARCHAR2(4)	
Shipment Transportation Company Type	*SHIPMNT_TRANSP_CMPNY_TYPE	VARCHAR2(3)	
Shipment TSD Accept Date	SHIPMNT_TSD_ACCEPT_DT	DATE	

Shipping Pick List (SHIPPICK)

Table to identify and group containers for retrieval from the AS/RS for shipment. This table provides a unique WRAP shipment number to relate other data in the DMS.

Shipping Pick List WRAP Number	*SHIPPICK_WRAP_NUM	VARCHAR2(8)	R
Shipping Pick List Package ID	•SHIPPICK_PKG_ID	VARCHAR2(14)	R

WRAP Shipment (SHIPWRAP)

(Journal)

This table provides all the data associated with the shipment of waste (excluding TRUPACT shipments) from the WRAP facility.

WRAP Shipment Number	*SHIPWRAP_NUM	VARCHAR2(8)	R
WRAP Shipment Absorbent Flag	SHIPWRAP_ABSORB_FLAG	VARCHAR2(1)	
WRAP Shipment Alpha Contamination	SHIPWRAP_ALPHA_CONTAM	VARCHAR2(8)	
WRAP Shipment Beta/Gamma Contamination	SHIPWRAP_BG_CONTAM	VARCHAR2(8)	
WRAP Shipment Cab Dose	SHIPWRAP_CAB_DOSE	VARCHAR2(8)	
WRAP Shipment Carrier Person	•SHIPWRAP_CARRIER_PERS_ID	VARCHAR2(6)	
WRAP Shipment Carrier Vehicle ID	SHIPWRAP_CARRIER_VEH_ID	VARCHAR2(14)	
WRAP Shipment Chemical Form	SHIPWRAP_CHEM_FORM	VARCHAR2(12)	
WRAP Shipment Container reusable Flag	SHIPWRAP_CNTR_REUSE_FLAG	VARCHAR2(1)	
WRAP Shipment Description	SHIPWRAP_DESCR	VARCHAR2(255)	
WRAP Shipment Ship from Facility	•SHIPWRAP_FROM_FACIL_ID	VARCHAR2(11)	
WRAP Shipment Ship from Name	•SHIPWRAP_FROM_PERS_ID	VARCHAR2(6)	
WRAP Shipment Max Package Dose at Contact	SHIPWRAP_MAX_PKG_DOSE_CT	VARCHAR2(8)	
WRAP Shipment Max Package Dose at 1M	SHIPWRAP_MAX_PKG_DOSE_1M	VARCHAR2(8)	
WRAP Shipment Max Vehicle Dose at Sides	SHIPWRAP_MAX_VEH_DOSE_SD	VARCHAR2(8)	
WRAP Shipment Max Vehicle Dose at 2M	SHIPWRAP_MAX_VEH_DOSE_2M	VARCHAR2(8)	
WRAP Shipment Manifest Complete Flag	SHIPWRAP_MFST_COMP_FLAG	VARCHAR2(1)	
WRAP Shipment Manifest Number	•SHIPWRAP_MFST_NUM	VARCHAR2(10)	
WRAP Shipment Radionuclide List	SHIPWRAP_NUCLIDE_LIST	VARCHAR2(255)	
WRAP Shipment Other Pertinent Info	SHIPWRAP_OTHR_PERT_DATA	VARCHAR2(255)	
WRAP Shipment Quantity Category	SHIPWRAP_QTY_CAT	VARCHAR2(35)	
WRAP Shipment RM Escort Flag	SHIPWRAP_RM_ESCRT_FLAG	VARCHAR2(1)	
WRAP Shipment RM Supervisor Review Flag	SHIPWRAP_RM_SUPR_REV_FLAG	VARCHAR2(1)	
WRAP Shipment RSR Complete Flag	SHIPWRAP_RSR_COMP_FLAG	VARCHAR2(1)	
WRAP Shipment RSR Number	SHIPWRAP_RSR_NUM	VARCHAR2(10)	
WRAP Shipment Secondary Hazards	SHIPWRAP_SEC_HAZ	VARCHAR2(255)	
WRAP Shipment SNM Flag	SHIPWRAP_SNM_FLAG	VARCHAR2(1)	
WRAP Shipment Ship to Facility	•SHIPWRAP_TO_FACIL_ID	VARCHAR2(11)	
WRAP Shipment Ship to Name	•SHIPWRAP_TO_PERS_ID	VARCHAR2(6)	

TRUPACT Shipping Record (TRUSHIP)

This table provide information associated with a specific TRUPACT shipment which may contain up to three TRUPACT II shipping casks.

TRUPACT Shipment Number	•TRUSHIP_SHIP_NUM	VARCHAR2(8)	R
Actual Ship Date	TRUSHIP_DT	DATE	

Container and Content Record (WASTE) - SWITS Data Record (Journal)

This table is used for all global container information. Data elements are updated as waste containers are processed through the facility. This table is downloaded from SWITS.

Container Package ID	*CON_PKG ID	VARCHAR2(14) R
Container Accumulation Date	CON_ACCUM DT	DATE
Container Chemical Nature Code	CON_CHEM NATURE_CD	VARCHAR2(2)
Container Volume	CON_CNTR VOL	NUMBER(10,4)
Container Type Code	•CON_CNTYP CD	VARCHAR2(2)
Container DOT Specification	•CON_DOT SPEC	VARCHAR2(3)
Container Generator Comment	CON_GENER COMMENT	VARCHAR2(80)
Container Generator Waste Description	CON_GENER WASTE_DESCR	VARCHAR2(255)
Container Gross Weight	CON_GROSS WGT	NUMBER(10,2)
Container Item Number	CON_ITEM NUM	VARCHAR2(4)
Container Labpack Flag	CON_LABPACK FLAG	VARCHAR2(1)
Container Liner Thick	CON_LINER THICK	VARCHAR2(6)
Container Liner Type	CON_LINER_TYPE	VARCHAR2(20)
Container Location Facility Area	•CON_LOCN FACIL_AREA	VARCHAR2(6)
Container Location Facility ID	•CON_LOCN FACIL_ID	VARCHAR2(11)
Container Manifest Number	CON_MFST NUM	VARCHAR2(10)
Container Physical State Code	CON_PHYS STATE_CD	VARCHAR2(3)
Container Package Date	CON_PKG DT	DATE
Container Package Status	•CON_PKG STATUS	VARCHAR2(1)
Container Primary Waste Type Code	•CON_PWTYP CD	VARCHAR2(2)
Container Routine	CON_ROUTINE	VARCHAR2(1)
Container Sample Flag	CON_SAMPLE FLAG	VARCHAR2(1)
Container Storage Category Code	•CON_SCAT CD	VARCHAR2(3)
Container Secondary Package ID	U CON_SEC PKG ID	VARCHAR2(14)
Container Ship Date	CON_SHIP DT	DATE
Container Size Description	•CON_SIZE_DESCR	VARCHAR2(14)
Container Source Charge Code	CON_SRCE_CHRG CD	VARCHAR2(8)
Container Source Company Id	•CON_SRCE_CMPNY_ID	VARCHAR2(4)
Container Source Company Type	•CON_SRCE_CMPNY_TYPE	VARCHAR2(3)
Container Source Facility ID	•CON_SRCE_FACIL_ID	VARCHAR2(11)
Container Source Organization	CON_SRCE_ORG	VARCHAR2(8)
Container Tare Weight	CON_TARE_WGT	NUMBER(10,2)
Container Treatment Date	CON_TREATMENT DT	DATE
Container TSD Accept Date	CON_TSD ACCEPT_DT	DATE
Container Waste Weight	CON_WASTE_WGT	NUMBER(12,4)

Container & Content Extension Record (WASTEXT) (Journal)

This table is used for all WRAP-specific container information. Data elements are updated as waste containers are processed through the facility.

Container Extension Package ID	•*CONEXT PKG ID	VARCHAR2(14) R
Container Assay Verification Date	CONEXT_ASSAY_VER DT	DATE
Container Assay Verification Flag	CONEXT_ASSAY_VER_FLAG	VARCHAR2(1)
Container Status	CONEXT_CNTR STATUS	VARCHAR2(2)
Container Compliant Flag	CONEXT_COMPLIANT FLAG	VARCHAR2(1)
Container Contamination Flag	CONEXT_CONTAM FLAG	VARCHAR2(1)
Container Filler Weight	CONEXT_FILLER WGT	NUMBER(10,2)
Container Haz Materials Verified Flag	CONEXT_HAZ_VER_FLAG	VARCHAR2(1)
Container Height	CONEXT_HEIGHT	NUMBER(12,4)
Container Material Group Code	•CONEXT_MAT_GRP_CD	VARCHAR2(2)

Container NDE Verified Flag	CONEXT_NDE_VER_FLAG	VARCHAR2(1)
Container Non-Listed Long-Lived Detected Date	CONEXT_NLLL_DET_DT	DATE
Container Profile Flag	CONEXT_PROF_FLAG	VARCHAR2(1)
Container Profile ID	•CONEXT_PROF_ID	VARCHAR2(6)
Container RADMAT ID	CONEXT_RADMAT_ID	VARCHAR2(1)
Container Route Code	•CONEXT_ROUTE_CD	VARCHAR2(4)
Container Revisit Flag	CONEXT_RVST_FLAG	VARCHAR2(1)
Container Screening Verification Flag	CONEXT_SCRN_VER_FLAG	VARCHAR2(1)
Container Shipment Pick Llist Code	•CONEXT_SHIPPICK_CD	VARCHAR2(4)
Container Treatment Flag	CONEXT_TREATMENT_FLAG	VARCHAR2(1)
Container Use Code	CONEXT_USE_CD	VARCHAR2(2)
Container Verification Gross Weight Container Verification Gross Weight Flag	CONEXT_VER_GROSS_WGT	NUMBER(10,2)
Container WRAP Sample Flag	CONEXT_VER_GROSS_WGT_FLAG	VARCHAR2(1)
Container WRAP Status Code	CONEXT_WRAP_STAT_CD	VARCHAR2(2)

Treatment Worksheet (WORKSHEET)

This data record is used to summarize the waste containers (not drums) that are to be treated using a common treatment procedure. Containers to be treated at the same time.

Treatment Worksheet ID	*WORKSHEET_ID	VARCHAR2(8)	R
Treatment File Pointer	WORKSHEET_FILE_POINT	VARCHAR2(14)	
Treatment Worksheet Name	WORKSHEET_NAME	VARCHAR2(12)	
Treatment Procedure Number	•WORKSHEET_PROC_NUM	VARCHAR2(14)	
Treatment Procedure Revision Number	WORKSHEET_PROC_REV_NUM	VARCHAR2(4)	

Verification (VERIFICATION) - New SWITS Data Record (Journal)

This data record documents the verification of waste data for containers of newly-generated waste evaluated at WRAP.

Verification Package ID	•*VER_PKG_ID	VARCHAR2(14)
Verification Method	*VER_METHOD	VARCHAR2(4)
Verification Date	*VER_DT	DATE
Verification Pass/Fail	VER_PASS	VARCHAR2(1)
Verification Failure Reason	VER_FAIL_REASON	VARCHAR2(255)

Worksheet Item (WORKITEM) (Journal)

This data record contains the list of transfer drum/purge port PINs and packet/sample PINs to be treated on a worksheet.

Worksheet Item ID	•*WORKITEM_ID	VARCHAR2(8)	R
Worksheet Item Package ID	•*WORKITEM_PKG_ID	VARCHAR2(14)	R

C.1.2 Data Look-Up Tables

Miscellaneous Code Table (CODECHECK) - SWITS Lookup Table

Occurrences of this entity contain the name of a data element and a specific valid value that may be stored in the data element of the same name in the functional database. A data element with 1-9 valid values will have a corresponding number of occurrences within this table to provide database maintenance software with a reference of those valid values. Data elements with greater than nine valid values may have a separate validation table where desirable.

Code Field Name	*CODE_FIELD_NAME	VARCHAR2(24)	R
Code Value	*CODE_VALUE	VARCHAR2(12)	R
Code Description	CODE_DESCR	VARCHAR2(70)	

Company Table (COMPANY) - SWITS Lookup Table

The table identifies all companies involved with the generation, transportation, or disposition of waste tracked by the SWITS system.

Company ID	*CMPNY_ID	VARCHAR2(4)	R
Company Type	*CMPNY_TYPE	VARCHAR2(3)	R
Company City	CMPNY_CITY	VARCHAR2(15)	
Company Environmental Protection Agency (EPA) ID	CMPNY_EPA_ID	VARCHAR2(12)	
Company Location	CMPNY_LOCATION	VARCHAR2(3)	
Company Phone	CMPNY_PHONE	VARCHAR2(12)	
Company State Code	*CMPNY_STATE_CD	VARCHAR2(2)	
Company Street	CMPNY_STREET	VARCHAR2(36)	
Company Title	CMPNY_TITLE	VARCHAR2(60)	
Company Zip Code	CMPNY_ZIP_CD	VARCHAR2(10)	

Container Size Table (CONSIZE) - SWITS Lookup Table

This table holds all the valid size descriptions for the various container types, such as '55 Gallon' for drums.

Container Size Container Type Code	*CSZ_CNTYP_CD	VARCHAR2(2)	R
Container Size Description	*CSZ_DESCR	VARCHAR2(14)	R
Container Size Volume	CSZ_VOL	NUMBER(10,4)	

Container Type Table (CONTYPE) - SWITS Lookup Table

All containers fall into one of several specific types. This entity identifies all valid container types.

Container Type Code	*CNTYP_CD	VARCHAR2(2)	R
Container Type Description	CNTYP_DESCR	VARCHAR2(42)	

Field Help Table (DATADICT)

This table contains help information which provides help messages at the field level.

Data Dictionary Table Name	*DD_TABLE_NAME	VARCHAR2(20)	R
Data Dictionary Field Name	*DD_FIELD_NAME	VARCHAR2(36)	R
Data Dictionary Help Text	DD_HELP_TEXT	LONG	
Data Dictionary Type	DD_DATA_TYPE	VARCHAR2(15)	

DOT Container Specification Table (DOTSPEC) - SWITS Lookup Table

This table holds Department of Transportation specifications for container types, such as 17C.

DOT Specification	*DOT_SPEC	VARCHAR2(3) R
DOT Specification Description	DOT_DESCR	VARCHAR2(60)

Dangerous Waste Number Table (DWNUM) - SWITS Lookup Table

The table of Dangerous Waste Numbers which are codes used to classify the type of hazards in a container of hazardous or mixed waste.

Dangerous Waste Number	*DW_NUM	VARCHAR2(4) R
Dangerous Waste Description	DW_DESCR	VARCHAR2(20)
Dangerous Waste Landban	DW_LANDBAN	VARCHAR2(1)
Dangerous Waste Sort Hazardous	DW_SORT_HAZ	NUMBER(3)
Dangerous Waste Sort Mixed	DW_SORT_MIXED	NUMBER(3)

Error Message Table (ERRMESSAGE)

This entity maintains a list of all error messages that may be displayed by the DMS system. A narrative is provided to guide the recipient of the message in the proper actions to correct the error.

Error Message Number	*ERR_NUM	VARCHAR2(4) R
Error Message Description	ERR_DESCR	VARCHAR2(255)
Error Message Text	ERR_TEXT	VARCHAR2(72)

Facility Table (FACILITY) - SWITS Lookup Table

Each facility on the Hanford site is identified by this entity.

Facility ID	*FACIL_ID	VARCHAR2(11) R
Facility Area	FACIL_AREA	VARCHAR2(6)
Facility Bar Code ID	FACIL_BAR_ID	VARCHAR2(5)
Facility Name	FACIL_NAME	VARCHAR2(55)

Field Analysis Type Table (FLDANALTYP)

This table will be used to define the various field screening analyses which may be performed in WRAP (pH, temperature, organic vapor, HAZCAT)

Field Analysis Type Code	*FAT_CD	VARCHAR2(4) R
Field Analysis Type Description	FAT_DESCR	VARCHAR2(70)
Field Analysis Type Units	FAT_UNITS	VARCHAR2(6)

Form Help Table (FORMHELP)

This table contains help information which provides help messages at the form level.

Form Help Name	*FH_FORM_NAME	VARCHAR2(8) R
Form Help Text	FH_HELP_TEXT	LONG

Hazardous Chemical Component Table (HAZCOMP) - SWITS Lookup Table

Each hazardous chemical that is present in a container package is identified by an occurrence of this entity. If a container contains four different hazardous chemicals, four occurrences of this entity will be present.

Hazardous Chemical Component ID	*HCC_ID	VARCHAR2(12)	R
Hazardous Chemical Component Chemical Abstract Number	HCC_CAS	VARCHAR2(12)	
Hazardous Chemical Component Description	HCC_DESCR	VARCHAR2(70)	
Hazardous Chemical Component New ID	HCC_NEWID	VARCHAR2(12)	

Isotope Table (ISOTOPE) - SWITS Lookup Table

Each isotope that can be present in a waste container is represented by an occurrence of this entity.

Isotope Number	*ISO_NUM	NUMBER(3)	R
Isotope Class A Limits	ISO_CLASS_A_LIM	FLOAT	
Isotope Class B Limits	ISO_CLASS_B_LIM	FLOAT	
Isotope Class C Limits	ISO_CLASS_C_LIM	FLOAT	
Isotope Class 1 Limits	ISO_CLASS_1_LIM	FLOAT	
Isotope Class 3 Limits	ISO_CLASS_3_LIM	FLOAT	
Isotope Concentration Limits	ISO_CONSTR_LIM	FLOAT	
Isotope Conversion Factor	ISO_CONV_FACTR	FLOAT	
Isotope Dose Equivalence Curie Factor	ISO_DE_CT_FACTR	FLOAT	
Isotope Daughter Products Isotope No.	ISO_DTR_ISO	NUMBER(3)	
Isotope Daughter Products Factor	ISO_DTRPRD_FACTR	FLOAT	
Isotope Enrichment	ISO_ENRICH	VARCHAR2(1)	
Isotope Half Life	ISO_HALFIFE	FLOAT	
Isotope Mixed Activation Prod. Factor	ISO_MAP_FACTR	FLOAT	
Isotope Mixed Activation Products Name	ISO_MAP_NAME	VARCHAR2(5)	
Isotope Mixed Fission Products Factor	ISO_MFP_FACTR	FLOAT	
Isotope Name	ISO_NAME	VARCHAR2(20)	
Isotope Unit	ISO_UNIT	VARCHAR2(2)	
<u>Phase 3 Data Elements:</u>			
Isotope Fissile Gram Equivalent Factor	ISO_FGE_FACTR	FLOAT	
Isotope Plutonium Equivalent Ci Factor	ISO_PE_CI_FACTR	FLOAT	
Isotope Alpha Curie Factor	ISO_ALPHA_CI_FACTR	FLOAT	

Laboratory Table (LAB) - SWITS Lookup Table

This entity identifies all the laboratories available to test waste samples.

Laboratory ID	*LAB_ID	VARCHAR2(6)	R
Laboratory Name	LAB_NAME	VARCHAR2(30)	

Laboratory Analysis Table (LABANAL)

The table defines the specifics associated with an analysis.

Laboratory Analysis Code	*LABANAL_CD	VARCHAR2(8)	R
Laboratory Analysis Container Count	LABANAL_CNTR_COUNT	NUMBER(1)	
Laboratory Analysis Container Type Code	*LABANAL_CNTP CD	VARCHAR2(3)	
Laboratory Analysis Description	LABANAL_DESCR	VARCHAR2(20)	
Laboratory Analysis Preservative	LABANAL_PRESERV	VARCHAR2(12)	
Laboratory Analysis Required Volume	LABANAL_REQD_VOL	NUMBER(4)	

Location Table (LOCN)

This table is used to validate WRAP facility locations.

Location ID	*LOCN_ID	VARCHAR2(10)	R
Location Description	LOCN_DESCR	VARCHAR2(60)	

Material Table (MATL)

This table is used to validate detailed descriptions for waste packet group codes.

Material Group Code	*MATL_GRP_CD	VARCHAR2(2)	R
Material Group Description	MATL_GRP_DESCR	VARCHAR2(30)	

Material Safety Data Sheets (MSDS) - SWITS Data Table

The reference number and description of Material Safety Data Sheets.

Material Safety Data Sheet ID	*MSDS_ID	VARCHAR2(6)	R
Material Safety Data Sheet Description	MSDS_DESCR	VARCHAR2(40)	

Person Table (PERSON)

This entity keeps track of all the persons associated with SWITS, whether they are users or not.

Person ID	*PERS_ID	VARCHAR2(6)	R
Person City	PERS_CITY	VARCHAR2(15)	
Person Company ID	*PERS_CMPNY_ID	VARCHAR2(4)	
Person Company Type	*PERS_CMPNY_TYPE	VARCHAR2(3)	
Person MSIN	PERS_MSIN	VARCHAR2(5)	
Person Name	PERS_NAME	VARCHAR2(20)	
Person Phone Number	PERS_PHONE	VARCHAR2(12)	
Person State Code	*PERS_STATE_CD	VARCHAR2(2)	
Person Street	PERS_STREET	VARCHAR2(36)	
Person Zip Code	PERS_ZIP_CD	VARCHAR2(10)	

Physical Component Description Table (PHYSDESC) - SWITS Data Table

A list of all physical components that may be present in a waste container is maintained by this entity.

