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W-026, WASTE RECEIVING AND PROCESSING FACILITY DATA MANAGEMENT SYSTEM VALIDATION AND VERIFICATION REPORT

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U.S. Department of Energy Contract DE-AC06-96RL13200

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Abstract: This V&V Report includes analysis of two revisions of the DMS System Requirements Specification (SRS) and the Preliminary System Design Document (PSDD); the source code for the DSM Communication Module (DMSCOM) messages; the source code for selected DMS Screens, and the code for the BWAS Simulator.

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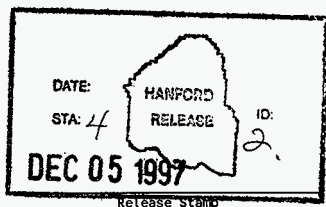
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EXECUTIVE SUMMARY

1.0 BACKGROUND

BDM Federal, Inc. was tasked to conduct an independent Validation and Verification (V&V) analysis of the DMS development. This V&V effort includes review of the DMS documentation and the source code being prepared by the DMS developer.

The V&V effort will continue through the various development phases of the DMS. The first release of the V&V Report was provided with the findings through March 12, 1996. This overview provides updated findings through September 27, 1996.

2.0 ANALYSIS CONDUCTED

BDM Federal analysts used a series of matrices to:

- compare the requirements in the System Requirements Specification (SRS) to the specifications found in the System Design Document (SDD), to ensure the design supports the business functions,
- compare the discreet parts of the SDD with each other, to ensure that the design is consistent and cohesive,
- compare the source code of the DMS Communication Module with the specifications, to ensure that the resultant messages will support the design,
- compare the source code of selected screens to the specifications to ensure that resultant system screens will support the design,
- compare the source code of the BWAS simulator with the requirements to interface with DMS messages and data transfers relating to the BWAS operations.

3.0 DISCREPANCY TRACKING

3.1 Discrepancy Categories

V&V discrepancies have been categorized as follows:

Category 1 Discrepancies

These are discrepancies the analyst considered to have high potential for a major impact on the development. If these discrepancies are not corrected, the system will fail to perform as planned.

Category 2 Discrepancies

These are discrepancies the analyst considered to have moderate impact on the system. If these are not corrected, the system will continue to fulfill the major intent of the analytic area in question, but it may not act quite as envisioned when the requirement or specification was originally prepared.

Category 3 Discrepancies

These are minor discrepancies of no immediate impact such as typos, inconsistent naming conventions, etc. These have been identified to be included in future new releases of affected documentation.

3.2 Discrepancy Tracking

All discrepancies were consolidated into "resolution matrices". These matrices group the discrepancies by analysis topic and discrepancy category. They include a column for resolution actions.

During module test procedure review sessions attended by WHC and the developer, those V&V discrepancies which affected that particular module were also reviewed and resolution actions were decided. These resolution actions are included in the resolution matrices. Closure dates are entered as the actions are completed.

All V&V analysis was conducted from a "frozen" set of SRS and SDD documents and with final source code. Some changes to the SDD were made during the V&V, but these

were not incorporated into the analysis. Instead, if they addressed V&V discrepancies, they were subsequently noted in the resolution matrices as having resolved those discrepancies and the actions were closed. In addition, system testing proceeded to exercise the source code, and the test results were used to verify that much of the source code discrepancies had been resolved.

4.0 SYNOPSIS OF FINDINGS

4.1 101 requirements and sub-processes were compared to the SDD.

	<u>Discrepancies Found</u>	<u>Resolution Action Completed</u>	<u>Closure Deferred Until Ph 2/3 or Next SRS**</u>
Category 1	24	17	7
Category 2	90	49	41
Category 3	37	10	27

**Note: For deferred closures: corrective action has been already identified.

4.2 15 Modules and associated screens, plus DMSCOM and DMS Reports were reviewed in the SDD.