Physical Description	*PDESC_DESCR	VARCHAR2(30)	R
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Package Status Table (PKGSTAT)

A table defining the various status codes which may be associated with a package during its existence, the edits which must be passed for other data about the package, and who owns the data.

Package Status	*PKS_STATUS	VARCHAR2(1)	R
Package Status Description	PKS_DESCR	VARCHAR2(60)	
Package Status Edit	PKS_EDIT	VARCHAR2(1)	
Package Owner	PKS_OWNER	VARCHAR2(3)	

Primary Waste Type Code Table (PRIWASTYPE) - SWITS Data Table

The entity identifies a particular grouping of waste types that are considered as primary to a particular container which includes radioactive waste.

Primary Waste Type Code	*PWTYP_CD	VARCHAR2(2)	R
Primary Waste Type Description	PWTYP_DESCR	VARCHAR2(20)	

Primary Waste Type Hazardous	PWTYP_HAZ	VARCHAR2(1)
Primary Waste Type Radioactive	PWTYP_RAD	VARCHAR2(1)
Primary Waste Type Ship Time	PWTYP_SHIP_TIME	NUMBER(3)

Generator Assay Profile Table (PROFILE)

This table provides a definition of the source of an isotopic profile for a specific waste stream.

Profile ID	*PROF_ID	VARCHAR2(6)	R
Profile Description	PROF_DESCR	VARCHAR2(50)	
Profile Date	PROF_DT	DATE	

Profile Isotopic Table (PROFILEISO)

This table provides the specific isotopic profile data required to support calculations of isotopic quantities during NDA operations.

Profile Isotopic Profile ID	•*PISO_PROF_ID	VARCHAR2(6)	R
Profile Isotopic Name	•*PISO_ISO_NAME	VARCHAR2(8)	R
Profile Relative Abundance	PISO_RABUND	FLOAT	
Profile Relative Abundance TMU	PISO_TMU	FLOAT	

Report Table (REPORTABLE)

This entity supports the report preparation activity.

Report Table Name	*RPT_NAME	VARCHAR2(8)	R
Report Table Generator Specific	RPT_GENSPEC	VARCHAR2(1)	
Report Table Select	RPT_SELECT	VARCHAR2(8)	
Report Table Timing	RPT_TIMING	VARCHAR2(1)	
Report Table Title	RPT_TITLE	VARCHAR2(40)	

Role Table (ROLE)

The list of roles to which users may be assigned, such as Generator.

Role Code	*ROLE_CD	VARCHAR2(6)	R
Role Description	ROLE_DESCR	VARCHAR2(60)	

Role Screen Relationship Table (ROLESCREEN)

The entity relates the screen and its access to a particular role.

Role Screen Role Code	•*RSCRN_ROLE_CD	VARCHAR2(6)	R
Role Screen Screen Name	•*RSCRN_SCRN_NAME	VARCHAR2(8)	R
Role Screen Screen Access for Role	RSCRN_ACCESS	VARCHAR2(1)	

Route Description Table (ROUTE)

This table defines the WRAP Process routes used to transfer waste containers from various waste streams through the facility.

Route Code	*ROUTE_CD	VARCHAR2(4)	R
Route Description	ROUTE_DESCR	VARCHAR2(25)	

Sample Container Type (SAMPCONTYP)

The table defines the containers to be used during sample collection.

Sample Container Type Code	*SAMP_CNTYP_CD	VARCHAR2(3)	R
Sample Container Description	SAMP_CNTR_DESCR	VARCHAR2(30)	

Sample Matrix Table (SAMPMATX)

The table defines the physical matrices for a given sample ID

Sample Matrix Code	*SAMPMATX_CD	VARCHAR2(3)	R
Sample Matrix Description	SAMPMATX_DESCR	VARCHAR2(12)	

Sampling Method (SAMPMETH)

This table shall be used to define the methods used to obtain samples in WRAP.

Sampling Method Code	*SAMPLING_METHOD_CD	VARCHAR2(4)	R
Sampling Method Description	SAMPLING_METHOD_DESCR	VARCHAR2(30)	

Screen Table (SCREEN)

The list of screens which are within the DMS System.

Screen Name	*SCRN_NAME	VARCHAR2(8)	R
Screen Title	SCRN_TITLE	VARCHAR2(40)	

Secondary Waste Type Code Table (SECWASTYPE) - SWITS Data Table

The occurrences of this entity define the particular kind of waste in a container.

Secondary Waste Type Code	*SWTYP_CD	VARCHAR2(2)	R
Secondary Waste Type Group	SWTYP_GROUP	VARCHAR2(3)	
Secondary Waste Type Description	SWTYP_DESCR	VARCHAR2(50)	

Shipping Pick List Type (SHIPPICKTYP)

Table to identify and group containers, based on waste type, for retrieval from the AS/RS for shipment.

Shipping Pick List Type Code	*SHIPPICKTYP_CD	VARCHAR2(4)	R
Shipping Pick List Type Description	SHIPPICKTYP_DESCR	VARCHAR2(24)	

SIE Isotopic Name Table (SIEISO)

This table provides a reference to the isotope descriptions and isotopic numbers used in WRAP 1 assays.

SIE Isotopic Name	*SIE_ISO_NAME	VARCHAR2(8)	R
SIE Isotopic Number	*SIE_ISO_NUM	NUMBER(3)	

State Table (STATE) - SWITS Data Table

This table identifies all states involved with the generation, transportation, or disposition of waste tracked by the SWITS system.

State Code	*STATE_CD	VARCHAR2(2)	R
State Name	STATE_NAME	VARCHAR2(15)	

Storage Category Table (STORAGECAT) - SWITS Data Table

Each waste container is assigned a specific storage category that groups the types of waste stored within the container. This entity identifies each possible category.

Storage Category Code	*SCAT_CD	VARCHAR2(3)	R
Storage Category	SCAT_CATEGORY	VARCHAR2(20)	

Treatment Procedure (TREATPROC)

(Journal)

This record provides a description of the WRAP 1 treatment procedure for waste in the RWM gloveboxes.

Treatment Procedure Number	*TREAT_PROC_NUM	VARCHAR2(14)	R
Treatment Procedure Revision Number	*TREAT_PROC_REV_NUM	VARCHAR2(4)	R
Treatment Procedure Author	TREAT_PROC_AUTHOR	VARCHAR2(30)	
Treatment Procedure Description	TREAT_PROC_DESCR	VARCHAR2(30)	
Treatment Procedure Expiration Date	TREAT_PROC_EXP_DT	DATE	

TRUCON Code Table (TRUCON)

This table lists the WIPP TRUCON codes used to describe the source and type of waste to be shipped to WIPP.

TRUCON Code	*TRUCON_CD	VARCHAR2(6)	R
TRUCON Description	TRUCON_DESCR	VARCHAR2(90)	

TRU Shipping Category Table (TRUSHIPCAT)

This table defines the TRUPACT 11 shipping categories and their applicable decay heat limits for waste shipped to the WIPP facility. The shipping categories define the waste type, packaging configuration, and decay heat limits for the waste streams.

TRU Shipping Category Code	*TRUSHIPCAT_CD	VARCHAR2(7)	R
TRU Shipping Category Description	TRUSHIPCAT_DESCR	VARCHAR2(90)	
RUPACT Container Limit	TRUSHIPCAT_CON_LIM	NUMBER(5,4)	
TRUPACT Cask Limit	TRUSHIPCAT_CASK_LIM	NUMBER(5,4)	

TSD Facility Table (TSDFACIL) - SWITS Data Table

This table identifies the treatment, storage, and disposal facilities involved with storage and disposition of waste tracked by SWITS.

TSD Facility ID	*TFAC_FACIL_ID	VARCHAR2(11)	R
TSD Manifest Address	TFAC_MFST_ADDR	VARCHAR2(40)	
TSD Scheduler	*TFAC_SCHEDULER	VARCHAR2(6)	
TSD Supervisor	*TFAC_SUPERVISOR	VARCHAR2(6)	

User Role Relationship Table (USERROLE)

The entity relates the screen and its access to a particular role.

User Role User Id	*URL_USERID	VARCHAR2(7)	R
User Role Role Code	*URL_ROLE_CD	VARCHAR2(6)	R

User Table (USERS)

(Journal)

Each functional, system manager, and developer user of DMS is maintained by occurrences of this entity.

User ID	*USR_USERID	VARCHAR2(7)	R
User Account	USR_ACCOUNT	VARCHAR2(6)	
User Bulletin Date	USR_BULL_DT	DATE	
User Logon Date	USR_LOGON_DT	DATE	
User Name	USR_NAME	VARCHAR2(20)	
User Organization	USR_ORG	VARCHAR2(5)	
User Person ID	*USR_PERS_ID	VARCHAR2(6)	
User Print Deliver To	USR_PR_DELIVER	VARCHAR2(20)	
User Printed Where	USR_PR_WHERE	VARCHAR2(8)	

User Term Type	USR_TERM_TYPE	VARCHAR2(6)
User Train Date	USR_TRAIN_DT	DATE

User Signature Password (USERSIGNPASS)

The entity is used to store the signature password for a User Id in a secured area.

User Signature Password User ID	•*UP_USERID	VARCHAR2(7) R
User Signature Password	U UP_SP	VARCHAR2(10)

WRAP Miscellaneous Table (WRAPMISC)

This table will contain miscellaneous values to be used during setup or processing of the WRAP 1 DMS. The data fields may be used to store constants for use in the DMS programming or selected data ranges.

WRAP Field Name	*WRAP_FIELD_NAME	VARCHAR2(24) R
WRAP Value	*WRAP_CODE_VALUE	VARCHAR2(12) R
WRAP Description	WRAP_CODE_DESCR	VARCHAR2(70)

C.2 DMS DATA ELEMENT DESCRIPTIONS

Section C.2 provides descriptions for each of the data elements in the DMS database. This section follows the same alphabetical data record organization and sequence as Section C.1.

C.2.1 Data Record Tables Element Descriptions

<u>Activity Comment_Record (ACTCOM)</u> **ACT_PKG_ID	VARCHAR2(14) Required	Activity Comment Package ID	Associates the activity comments with a particular PIN. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
*ACT_DT	DATE Required	Activity Date	Date of activity comment. Domain: Oracle format date.
ACT_CD	VARCHAR2(10)	Activity Comment Activity Code	Type of activity that comments were made against which includes receipt inspection, assay, examination, treatment, or repackaging. Domain: Alphanumeric; WRAP Miscellaneous Table (WRAPMISC) WRAP_FIELD_NAME = ACT_CD. 'RECEIVING' 'STORAGE' 'AGV' 'NDE' 'PAN' 'GEA' 'BWAS' 'LLW GB' 'LLWRWM GB' 'TRU GB' 'TRURWM GB' 'SHIPPING'

ACT_COMMENTS	VARCHAR2(255)	Activity Comment Operator Comments	Comments generated by an operator during receipt inspection, assay, examination, treatment, or repackaging waste (multiple occurrences). Domain: Alphanumeric.
•ACT_OP_ID	VARCHAR2(7)	Activity Comment Operator ID	Identifier of person performing a specific activity in WRAP Module 1 such as NDE, NDA, packaging the waste, sampling, or treating. Domain: Alphanumeric. Must match a user ID in the User table (USR_USERID).
<u>Applicable MSDS (APPMSDS)</u> - SWITS Data Record			
•APP_PKG_ID	VARCHAR2(14) Required	Applicable Package ID Number	Package ID associated to an Material Safety Data Sheet (MSDS). Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
•APP_MSDS	VARCHAR2(6) Required	Applicable MSDS	The identifier of the applicable MSDS as described in the Material Safety Data Sheets table (MSDS). Domain: Material Safety Data Sheet Table (MSDS) MSDS_ID.
<u>Bin List (BIN)</u>			
*BIN_NUM	VARCHAR2(3) Required	Bin Number	The bin location returned from the AS/RS when a pallet is put into storage. Domain: Alphanumeric.
U*BIN_PKG_ID	VARCHAR2(14) Required	Bin Package ID	The package ID of a the drums on the pallet. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).

<u>Bottle Data Record (BOTTLE)</u> *BOT_BOTTLE_ID	VARCHAR2(12) Required	Bottle ID	The unique identification number assigned to the individual sample bottle. Domain: Alphanumeric. Format shall be YY-NNNN-BBL where YY = year NNNN = sequential sample number BB = bottle number 'L' = laboratory sample.
•BOT_SAMPLE_ID	VARCHAR2(8)	Bottle Sample ID	The unique identification of the sample itself. Domain: Alphanumeric. Format shall be YY-NNNN where YY = year NNNN = sequential sample number. Must be in SAM_SAMPLE_ID.
BOT_COMMENTS	VARCHAR2(255)	Bottle Comments	Comments by the user about the sample bottle. Domain: Alphanumeric.
BOT_DISP_BY	VARCHAR2(15)	Bottle Disposed By	Identifies the person responsible for the final disposal of the sample bottle. Domain: Alphanumeric.
BOT_DISP_DT	DATE	Bottle Disposal Date	The date that the sample bottle was disposed. Domain: Oracle format date.
BOT_DISP_METHOD	VARCHAR2(25)	Bottle Disposal Method	The method used for final disposal of the bottle. Domain: Alphanumeric.
BOT_OK_AT_LAB	VARCHAR2(1)	Bottle OK at Laboratory	Yes/No code to indicate whether a bottle arrived at the laboratory intact. Domain: 'Y' or 'N'.

BOT_RETURN_TO_PKG	VARCHAR2(1)	Bottle Returned To Package	Yes/no code indicating whether the bottle of sample has been returned or not. Domain: 'Y' or 'N'.
BOT_RETURN_DT	DATE	Bottle Return Date	The date the bottle of sample is returned. Domain: Oracle format date.
<u>Bottle Analysis Record</u> **BOTANAL_BOTTLE_ID	VAR2(12) Required	Bottle Analysis Bottle ID	The unique identification number assigned to the individual sample bottle. Domain: Alphanumeric. Format shall be YY-NNNNN-BBL where YY = year NNNNN = sequential sample number BB = bottle number 'L' = laboratory sample. Must be in BOT_BOTTLE_ID.
**BOTANAL_AMAL_CD	VAR2(8) Required	Bottle Analysis Analysis Code	Code relating a specific analysis to a sample bottle. Domain: Alphanumeric. Lookup to Laboratory Analysis table (LABANAL) LABANAL_CD.
BOTANAL_REQUEST_FLAG	VAR2(1)	Bottle Analysis Requested Flag	Flag indicating that an analysis is requested for the sample bottle.
BOTANAL_PERFORM_FLAG	VAR2(1)	Bottle Analysis Performed Flag	Flag indicating that an analysis was actually performed on the sample bottle.

<p><u>Hazardous Chemical Component Record</u> (CHEMCOMP) •*HAZ_PKG_ID</p>	<p>- SWITS Data Record Hazardous Package ID Required</p>	<p>VARCHAR2(14)</p>	<p>The unique package identification number that is assigned to the outer waste package. The number is assigned by the waste generator and is used for tracking all waste. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).</p>
<p>•*HAZ_COMP_ID</p>	<p>Hazardous Chemical Component ID Required</p>	<p>VARCHAR2(12)</p>	<p>Unique identification of a hazardous chemical component. The hazardous chemical ID must be in the HAZCOMP table. Domain: Hazardous Chemical Component Table (HAZCOMP) HCC_ID.</p>
<p>HAZ_COMP_PPM</p>	<p>Hazardous Chemical Component Parts Per Million</p>	<p>VARCHAR2(7)</p>	<p>The portion of the waste in a container of a chemical component such as heavy metal, polychlorinated biphenyl. Domain: Alphanumeric. Units are parts per million (ppm).</p>
<p>HAZ_COMP_TEXT</p>	<p>Hazardous Chemical Component Text</p>	<p>VARCHAR2(70)</p>	<p>The name of the hazardous chemical component. Domain: Derived from Hazardous Chemical Component Table (HAZCOMP) HCC_DESCR (not maintained).</p>
<p>HAZ_COMP_WGT</p>	<p>Hazardous Chemical Component Weight</p>	<p>NUMBER(12,4)</p>	<p>The weight of a hazardous chemical component found in a specific waste container. Domain: Numeric. Must be > 0. Units are kilograms.</p>
<p>HAZ_COMP_WGT_PCT</p>	<p>Hazardous Chemical Component Weight Percent</p>	<p>VARCHAR2(7)</p>	<p>The percent by weight of a component. Relates to container Waste Weight (CON_WASTE_WGT). Domain: Alphanumeric.</p>

HAZ_EPCRA_FLAG	VARCHAR2(1)	Hazardous Chemical Component Emergency Planning and Community Right-to-Know Act (EPCRA) Flag	Flag indicating that this waste is reportable according to EPCRA, also known as Title III of the Superfund Amendments Reauthorization Act (SARA). Domain: 'Y', 'N', or null.
<u>Chain of Custody (COC)</u> *COC_FORM_ID	VARCHAR2(10) Required	Chain of Custody Form ID	This unique identifier is used to track the samples to the COC form. Domain: Alphanumeric.
COC_BILL_LADING	NUMBER(25)	Chain of Custody Bill of Lading/Air Bill Number	The bill of lading number for the samples shipped to the laboratory. Domain: Numeric.
COC_CHEST_ID	VARCHAR2(11)	Chain of Custody Ice Chest ID Number	Identification number of the ice chest used to ship samples to the laboratory. Domain: Alphanumeric.
COC_HAZ_REMARKS	VARCHAR2(255)	Chain of Custody Possible Sample Hazard/Remarks	Remarks or comments describing any hazardous conditions pertaining to the samples. Domain: Alphanumeric.
*COC_LAB_ID	VARCHAR2(6)	Chain of Custody Laboratory ID	The identifier for the laboratory to which the sample is sent. Domain: Alphanumeric (Lookup to Laboratory table (LAB) LAB_ID).
COC_LOG_ID	VARCHAR2(20)	Chain of Custody Log ID	Identifies the log book in which the COC entries exist. Domain: Alphanumeric.
COC_METH_SHIPMENT	VARCHAR2(20)	Chain of Custody Method of Shipment	Method used to ship the samples to the laboratory. Domain: Alphanumeric.

•COC_PERS_ID	VARCHAR2(6)	Chain of Custody Company Contact	ID of the person who is the facility point of contact pertaining to the samples. Domain: Alphanumeric. Lookup to PERSON_PERS_ID.
COC_PROJ_DESIG	VARCHAR2(25)	Chain of Custody Project Designation	Project designation for the sampling activities. Domain: Alphanumeric.
COC_PROPERTY_NUM	NUMBER(14)	Chain of Custody Offsite Property Number	Any other property numbers that need to be tracked along with the sample numbers. Domain: Numeric.
COC_SAF_NUM	NUMBER(10)	Chain of Custody SAF Number	Unique number provided by HSAM to track samples. Domain: Numeric.
COC_SHIP_DT	DATE	Chain of Custody Shipment Date	Date of shipment of the sample to the laboratory. Domain: Oracle format date.
COC_SPEC_HANDLING	VARCHAR2(255)	Chain of Custody Special Handling or Storage	Special handling instructions for the samples. Domain: Alphanumeric.
COC_SPEC_INSTRUCTION	VARCHAR2(255)	Chain of Custody Special Instructions	Special instructions pertaining to the sample. Domain: Alphanumeric.
COC_TURN_AROUND	VARCHAR2(1)	Chain of Custody Data Turnaround	Turn-around time that a laboratory is expected to return the analysis results on samples. Domain: Alpha 'P' = Priority 'N' = Normal.

<u>Chain_of_Custody_Transfer</u> (COCXFR) •*COCXFR_PKG_ID	VARCHAR2(14) Required	Chain of Custody Transfer Pkg ID	ID of the exterior package used to transport one or more samples. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
•*COCXFR_DT	DATE Required	Chain of Custody Transfer Date	Date that a transfer of custody occurs. Domain: Oracle format date.
•COCXFR_RECVD_BY_OP_ID	VARCHAR2(6)	Chain of Custody Transfer Received By Operator	ID of the operator who receives custody of samples. Domain: Alphanumeric. Lookup to Person table PERS_ID.
•COCXFR_RELIN_BY_OP_ID	VARCHAR2(6)	Chain of Custody Transfer Relinquished By Operator	ID of the operator who relinquishes custody of samples. Domain: Alphanumeric. Lookup to Person table PERS_ID.
<u>Communication_Table</u> (COMMUNICATION_TABLE) COMM_FROM	VARCHAR2(8)	Communication From	Identifies where the message was initiated from (i.e., DMSCOM, SQL*FORMS program, etc). Domain: Alphanumeric.
COMM_TO	VARCHAR2(8)	Communication To	Identifies where the message is being sent (i.e., DMSCOM, SQL*FORMS program, etc). Domain: Alphanumeric.
COMM_MSG_ID	VARCHAR2(20)	Communication Message ID	Identifier for message. Domain: Alphanumeric.
COMM_MSG_TEXT	VARCHAR2(80)	Communication Message Text	Additional text for message. Domain: Alphanumeric.

COMM_PRIORITY	NUMBER(3)	Communication Priority	Priority for message. Lower the number, higher the priority. Domain: Numeric.
COMM_DT	DATE	Communication Date	Date/Timestamp of message. Domain: Oracle format date.
Container_Location (CONLOC) •*CONLOC_PKG_ID	VARCHAR2(14) Required	Container Package ID	The unique package identification number that is assigned to the outer waste package. The number is assigned by the waste generator and is used for tracking all waste. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
CONLOC_DT	DATE	Container Location Date	Date and time that the waste container was moved to the current location. Domain: Oracle format date.
•CONLOC_LOCN_ID	VARCHAR2(10)	Container Location ID	Name of a location within WRAP Module 1 where waste item or empty drum is stored or processed. Domain: Alphanumeric. Lookup to LOCATION Table LOCN_ID.
Container_Relationship_Record (CONREL) •*CONR_FROM_PKG_ID	(CONREL) - SWITS VARCHAR2(14) Required	Data Record Container Relationship From Package ID	The package ID from which the contents were moved. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).

<p>•*CONR_TO_PKG_ID</p>	<p>VAR2CHAR(14) Required</p>	<p>Container Relationship To Package ID</p>	<p>The package ID to which the contents were moved. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).</p>
<p>*CONR_DT</p>	<p>DATE Required</p>	<p>Container Relationship Date</p>	<p>The date the repackaging took place. Domain: Oracle format date.</p>
<p>CONR_REL_CD</p>	<p>VAR2CHAR(1)</p>	<p>Container Relationship Code</p>	<p>The relationship between the two containers. Domain: 'C' = Combine (the contents of several containers being placed into one) 'O' = Overpack (a container and its contents being placed in another container) 'S' = Split (the contents of one container being distributed to several others) 'W' = WRAP-generated container relationship; may be many to many.</p>
<p>Container Treatment</p>	<p>(CONTREAT)</p>	<p>•*CONTREAT_PKG_ID</p>	<p>The package ID of a container to be treated with the following treatment worksheet. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).</p>
<p>*CONTREAT_DT</p>	<p>DATE Required</p>	<p>Container Treatment Date</p>	<p>Date that the treatment is performed on the container. Domain: Oracle format date.</p>

CONTREAT_COMMENT	VARCHAR2(255)	Container Treatment Comments	Comments by the user about the treatment process. Domain: Alphanumeric.
•CONTREAT_USER_ID	VARCHAR2(7)	Container Treatment User ID	User ID of the person performing the treatment process. Domain: Alphanumeric. Lookup to USERS_USR_USERID.
CONTREAT_WS_ID	VARCHAR2(8)	Container Treatment Worksheet ID	The worksheet ID that describes the treatment process to be performed. Domain: Alphanumeric.
<u>Discharge Conveyor List (DISCHARGE)</u> *DISCHARGE_SEQ_NUM	NUMBER(12) Required	Discharge Conveyor Sequence Number	Record sequence number assigned by Oracle. Domain: Numeric; whole number ≤ 5.
•DISCHARGE_PKG_ID	VARCHAR2(14)	Discharge Conveyor Package ID	Package ID of a container on the discharge conveyor. Used to display the waste characteristics of the container to the user at the discharge conveyor to plan the makeup of the pallets to go into the AS/RS. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).

<u>Field_Screening_Record (FIELDSCRN)</u>			
**SCRN_PKG_ID	VARCHAR2(14) Required	Field Screening Package ID	The unique package identification number that is assigned to any waste packet which undergoes field screening. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
*SCRN_ID	VARCHAR2(12) Required	Field Screening ID	The unique identification number for samples taken during field screening operations. Domain: Alphanumeric. Format shall be YY-NNNN-BBF where YY = year NNNN = sequential sample number BB = '01' for field screening sample 'F' = field screening sample
SCRN_COMMENTS	VARCHAR2(255)	Field Screening Comments	Operator comments about the field screening. Domain: Alphanumeric.
SCRN_DT	DATE	Field Screening Date	Date that the field screening took place. Domain: Oracle format date.
•SCRN_LOCN_ID	VARCHAR2(10)	Field screening Location	Location where the field screening activity takes place (Process Area gloveboxes) Domain: Alphanumeric. Must be in Location table (LOCN_LOCN_ID).
•SCRN_PERS_ID	VARCHAR2(6)	Field Screening Person	ID of person who takes the field screening sample Domain: Alphanumeric. Lookup to PERSON_PERS_ID.

SCRN_SAMPLE_VOL	NUMBER(4)	Field Screening Sample Volume	Volume of the field screening sample. Domain: Numeric, units are in milliliters.
•SCRN_SAMPLING_METHOD_CD	VARCHAR2(4)	Field Screening Sampling Method Code	Defines the method used to obtain the field screening sample. Domain: Alphanumeric. Lookup to Sampling Method table (SAMPMETHOD SAMPLING_METHOD_CD).
SCRN_VER_PASS_FLAG	VARCHAR2(1)	Field Screening Verification Pass Flag	Designates that the field screening results confirmed the data provided by the generator. Domain: Alpha (Y or N).
Field Analysis_(FIELDANAL) •*FIELD_SCRN_ID	VARCHAR2(12) Required	Field Analysis Field Screening ID	This unique identifier relates the required analysis to the field sample that is taken. Domain: Alphanumeric. Format shall be YY- NNNNN-O1F where YY = Year NNNNN = sequential sample number 'O1F' = field screening sample. Must match screening ID in Field Screening Table (SCRN_ID).
•*FIELD_FAT_CD	VARCHAR2(4) Required	Field Analysis Code	This code is used to uniquely identify the screening analysis to be performed in WRAP. Domain: Alphanumeric. Must be in Field Analysis Type table (FLDANALTYFAT_CD).

FIELD_RES	VARCHAR2(30)	Field Analysis Results	This data element is used to record the field analysis results obtained during field screening operations. Domain: Alphanumeric.
<u>Hazardous Waste Container Detail Record (HAZDETAIL)</u> - SWITS Data Record			
**HDET_PKG_ID	VARCHAR2(14) Required	Hazardous Detail Package ID	The unique package identification number assigned to a hazardous waste container package. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
HDET_CNTR_STATUS	VARCHAR2(2)	Hazardous Detail Container Status	Status codes of an hazardous waste container. Domain: (CODECHECK) 'MT' = empty 'TR' = triple rinsed 'F' = full 'PF' = part full.
HDET_DESIG_CD	VARCHAR2(3)	Hazardous Detail Designation Code	The designation type applied to hazardous, mixed-radioactive and PCB waste in this waste package. Washington Administrative Code (WAC) 173-303 provides the criteria for these solid waste types. Domain: (CODECHECK) 'D' = dangerous waste 'E' = extremely hazardous waste 'RD' = radioactive dangerous waste 'RE' = radioactive extremely hazardous waste.

HDET_DW_NUM	VARCHAR2(85)	Hazardous Detail Dangerous Waste Numbers	Provides a list of all the dangerous waste numbers applying to the waste in this package. This list contains 1 to 14 four-character dangerous waste numbers. Each set is separated by a single blank. Each set is validated to the dangerous waste numbers in the DWNUM table. These sets are automatically sorted into the proper order using the sort information in the DWNUM table. Domain: Dangerous Waste Numbers Table (DWNUM) DW_NUM.
HDET_FLASHPOINT	VARCHAR2(6)	Hazardous Detail Flashpoint	Description of Flashpoint of the contents, necessary only for a flammable material. Domain: Alphanumeric. 'F' = Fahrenheit 'C' = Celsius.
HDET_HAZPROP_CD	VARCHAR2(6)	Hazardous Detail Hazardous Property Codes	Identifies the Hazardous property categories applicable to the waste in this container. Domain: (CODECHECK) 'C' = corrosive 'E' = explosive 'I' = ignitable 'P' = persistent 'T' = toxic 'X' = carcinogenic.

HDET_IND_DOT_ID_NUM

VARCHAR2(5)

Hazardous Detail
Individual DOT ID
Number

This field is used when a container has the option of being shipped separately. "Standard" shipping information for groups of containers is stored in the shipping records.

DOT identification number for waste in this individual container. The DOT identification number assigned to hazardous materials is given in the 49 CFR table 172.101. The numbers prefixed with 'UN' are appropriate for both international and domestic shipments. Those preceded by 'NA' are not recognized for international shipments except to and from Canada.
Domain: Alphanumeric.

HDET_IND_NOS_DESCR

VARCHAR2(60)

Hazardous Detail
Individual Not
Otherwise Specified
Description

This field is used when a container has the option of being shipped separately. "Standard" shipping information for groups of containers is stored in the shipping records.

Text description of the two main hazardous components in the waste in this container. When waste is listed as Not Otherwise Specified (NOS), the two main hazardous components must be listed on the manifest. This field will be null if the shipping name HDET_DOT_ID_NUM doesn't indicate NOS.
Domain: Alphanumeric.

HDET_IND_SHIP_NAME

VARCHAR2(80)

Hazardous Detail
Individual Shipping
Name

This field is used when a container has the option of being shipped separately. "Standard" shipping information for groups of containers is stored in the shipping records.

Proper shipping name for waste in this container. All DOT hazardous materials have a proper shipping name. This name is found in 49 CFR 172.101. The DOT hazardous class, DOT identification number, DOT label, and the package ID are related to this proper shipping name. Domain: Alphanumeric.

HDET_LANDBAN

VARCHAR2(17)

Hazardous Detail
Land Banned

Codes indicating whether the dangerous waste number of the waste associated with this hazardous, mixed-radioactive and/or PCB waste package is regulated as "Land Banned". These codes have a one-to-one relationship to the sets of dangerous waste numbers in HDET DW NUM. A 'Y' or 'N' must be assigned for each set of dangerous waste numbers. DW LANDBAN contains a 'Y' for wastes that are land banned and a null for wastes that are sometimes land banned. In this detail record WMP must supply the 'Y' or 'N' for the wastes that are sometimes land banned. Domain: Alphanumeric.

HDET_OTHER_LANDBAN_1 VARCHAR2(8) Hazardous Detail
 Other Land Banned 1

Codes indicating particular instances of waste without dangerous waste numbers associated with this hazardous, mixed-radioactive and/or PCB waste package that are regulated as "Land Banned". Domain:
 (CODECHECK)
 'HOC' when HOC >= 1000 ppm
 'PCB' when PCB >= 50 ppm
 'NICKEL' when NI >= 134 ppm
 'THALLIUM' when TI >= 130 ppm
 'PH<2' when PH <= 2 (liquid)
 'PH>12' when PH >= 12.5
 (liquid).

HDET_OTHER_LANDBAN_2 VARCHAR2(8) Hazardous Detail
 Other Land Banned 2

Codes indicating particular instances of waste without dangerous waste numbers associated with this hazardous, mixed-radioactive and/or PCB waste package that are regulated as "Land Banned". Domain:
 (CODECHECK)
 'HOC' when HOC >= 1000 ppm
 'PCB' when PCB >= 50 ppm
 'NICKEL' when NI >= 134 ppm
 'THALLIUM' when TI >= 130 ppm
 'PH<2' when PH <= 2 (liquid)
 'PH>12' when PH >= 12.5
 (liquid).

HDET_OTHER_LANDBAN_3	VARCHAR2(8)	Hazardous Detail Other Land Banned 3	Codes indicating particular instances of waste without dangerous waste numbers associated with this hazardous, mixed-radioactive and/or PCB waste package that are regulated as "Land Banned". Domain: (CODECHECK) 'HOC' when HOC >= 1000 ppm 'PCB' when PCB >= 50 ppm 'NICKEL' when NI >= 134 ppm 'THALLIUM' when TI >= 130 ppm 'PH<2' when PH <= 2 (liquid) 'PH>12' when PH >= 12.5 (liquid).
HDET_PCB_DESCR	VARCHAR2(40)	Hazardous Detail PCB Description	Standard description of PCB contents valid for PCB wastes only. Validated against the miscellaneous codes table. Domain: Miscellaneous Code Table (CODECHECK) CODE_FIELD_NAME = PCB_DESCR
HDET_PCB_PPM	VARCHAR2(6)	Hazardous Detail PCB Parts Per Million	Concentration of PCB material. Domain: (CODECHECK) '<2', '2-49', '50-499', '>499'.
HDET_PCB_REMOVED_DT	DATE	Hazardous Detail PCB Removed Date	Date PCB item was removed from service and became PCB waste. Domain: Oracle format date or null.

DET_PCB_SUBTYPE	VARCHAR2(1)	Hazardous Detail PCB Sub-Type	Storage category code for hazardous, mixed-radioactive and/or PCB solid waste. One-character code defining the PCB according to sub-type. Domain: (CODECHECK) 'C' = Container 'E' = Contaminated Electrical Equipment (50-499 ppm) 'P' = Capacitor 'Q' = Contaminated Electrical Equipment (\geq 500 ppm) 'R' = Article Container 'S' = Submarine Reactor Compartment 'T' = Transformer.
HDET_PCB_TYPE	VARCHAR2(1)	Hazardous Detail PCB Type	One-character code defining the type of PCB item. Domain: (CODECHECK) 'A' = Article 'C' = Container 'R' = Article container.
HDET_PCB_WGT	NUMBER(12,4)	Hazardous Detail PCB Weight	The weight of PCBs in the waste package. Domain: Numeric. Units are kilograms.
HDET_PH	VARCHAR2(5)	Hazardous Detail pH	The pH of waste package content. Domain: Alphanumeric.
HDET_WASTE_STATUS	VARCHAR2(2)	Hazardous Detail Waste Status	Status code identifying waste origin. Domain: 'S' = spilled 'U' = used 'O' = old but not used 'R' = reacted. Combinations: 'SU', 'SO', 'SR', 'RU', 'RO'.

HDET_WASTE_VOL	NUMBER(10,4)	Hazardous Detail Waste Volume	The actual volume of the hazardous waste as opposed to the container volume. This value is less than or equal to the container volume. Domain: Numeric. Units are liters.
Radioactive_Isotope_Quantity_Record (ISOQTY) - SWITS Data Record **RAD_PKG_ID	VARCHAR2(14) Required	Radioactive Package ID	The unique package identification number that is assigned to the outer waste package. The number is assigned by the waste generator and is used for tracking all waste. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
**RAD_ISO_NUM	NUMBER(3) Required	Radioactive Isotope Number	Code arbitrarily assigned for solid waste to identify a specific isotope or entity reported as an isotope, such as mixed fission products, Co-60 and Sr-90. Domain: Isotope Table (ISOTOPE) ISO_NUM.
RAD_ALPHA_CI	FLOAT	Radioactive Alpha CI	Alpha emission of listed transuranic elements (isotopes) identified in the isotope table as being measured in grams. Domain: Numeric. Must be ≥ 0 . Units are alpha curies.
RAD_PE_CI	FLOAT	Radioactive PE CI	Plutonium equivalent curies of listed transuranic elements (isotopes) identified in the isotope table as being measured in grams. Domain: Numeric. Must be ≥ 0 . Units are plutonium equivalent curies.

RAD_PU_FGE	FLOAT	Radioactive PU FGE	Plutonium 239 fissile gram equivalent of listed transuranic elements (isotopes) identified in the Isotope table as being measured in grams. Domain: Numeric. Must be ≥ 0 . Units are Plutonium 239 fissile gram equivalents.
RAD_QTY	FLOAT	Radioactive Quantity	The quantity of a radioactive isotope in the container. Domain: Numeric. Must be ≥ 0 . Units are grams or curies as defined in the Isotope Table for that isotope (ISO_UNIT).
RAD_QTY_TMU	FLOAT	Radioactive Qty Total Measurement Uncertainty	This value represents the Total Measurement Uncertainty associated with the isotopic quantities recorded in the record. Domain: Numeric.
RAD_UNKNOWN	FLOAT	Radioactive Unknown	The curie amount of unknown constituents in the package. This is calculated only for Isotope 19, Mixed Fission/Activation Products. The individual isotopes RAD_QTY with an ISO_UNIT of 'CI' is summed, then subtracted from the RAD_QTY of RAD_ISO_NUM 19. The remainder is RAD_UNKNOWN. Domain: Numeric. Must be ≥ 0 . Units are curies.

Metrics Record (METRICS)

*MET_PKG_ID	VARCHAR2(14) Required	Metric Package ID	Defines the waste package with which the metrics table entry is associated. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
*MET_DT	DATE Required	Metric Date	Date that the facility metrics record was generated Domain: Oracle format date.
MET_ASSAY_VER_FLAG	VARCHAR2(1)	Metric Assay Verified Flag	Records the current value of CONEXT_ASSAY_VER_FLAG. Domain: Alphanumeric.
MET_COMPLIANT_FLAG	VARCHAR2(1)	Metric Compliant Flag	Records the current value of CONEXT_COMPLIANT_FLAG. Domain: Alphanumeric.
MET_HAZ_VER_FLAG	VARCHAR2(1)	Metric Hazardous Materials Verified Flag	Records the current value of CONEXT_HAZ_VER_FLAG.
MET_LOCN_ID	VARCHAR2(10)	Metric Location	Data element records the current value of CONLOC_LOCN_ID. Domain: Alphanumeric. Must be in Location table (LOCN_LOCN_ID).
MET_NDE_VER_FLAG	VARCHAR2(1)	Metric NDE Verified Flag	Data element records the current value of CONEXT_NDE_VER_FLAG. Domain: Alphanumeric.
MET_SWTYP_GROUP	VARCHAR2(2)	Metric Secondary Waste Group	Data element records the current value of RDET_SWTYP_GROUP. Domain: Alphanumeric.

MET_USE_CD	VARCHAR2(2)	Metric Container Use Code	Data element records the current value of CONEXT_USE_CD. Domain: Alphanumeric.
MET_WASTE_CAT	VARCHAR2(5)	Metric Waste Category	Data element records the current value of RDET_WASTE_CAT. Domain: Alphanumeric.
MET_WRAP_STAT_CD	VARCHAR2(2)	Metric WRAP Status Code	Data element records the current value of CONEXT_WRAP_STAT_CD. Domain: Alphanumeric.
Message_Log_Record (MSGLOG) MSGLOG_DT	DATE	Message Log Date	The date and time that the message was logged. Domain: Oracle format date.
MSGLOG_ERROR_FLAG	VARCHAR2(2)	Message Log Error	Flag TRUE to indicate if any errors were found during receipt or transmittal of message. Domain: 'Y', 'N', or Null.
MSGLOG_GEN_TYPE	VARCHAR2(8)	Message Log General Type	Specifies the systems that are communicating during the message transmittal. Domain: 'DMSPCS', 'PCSDMS', 'STEDMS', 'DMSSIE', 'BWASDMS', 'DMSBWAS', 'PCSRDMS', 'DMSRSIE', 'DMSRBWAS'.
MSGLOG_SEQ_NUM	VARCHAR2(4)	Message Log Number	The sequential message log number. Domain: Whole number.

MSGLOG_SPEC_TYPE	VARCHAR2(4)	Message Log Specific Type	Specifies the type of message that is being transmitted. Domain: 'ACC', 'ADDT', 'BAA', 'BAC', 'BAS', 'CDBT', 'CL', 'CLW', 'CRIT', 'DCS', 'DD', 'FCL', 'FML', 'LSPL', 'NCIP', 'NCIT', 'NULL', 'OCW', 'OWEL', 'PAMR', 'POPD', 'PPL', 'PPLI', 'PPTP', 'WA', 'RGDB', 'RDMS', 'REMT', 'RESS', 'RID', 'RPCS', 'RSIE', 'RWPP', 'RWPT', 'SBWA', 'SDG', 'SDMS', 'SDP', 'SPCS', 'SPDP', 'SPP', 'SSIE', 'TAPL', 'TCIC', 'TCLD', 'TCPL', 'TRSP', 'TSPL'.
MSGLOG_STRING1	VARCHAR2(2000)	Message Log String - ASCII	The contents of the message received from the PCS, SIE, or BWAS. Converted to ASCII character format. The fields delimited by the tilde (~) character. Domain: Not Applicable.
MSGLOG_STRING2	LONG RAW	Message Log String - HEX	The contents of the message received from the PCS, SIE, or BWAS in HEX format. Domain: Not Applicable.
<u>NDA_Assay_Results</u> •NDA_PKG_ID	VARCHAR2(14) Required	NDA Package ID	Package ID associated with the NDA results in the message from the SIE. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
*NDA_DT	DATE Required	NDA Date	Date of assay in the message from the SIE. Domain: Oracle format date.
*NDA_ASSAY_NUM	NUMBER Required	NDA Assay Number	Unique number to identify a specific drum assay. Domain: Numeric.

NDA_FUT_EVAL_REQD	VARCHAR2(1)	NDA Future Evaluation Required	The confidence flag is true (Y) if the checks indicate discrepancies between declared and measured ratios and is false (N) if no discrepancy is identified. Domain: Alpha ('Y' or 'N').
NDA_ISO_TOT	NUMBER(3)	NDA Number of ISO Records	The number of Isotopic records to follow in this message from the SIE. Domain: Numeric (< 100).
•NDA_PROF_ID	VARCHAR2(6)	NDA Profile ID	The profile ID sent to the SIE for this assay. Domain: Alphanumeric; lookup to Generator Assay Profile Table (PROFID) PROF_ID.
NDA_RATIO	FLOAT	NDA Ratio (PU239/PU240)	The Pu239/Pu240 ratio returned in the SIE message. Domain: Numeric.
NDA_RVST_FLAG	VARCHAR2(1)	NDA Revisit Flag	The revisit flag will be used by the DMS to denote whether a revisit of the drum assay is required. Domain: Alpha ('Y' or 'N').
NDA_SWTYP_GROUP	VARCHAR2(3)	NDA Secondary Waste Type Group	The secondary waste type group code, LLW or TRU, returned in the SIE message. Domain: Alphanumeric (Lookup to SECMWASTE Table SWTYP_GROUP).
NDA_THERMAL_POWER	FLOAT	NDA Thermal Power	Thermal Power in watts/cu.ft. The value reported from the SIE will be in WATTS which will be converted to W/cu.ft prior to storing in the DMS. Domain: Numeric.