	<u>Discrepancies Found</u>	<u>Resolution Action Completed</u>	<u>Closure Deferred Until Ph 2/3 or Next SDD**</u>
Category 1	89	161	28
Category 2	195	122	73
Category 3	106	102	4

**Note: For deferred closures: corrective action has been already identified.

4.3 Source code for all of the Communication Module (Phase 1) was compared to the SDD

	<u>Discrepancies Found</u>	<u>Resolution Action Completed</u>
Category 1	9	9
Category 2	16	16
Category 3	10	10

4.4 Source code for 13 Screens was compared to the SDD

	<u>Discrepancies Found</u>	<u>Resolution Action Completed**</u>
Category 1	30	30
Category 2	35	35
Category 3	16	16

**Note: Testing indicates discrepancies are resolved. Meanwhile, the SDD is being updated to reflect Phase 1 "as-built" specifications. This update will incorporate the resolution actions of affected module screens.

5.0 GENERAL ASSESSMENT

1. Major requirements have all been incorporated into the design. Many discreet "sub-processes" within these requirements differ from the design in their low level details.

2. Discrepancies between the SRS and SDD often reflect the fact that the SRS has not been kept up to date as the design progressed. Consequently, the SDD tends to be more current, with later approved changes. This has eroded the SRS's value as a baseline definition of scope and functionality. A new release of the SRS subsequently addressed most of this problem.

3. There are multiple discrepancies across the discreet design parts of the SDD. The general design and eight appendices supporting the detailed design tend to reflect differing authors and a mix of development methodologies. The lack of a single repository and consistent methodology makes it difficult to update one part of the design and ensure all other inter-related parts are also updated.

4. The source code also reflects some late design changes that have not migrated back to the SDD.

5. As the SDD cohesiveness and consistency have been affected, this has eroded the SDD's value as a baseline specification document. It has been updated to an "as built" status reflecting the latest design at the completion of the first release of the DMS software. It needs further updates as DMS development continues.

6. The source code itself tends to reflect sound programming practice. A mix of logic errors and "bugs" have been found, but not in amounts abnormal to this stage of development. These have been generally corrected quickly when identified as verified by the fact that the affected system features eventually passed functional and performance testing.

6.0 RECOMMENDATIONS

1. Place the SRS and SDD under strict configuration control and keep them current with ongoing decisions.

2. Continue to track V&V discrepancies to closure.

3. Consider migrating the SDD into some electronic version that better supports inter-dependencies during iterative updates. Since ORACLE is the primary programming language, consideration should be given to using the ORACLE CASE product, or some other CASE tool technology.

1.0 INTRODUCTION

1.1 Purpose

The Waste Receiving and Processing Facility (Module 1) (WRAP 1) requires Verification and Validation (V&V), testing, and procedural support during development of the facility's Data Management System (DMS).

1.2 Scope

This V&V Report includes analysis of two revisions of the DMS System Requirements Specification (SRS) and the Preliminary System Design Document (PSDD); the source code for the DMS Communication Module (DMSCOM) messages; the source code for selected DMS screens, and the code for the BWAS simulator.

This V&V Report provides the V&V analytic results for all phases of the DMS development as contained in the SRS and SDD. The initial release of the WRAP1 DMS V&V Report contains the screen source code review for only screens and communication messages constructed during Phase 1 of the system development. This report has been periodically updated and reissued as the development progresses. At the end of each DMS development phase, a new version of the DMS V&V Report shall incorporate all prior V&V results in addition to findings from the latest phase.

1.3 Analytic Approach

The V&V analysts used several matrices to map SRS requirements to the SDD, to map internal SDD design across the various SDD sections and appendices, and to map the DMSCOM and certain screen code against the SDD. Discrepancies and comments were recorded as applicable.

System Requirements Document (SRS) Compared to System Design Document (SDD)

For this analysis, the requirements in the SRS were mapped to the processes and their descriptions in the SDD Appendix F Process Model. Matrices were prepared which compared the SRS system message requirements to the SDD Communication Module (Appendix F, Section 3.18) design and the other SRS requirements with their associated processes.

System Design Document Integrity

For this analysis, the internal appendices and design features described in the SDD were compared against each other to determine their consistency and the general integrity of the various design parts.

As an extension of the SDD analysis, the Journaling and Archiving design was compared to the "as-built" ORACLE code to determine if the triggers and functions in the code were implementing the design. This portion of the analysis did not lend itself to a matrix layout. The results are included in this V&V report in more traditional report format.

DMS Communications Module Review

For this analysis, the container tracking requirements were compared to the specifications for the Communications Module in Appendix F. Also, DMS Communication Module source code was compared to the SDD design to ensure that the design was being implemented.

Screen Source Code Review

For this analysis, the code for individual DMS screens was compared to the SDD design to ensure that the design was being implemented.

Discrepancies noted were cataloged based on the analyst's judgement of relative risk and impact on the DMS system. This was done to draw attention to corrective actions in a priority order with the first emphasis being on those discrepancies that may directly impact the Phase 1 implementation. Discrepancy categories and their recommended corrective actions are defined as follows.

BWAS Simulator Review

The source code for the BWAS Simulator was reviewed to ensure it will adequately imitate the transfer of data and messages between the BWAS system and DMS.

CATEGORY 1

These discrepancies have the potential for causing severe development implementation problems. If they are not resolved, there is high risk that the implemented module will not function as required in the SRS or SDD. Examples of such discrepancies include:

- SRS requirements missing from Appendix F;
- Appendix F inputs or outputs different from those discussed in the SRS;
- Software code that will not perform as indicated in the SDD, etc.

CATEGORY 2

These discrepancies indicate minor differences between the SRS requirements and the SDD design, or apparent design mismatches across the SDD sections and chapters. The system can be implemented with these discrepancies and will fulfill the primary intent of the SRS and the SDD. However, the results may differ slightly from the original user vision underlying the SRS preparation or the design work in other parts of the SDD. Such differences may frequently reflect later insights noted during design which have not migrated back into the SRS or SDD. There may also be new functionality introduced in the design which constitutes an increase in scope and cost beyond what was envisioned when these documents were prepared. Examples of such discrepancies include:

- Appendix F processes which are described with minor differences from their SRS requirement descriptions;
- Screens described in Appendix A with different data than is described in the general specifications System Navigation text;
- Discrepancies between report layouts and specified data calls in the design, etc.

CATEGORY 3

These discrepancies reflect minor editorial updates to either the SRS or the SDD. Such discrepancies include typographical errors, changes in naming conventions (i.e., the same item has two different names), discrepancies between data flow diagrams (DFDs) and Appendices, etc.

1.4 Discrepancy Tracking and Resolution

As the discrepancies were noted, they were entered on summary matrices which include a column for resolution. Discrepancies were discussed during bi-weekly review meetings and at test procedure review sessions. Resolutions were recorded as they occurred. These Resolution Matrices are provided as part of this report.

Actions and urgency for correction were determined based on the discrepancy category:

- Category 1 discrepancies received immediate attention and were resolved during test procedure review sessions. Corrective actions were taken as identified.
- Category 2 discrepancies were reviewed to verify that they were acceptable/unacceptable prior to implementation. Decisions were made to:
 - amend the design;
 - stop further development on unneeded processes; or
 - continue with the development as designed and update the SRS and/or SDD.
- Category 3 discrepancies were addressed during final updates to the SRS and SDD.

2.0 ASSESSMENT OF OVERALL QUALITY

The following general assessments represent analytic conclusions incorporating a synopsis of trends and indicators noted during the detailed analysis. More specific findings are contained in the detailed analytic paragraphs that follow.

2.1 System Requirements Specifications (SRS)

Strengths

- The document contains the major informational sections required by WHC-CM-3-10, Software Development, which is the source document for IEEE development methodology guiding the DMS project.

- The document contains all of the major functional requirements which the DMS system will support.
- The requirement statements are generally statements of work provided from the operator and WRAP1 processing perspective.
- Other unique requirements and constraints such as operating environment, performance expectations, and user interface expectations are included.

Weaknesses

- The document has not been kept current as the design phase has progressed; new requirement insights normal to the detailed analysis and decisions during design have not migrated back to the SRS. This has eroded the value of the SRS to define the DMS functional baseline and to control system scope.
- Security expectations are poorly defined, especially for signature password requirements.
- Administrative and procedural interactions are poorly defined, especially for system administration and database administration.

2.2 System Design Document (SDD)

Strengths

- All of the major design features are included as required by WHC-CM-3-10, Software Development.
- Both general and detailed design are specified.
- All of the major requirements have been addressed.
- The requirements are mapped into focused system modules.