NDAISO_PAN_ACTIVE	VARCHAR2(2)	NDA Isotopic PAN Active Data Used	The PAN active detector chain used or not, A, B, or NO, as reported in the message from the SIE. Domain: Alphanumeric. 'A', 'B', or 'NO'.
NDAISO_PAN_PASSIVE	VARCHAR2(2)	NDA Isotopic PAN Passive Data Used	The PAN passive detector chain used or not, A, B, or NO, as reported in the message from the SIE. Domain: Alphanumeric. 'A', 'B', or 'NO'.
NDAISO_QTY	FLOAT	NDA Isotopic Quantity	The radionuclide quantity detected in Curies for fission and active products and grams for actinides as reported in the message from the SIE. Domain: Numeric.
NDAISO_QTY_TMU	FLOAT	NDA Isotopic Quantity TMU	The radionuclide quantity Total Measurement Uncertainty as reported in the message from the SIE. Domain: Numeric.
NDE_Results (NDE) •*NDE_PKG_ID	VARCHAR2(14) Required	NDE Results Package ID	The package ID of the container being reviewed in the NDE vault. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
*NDE_DT	DATE Required	NDE Results Date	The date the results were obtained from the NDE vault. Domain: Oracle format date.
NDE_COMMENTS	VARCHAR2(255)	NDE Comments	User comments about the container and its contents. Domain: Alphanumeric.

•NDE_OPER_ID	VARCHAR2(7)	NDE Operator ID	The operator ID of the user gathering the NDE results. Domain: Alphanumeric (lookup from USERS table USR_USERID).
NDE_VDISK_FILE	VARCHAR2(5)	NDE Container Video Disk File	The name of the file on the optical disk where a specific image of a waste container is recorded. Domain: Alphanumeric.
NDE_VDISK_NUM	VARCHAR2(5)	NDE Container Video Disk Number	The number of the optical disc that is used to record container images. Domain: Alphanumeric.
NDE_VTAPE_NUM	VARCHAR2(5)	NDE Container Video Tape Number	The number identifying the VHS tape that is used to record a container image. Domain: Alphanumeric.
NDE_VTAPE_START	NUMBER(5)	NDE Container Video Tape Start	The footage location on the VHS tape were a specific image of a waste container is recorded. Domain: Numeric.
Not_Process_List •*NOTPROC_PKG_ID	VARCHAR2(14) Required	Not Process List Package ID	ID of a package not on a process list. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
Not_Ship_Pick_List •*NOTSHIP_PKG_ID	VARCHAR2(14) Required	Not Ship Pick List Package ID	ID of a packages not on a shipping pick list. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).

Isotopic Distribution (PAM)

**PAM_PKG_ID	VARCHAR2(14) Required	PAM Package ID Number	Unique package identification number assigned to a packet removed from a waste package and which requires further tracking. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
PAM_PU_FGE	FLOAT	PAM Plutonium 239 Fissile Gram Equivalent	Plutonium 239 fissile gram equivalent calculated using the quantity of Pu-240 identified for a given packet. Domain: Numeric.
PAM_QTY	FLOAT	PAM Gram Quantity	The amount of the PU-240 in the waste package. Domain: Numeric. Units are grams.
PAM_UNCERTAINTY	FLOAT	PAM Uncertainty	The uncertainty value associated with the packet assay. Domain: Numeric.
Payload Container Certification Record (PAYLOAD) **PAYLOAD_PKG_ID	VARCHAR2(14) Required	Payload Package ID Number	The unique package identification number that is assigned to the outer waste package. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).

•PAYLOAD_ASSEMBLY_ID	VARCHAR2(8)	Payload Package Assembly ID	The identification number for the package assembly that will be placed into a TRUPACT II cask. The numbering sequence order is the 2-letter site ID code, last 2 digits of the year, and 4-digit package assembly number. Domain: Alphanumeric.
PAYLOAD_CERT_DT	DATE	Payload Certification Date	Date that a payload has been certified for shipment to WIPP. Domain: Oracle format date.
PAYLOAD_CERT_OFFICIAL	VARCHAR2(25)	Payload Certification Official	The name of the site transportation certification official assuring that the contents meet the requirements for shipment in a TRUPACT II cask and the payload is qualified for transport. Domain: Alphanumeric.
•PAYLOAD_CNTYP_CD	VARCHAR2(3)	Payload Container Type	The code for the various containers approved for shipment to WIPP. Domain: Alphanumeric. Must be in Container Type table (CONTYPE) CNTYP_CD.
PAYLOAD_DECAY_HEAT	FLOAT	Payload Container Decay Heat	The decay heat value for a specific container. Domain: Numeric.
PAYLOAD_FILTER_MODEL	VARCHAR2(10)	Payload Filter Model	The model number of the filter used on the payload container. Domain: Alphanumeric.
PAYLOAD_FILTER_INSTLD	VARCHAR2(3)	Payload Filter Installation	Answered yes or no as to whether or not a filter is installed. Domain: Alpha ('Y' or 'N').

PAYLOAD_FISSILE_ERROR	FLOAT	Payload Fissile Mass Error (2X)	The assigned error value for the fissile mass of a payload container. Domain: Numeric.
PAYLOAD_GAS_GEN_RATE	NUMBER(3)	Payload Gas Generation Rate	Total gas generation rate for a specific container. Domain: Numeric. Units are psig.
PAYLOAD_HEAT_ERROR	FLOAT	Payload Container Decay Heat Error	The error value assigned for decay heat by shipping category. Domain: Numeric.
PAYLOAD_HEAT_LIMIT	FLOAT	Payload Decay Heat Limit	The allowable decay heat for a specific shipping category. Domain: Numeric.
PAYLOAD_HYDROGEN_RATE	NUMBER(1)	Payload Hydrogen Generation Rate	Hydrogen gas generation rate measured in a percentage of payload and the package. Domain: Numeric.
PAYLOAD_LINER_VNT	VARCHAR2(8)	Payload Liner Punctured/Filtered	Identifies if the liner has been punctured or has a filter in place in the liner. Domain: Alphanumeric. 'filter' or 'puncture'.
PAYLOAD_RECORD_TYPE	VARCHAR2(1)	Record Type	The code that identifies the type of record for a specific data package. Domain: Alphanumeric. 'S' = shipment 'P' = package 'H' = hazardous 'R' = radionuclide
PAYLOAD_SEQ_NUM	NUMBER(2)	Payload Sequence Number	Defines the position of the waste container in the 14-drum/2-SWB payload. Domain: Numeric (1-14).

PAYLOAD_SHIP_APP_FLAG	VARCHAR2(1)	Payload Approval to Ship	Flag that identifies if a payload container has been approved for shipment. Domain: Alpha ('Y' or 'N').
PAYLOAD_SHIP_CAT	VARCHAR2(10)	Payload Shipping Category	The shipping category for a particular container content. Shipping categories are defined in the TRUCON document (Example III.1.1.A.4). Domain: Alphanumeric. Lookup to TRU Shipping Category table (TRUSHIPCAT) TRUSHIPCAT_CD.
•PAYLOAD_TRUCON_CD	VARCHAR2(6)	Container TRUCON Code	The TRUPACT II code or designation for a particular waste stream. Domain: TRU Container Code Table (TRUCON) TRUCON_CD.
PAYLOAD_VOC_CONC	NUMBER(3)	Payload Flammable VOC Concentration	Flammable volatile organic compound concentration measured in ppm for a specific container. Domain: Numeric.
PAYLOAD_WAC_EXCEPT	VARCHAR2(7)	WAC Exception Number	The WIPP Waste Acceptance Criteria exception tracking number. Domain: Alphanumeric.

PAYLOAD_WGT_ERROR	NUMBER(10,2)	Payload Container Weight Error	The weight error value calculated for a specific payload container. Domain: Numeric.
<u>Payload Assembly Certification Record (PAYLOADASBLY)</u>			
*ASBLY_NUM	VARCHAR2(8) Required	Assembly Number	The number for the TRUPACT II assembly. This numbering sequence is the 2-letter site code, last 2 digits of the year, and 4-digit assembly number. (Three assemblies to a typical shipment) Domain: Alphanumeric.
*ASBLY_SHIPMENT_NUM	VARCHAR2(8)	Assembly Shipment Number	The shipment number for waste going to WIPP. This numbering sequence is the 2-letter site code, last 2 digits of the year, and 4-digit shipment number. Domain: Alphanumeric.
ASBLY_APPROVED_SHIP_FLAG	VARCHAR2(1)	Assembly Approved for Shipment Flag	Identifies that the TRUPACT II shipping container is ready to be shipped. Domain: Alpha ('Y' or 'N').
ASBLY_CERT_DT	DATE	Assembly Shipment Certification Date	Date that the TRUPACT II shipping container is certified to be shipped. Domain: Oracle format date.
ASBLY_CERT_OFFICIAL	VARCHAR2(25)	Assembly Certification Official	Name of the officer assuring that the transportation requirements of the TRUPACT II safety analysis report are being met. Domain: Alphanumeric.

ASBLY_CONFIGURATION	VARCHAR2(4)	Payload Configuration	Payload container configuration. Domain: Alphanumeric. 'drum' = drum 'SWB' = Standard Waste Box 'ovpk' = overpack.
ASBLY_DOSE_RATE	NUMBER(8,2)	Assembly Dose Rate - Pkg	Neutron dose rate of the shipping container measured at the surface. Domain: Numeric.
ASBLY_DOSE_RATE_2M	NUMBER(8,2)	Assembly Dose Rate at 2 Meters	Neutron dose rate of the shipping container measured at 2 meters. Domain: Numeric.
ASBLY_ICV_CLOSURE_DT	DATE	Assembly Date of ICV Closure	The date the ICV is closed. Domain: Oracle format date.
ASBLY_OCA_BODY_ID	VARCHAR2(8)	Assembly TRUPACT OCA Body Number	The identification number on the TRUPACT II OCA body. Domain: Alphanumeric.
ASBLY_OCA_LID_ID	VARCHAR2(8)	Assembly TRUPACT OCA Lid Number	The identification number on the TRUPACT II OCA lid. Domain: Alphanumeric.

ASBLY_POS	VARCHAR2(1)	Assembly Position	Position on the TRUPACT trailer for the cask assembly. Domain: Numeric (1-3); '1' = TRUPACT closest to cab trailer '2' = TRUPACT in middle of the trailer '3' = TRUPACT at back end of trailer
ASBLY_SHIP_CAT	VARCHAR2(10)	Assembly Payload Shipping Category	The shipping category for a particular container content. Shipping categories are defined in the TRUCON document. Domain: Alphanumeric. Lookup to TRU Shipping Category table (TRUSHIPCAT) TRUSHIPCAT_CD.
ASBLY_SHIP_CAT_HEAT_LT	FLOAT	Assembly Decay Heat Limit - Shipping Category	The allowable decay heat for a specific shipping category. Domain: Numeric.
ASBLY_WGT_TRUPACT	VARCHAR2(10,2)	Assembly Weight of TRUPACT	Total weight of the TRUPACT II shipping container. Domain: Numeric. Must be >0.
Physical_Component_Record •*PHYS_PKG_ID	(PHYSCOMP) VARCHAR2(14) Required	SWITS Data Record Physical Component Package ID	The unique package identification number that is assigned to the outer waste package. The number is assigned by the waste generator and is used for tracking all waste. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).

•*PHYS_COMP_DESCR	VARCHAR2(30) Required	Physical Component Description	The description of a physical component in radioactive or mixed waste. Descriptions include paper, plastic, rags, concrete. Domain: Physical Component Description Table (PHYSDESC) PDESC_DESCR.
PHYS_COMP_VOL_PCT	NUMBER(6,3)	Physical Component Volume Percent	Percent by volume of a physical (not hazardous) component found in a specific waste container of radioactive or mixed waste. Domain: Numeric. Must be between 0 and 100.
PHYS_COMP_WGT	NUMBER(8,2)	Physical Component Weight	Weight of a physical (not hazardous) component found in a specific waste container of radioactive or mixed waste. Domain: Numeric. Units are kilograms.
Package Dangerous Waste Numbers •*PDW_PKG_ID	Package Dangerous Waste Numbers Record (PKGDW) VARCHAR2(14) Required	SWITS Data Record Dangerous Waste Package ID	Unique package identification number assigned to the outer waste package. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
•*PDW_NUM	VARCHAR2(4) Required	Dangerous Waste Number	Unique dangerous waste number identification. Domain: Alphanumeric. Must be in Dangerous Waste Number table (DWNUM), DW_NUM.

PDW_LANDBAN	VARCHAR2(1)	Dangerous Waste Land Banned	Code indicating whether the waste associated with the dangerous waste number is regulated as "Land Banned". Yes - defined as always land banned. No - defined as never land banned. Null - may be land banned on a case by case basis. Domain: 'Y', 'N', or null.
PDW_SORT_ORDER	NUMBER(3)	Dangerous Waste Sort Order	The Annual Dangerous Waste Report and LLW IDB Report has a unique reporting order. The value in this field will determine the sort order for the waste. Domain: whole number >0.
Process_List *PROC_PKG_ID	VARCHAR2(14) Required	Process List Package ID	The package ID to be retrieved from the AS/RS to be processed in list sequence. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
PROC_COMPLIANT_FLAG	VARCHAR2(1)	Process List Compliant Flag	Identifies the container as being compliant. Domain: 'Y', 'N', or null.
PROC_PCS_FLAG	VARCHAR2(1)	Process List PCS Flag	Flag to designate containers to send to the PCS. Domain: 'Y', 'N', or null.
*PROC_PROF_ID	VARCHAR2(6)	Process List Profile ID	Defines which profile is to be used by the NDA equipment. Domain: Profile Table (PROFILE) PROF_ID.

CHANGES TO DMS AND SWITS REQUIRED TO IMPLEMENT DMS/SWITS INTERFACE

Changes Affecting Both SWITS and DMS

1. ADD new container status code CON_PKG STATUS = 'M' for mobile shipping overpack containers. The mobile shipping overpack containers will not have any detail records. The detail records will be maintained with the waste records for the inner (overpacked) drum and the CON_PKG STATUS for the inner drum will not have a container status of 'R' (repackaged).
2. Add new container relationship code CONR_REL_CD = 'M' for waste containers in mobile shipping overpackes.

DMS Driven SWITS Changes

1. Add new container relationship code CONR_REL_CD = 'W' to allow for many-to-many relationships. The only container relationships uploaded to SWITS from WRAP will be 'W' relationships for repackaged waste and processed waste placed in product drums.
2. Add following data elements to the RADDETAIL table (SWITS SCR #786)
RDET_TOT_PE_CI_TMU
RDET_TOT_PU_FGE_TMU
RDET_TOT_ALPHA_CI_TMU
RDET_THERMAL_POWER_TMU
3. Add data element RAD_QTY_TMU to the ISOQTY table (SWITS SCR #786)

SWITS Driven DMS Changes

1. Add designation of waste stream codes (CON_WASTE_STREAM) for product drums.

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DISTRIBUTION SHEET

To Distribution	From JR Weidert/87810/T4-02/ 376-8132	Page 1 of 1 Date 4/9/96
Project Title/Work Order WRAP 1 - W026		EDT No. N/A ECN No. 193579

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
R. J. Bottenus	T4-02				X
D. E. Caldwell	H8-44	X			
R. W. Carey	H8-44	X			
D. L. Chien	H8-44	X			
T. A. Gates, Jr	H8-44	X			
E. E. Hawker	H8-44	X			
D. R. Lucas	T4-02				X
D. C. McCann	H8-44	X			
J. R. McGee	T4-50				X
M. E. Palmer	T4-02	X			
W. A. Robertson	T4-02	X			
C. K. Rosnick	T4-03	X(5)			
J. S. Trent	H7-32	X			
J. R. Weidert	T4-02	X			
WRAP 1 DMC	T4-02	X(2)			
Station 34	G3-11	X			
OSTI	L8-07	X(2)			

•PROC_ROUTE_CD	VARCHAR2(4)	Process List Route Code	The route this container is to take through the areas of the facility. Domain: Route Table (ROUTE) ROUTE_CD.
PROC_SAMPLE_FLAG	VARCHAR2(1)	Process List Sample Flag	Designates that a sample needs to be taken from this container. Domain: 'Y', 'N', or null.
PROC_SEQ_NUM	NUMBER(4)	Process List Sequence Number	Sequence number for sequencing the process list. Domain: Numeric.
Processing_Add_List *PROCADD_PKG_ID	VARCHAR2(14) Required	Processing Add List Package ID	The package ID to be retrieved from the AS/RS to be processed in list sequence. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
PROCADD_COMPLIANT_FLAG	VARCHAR2(1)	Processing Add List Compliant Flag	Identifies the container as being compliant. Domain: 'Y', 'N', or null.
•PROCADD_PROF_ID	VARCHAR2(6)	Processing Add List Profile ID	Defines which profile is to be used by the NDA equipment. Domain: Profile Table (PROFILE) PROF_ID.
•PROCADD_ROUTE_CD	VARCHAR2(4)	Processing Add List Route Code	The route this container is to take through the areas of the facility. Domain: Route Table (ROUTE) ROUTE_CD.
PROCADD_SAMPLE_FLAG	VARCHAR2(1)	Processing Add List Sample Flag	Designates that a sample needs to be taken from this container. Domain: 'Y', 'N', or null.

PROCADD_SEQ_NUM	NUMBER(4)	Processing Add List Sequence Number	Sequence number for sequencing Domain: Numeric.
Radioactive_Waste_Container_Detail_Record **RDET_PKG_ID	Radioactive Detail Radioactive Detail Package ID VARCHAR2(14) Required	Record	The unique package identification number that is assigned to the outer waste package. The number is assigned by the waste generator and is used for tracking all waste. Domain: Alphanumeric.
RDET_ASSAY_DT	DATE	Radioactive Detail Assay Date	This date is the date that the assay abundance data was obtained for a given assay Domain: Oracle format date.
RDET_ASSAY_NUM	VARCHAR2(14)	Radioactive Detail Assay Number	The number that identifies the results of an assay done on the package. Domain: Alphanumeric.
RDET_BG_DOSE_RATE	FLOAT	Radioactive Detail Beta/Gamma Dose Rate	Dose rate of a container. The dose rate is measured at 1 cm for contact handled waste and 1 meter for remote handled waste. Domain: Numeric. Must be ≥ 0 . Units are mrem/hr.
RDET_CERT_DT	DATE	Radioactive Detail Certification Date	Date that a waste container of transuranic waste was certified. The certification of each container's assay results is completed by the generator. Domain: Oracle format date.

RDET_DE_CI_FLAG	VARCHAR2(1)	Radioactive Detail Dose Equivalence Curie Flag	Used by SME to identify specially packaged waste container(s) excluded from the DE-Ci sum for a facility. Domain: 'Y', 'N', or null.
RDET_HANDLING	VARCHAR2(1)	Radioactive Detail Handling	Identifies whether a container is considered contact handled or remote handled. RDET_HANDLING will be set whenever RDET_BG_DOSE_RATE (Contr Dose Rate) is changed. RDET_HANDLING will be set to R if a dose rate over 200 is entered, will be set to C if a dose rate of 200 or less is entered, and will be ignored if a null dose rate is entered. Domain: Alphanumeric. 'C' = Contact handling 'R' = Remote handling.
RDET_NEUT_DOSE_RATE	NUMBER(8,2)	Radioactive Detail Neutron Dose Rate	Neutron dose rate contributions for transuranic waste with greater than 20 mrem/hr shall be reported separately on the SMSDR. The dose rate is measured at 1 cm for contact handled waste and 1 m for remote handled waste. Domain: Numeric. Must be ≥ 0 . Units are mrem/hr.
RDET_ORGANIC_VOL_PCT	NUMBER(3)	Radioactive Detail Organic Volume Percent	The percentage by volume of organic material that is in the waste container. Organic material includes plastic, paper, cloth, wood, solvents, oils, and hydrocarbon diluents used in solvent extraction (e.g., hexone and normal paraffin hydrocarbon). Domain: Numeric. Must be between 0 and 100.

RDET_ORGANIC_WGT	NUMBER(8,2)	Radioactive Detail Organic Weight	The total weight of the organic material in a waste container. Organic material includes plastic, paper, cloth, wood, solvents, oils, and hydrocarbon diluents used in solvent extraction (e.g., hexane and normal paraffin hydrocarbon). Domain: Numeric. Units are kilograms.
RDET_PDR_NUM	VARCHAR2(9)	Radioactive Detail Property Disposal Request Number	Identification number from the Property Disposal Request used to remove equipment from the property accounting system. Domain: Alphanumeric.
RDET_RSWIMS_COUNT	NUMBER(4)	Radioactive Detail RSWIMS Count	The count of containers described by the current container record. Not available for data entry. The source is old RSWIMS data from the time when multiple containers could be defined in one record. Domain: Whole number >0.
RDET_SDAR_APPRV_NUM	VARCHAR2(14)	Radioactive Detail SDAR Approval Number	Identifies a number given to a specific Storage/Disposal Approval Record (SDAR). The number is used to track approval for the storage or disposal of radioactive waste. Domain: Alphanumeric.
RDET_SEAL_NUM	VARCHAR2(14)	Radioactive Detail Seal Number	The number assigned to the outer waste container seal. Domain: Alphanumeric.

RDET_SWIMS_CD	VARCHAR2(2)	Radioactive Detail Solid Waste Information Management System Code	These codes identify waste descriptions that are defined by the "Solid Waste Information Management System - SWIMS Users Manual," EG&G Idaho, Idaho National Engineering Laboratory (INEL). Domain: Miscellaneous Code Table (CODECHECK) CODE_FIELD_NAME = SWIMS_CD.
•RDET_SWTYP_CD	VARCHAR2(2)	Radioactive Detail Secondary Waste Type Code	Identifies the type of waste in a particular container or waste stream; used for radioactive or mixed waste only. Domain: Alphanumeric; lookup to Secondary Waste Type Code Type (SECWASTYPE) SWTYP_CD.
•RDET_SWTYP_GROUP	VARCHAR2(3)	Radioactive Detail Secondary Waste Type Group	This code identifies the waste group in a particular container or waste stream. This is used for radioactive or mixed waste only. Groups are Low-Level, Transuranic, Unsegregated, and High Level. Domain: Secondary Waste Type Code Table (SECWASTYPE) SWTYP_GROUP.
RDET_THERMAL_POWER	FLOAT	Radioactive Detail Thermal Power	The thermal power generation of a specific radioactive waste package. Domain: Numeric. Must be ≥ 0. Units are watts per cubic foot.
RDET_THERMAL_POWER_TMU	FLOAT	Radioactive Detail Thermal Power Total Measurement Uncertainty	Total Measurement Uncertainty associated with the thermal power generation of a specific radioactive waste package. Domain: Numeric.

RDET_TOT_ALPHA_CI	FLOAT	Radioactive Detail Total Alpha Ci	Total alpha emission (in curies) of listed transuranic elements (isotopes) identified in the isotope table. Domain: Numeric. Must be ≥ 0 . Units are curies.
RDET_TOT_ALPHA_CI_TMU	FLOAT	Radioactive Detail Total Alpha Ci Total Measurement Uncertainty	Total Measurement Uncertainty associated with the total alpha emission (in curies) of listed transuranic elements (isotopes) identified in the isotope table. Domain: Numeric.
RDET_TOT_BG_CI	FLOAT	Radioactive Detail Total Beta/Gamma Ci	Total beta/gamma curies for the contents of a container. Differs from RDET_BG_DOSE_RATE in that the dose is reduced by the shielding properties of the container. Domain: Numeric. Must be ≥ 0 . Units are beta/gamma curies.
RDET_TOT_DE_CI	FLOAT	Radioactive Detail Total Dose Equivalence Curies	Contains the sum total dose equivalence for a given package. Domain: Numeric. Must be ≥ 0 . Units are dose equivalent curies.
RDET_TOT_PE_CI	FLOAT	Radioactive Detail Total Plutonium Equivalent Curies	Total plutonium equivalent curies of listed transuranic elements (isotopes) identified in the isotope table as being measured in grams. Domain: Numeric. Must be ≥ 0 . Units are plutonium equivalent curies.

RDET_TOT_PE_CI_TMU	FLOAT	Radioactive Detail Total Plutonium Equivalent Curies Total Measurement Uncertainty	Total Measurement Uncertainty associated with the total plutonium equivalent curies of listed transuranic elements (isotopes) identified in the isotope table as being measured in grams. Domain: Numeric.
RDET_TOT_PU_FGE	FLOAT	Radioactive Detail Total Plutonium Fissile Gram Equivalent	Total plutonium 239 fissile gram equivalent of listed transuranic elements (isotopes). Domain: Numeric. Must be ≥ 0 . Units are fissile gram equivalents.
RDET_TOT_PU_FGE_TMU	FLOAT	Radioactive Detail Total Plutonium Fissile Gram Equivalent Total Measurement Uncertainty	Total Measurement Uncertainty associated with the total plutonium 239 fissile gram equivalent of listed transuranic elements (isotopes). Domain: Numeric.
RDET_VOID_CD	VARCHAR2(6)	Radioactive Detail Void Code	Code for approved void space filler material for radioactive waste container. By regulation there must be no free space in radioactive waste containers. Domain: Miscellaneous Code Table (CODECHECK) CODE_FIELD_NAME = VOID.
RDET_WASTE_CAT	VARCHAR2(5)	Radioactive Detail Waste Category	Waste Category of radioactive and mixed waste. Domain: 'WC1' = LLW Category 1 'WC3' = LLW Category 3 'GTWC3' = LLW Category >3.

RDET_WASTE_MAKEUP	VARCHAR2(1)	Radioactive Detail Waste Makeup	A code indicating whether unknown radioactive components should be considered MAP or MFP. Domain: 'A' = MAP 'F' = MFP.
RDET_WRAP_CAT	VARCHAR2(2)	Radioactive Detail WRAP Category	Description codes that define the waste that will be processed in the WRAP plant. When processing takes place, the predominant category will help determine the type of processing. One code is assigned per container. Domain: Miscellaneous Code Table (CODECHECK) CODE_FIELD_NAME = WRAP_CAT.
<u>RadioLogic_Inventory</u> *RADMAT_ID	VARCHAR2(1) Required	Radiologic Inventory Area ID	Identifies which area of the facility the Rad Total is being calculated for. Domain: 'F' = Facility 'T' = TRU Process Glovebox 'R' = TRU RWM Glovebox.
RADMAT_ALARM	VARCHAR2(1)	Radiologic Inventory Area Alarm Flag	Set to yes (Y) if the Rad calculations for a given area exceeds the area limit. Domain: 'Y' or 'N'.
RADMAT_DESCR	VARCHAR2(50)	Radiologic Inventory Area Description	Description of the area of the facility the Rad total is being calculated for. Domain: Alphanumeric.
RADMAT_DT	DATE	Radiologic Inventory Date & Time of calculation	The date and time the current Rad total was calculated. Domain: Oracle format date.

•RADMAT_GB_PKG_ID	VARCHAR2(14)	Radiologic Inventory Glovebox Package ID	The Package ID of the drum last added to or removed from the identified glovebox inventory. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
RADMAT_LIMIT	FLOAT	Radiologic Inventory Area Limit	Fissile Inventory Limit for the area referenced by this record. Domain: Numeric.
RADMAT_RAD_TOT	FLOAT	Radiologic Inventory Current Rad Total	The current Rad total calculated for this area. Domain: Numeric.
RADMAT_UNITS	VARCHAR2(3)	Radiologic Inventory Units	Identifies which units are used for this area's calculations. Domain: 'FGE' or 'CI'.
<u>Receiving_Display_Record</u> RECDISP_BLK_NUM	(RECDISP) NUMBER	Receiving Display Block Number	Unique internal sequence number to record the shipment. Domain: Whole number.
RECDISP_INNER_PKG_ID	VARCHAR2(14)	Receiving Display Inner Package ID	PIN of a drum contained in an overpack drum. Domain: Alphanumeric.

RECDISP_PKG_ID	VARCHAR2(14)	Receiving Display Package ID	The list of package IDs on the receiving dock received from the PCS. This list will be used to resolve any differences between the DMS and SWITS. When the list is correct and the data downloaded from SWITS, this list will be sent to the PCS as the set of containers received. Domain: Alphanumeric.
RECDISP_ERROR_STATUS	VARCHAR2(50)	Receiving Display Error Status	Message area for informative messages to be displayed on the DMSS0101 screen. Domain: Alphanumeric.
Sample Bottle Location **SAMLOC_BOTTLE_ID	Sample Bottle Location VARCHAR2(12) Required	Sample Bottle Location Bottle ID	The unique sample bottle number. Domain: Alphanumeric. Format shall be YY-NNNNN-BBL where YY = year NNNNN = sequential sample number BB = bottle number for laboratory sample 'L' = laboratory sample Must be in BOTTLE Table BOTTLE_ID.
SAMLOC_DT	DATE	Sample Bottle Location Date	Date and time that the sample bottle was moved to the current location. Domain: Oracle format date.

•SAMPLC_LOCN_ID	VARCHAR2(10)	Sample Bottle Location ID	Identifier of a location within WRAP Module 1 where the sample bottle is stored or processed. Domain: Alphanumeric (lookup to LOCATION Table LOCN_ID).
•SAMPLC_DATA_RECORD	SWITS Data Record	Sample ID	Unique identification number of the sample itself. Domain: Alphanumeric. Format shall be YY-NNNNN where YY = year NNNNN = sequential sample number.
•SAMPLC_SAMPLE_ID	VARCCHAR2(8) Required	Sample ID	The chain of custody form number used to ship this sample to another laboratory. Domain: Alphanumeric.
•SAMPLC_COC_FORM_ID	VARCCHAR2(10)	Sample COC Form ID	Unique identification number of the waste container from which the sample is taken. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
•SAMPLC_PKG_ID	VARCCHAR2(14)	Sample Package ID	Yes/No flag indicating whether or not a sample is closed. 'Y' = closed, meaning no more information is expected to be input. Domain: 'Y' or 'N'.
SAMPLC_CLOSED_FLAG	VARCCHAR2(1)	Sample Closed Flag	General comments pertaining to a sample. Domain: Alphanumeric.
SAMPLC_COMMENTS	VARCCHAR2(255)	Sample Comments	

•SAM_LOCN_ID	VARCHAR2(10)	Sample Sampling Location	Location where the sample was taken. Domain: Alphanumeric. Lookup to Location Table (LOCN) LOCN_ID.
•SAM_MATRIX_CD	VARCHAR2(3)	Sample Matrix Code	Code defining the physical matrix of the sample. Domain: Alphanumeric. Lookup to Sample Matrix table (SAMPMATX) SAMP_MATR_CD.
SAM_REPORT_DT	DATE	Sample Report Date	The date the analysis report is returned. Domain: Oracle format date.
SAM_RETURN	VARCHAR2(1)	Sample To Be Returned	Yes/No code to indicate whether a sample should be returned or not. Domain: 'Y' or 'N'.
•SAM_SAMPLING_METHOD_CD	VARCHAR2(4)	Sample Sampling Method Code	Used to identify the sampling method to be employed in the sampling process. Domain: Alphanumeric. Lookup to Sampling Method table (SAMPMETH) SAMPLING_METHOD_CD.
•SAM_TAKEN_BY	VARCHAR2(6)	Sample Taken By	Identification of the person who took the sample. Domain: Alphanumeric. Lookup to Person table (PERS) PERS_ID.
SAM_TAKEN_DT	DATE	Sample Taken Date	Date the sample was taken. Domain: Oracle format date.
SAM_TEMP	NUMBER(2)	Sample Temperature	Temperature of the sample at the time it was taken. Domain: Numeric (units are deg C).

<p>Sample Data Relationship Record ••SAMREL__BOTTLE_ID</p>	<p>(SAMREL) - SWITS Data Record VARCHAR2(12) Sample Relationship Required Bottle ID</p>	<p>Sample identification code. Domain: Alphanumeric. Must match a Bottle ID in the BOTTLE table (BOT_BOTTLE_ID). Format shall be YY-NNNNN-BBL where YY = year NNNNN = sequential sample number BB = bottle number for laboratory sample or '01' for field screening sample 'L' = laboratory sample.</p>
<p>••SAMREL__PKG_ID</p>	<p>VARCHAR2(14) Required Sample Relationship Package ID</p>	<p>Package identification for the associated waste container; may be the original waste packet, treatment container, or the purge port container. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).</p>
<p>SAMREL_DT</p>	<p>DATE Sample Relationship Date</p>	<p>Date that the sample relationship was established. Domain: Oracle format date.</p>
<p>•SAMREL__USE_CD</p>	<p>VARCHAR2(2) Sample Relationship Use Code</p>	<p>This field will be used to identify whether the sample relationship is to a waste packet or a purge port container. Domain: CODECHECK table, USE_CD (see CONEXT_USE_CD domain).</p>

<p>Sample Analysis Request (SAR) **SAR_SAMPLE_ID</p>	<p>VARCHAR2(8) Required</p>	<p>Sample Analysis Request Sample ID</p>	<p>Unique identifier relating the sample to the specific laboratory analysis requested. Domain: Alphanumeric. Must match a sample ID in the SAMPLE table (SAM SAMPLE ID). Format shall be YY-NNMMW where YY = year NNNNN = sequential sample number.</p>
<p>**SAR_ANAL_CD</p>	<p>VARCHAR2(8) Required</p>	<p>Sample Analysis Request Analysis Code</p>	<p>Code used to relate the sample to a specific analysis type and its associated parameters. Domain: Alphanumeric. Lookup to Laboratory Analysis table (LABANAL) LABANAL_CD.</p>
<p>Shipment History Record (SHIPHIST) **SHPHST_MFST_NUM</p>	<p>SWITS Data VARCHAR2(10) Required</p>	<p>Record Shipment History Manifest Number</p>	<p>A unique identifier for a uniform hazardous waste manifest form consisting of 5-digit number. The manifest is used for hazardous waste, radioactive mixed waste, and PCB contaminated waste. Domain: Alphanumeric. Must be in Shipment Record table (SHIPMENT) SHPMNT_MFST_NUM.</p>
<p>**SHPHST_ITEM_NUM</p>	<p>VARCHAR2(4) Required</p>	<p>Shipment History Item Number</p>	<p>Identifies the page number and letter for a specific line on a uniform hazardous waste manifest (e.g., '1A', '1B'). Domain: Alphanumeric. Must be in Shipment Item Record table (SHIPITEM) SHPITM_ITEM_NUM.</p>

<p>•*SHPHST_PKG_ID</p>	<p>VARCHAR2(14) Required</p>	<p>Shipment History Package ID</p>	<p>The unique package identification number that is assigned to the outer waste package. The number is assigned by the waste generator and is used for tracking all waste. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).</p>
<p>SHPHST_NMIT_NUM</p>	<p>VARCHAR2(10)</p>	<p>Shipment History Nuclear Material Item Transfer Number</p>	<p>The number assigned to the Nuclear Material Item Transfer (NMIT) form or the Shipping Receiving Report (SRR). These forms are submitted to WHC Safeguards and Security division to provide information to complete the DOE/NRC 741 form which is used to document all transactions and adjustments that affect the materials balance, material usage, and the preparation of inventory reports. Domain: Alphanumeric.</p>
<p>SHPHST_RETURN</p>	<p>VARCHAR2(1)</p>	<p>Shipment History Return</p>	<p>Flag showing that a package was returned to the generator and is no longer associated with the manifest. Domain: 'Y' or 'N'.</p>

SHPHST_RSR_NUM	VARCHAR2(10)	Shipment History Radioactive Shipment Record Number	This references the form number identified on the Radioactive Shipment Record (RSR). An RSR is required for all shipments of radioactive material, including radioactive waste on the Hanford site. Although this form is not required by solid waste management, its number is tracked for information only. Domain: Alphanumeric. See SHIPWRAP_RSR_NUM.
SHPHST_741_NUM	VARCHAR2(11)	Shipment History 741 Number	The number assigned on a DOE/NRC 741 form, Nuclear Material Transaction report. This form is generated to document all transactions and adjustments that affect the materials balance, materials usage and preparation of inventory lists for all accountable nuclear material. The DOE/NRC 741 form is the official record for nuclear material accountability. Domain: Alphanumeric.
Shipment_Item_Record	- SWJTS Data Record	Shipment Item	A unique identifier for a uniform hazardous waste manifest form consisting of 5-digit number. The manifest is used for hazardous waste, radioactive mixed waste, and PCB contaminated waste. Domain: Alphanumeric. Must be in Shipment Record table (SHIPMENT)
**SHPITM_MFST_NUM	VARCHAR2(10) Required	Manifest Number	SHPMNT_MFST_NUM.

*SHPITM_ITEM_NUM	VARCHAR2(4) Required	Shipment Item Number	This identifies the page number and letter for a specific line on a uniform hazardous waste manifest (e.g., 'IA', 'IB'). Domain: Alphanumeric.
SHPITM_CNTR_COUNT	NUMBER(3)	Shipment Item Container Count	Identifies the total number of individual containers in a particular line item on a uniform hazardous waste manifest. Domain: Numeric. Whole number >0.
SHPITM_DOT_HAZ_CLASS	VARCHAR2(20)	Shipment Item DOT Hazardous Class	Hazard Class as defined in 49 CFR, Hazardous Material Table; DOT hazard class tied to elements: shipment item dot number & name. Classes include flammable liquid, corrosive material, ORM-E. Domain: Alphanumeric.
SHPITM_DOT_ID_NUM	VARCHAR2(6)	Shipment Item DOT ID Number	Identifies the proper DOT identification number for each waste. This ID is prefixed by either 'UN' or 'NA'. Tied to proper shipping name. Domain: Alphanumeric.
SHPITM_DOT_NAME	VARCHAR2(100)	Shipment Item DOT Name	The proper DOT shipping name assigned to a specific waste stream as identified in the code of federal regulations. Domain: Alphanumeric.

SHPITM_NOS_DESCR	VARCHAR2(60)	Shipment Item Not Otherwise Specified Description	Text description of the two main hazardous components in the waste associated with this item. This waste can be in multiple containers. When waste is listed as Not Otherwise Specified (NOS), the two main hazardous components must be listed on the manifest. This field will be null if the shipping name SHPITM_DOT_NAME doesn't indicate NOS. See HDET_IND_NOS_DESCR. Domain: Alphanumeric.
SHPITM_PROFILE_NUM	VARCHAR2(10)	Shipment Item Profile Number	"Waste Product Questionnaire" (WPQ). A reference number for a waste stream profile as required by the off-site disposal contractor. The WPQ is the contractor's form, and subject to change depending on contract assignment. Domain: Alphanumeric.
SHPITM_QTY_UNIT	VARCHAR2(1)	Shipment Item Quantity Unit	This code identifies the appropriate unit of measure for waste on a specific line on the uniform hazardous waste manifest. The codes include 'G' for gallon, 'P' for pounds, 'T' for tons, 'L' for liter, 'K' for kilogram, 'M' for metric ton, and 'N' for cubic meter. These codes are defined in 49 CFR. Domain: Alphanumeric.

SHIPITM_RQ_FLAG	VARCHAR2(1)	Shipment Item Reportable Quantity Flag	Yes/No flag indicating whether or not a reportable quantity exists. The details are contained in SHPITM_DOT_NAME, but this flag is used in manifest creation to add 'RQ' in a box before the proper shipping name. Yes - reportable quantity exists. No - quantity is not reportable. Domain: 'Y' or 'N'.
SHPITM_TOT_QTY	NUMBER(12,4)	Shipment Item Total Quantity	The total quantity of waste described on each line of the uniform hazardous waste manifest. Containers and inner liners are not considered part of the waste when measuring or calculating the quantity of dangerous waste. Domain: Numeric. Must be >0.
SHPITM_TSD_PROCESS	VARCHAR2(50)	Shipment Item TSD Process	Handling codes and treatment method EPA code IDs, containment vessel and treatment. Codes may include: S01C, S02I, T31I, D810. Domain: Alphanumeric.
Shipment Record (SHIPMENT) - SWITS Data Record *SHPMNT_MFST_NUM	VARCHAR2(10) Required	Shipment Manifest Number	A unique identifier for a uniform hazardous waste manifest form consisting of 5-digit number. The manifest is used for hazardous waste, radioactive mixed waste, and PCB contaminated waste. For the purpose of recording movement of radioactive waste, where no manifest is used, the RSR number will be used instead. Domain: Alphanumeric.

SHPMNT_CERT_DT	DATE	Shipment Certification Date	The date that a qualified generator certifies that the contents of the waste shipment are fully and accurately described, packaged, marked, labeled, and are in all respects in proper condition for transport by highway according to all applicable regulations. Domain: Oracle format date.
SHPMNT_GGRP_ID	VARCHAR2(8)	Shipment Group ID	Identification of the generator group responsible for this shipment. Domain: Alphanumeric.
SHPMNT_MFST_RET_DT	DATE	Shipment Manifest Return Date	The date the original manifest is returned to the Generator. Domain: Oracle format date.
SHPMNT_MFST_TYPE_CD	VARCHAR2(3)	Shipment Manifest Type Code	The code which identifies whether or not a uniform hazardous waste manifest has been generated for onsite or offsite shipping of hazardous, mixed, or PCB waste. Domain: '0' for Onsite or 'F' for Offsite.
•SHPMNT_OFFSITE_CMPNY_ID	VARCHAR2(4)	Shipment Offsite Company ID	Identifies the offsite company which disposes of the waste. For offsite manifests only. Domain: Alphanumeric. Lookup to Company table (COMPANY) CMPNY_ID.

•SHPMNT_OFFSITE_CMPNY_TYPE	VARCHAR2(3)	Shipment_Offsite Company Type	Additional identifier of off-site company responsible for the storage/disposal of the waste in this shipment. Domain: Alphanumeric. Lookup to Company table (COMPANY) CMPNY_TYPE.
•SHPMNT_RECV_FACIL_ID	VARCHAR2(11)	Shipment Receiving Facility ID	Specific facility to which waste is shipped. For onsite manifests only. Domain: Alphanumeric. Lookup to Facility table (FACILITY) FACIL_ID.
SHPMNT_RSR_TYPE	VARCHAR2(2)	Shipment Radioactive Shipment Record Type	Identifies the source and destination of waste being shipped on an RSR. Domain: Alphanumeric. 'GT' = generator to TSD 'TG' = TSD to generator 'TT' = TSD to TSD.
SHPMNT_SCHED_DT	DATE	Shipment Scheduled Date	Shipping date scheduled for the shipment. Domain: Oracle format date.
SHPMNT_SHIP_DT	DATE	Shipment Ship Date	The date the shipment starts moving. Domain: Oracle format date.
•SHPMNT_TRANSP_CMPNY_ID	VARCHAR2(4)	Shipment Transportation Company ID	Identifies the company which transports the waste. Typical codes are 'WHC', 'KEH', 'PNL'. Domain: Alphanumeric. Lookup to Company table (COMPANY) CMPNY_ID.
•SHPMNT_TRANSP_CMPNY_TYPE	VARCHAR2(3)	Shipment Transportation Company Type	Additional identifier of the company that transports the waste shipment. Domain: Alphanumeric. Lookup to Company table (COMPANY) CMPNY_TYPE.

SHPMNT_TSD_ACCEPT_DT	DATE	Shipment TSD Accept Date	The date the shipment is accepted at a TSD facility. Domain: Oracle format date.
Shipping_Pick_List *SHIP_PICK_WRAP_NUM	VARCHAR2(8) Required	Shipping Pick List Shipment Number	The WRAP specific shipment number assigned to this shipment pick list. Domain: Alphanumeric.
**SHIP_PICK_PKG_ID	VARCHAR2(14) Required	Shipping Pick List Package ID	The package ID assigned to this shipment number. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).
WRAP_Shipment (SHIPWRAP) *SHIPWRAP_NUM	VARCHAR2(8) Required	WRAP Shipment Number	Unique WRAP number to identify a specific shipment leaving the WRAP facility. Domain: Alphanumeric.
SHIPWRAP_ABSORB_FLAG	VARCHAR2(1)	WRAP Shipment Absorbent Flag	Designates whether or not absorbents are required for the shipment, external to the waste containers. Domain: Alphanumeric ('Y' or Null).
SHIPWRAP_ALPHA_CONTAM	VARCHAR2(8)	WRAP Shipment Alpha Contamination	Value for the measured removable Alpha contamination. Domain: Alphanumeric (units = dpm/sq. cm).
SHIPWRAP_BG_CONTAM	VARCHAR2(8)	WRAP Shipment Beta/Gamma Contamination	Value for the measured removable Beta/Gamma contamination. Domain: Alphanumeric (units are dpm/sq. cm).

SHIPWRAP_CAB_DOSE	VARCHAR2(8)	WRAP Shipment Cab Dose Rate	Dose rate measured within the cab of the transport vehicle. Domain: Alphanumeric (mrem/hr).
•SHIPWRAP_CARRIER_PERS_ID	VARCHAR2(6)	WRAP Shipment Carrier Person	Unique identification number of the person who is transporting the waste. Domain: Alphanumeric. Lookup to PERSON table PERS_ID.
SHIPWRAP_CARRIER_VEH_ID	VARCHAR2(14)	WRAP Shipment Carrier Vehicle ID	ID number of the vehicle transporting the waste. Domain: Alphanumeric.
SHIPWRAP_CHEM_FORM	VARCHAR2(12)	WRAP Shipment Chemical Form	Defines the chemical form for the RSR document. Domain: Alphanumeric ('Oxide', 'Nitrate', 'Elemental', 'Mixture', 'Organic', Other [user entry]).
SHIPWRAP_CNTR_REUSE_FLAG	VARCHAR2(1)	WRAP Shipment Container Reusable Flag	Determines whether or not the waste container is a single trip or reusable container. If 'Y', container is reusable. Domain: 'Y' or 'N'.
SHIPWRAP_DESCR	VARCHAR2(255)	WRAP Shipment Description	Shipper's description of the waste shipment. Domain: Alphanumeric.
•SHIPWRAP_FROM_FACIL_ID	VARCHAR2(11)	WRAP Shipment Ship from Facility	ID for the facility that is shipping the waste. Domain: Alphanumeric (Lookup to FACILITY).
•SHIPWRAP_FROM_PERS_ID	VARCHAR2(6)	WRAP Shipment Ship from Name	ID of the responsible person that is shipping the waste. Domain: Alphanumeric (Lookup to PERSON).

SHIPWRAP_MAX_PKG_DOSE_CT	VARCHAR2(8)	WRAP Shipment Maximum Package Dose At Contact	Dose rate of the package with the highest measured dose rate at contact. Domain: Alphanumeric (mrem/hr).
SHIPWRAP_MAX_PKG_DOSE_1M	VARCHAR2(8)	WRAP Shipment Maximum Package Dose At 1M	Dose rate of the package with the highest measured dose rate at 1 meter. Domain: Alphanumeric (mrem/hr).
SHIPWRAP_MAX_VEH_DOSE_SD	VARCHAR2(8)	WRAP Shipment Max Vehicle Dose At Vehicle Sides	Highest dose rate measured at the sides of the vehicle. Domain: Alphanumeric (mrem/hr).
SHIPWRAP_MAX_VEH_DOSE_2M	VARCHAR2(8)	WRAP Shipment MAX Vehicle Dose at 2M	Maximum dose rate measured for the vehicle at a distance of 2 meters. Domain: Alphanumeric (mrem/hr).
SHIPWRAP_MFST_COMP_FLAG	VARCHAR2(1)	WRAP Shipment Manifest Complete Flag	Flag to indicate when the manifest has been completed for a specific shipment. Domain: 'Y' or 'N'.
SHIPWRAP_MFST_NUM	VARCHAR2(10)	WRAP Shipment Manifest Number	Manifest number if the waste contains hazardous constituents. Domain: Alphanumeric. Must be in Shipment Record table (SHIPMENT) SHPMNT_MFST_NUM.
SHIPWRAP_NUCLIDE_LIST	VARCHAR2(255)	WRAP Shipment Radionuclide List	List of the significant radionuclides contained in the waste shipment as defined by EP-0063 guidelines. Domain: Alphanumeric.
SHIPWRAP_OTHR_PERT_DATA	VARCHAR2(255)	WRAP Shipment Other Pertinent Info	User entry of data applicable to the waste shipment. Domain: Alphanumeric.

SHIPWRAP_QTY_CAT	VARCHAR2(35)	WRAP Shipment Quantity Category	Defines the shipping quantity category for the RSR form. Domain: Alphanumeric.
SHIPWRAP_RM_ESCRT_FLAG	VARCHAR2(1)	WRAP Shipment RM ESCORT FLAG	Flag noting whether or not an HPT escort is required. Domain: 'Y' or 'N'.
SHIPWRAP_RM_SUPR_REV_FLAG	VARCHAR2(1)	WRAP Shipment RM Supervisor Review Flag	Flag noting whether or not an HPT supervisor review of the RSR data is required. Domain: 'Y' or 'N'.
SHIPWRAP_RSR_COMP_FLAG	VARCHAR2(1)	WRAP Shipment RSR Complete Flag	Flag to indicate when the RSR has been completed for a specific shipment. Domain: 'Y' or 'N'.
SHIPWRAP_RSR_NUM	VARCHAR2(10)	WRAP Shipment RSR Number	RSR number associated with a specific WRAP shipment. Domain: Alphanumeric.
SHIPWRAP_SEC_HAZ	VARCHAR2(255)	WRAP Shipment Secondary Hazards	Shipper's description of hazards associated with the waste shipment. Domain: Alphanumeric.
SHIPWRAP_SNM_FLAG	VARCHAR2(1)	WRAP Shipment SNM Flag	Flag to indicate when a shipment container Special Nuclear Materials. Domain: 'Y' or 'N'.
•SHIPWRAP_TO_FACIL_ID	VARCHAR2(11)	WRAP Shipment Ship to Facility	ID of the facility that a shipment is going to. Domain: Alphanumeric. Lookup to FACILITY FACIL_ID.
•SHIPWRAP_TO_PERS_ID	VARCHAR2(6)	WRAP Shipment Ship to Name	ID of responsible person that a shipment is going to. Domain: Alphanumeric. Lookup to PERSON PERS_ID.

<u>TRUPACT Shipping Record (TRUSHIP)</u>	VARCHAR2(8)	TRUPACT Shipment Number	The shipment number for waste going to WIPP. This numbering sequence is the 2-letter site code, last 2 digits of the year, and 4-digit shipment number. Domain: Alphanumeric.
•TRUSHIP_SHIP_NUM			
TRUSHIP_DT	DATE	Actual Ship Date	The actual ship date for a TRUPACT II cask. Domain: Oracle format date.
<u>Container/Content Record (WASTE)</u>	- SWITS Data VARCHAR2(14)	Record Container Package ID	The unique package identification number that is assigned to the outer waste package. The number is assigned by the waste generator and is used for tracking all waste. Domain: Alphanumeric.
*CON_PKG_ID	Required		
CON_ACCUM_DT	DATE	Container Accumulation Date	Accumulation date, the date the waste was accumulated. This date is the beginning of the storage time limit identified in the Primary Waste table. This field is also used as the general date of waste generation for all waste types. Domain: Oracle format date.
CON_CHEM_NATURE_CD	VARCHAR2(2)	Container Chemical Nature Code	A code required on the annual dangerous waste report. Domain: The code is either '0' for organic or 'I' for inorganic. In some cases it may be both.

CON_CNTR_VOL	NUMBER(10,4)	Container Volume	Total volume for a specific container. Domain: Container Size Table (CONSIZE) CSZ VOL. Default units are cubic meters.
•CON_CNTP_CD	VARCHAR2(2)	Container Type Code	Codes which identify the type of container per Department of Transportation and other requirements. Domain: Container Type Table (CONTYPE) CNTYP_CD.
•CON_DOT_SPEC	VARCHAR2(3)	Container DOT Specification	The Department of Transportation Specification for the outer waste container. Domain: DOT Specification Table (DOTSPEC) DOT_SPEC.
CON_GENER_COMMENT	VARCHAR2(80)	Container Generator Comment	Generator comment related to this package. Domain: Alphanumeric.
CON_GENER_WASTE_DESCR	VARCHAR2(255)	Container Generator Waste Description	Generator prepared waste content description. Domain: Alphanumeric.
CON_GROSS_WGT	NUMBER(10,2)	Container Gross Weight	Gross weight of a waste container. It includes the weight of the waste, of the container and of any shielding. Gross weight cannot exceed waste description weight plus container weight plus hazardous component weight. Domain: Number. Units are kilograms.
CON_ITEM_NUM	VARCHAR2(4)	Container Item Number	Line item number for the manifest on which the package is shipped from the generator. Domain: Whole number.

CON_LABPACK_FLAG	VARCHAR2(1)	Container Labpack Flag	Flags whether or not a container is a lab pack. Domain: 'Y' or 'N'.
CON_LINER_THICK	VARCHAR2(6)	Container Liner Thickness	Designates the thickness of a waste container liner. Domain: Alphanumeric.
CON_LINER_TYPE	VARCHAR2(20)	Container Liner Type	Specifies the type of waste container liner used. Domain: Alphanumeric.
CON_LOCN_FACIL_AREA	VARCHAR2(6)	Container Location Facility Area	The approved name of the areas identified on the Hanford site used for the storage or disposal of waste; area names include 200E, 200W. Domain: Alphanumeric; populated from Facility Table (FACILITY) FACIL_AREA.
•CON_LOCN_FACIL_ID	VARCHAR2(11)	Container Location Facility ID	The specific facility where waste is generated, received, or stored on the Hanford site. Domain: Facility Table (FACILITY) FACIL_ID.
•CON_MFST_NUM	VARCHAR2(10)	Container Manifest Number	Manifest number on which the package is being shipped from the generator. Domain: Alphanumeric. Must be in Shipment Record table (SHIPMENT) SHPMNT_MFST_NUM.
CON_PHYS_STATE_CD	VARCHAR2(3)	Container Physical State Code	Code that describes the actual physical state of the waste. Domain: Alphanumeric; 'S' = solid 'L' = liquid 'G' = sludge 'M' = compressed gas.

CON_PKG_DT	DATE	Container Package Date	This is the date that a container was closed and physically sealed. For radioactive waste, it applies mainly to WIPP certified transuranic waste but may apply to LLW in the future. For hazardous and mixed waste, it is used as the accumulation date. This applies to the package closure mechanism and not to an official seal such as a numbered tag. Domain: Oracle format date.
•CON_PKG_STATUS	VARCHAR2(1)	Container Package Status	Package status code indicating status of waste package, required edit level, and data ownership. Domain: Package Status Table (PKGSTAT) PKS_STATUS.
•CON_PWTYP_CD	VARCHAR2(2)	Container Primary Waste Type Code	Primary waste type code identifying the type of waste in a particular container or waste stream. Domain: Primary Waste Type Code Table (PRIMASTYPE) PWTYP_CD.
CON_ROUTINE	VARCHAR2(1)	Container Routine	Indicates whether waste is routine or other. Domain: Alphanumeric. 'R' = Routine 'P' = PCB 'E' = Environmental Restoration 'D' = D&D.
CON_SAMPLE_FLAG	VARCHAR2(1)	Container Sample Flag	Identifies wastes that must be sampled prior to shipment offsite. The sampling is required for acceptance of the waste at the offsite TSD. Domain: 'Y', 'N', or null.

•CON_SCAT_CD	VARCHAR2(3)	Container Storage Category Code	Code indicating the container storage category. Domain: Storage Category Table (STORAGECAT) SCAT_CD.
U CON_SEC_PKG_ID	VARCHAR2(14)	Container Secondary Package ID	A secondary package ID that the generator may use or is used to identify the inner container of an overpack. Domain: Alphanumeric.
CON_SHIP_DT	DATE	Container Ship Date	The date on which the package was shipped from the generator. Domain: Oracle format date.
•CON_SIZE_DESCR	VARCHAR2(14)	Container Size Description	The dimensions of the container. Length x width x height or diameter x length for cylindrical waste packages, which could include containers such as 55 gallon, 30 gallon, 12-B. Domain: Container Size Table (CONSIZE) CSZ_DESCR.
CON_SRCE_CHRG_CD	VARCHAR2(8)	Container Source Charge Code	A charge code to be used in billing for this package. Domain: Alphanumeric.
•CON_SRCE_CMPNY_ID	VARCHAR2(4)	Container Source Company ID	Identifies the company who generates the waste. Typical codes are WHC, KEH, PNL. Domain: Alphanumeric. Company Table (COMPANY) CMPNY_ID.
•CON_SRCE_CMPNY_TYPE	VARCHAR2(3)	Container Source Company Type	Additional identifier of the company that generates the waste. Domain: Alphanumeric. Company table (COMPANY) CMPNY_TYPE.

•CON_SRCE_FACIL_ID	VARCHAR2(11)	Container Source Facility ID	Identifies the facility where waste is generated. The facility is identified by number and is the official WHC building number. Domain: Alphanumeric. Facility Table (FACILITY) FACIL_ID.
CON_SRCE_ORG	VARCHAR2(8)	Container Source Organization	Source of the waste. Used for identification in generator reports. Domain: Alphanumeric.
CON_TARE_WGT	NUMBER(10,2)	Container Tare Weight	The weight of an empty waste container. This tare weight may include any shielding material required. Domain: Number. Units are Kilograms.
CON_TREATMENT_DT	DATE	Container Treatment Date	The date the waste is actually treated, such as incinerated. Domain: Oracle format date.
CON_TSD_ACCEPT_DT	DATE	Container TSD Accept Date	Identifies the date that the waste was accepted for treatment, storage, or disposal at an EPA approved TSD facility. Domain: Oracle format date.
CON_WASTE_WGT	NUMBER(12,4)	Container Waste Weight	Total weight of the contents found in a specific waste container. Domain: Number. Units are kilograms.

<p><u>Container & Content Extension Record (WASTEXT)</u> **CONEXT_PKG_ID</p>	<p>Container Extension Package ID</p>	<p>The unique package identification number that is assigned to the outer waste package. The number is assigned by the waste generator and is used for tracking all waste. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).</p>
<p>CONEXT_ASSAY_VER_DT</p>	<p>DATE Container Assay Verification Date</p>	<p>The date of the assay that is chosen as the WRAP verification assay Domain: Oracle format date.</p>
<p>CONEXT_ASSAY_VER_FLAG</p>	<p>VARCHAR2(1) Container Assay Verification Flag</p>	<p>The flag denotes whether the NDA results obtained in WRAP 1 are consistent with the generator supplied NDA results for drums which are not processed in WRAP 1. Domain: 'Y', 'N', or Null.</p>
<p>CONEXT_CNTR_STATUS</p>	<p>VARCHAR2(2) WRAP RWM Container Status</p>	<p>Status codes of an RWM transfer drum. Domain: Alphanumeric. 'E' = empty 'F' = full 'P' = part full.</p>
<p>CONEXT_COMPLIANT_FLAG</p>	<p>VARCHAR2(1) Container Compliant Flag</p>	<p>Flags a container to identify if it is compliant or non-compliant based on the assay, examination, or visual inspection. This flag will be used to re-route a newly generated non-compliant waste drum to the processing area or route it within the glovebox where it will be opened. Domain: 'C' or null.</p>

CONEXT_CONTAM_FLAG	VARCHAR2(1)	Container Contamination Flag	Flags whether or not an overpack drum is contaminated. Domain: 'Y', 'N', or null.
CONEXT_FILLER_WGT	NUMBER(10,2)	Container Filler Weight	This data element records the weight of the filler material added to a drum during processing in WRAP 1. Filler weight to be subtracted prior to NDA calculations. Domain: Numeric (units in kg.)
CONEXT_HAZ_VER_FLAG	VARCHAR2(1)	Container Haz Materials Verified Flag	This data element will be used to document the verification of the hazardous constituents in a waste drum. Domain: Alphanumeric ('Y' for verified, 'N' for not verified, 'R' for additional evaluation required, 'Null' for not applicable).
CONEXT_HEIGHT	NUMBER(12,4)	Container Height	Height of a puck loaded out of the glovebox after processing. Domain: Numeric ≥ 0.12 , units in meters.
•CONEXT_MAT_GRP_CD	VARCHAR2(2)	Container Material Group Code	This unique code is used to identify the WRAP 1 specific waste components for packets. Domain: Material Table (MATL) MATL_GRP_CD.
CONEXT_NDE_VER_FLAG	VARCHAR2(1)	Container NDE Verified Flag	Flags a container to identify if it is verified or not verified based on non-destructive examination. Domain: 'Y' or null.
CONEXT_NLLL_DET_DT	DATE	Container Non-Listed Long-Lived Detected Date	Date the NDA results identified Non-listed, long-lived nuclides. Domain: date or null.

CONEXT_PROF_FLAG	VARCHAR2(1)	Container Profile Flag	Flag indicates whether default profile data is used. Domain: 'Y', 'N', or null.
•CONEXT_PROF_ID	VARCHAR2(6)	Container Assay Profile ID	The generator assay profile ID associated with this container. Domain: Profile Table (PROFILE) PROF_ID.
CONEXT_RADMAT_ID	VARCHAR2(1)	Container Fissile Material ID	The fissile material ID that describes the area that the container fissile material has been added to. Domain: 'F' = Facility 'T' = TRU Glovebox 'R' = TRU RMM Glovebox.
•CONEXT_ROUTE_CD	VARCHAR2(4)	Container Route Code	Container Route Code used to identify the various container routings within WRAP Module 1. The routing codes will be used by the PCS to identify the routings. Code that identifies the processing route assigned to the container. Domain: Route Table (ROUTE) ROUTE_CD.
CONEXT_RVST_FLAG	VARCHAR2(1)	Container Revisit Flag	Flag used to determine if the NDA results need to be revisited. Domain: 'Y', 'N', or null.
CONEXT_SCRN_VER_FLAG	VARCHAR2(1)	Container Screening Verification Flag	This flag designates whether or not the sampling performed is to verify generator data. Domain: 'Y' or 'N'.

•CONEXT_SHIPPICK_CD	VARCHAR2(4)	Container Shipment Pick List Code	Shipment code assigned to the container following processing, used to assign the container to the appropriate shipping pick list. Domain: Shipment Pick List Description Table (SHIPPICKTYP) SHIPPICK_CD.
CONEXT_TREATMENT_FLAG	VARCHAR2(1)	Container Treatment Flag	The treatment flag that indicates that the container has been treated. Domain: 'Y', 'N', or null.

CONEXT__USE_CD	VARCHAR2(2)	Container Use Code	Code assigned to identify what a container is or is used for, i.e., transfer drum, calibration drum, purge port, PIG, packet, inner waste item, collection or treatment container. Domain: CODECHECK table, USE_CD
			'BB' = Background Box
			'BD' = Background Drum
			'BX' = Box
			'CC' = Collection Container
			'CD' = Calibration Drum
			'EC' = Empty Container
			'OD' = Overpack Drum
			'PD' = Product Drum
			'PU' = Puck
			'PK' = Packet
			'PP' = Purge Port
			'TC' = Treatment Container
			'TD' = Transfer Drum
			'TP' = Transfer Pig
			'VB' = Verification Box Std
			'VL' = Verification Drum-Low Std
			'VH' = Verification Drum-High Std
			'WP' = Waste Container (Retrieved to Process Area)
			'WW' = Waste Container (Newly-Generated to be Verified).
CONEXT__VER_GROSS_WGT	NUMBER(10,2)	Container Verification Gross Weight	Container weight obtained within the WRAP facility. Domain: Numeric (units in kgs).

CONEXT_VER_GROSS_MGT_FLAG	VARCHAR2(1)	Container Verification Gross Weight Flag	This flag will be set = 'Y' if the original container weight is verified or will be set to 'N' if the original weight deviates from the WRAP I weight by a predetermined amount. Domain: 'Y', 'N' or Null.
CONEXT_WRAP_SAM_FLAG	VARCHAR2(1)	Container WRAP Sample Flag	Indicates that this container has been sampled (Y) or not (N). Domain: 'Y', 'N', or null.
CONEXT_WRAP_STAT_CD	VARCHAR2(2)	Container WRAP Status Code	Code that identifies current status of the package at WRAP. Domain: Alphanumeric. 'W' = Waiting for processing 'I' = In-process 'C' = Processing complete, waiting for completion of data review 'N' = NDA data review complete 'S' = Data review complete. 'P' = Ready to be assembled into shipment 'P' = Placed on shipping list.
Verification (VERIFCATION) - New **VER_PKG_ID	SWITS Data Record VARCHAR2(14) Required	Verification Package ID	The unique package identification assigned to the package to which the verification applies. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).

*VER_METHOD	VARCHAR2(4) Required	Verification Method	The method used to verify package data, i.e., visual, chemical, etc. Domain: Alphanumeric.
*VER_DT	DATE Required	Verification Date	The date on which the verification was done.
VER_PASS	VARCHAR2(1)	Verification Pass/Fail	One-character code indicating whether the verification was passed or failed. Domain: Alphanumeric; 'P' = Pass 'F' = Fail.
VER_FAIL_REASON	VARCHAR2(255)	Verification Failure Reason	The reason the waste package failed verification. Domain: Alphanumeric.
<u>Treatment Worksheet (WORKSHEET)</u> *WORKSHEET_ID	VARCHAR2(8) Required	Treatment Worksheet ID	The treatment worksheet ID assigned by the chemist deciding which treatment to apply to which drums in the RWM glovebox. Domain: Alphanumeric.
WORKSHEET_FILE_POINT	VARCHAR2(14)	Worksheet File Pointer	Pointer to the file to be displayed on the DMS console during treatment. Domain: Alphanumeric.
WORKSHEET_NAME	VARCHAR2(12)	Worksheet Name	The worksheet name is the short text name that is used to describe the worksheet to the WRAP I operators. Domain: Alphanumeric.
*WORKSHEET_PROC_NUM	VARCHAR2(14)	Worksheet Procedure Number	The WRAP I identifier for the procedure. Domain: Treatment Procedure Table (TREATPROC).

WORKSHEET_PROC_REV_NUM	VARCHAR2(4)	Worksheet Procedure Revision Number	Revision number of the procedure worksheet. Domain: Alphanumeric.
Worksheet_Item •*WORKITEM_ID	VARCHAR2(8) Required	Worksheet Item ID	The treatment worksheet ID assigned by the chemist deciding which treatment to apply to which drums in the RWM glovebox. Domain: Alphanumeric. Must be in Treatment Worksheet table (WORKSHEET WORKSHEET_ID).
•*WORKITEM_PKG_ID	VARCHAR2(14) Required	Worksheet Item Package ID	PIN from the packet of waste or sample removed from the transfer drum or purge port for treatment in the RWM glovebox. Domain: Alphanumeric. Must match a package ID in the Container and Content Record (CON_PKG_ID).

C.2.2 Data Look-Up Tables Element Descriptions

<u>Miscellaneous Code Table (CODECHECK) - SWITS Lookup Table</u> <u>*CODE_FIELD_NAME</u>	<u>Code Field Name</u>	<u>Code Field Value</u>	<u>Code Description</u>
<u>*CODE_VALUE</u>	VAR2(12) Required	VAR2(12) Required	The name of a data field as specified in the data dictionary for which a code validation edit is required. Domain: Alphanumeric.
<u>CODE_DESCR</u>	VAR2(70)	VAR2(70)	A valid value for the data field being tested. Domain: Alphanumeric. A description of the code and its purpose. Domain: Alphanumeric.
<u>Company Table (COMPANY) - SWITS Lookup Table</u> <u>*CMPNY_ID</u>	VAR2(4) Required	VAR2(4) Required	Identifies the company which generates, transports, treats, stores, or disposes of the waste. Typical codes are WHC, KEH, PNL. Domain: Alphanumeric.
<u>*CMPNY_TYPE</u>	VAR2(3) Required	VAR2(3) Required	Additional identifier for the company performing solid waste activities. Domain: Alphanumeric. Company Types include: 'TRA' = Transportation Company 'GEN' = Generator 'TSD' = TSD.
<u>CMPNY_CITY</u>	VAR2(15)	VAR2(15)	City in which the company resides. Domain: Alphanumeric.
<u>CMPNY_EPA_ID</u>	VAR2(12)	VAR2(12)	Unique identification number assigned by the EPA to a company. Domain: Alphanumeric.

CMPNY_LOCATION	VARCHAR2(3)	Company Location	A code to describe the company as on-site (ON) or off-site (OFF). Domain: Alphanumeric. 'ON' or 'OFF'.
CMPNY_PHONE	VARCHAR2(12)	Company Phone	Phone number for the official point of contact for the organization specified by the company ID and company type code. Domain: Alphanumeric.
•CMPNY_STATE_CD	VARCHAR2(2)	Company State Code	Standard state abbreviation code. Domain: Alphanumeric. Lookup to State table STATE_CD.
CMPNY_STREET	VARCHAR2(36)	Company Street	Street address for the company. Domain: Alphanumeric.
CMPNY_TITLE	VARCHAR2(60)	Company Title	The name of a company. Domain: Alphanumeric.
CMPNY_ZIP_CD	VARCHAR2(10)	Company Zip Code	The zip code for the area in which the company resides. Domain: Alphanumeric.
Container Size Table (CONSIZE) - SWITS Lookup Table •*CSZ_CNTYP_CD	VARCHAR2(2) Required	Container Size Container Type Code	The code which refers to the type of container. Domain: Alphanumeric. Lookup to Container Type table (CONTYPE) CNTYP_CD.
*CSZ_DESCR	VARCHAR2(14) Required	Container Size Description	Describes the size of the container. Domain: Alphanumeric.
CSZ_VOL	NUMBER(10,4)	Container Size Volume	Provides the volume of a certain container type. Domain: Number.

<p><u>Container_Type_Table</u> (CONTYPE) - SWITS Lookup Table *CNTYP_CD</p>	<p>VARCHAR2(2) Required</p>	<p>Container_Type Code</p>	<p>Code which identifies the type of container per Department of Transportation (DOT) and other requirements. Codes include DM for metal drums, barrels. Domain: Alphanumeric.</p>
<p>CNTYP_DESCR</p>	<p>VARCHAR2(42)</p>	<p>Container_Type Description</p>	<p>The DOT or other specifications describing a waste container. Specification includes 17c, 17h, self contained, plywood box, metal box. Domain: Alphanumeric.</p>
<p><u>Field_Help_Table</u> (DATADICT) *DD_TABLE_NAME</p>	<p>VARCHAR2(20) Required</p>	<p>Data Dictionary Table Name</p>	<p>The table name for each data element. Domain: Alphanumeric.</p>
<p>*DD_FIELD_NAME</p>	<p>VARCHAR2(36) Required</p>	<p>Data Dictionary Field Name</p>	<p>The data element name. Domain: Alphanumeric.</p>
<p>DD_DATA_TYPE</p>	<p>VARCHAR2(15)</p>	<p>Data Dictionary Type</p>	<p>The data element type and size. Domain: Alphanumeric.</p>
<p>DD_HELP_TEXT</p>	<p>LONG</p>	<p>Data Dictionary Help Text</p>	<p>The data element description. Domain: Alphanumeric.</p>
<p><u>DOT_Container_Specification_Table</u> (DOTSPEC) - SWITS Lookup Table *DOT_SPEC</p>	<p>VARCHAR2(3) Required</p>	<p>DOT Specification</p>	<p>The unique identification of a DOT specification entered by WMP when a DOT specification becomes associated with SWITS. Domain: Alphanumeric.</p>

DOT_DESCR	VARCHAR2(60)	DOT Specification Description	Text description of a DOT specification entered by WMP when a DOT specification becomes associated with SWITS. Domain: Alphanumeric.
<u>Dangerous Waste Number Table</u> *DW_NUM	(DWHNUM) - SWITS VARCHAR2(4) Required	Lookup Table Dangerous Waste Number	Unique identifier for a Dangerous Waste Number. Domain: Alphanumeric.
DW_DESCR	VARCHAR2(20)	Dangerous Waste Description	Text description for a Dangerous Waste Number. Domain: Alphanumeric.
DW_LANDBAN	VARCHAR2(1)	Dangerous Waste Landban	Code indicating whether the waste associated with the dangerous waste number is regulated as "Land Banned." Yes - defined as always land banned. No - defined as never land banned. Null - not defined. The user must determine for each package. Domain: 'Y', 'N' or Null.
DW_SORT_HAZ	NUMBER(3)	Dangerous Waste Sort Hazardous	Reports generated using dangerous waste numbers have a unique reporting order. The value in this field will determine the sort order for hazardous waste. Domain: Number.
DW_SORT_MIXED	NUMBER(3)	Dangerous Waste Sort Mixed	Reports generated using dangerous waste numbers have a unique reporting order. The value in this field will determine the sort order for mixed waste. Domain: Number.

<u>Error_Message_Table</u> *ERR_NUM	VARCHAR2(4) Required	Error Message Number	The code which identifies an error message. Consists of an alpha, E for error or I for information, followed by 3 numerics (XNNN). Domain: Alphanumeric.
ERR_DESCR	VARCHAR2(255)	Error Message Description	A more complete description of the error. Domain: Alphanumeric.
ERR_TEXT	VARCHAR2(72)	Error Message Text	A one-line error message. Domain: Alphanumeric.
<u>Facility_Table</u> (FACILITY) - SHITS Lookup Table *FACIL_ID	VARCHAR2(11) Required	Facility ID	The specific facility where waste is generated, received, or stored on the Hanford site. Domain: Alphanumeric.
FACIL_AREA	VARCHAR2(6)	Facility Area	The approved name of the areas identified on the Hanford site used for the storage or disposal of waste; area names include 200E, 200W. Domain: Alphanumeric.
FACIL_BAR_ID	VARCHAR2(5)	Facility Bar Code ID	The approved machine readable code (MRC) assigned by the MRC Council to identify location within bar code labels. Domain: Character.
FACIL_NAME	VARCHAR2(55)	Facility Name	The proper name given to a facility which generates or receives waste for treatment, storage, or disposal. Domain: Alphanumeric.

<u>Field Analysis Type</u> *FAT_CD	<u>Field Analysis Type</u> Code	<u>Field Analysis Type</u> Code	Unique identifier for each WRAP screening analysis Domain: Alphanumeric.
VARCHAR2(4) Required			'COLR' = Color 'TEXT' = Texture 'VISC' = Viscosity 'PHPR' = pH using paper 'PHMT' = pH using meter 'TEMP' = Temperature 'ORGY' = Organic Vapor.
FAT_DESCR		Field Analysis Type Description	Text description of the four-character analysis code Domain: Alphanumeric. 'Color' 'Texture' 'Viscosity' 'pH using paper' 'pH using meter' 'Temperature' 'Organic Vapor'.
VARCHAR2(70)			
FAT_UNITS		Field Analysis Type Units	Applicable units for the field screening analysis that is performed. Domain: Alphanumeric. 'deg C' 'centip' = centipoise.
VARCHAR2(6)			
Form Help Table *FH_FORM_NAME		Form Help Name	WRAP 1 DMS menu or screen name. Domain: Alphanumeric.
VARCHAR2(8) Required			
FH_HELP_TEXT		Form Help Text	Help description for the WRAP 1 DMS screen. Domain: Alphanumeric.
LONG			

<u>Hazardous Chemical Component Table (HAZCOMP) - SWITS Lookup Table</u> *HCC_ID VARCHAR2(12) Required	Unique identification of a hazardous chemical component. Domain: Alphanumeric.
HCC_CAS VARCHAR2(12)	Chemical abstract number of a hazardous chemical component. This is needed for EPCRA-313 reportable chemicals. Domain: Alphanumeric.
HCC_DESCR VARCHAR2(70)	Text description of a hazardous chemical component. Domain: Alphanumeric.
HCC_NEUID VARCHAR2(12)	Identification used for conversion of temporary IDs to permanent IDs. Domain: Alphanumeric.
<u>Isotope Table (ISOTOPE) - SWITS Lookup Table</u> *ISO_NUM NUMBER(3) Required	Code arbitrarily assigned for solid waste to identify a specific isotope or entity reported as an isotope, such as mixed fission products, Co-60, Sr-90. Domain: Whole Number >0.
ISO_CLASS_A_LIM FLOAT	Defines the upper limits for determining Class A radionuclides. Units are curies per cubic meter (ci/m ³), or nci/g for alpha emitting transuranic radionuclides. Domain: Number.

ISO_CLASS_B_LIM	FLOAT	Isotope Class B Limits	Defines the upper limits for determining Class B radionuclides. Units are curies per cubic meter (ci/m ³), or nci/g for alpha emitting transuranic radionuclides. Limits are defined in 10 CFR 61.55. Domain: Number.
ISO_CLASS_C_LIM	FLOAT	Isotope Class C Limits	Defines the upper limits for determining Class C radionuclides. Units are curies per cubic meter (ci/m ³), or nci/g for alpha emitting transuranic radionuclides. Limits are defined in 10 CFR 61.55. Note: not all radionuclides are Class C. Domain: Number.
ISO_CLASS_1_LIM	FLOAT	Isotope Class 1 Limits	Defines the upper limits for determining Class 1 radionuclides. Units are curies per cubic meter (ci/m ³), or nci/g for alpha emitting transuranic radionuclides. Domain: Number.
ISO_CLASS_3_LIM	FLOAT	Isotope Class 3 Limits	Defines the upper limits for determining Class 3 radionuclides. Units are curies per cubic meter (ci/m ³), or nci/g for alpha emitting transuranic radionuclides. Domain: Number.

ISO_CONSTR_LIM	FLOAT	Isotope Concentration Limits	Concentration limits set for disposal/storage for waste. The values are not static. This field is used to contain values where a one time special report is needed. When the report is done, these values should be deleted making the fields available for other reports. Domain: Number.
ISO_CONV_FACTR	FLOAT	Isotope Conversion Factor	Factor for converting grams of the specific isotope to curies. Domain: Number.
ISO_DE_CI_FACTR	FLOAT	Isotope Dose Equivalence Curie Factor	Dose Equivalence Factor for the given Isotope. This value is multiplied with the quantity of the isotope to get the dose equivalence sum for an isotope. The sum of all the isotopes in a package is stored in RDET_TOT_DE_CI. Domain: Number.
ISO_FGE_FACTR	Phase 3 FLOAT	Fissile Isotope Fissile Gram Equivalent Factor	Fissile Gram Equivalent Factor for the given Isotope. This value is multiplied with the quantity of the isotope to get the fissile gram equivalent contribution for an isotope. The sum of all the isotopes in a package is stored in RAD_PU_FGE. Domain: Number.

ISO_MAP_FACTR	FLOAT	Isotope Mixed Activation Products Factor	The proportion of MAP (Mixed Activation Products, Isotope 19) which is assumed to consist of the specific isotope in question, if and only if, the source of the waste is 100 Area facilities with the exception of 108F facility or the waste source is identified in the company table as a generator of MAP instead of MFP. Domain: Number.
ISO_MAP_NAME	VARCHAR2(5)	Isotope Mixed Activation Products Name	Name given to specific isotope to be used if it has a non-zero value for MAP factor. Domain: Alphanumeric.
ISO_MFP_FACTR	FLOAT	Isotope Mixed Fission Products Factor	The proportion of MFP (Mixed Fission Products, Isotope 19) which is assumed to consist of the specific isotope in question. Domain: Number.
ISO_NAME	VARCHAR2(20)	Isotope Name	Name of a specific isotope. Domain: Alphanumeric.
ISO_UNIT	VARCHAR2(2)	Isotope Unit	Units by which amounts of a specific isotope are measured. Normally gm for grams or ci for curies. Domain: Alphanumeric.
Laboratory Table (LAB) - SWITS	Lookup Table		
*LAB_ID	VARCHAR2(6) Required	Laboratory ID	A unique identifier for a laboratory approved to perform waste sample analysis. Domain: Alphanumeric.
LAB_NAME	VARCHAR2(30)	Laboratory Name	Name of a laboratory approved to perform waste sample analysis. Domain: Alphanumeric.

<u>Laboratory_Analysis_Table</u> *LABANAL_CD	(LABANAL) VARCHAR2(8) Required	Laboratory Analysis Code	Unique code identifying specific analysis requested. Domain: Alphanumeric.
LABANAL_CNTR_COUNT	NUMBER(1)	Laboratory Analysis Container Count	Defines the number of containers to be used for a single analysis. Domain: Number >0.
•LABANAL_CNTYP_CD	VARCHAR2(3)	Laboratory Analysis Container Type Code	This code will be used to define the type of container to be used to take the sample. Domain: Alphanumeric. Lookup to Sample Container Type table (SAMPCONTYP) SAMP_CNTYP_CD.
LABANAL_DESCR	VARCHAR2(20)	Laboratory Analysis Description	Text description of the analysis. Domain: Alphanumeric.
LABANAL_PRESERV	VARCHAR2(12)	Laboratory Analysis Preservative	Description of any preservatives required to be used during acquisition of the sample. Domain: Alphanumeric.
LABANAL_REQD_VOL	NUMBER(4)	Laboratory Analysis Required Volume	Volume of the sample to be taken for analysis. Domain: Numeric (units in ml).
<u>Location_Table</u> *LOCN_ID	(LABANAL) VARCHAR2(10) Required	WRAP 1 Location ID	Identifies a location within WRAP Module 1 where waste item or empty drum is stored or processed. This includes nondestructive examination equipment, assay equipment, gloveboxes, AS/RS, carrouseis, conveyors. Domain: Alphanumeric (see Appendix E).

LOCN_DESCR	VARCHAR2(60)	Location Description	Description or name of a location within WRAP Module 1. Domain: Alphanumeric (see Appendix E).
<u>Material_Table (MATL)</u> *MATL_GRP_CD	VARCHAR2(2) Required	Material Group Code	This unique code is used to identify the WRAP 1 specific waste components for packets. Domain: Alphanumeric.
MATL_GRP_DESCR	VARCHAR2(30)	Material Group Description	Unique description for material group codes. Domain: Alphanumeric.
<u>Material_Safety_Data_Sheets (MSDS)</u> *MSDS_ID	SWIITS Lookup Table VARCHAR2(6) Required	Material Safety Data Sheet ID	Unique identification number for a Material Safety Data Sheet (MSDS). Domain: Alphanumeric.
MSDS_DESCR	VARCHAR2(40)	Material Safety Data Sheet Description	A description of the waste package on the Material Safety Data Sheet. Domain: Alphanumeric.

Person_Table (PERSON) - SWITS Lookup Table
 *PERS_ID VARCHAR2(6)
 Required

Person ID

This is the primary identifier for any person of interest to SWITS. This key will be used in other tables which have information for special subsets of individuals in the PERSON table (e.g. the GENERATOR table).

For onsite (Hanford) employees, this is the employee ID. For offsite persons, an ID is created using the CMPNY_ID plus a number: where LENGTH (CMPNY_ID) = 3, the PERS_ID will be CIDMMW, and where LENGTH(CMPNY_ID) = 4, PERS_ID will be CIDMMW where CID = the CMPNY_ID and MMW = 001/01 for the 1st entry from that company and then incremented as needed, e.g., the first PERS_ID entered for University of Washington (CMPNY_ID = UOW) would be UOW001. Domain: Alphanumeric.

PERS_CITY

VARCHAR2(15)

Person City

City part of address. Domain: Alphanumeric.

•PERS_CMPNY_ID

VARCHAR2(4)

Person Company ID

Code identifying the company the person is associated with. Domain: Alphanumeric. Lookup to Company table CMPNY_ID.

•PERS_CMPNY_TYPE

VARCHAR2(3)

Person Company Type

Additional identifier of the company with which the person is affiliated. Domain: Alphanumeric. Lookup to Company table CMPNY_TYPE.

PERS_MSIN	VARCHAR2(5)	Person MSIN	MSIN (Mail Stop Identification Number) for onsite employee. NULL for offsite persons. Domain: Alphanumeric.
PERS_NAME	VARCHAR2(20)	Person Name	Format is 2 initials plus last name. If the person does not have a middle initial, a blank will be used in its place. Domain: Alphanumeric.
PERS_PHONE	VARCHAR2(12)	Person Phone Number	Work phone number of person. Format is <i>NNN NNN-NNNN</i> ; area code and full prefix are required.
•PERS_STATE_CD	VARCHAR2(2)	Person State Code	State Code of address. Domain: Alphanumeric. Lookup to State table STATE_CD.
PERS_STREET	VARCHAR2(36)	Person Street	Street part of address. Domain: Alphanumeric.
PERS_ZIP_CD	VARCHAR2(10)	Person Zip Code	Zip Code part of address. Domain: Alphanumeric.
<u>Physical Component Description Table (PHYDESC)</u> *PDESC_DESCR	<u>Physical Component Description Table (PHYDESC)</u> VARCHAR2(30) Required	SWITS Lookup Table Physical Description	The description of a physical component in radioactive or mixed waste. Descriptions include paper, plastic, rags, concrete. Domain: Alphanumeric.
<u>Package Status Table (PKGSTAT)</u> *PKS_STATUS	VARCHAR2(1) Required	Package Status	Code indicating a package's status. Domain: Alphanumeric.

PKS_DESCR	VARCHAR2(60)	Package Status Description	Text description of a package status. Domain: Alphanumeric.
PKS_EDIT	VARCHAR2(1)	Package Status Edit	Edit level associated with a waste package's data when this package status is assigned. Domain: Alphanumeric. Edit levels are: '1' = Default: Fields defining the container are required. '2' = Contents: Fields defining the waste are required. '3' = Shipment: Fields defining the shipment are required.
PKS_OWNER	VARCHAR2(3)	Package Owner	Package data owner when a waste package is assigned this package status. Domain: Alphanumeric; 'GEN', 'WMP', 'SWO'.
Primary Waste Type Code *PWTP_CD	Primary Waste Type Code VARCHAR2(2) Required	SWITS Lookup Table Primary Waste Type Code	Primary waste type code. This code identifies the type of waste in a particular container or waste stream. Domain: Alphanumeric.
PWTP_DESCR	VARCHAR2(20)	Primary Waste Type Description	Description of the primary waste type code. Domain: Alphanumeric.
PWTP_HAZ	VARCHAR2(1)	Primary Waste Type Hazardous	Yes/No flag to indicate if this type of primary waste is hazardous waste. Yes - hazardous, mixed-radioactive, or PCB waste. No - no hazardous components. Domain: 'Y' or 'N'.

PWTYP_RAD	VARCHAR2(1)	Primary Waste Type Radioactive	Yes/No flag to indicate if this type of primary waste is radioactive waste. Yes - radioactive. No - no radioactive components. Domain: 'Y' or 'N'.
PWTYP_SHIP_TIME	NUMBER(3)	Primary Waste Ship Time	Days allowed before generated waste must be shipped. 30 days for PCBs, 90 days for other hazardous or mixed waste. Domain: Number.
Generator_Assay_Profile_Table *PROF_ID	(PROFILE) VARCHAR2(6) Required	Assay Profile Number	Profile number of assay data associated with a generator or multiple generators. Domain: Alphanumeric.
PROF_DESCR	VARCHAR2(50)	Assay Profile Description	Basic description of the assay profile data such as percentage of Pu. Domain: Alphanumeric.
PROF_DT	DATE	Profile Date	Assay profile date. Domain: Oracle format date.
Profile_Isotopic_Table *PISO_PROF_ID	(PROFILEISO) VARCHAR2(6) Required	Profile Isotopic Profile Number	Profile number of assay data associated with a generator or multiple generators. Domain: Alphanumeric. Lookup to Generator Assay Profile table (PROFILE) PROF_ID.
*PISO_ISO_NAME	VARCHAR2(8) Required	Profile Isotopic Name	The isotopic name for this profile. Domain: Alphanumeric (Lookup to SIEISO).

PISO_RABUND	FLOAT	Profile Relative Abundance	The relative abundance of this isotope in this profile. Domain: Numeric.
PISO_TMU	FLOAT	Profile Relative Abundance TMU	The relative abundance Total Measurement Uncertainty in this profile. Domain: Numeric.
<u>Report_Table</u> *RPT_NAME	VARCHAR2(8) Required	Report Table Name	Name of report. Domain: Alphanumeric.
RPT_GENSPEC	VARCHAR2(1)	Report Table Generator Specific	Yes/No flag used to identify reports specific to the user's generator group. Yes - when the report is specific to data for the user's generator group. No - when the report is not specific to the user's generator group. Domain: 'Y' or 'N'.
RPT_SELECT	VARCHAR2(8)	Report Table Select	Name of selection criteria forms block. Domain: Alphanumeric.
RPT_TIMING	VARCHAR2(1)	Report Table Timing	Parameter restricting how and when a report will run. Domain: Alphanumeric. 'I' = Immediate 'B' = Batch only 'O' = Batch overnight (non-prime time).
RPT_TITLE	VARCHAR2(40)	Report Table Title	Title or report. Domain: Alphanumeric.

<u>Role Table (ROLE)</u> *ROLE_CD	Role Code	Unique identification of a role a person can assume in WRAP. Domain: Alphanumeric.
VARCHAR2(6) Required	Role Code	Unique identification of a role a person can assume in WRAP. Domain: Alphanumeric.
ROLE_DESCR	Role Description	Text description of the role. Domain: Alphanumeric.
<u>Role_Screen_Relationship_Table (ROLESCREEN)</u> **RSCRN_ROLE_CD	Role-Screen Relationship Role Code	Identifying code for the role to be related to a screen. Domain: Role Table (ROLE) ROLE_CD.
VARCHAR2(6) Required	Role-Screen Relationship Role Code	Identifying code for the role to be related to a screen. Domain: Role Table (ROLE) ROLE_CD.
*RSCRN_SCRN_NAME	Role-Screen Relationship Screen Name	Name of the screen to which a role is related. Domain: Screen Table (SCREEN) SCRN_NAME.
VARCHAR2(8) Required	Role-Screen Relationship Screen Name	Name of the screen to which a role is related. Domain: Screen Table (SCREEN) SCRN_NAME.
RSCRN_ACCESS	Role-Screen Relationship Access	Type of access allowed to the screen. Domain: Alphanumeric. 'R' = Read Access 'U' = Update Access.
VARCHAR2(1)	Role-Screen Relationship Access	Type of access allowed to the screen. Domain: Alphanumeric. 'R' = Read Access 'U' = Update Access.
<u>Route_Description_Table (ROUTE)</u> *ROUTE_CD	Route Code	Code that identifies the route assigned to a container designating the process routing of that container. Domain: Alphanumeric. '1', '2', '3', '4', '5', '6', '7', '8', '101', '102', and '103'.
VARCHAR2(4) Required	Route Code	Code that identifies the route assigned to a container designating the process routing of that container. Domain: Alphanumeric. '1', '2', '3', '4', '5', '6', '7', '8', '101', '102', and '103'.

ROUTE_DESCR VARCHAR2(25) Route Description

Description of the various processing routes a container may be assigned in WRAP Module 1. Domain: Alphanumeric.

'VERIFY NG-TRU & NG-LLW' (1)

'TRU TO PROCESS' (2)

'LLW TO PROCESS' (3)

'55G OT EMPTIES TO PROCESS' (4)

'85G DS EMPTIES TO PROCESS' (5)

'85G EE EMPTIES TO PROCESS' (6)

'BACKGROUND DRUM ASSAYS' (7)

'VERIFICATION DRUM ASSAYS' (8)

'UNCOMPACTED PROCESSED WASTE'(101)

'COMPACTED PROCESSED WASTE' (102)

'EMPTY DRUMS FROM PROCESS' (103).

Sample Container Type (SAMPCONTYP)
 *SAMP_CNTYP_CD VARCHAR2(3) Sample Container Type Code

Required

A code used to identify the type of container to be used during sample acquisition Domain: Alphanumeric.

SAMP_CNTR_DESCR VARCHAR2(30) Sample Container Description

Text description of sample containers to be used. Domain: Alphanumeric.

Sample Matrix Table (SAMPMATX)
 *SAMPMATX_CD VARCHAR2(3) Sample Matrix Code

Required

A code used to define the physical matrix of the sample Domain: Alphanumeric.

SAMPMATX_DESCR VARCHAR2(12) Sample Matrix Description

Text description of the sample's matrix. Domain: Alphanumeric.

<u>Sampling Method (SAMPMETH)</u> *SAMPLING_METHOD_CD	VARCHAR2(4) Required	Sampling Method Code	Abbreviated code defining the method to be employed during field sampling operations. Domain: Alphanumeric. 'pipe' = pipet 'collw' = colliwasa 'trier' = trier 'gr' = grain.
SAMPLING_METHOD_DESCR	VARCHAR2(30)	Sampling Method Description	A text description of the sampling method to be utilized. Domain: Alphanumeric. 'pipet' 'colliwasa' 'trier' 'grain'.
<u>Screen Table (SCREEN)</u> *SCRN_NAME	VARCHAR2(8) Required	Screen Name	Name of the WRAP 1 DMS screen. Domain: Alphanumeric.
SCRN_TITLE	VARCHAR2(40)	Screen Title	Title of the WRAP 1 DMS screen. Domain: Alphanumeric.
<u>Secondary Waste Type Code Table</u> *SWTYP_CD	(SECWASTYPE) VARCHAR2(2) Required	SWITS Lookup Table Secondary Waste Type Code	Secondary waste type codes are a further breakdown of the SWTYP_GROUP. Domain: Alphanumeric.
SWTYP_GROUP	VARCHAR2(3)	Secondary Waste Type Group	Used for grouping data on some reports. Groups are Low-Level, Transuranic, Unsegregated, and High Level. Domain: Alphanumeric.

<u>SWTYP_DESCR</u>	VARCHAR2(50)	Secondary Waste Type Description	The description identifies the type of waste in a particular container or waste stream. The types are low-level, transuranic, unsegregated classified, industrial, or special case. Domain: Alphanumeric.
<u>Shipping Pick List Type</u> *SHIPPICKTYP_CD	SHIPPICKTYP VARCHAR2(4) Required	Shipping Pick List Type Code	A short code which relates to the description for the various shipping pick list types. Domain: Alphanumeric.
<u>SHIPPICKTYP_DESCR</u>	VARCHAR2(24)	Shipping Pick List Type Description	Description of the various shipping categories that will be used during shipping in WRAP I. This includes TRU to head gas or storage, TRU to disposal, LLW to disposal, and LLW to storage. Domain: Alphanumeric.
<u>SIE_Isotopic Name Table</u> *SIE_ISO_NAME	(SIEISO) VARCHAR2(8) Required	SIE Isotopic Name	The specific isotopic name that is used by the SIE which it returns in its measurement message to the DMS. Domain: Alphanumeric.
*SIE_ISO_NUM	NUMBER(3)	SIE Isotopic Number	The associated isotopic number used by SWITS to identify isotopes in the ISOTOPE table. Domain: Alphanumeric. Lookup to ISOTOPE ISO_NUM.

<u>State_Table (STATE) - SWITS Lookup Table</u> *STATE_CD	State Code	Standard state abbreviation code. Domain: Alphanumeric.
STATE_NAME	State Name	The name of the state. Domain: Alphanumeric.
<u>Storage_Category_Table (STORAGECAT) - SWITS Lookup Table</u> *SCAT_CD	Storage Category Code	Arbitrary code assigned by WMP to identify storage categories. Domain: Alphanumeric.
SCAT_CATEGORY	Storage Category	Describes the storage category of the waste container. Each container will have only one category assigned. Categories include acid, caustic, flammable, other mixed waste (OMW), PCBs. Domain: Alphanumeric.
<u>Treatment_Procedure (TREATPROC)</u> *TREAT_PROC_NUM	Treatment Procedure Number	Unique number used to identify the treatment to be used. Domain: Alphanumeric.
*TREAT_PROC_REV_NUM	Treatment Procedure Revision Number	Revision for the treatment procedure. Domain: Alphanumeric.
TREAT_PROC_AUTHOR	Treatment Procedure Author	Author of the treatment procedure. Domain: Alphanumeric.
TREAT_PROC_DESCR	Treatment Procedure Description	Text description of the treatment procedure. Domain: Alphanumeric.

TREAT_PROC_EXP_DT	DATE	Treatment Procedure Expiration Date	Date that the procedure expires (No longer valid). Domain: Oracle format date.
<u>TRUCON_Code_Table (TRUCON)</u> *TRUCON_CD	VARCHAR2(6) Required	TRUCON Code	TRUCON Code as described in the WIPP TRUCON document. This code defines the source and type of waste to be shipped to WIPP. (Example: RH123A) Domain: Alphanumeric.
TRUCON_DESCR	VARCHAR2(90)	TRUCON Description	Description of the waste stream defined by the TRUCON code. Domain: Alphanumeric.
<u>TRU_Shipping_Category_Table (TRUSHIPCAT)</u> *TRUSHIPCAT_CD	VARCHAR2(7) Required	TRU Shipping Category Code	TRU Shipping Category for the waste containers to be loaded into a TRUPACT II container. (Example: IV.1A2) Domain: Alphanumeric.
TRUSHIPCAT_DESCR	VARCHAR2(90)	TRU Shipping Category Description	TRU Shipping Category Description which defines the category of the waste being shipped, type of waste container, and the number of levels of confinement. (Example: Solid waste shipped in an SWB with two layers of confinement) Domain: Alphanumeric.
TRUSHIPCAT_CON_LIM	NUMBER(5,4)	TRUPACT Container Limit	This field provides the decay heat limit for the specific waste container identified by the TRUSHIPCAT_CD. Domain: Numeric.

TRUSHIPCAT_CASK_LIM	NUMBER(5,4)	TRUPACT Cask Limit	This field provides the decay heat limit for the TRUPACT II cask containing the waste identified by the TRUSHIPCAT_CD. Domain: Numeric.
<u>TSD_Facility Table (TSDFACIL)</u> - SWITS Lookup Table			
•*TFAC_FACIL_ID	VARCHAR2(11) Required	TSD Facility ID	Unique identification of a TSD Facility associated with SWITS. Domain: Alphanumeric. Lookup to Facility table FACIL_ID.
TFAC_MFST_ADDR	VARCHAR2(40)	TSD Manifest Address	TSD facility address used in preparing manifests. Domain: Alphanumeric.
•TFAC_SCHEDULER	VARCHAR2(6)	TSD Scheduler	Identification of the TSD Facility scheduler. Domain: Alphanumeric. Lookup to Person table PERS_ID.
•TFAC_SUPERVISOR	VARCHAR2(6)	TSD Supervisor	Identification of a TSD Facility supervisor. Domain: Alphanumeric. Lookup to Person table PERS_ID.
<u>User_Role_Relationship Table (USEROLE)</u>			
•*URL_USERID	VARCHAR2(7) Required	User-Role Relationship User ID	User ID of the user to which the role is related. Domain: User Table (USERS) USR_USERID.
•*URL_ROLE_CD	VARCHAR2(6) Required	User-Role Relationship Role Code	Code identifying the role related to the user. Domain: Role Table (ROLE) ROLE_CD.

User_Table (USERS)

*USR_USERID	VARCHAR2(7) Required	User ID	User's UserID. A unique identifier for a SMITS user. Generally a person's payroll number. Domain: Alphanumeric.
USR_ACCOUNT	VARCHAR2(6)	User Account	Account for computer billing. Domain: Alphanumeric.
USR_BULL_DT	DATE	User Bulletin Date	The date a bulletin was published. Provides the user with a way of skipping the system bulletin which appears at logon time once it has been seen. Domain: Oracle format date.
USR_LOGON_DT	DATE	User Logon Date	The last date on which the user entered the system. Domain: Alphanumeric.
USR_NAME	VARCHAR2(20)	User Name	User's name. Domain: Alphanumeric.
USR_ORG	VARCHAR2(5)	User Organization	User's organization code. Domain: Alphanumeric.
*USR_PERS_ID	VARCHAR2(6)	User Person ID	User Person ID number. Domain: Alphanumeric. Lookup to Person table PERS_ID.
USR_PR_DELIVER	VARCHAR2(20)	User Print Deliver To	User's output delivery address. Domain: Alphanumeric.
USR_PR_WHERE	VARCHAR2(8)	User Printed Where	Default device for output printed at a central or remote site (not printed through the user's terminal). Domain: Alphanumeric.

USR_TERM_TYPE	VARCHAR2(6)	User Term Type	Type of terminal used. Domain: Alphanumeric.
USR_TRAIN_DT	DATE	User Train Date	The date the user received SWITS training. Domain: Oracle format date.
<u>User_Signature_Password</u> (USERSIGNPASS) **USR_USERID	VARCHAR2(7) Required	User Signature Password User ID	User ID. Domain: User Table (USERS) USR_USERID.
U UP_SP	VARCHAR2(10)	User Signature Password Signature Password	The signature password. Domain: Alphanumeric.
<u>WRAP_Miscellaneous_Table</u> (WRAPMISC) **WRAP_FIELD_NAME	VARCHAR2(24) Required	WRAP Code Field Name	The data fields may be used to store constants for use in the DMS programming or selected data ranges. Domain: Alphanumeric. VERLIM_WGT DEFAULT_PCK_HGHT DEFAULT_PCK_MTL_HGHT EMPTY_55_OT EMPTY_55_EE EMPTY_85_DS LLW_DEFLT_PROF TRU_DEFLT_PROF.

*WRAP_CODE_VALUE

VARCHAR2(12)
Required

WRAP Code Value

A valid value for the data field being tested. Domain: Alphanumeric.
 VERLIM_WGT = '.1', unitless
 DEFAULT_PCK_HGHT = '.21', units in meters
 DEFAULT_PCK_MTL_HGHT = '.012', units in meters
 EMPTY_55_OT = '4'
 EMPTY_55_EE = '6'
 EMPTY_85_DS = '5'
 LLW_DEFLT_PROF = variable (lookup to PROFILE)
 TRU_LLW_DEFLT_PROF = variable (lookup to PROFILE).

WRAP_CODE_DESCR	VARCHAR2(70)	WRAP Code Description
<p>A description of the code and its purpose. Domain: Alphanumeric.</p>	<p>VERLIM_WGT - % deviation waste</p>	<p>container certification weight</p>
<p>DEFAULT_PCK_HGHT - used as a default height for the LLW pucks</p>	<p>DEFAULT_PCK_MTL_HGHT - used as a default value for the effective height of the metal in a supercompacted puck</p>	<p>EMPTY_55_OT - 55-gallon One Trip drum (used to designate an empty drum with a process route = 4)</p>
<p>EMPTY_55_EE = 6 - 55-gallon Entry/Exit drum (used to designate an empty drum with a process route = 6)</p>	<p>EMPTY_85_DS = 5 - 85-gallon Drath & Schrader drum (used to designate an empty drum with a process route = 5)</p>	<p>LLW_DEFLT_PROF = variable (value to be revised based on batches of waste processed through the WRAP facility).</p>
<p>TRU_DEFLT_PROF = variable (value to be revised based on batches of waste processed through the WRAP facility).</p>		

C.3 MISCELLANEOUS CODE DEFINITIONS

The Miscellaneous Code (CODECHECK) table values utilized by the DMS are defined in Table C-2. Table C-3 defines the values in the WRAP Miscellaneous Code (WRAPMISC) table.

Table C-2. Miscellaneous Codes.

Code Name	Data Element	Where Used
Designation Code	DESIG_CD	HazDetail (HDET)
Hazardous Property Codes	HAZPROP_CD	HazDetail (HDET)
Other Land Banned 1	OTHER_LANDBAN_1	HazDetail (HDET)
Other Land Banned 2	OTHER_LANDBAN_2	HazDetail (HDET)
Other Land Banned 3	OTHER_LANDBAN_3	HazDetail (HDET)
PCB Description	PCB_DESCR	HazDetail (HDET)
PCB Parts Per Million	PCB_PPM	HazDetail (HDET)
PCB Subtype	PCB_SUBTYPE	HazDetail (HDET)
PCB Type	PCB_TYPE	HazDetail (HDET)
SWIMS Code	SWIMS_CD	RadDetail (RDET)
Void Code	VOID_CD	RadDetail (RDET)
WRAP Category	WRAP_CAT	RadDetail (RDET)
Use Code	USE_CD	SAMREL; WRAP container (CONEXT)

Table C-3. WRAP Miscellaneous Codes.

Code Name	Data Element	Where Used
Container Status	CNTR_STATUS	CONEXT_CNTR_STATUS
Weight Verification Limit	VERLIM_WGT	CONEXT_VER_GROSS_WGT
LLW Default Profile	LLW_DEFLT_PROF	CONEXT_PROF_ID
Default Puck Height	DEFAULT_PUCK_MATL_HEIGHT	CONEXT_HEIGHT
Empty 55-Gallon Entry/Exit Drum Route Code	EMPTY_55_EE	CONEXT_ROUTE_CD
Empty 55-Gallon One Trip Drum Route Code	EMPTY_55_OT	CONEXT_ROUTE_CD
Empty D&S 85-Gallon Drum Route Code	EMPTY_85_DS	CONEXT_ROUTE_CD

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