Weaknesses

- The design details are not always consistent across the discreet SDD design sections; a description or detail in one appendix may be used or described differently in another appendix.
- There is no standard methodology used across the entire design. The various sections reflect authorship by diverse persons at diverse times, and each seems to have adopted his/her own convention for defining that particular portion of the design. A central repository for definition, models, and modular interaction is missing, creating a high potential for inconsistency throughout the development.
- There are several inconsistencies between minor details of the SDD and the SRS. While there are few instances where a single inconsistency indicates a major system deviation, in aggregate, the number of inconsistencies indicates the design is not fully compatible with the SRS. The above comments regarding the SRS being out of date are a large factor in this problem.
- The design is lacking in clear specification for system administration tools, security enforcement, and general performance expectations (throughput, timeliness, hours of operations, batch-versus-real time operations, etc.) Again, some of this vagueness can probably be traced to a comparable vagueness in the SRS in some of these issues such as system administration and security requirements.
- There has been an apparent attempt to introduce into the SDD some of the functional requirement perspective normally reserved for the SRS. This is probably meant to compensate for the SRS becoming out of date.
- The system owner has maintained the SDD. This has caused the functional operator customer to have to assume responsibility for definition of the technical solutions expected from the developer.

2.3 DMS Communication Module

Strengths

- The source code has a high degree of consistency with the specifications with regard to message definition.
- The source code is prepared following industry convention regarding modularity as a whole, use of generic called functions, field and table naming conventions, and error trapping.

Weaknesses

- The source code has some specific inconsistencies with the SDD. In aggregate, these would cause the system to perform differently than expected for some modules.
- There are some instances where modularity breaks down. Some of the code sections appeared to have been "cut and pasted" resulting in "code bloat". For example, the function ora_pcsdms_cl() is 1066 lines long and is expected to become larger as Phase 2 and Phase 3 functionality is implemented.
- Some logic errors and "bugs" have been noted in the code and have been brought to the attention of the developer.

2.4 Screen Source Code

Strengths

- The use of a 4th Generation Language has led to consistent implementation of the design.
- There is a high degree of modularity with the screens. Common functions are implemented once, such as security checking.
- Well documented. Due to the declarative nature of a 4th Generation Language it is easy to determine a display field's attributes-- enabled, navigable, updatable, datastore, etc.

Weaknesses

- The source code has some specific inconsistencies with the SDD. In aggregate, these would cause the system to perform differently than expected for some of the screens.
- Some logic errors and "bugs" have been noted in the code and have been brought to the attention of the developer.
- Reliance on the declarative nature of a 4th Generation Language and vagueness of the SDD has resulted in a lack of documentation regarding "as built" features.
- The "work arounds" implemented to get Oracle Forms to perform as required are not documented.

3.0 RECOMMENDATIONS

Each resolution matrix is preceded with a discussion of general errors and recommendations specific to the analytic results noted in that matrix. The following represent general recommendations which are provided to address the trends noted during the V&V analysis.

3.1 System Requirements Specification

- Resolve all discrepancies noted during the V&V Analysis and update the SRS accordingly.
- Place the SRS under configuration control and keep it up to date.
- Use the SRS to gauge the compliance of the system with the needs of the functional requirements.
- Form a customer/operator review group which can evaluate baseline requirements, compare these to both business rule and technical design change influences, and determine needed changes with priority, cost-benefit tradeoffs, and facility impacts.

3.2 System Design Document

- Resolve all discrepancies noted during the V&V Analysis and update the SDD accordingly.
- Transfer the SDD to the developer.
- Update the SDD to reflect "as-built" conditions, then keep it under configuration control.
- Establish a single methodology for the design and update all design sections to that standard - then keep the sections consistent (i.e., be able to trace the affects of any design change across all of the design's salient parts and make the appropriate changes).

3.3 DMS Communication Module

- Resolve all code errors.
- Update the source code to reflect the SDD after the SDD has the "as-builts" incorporated.
- Increase modularity and reduce redundant coded sections.

3.4 Screen Source Code

- Resolve all code errors.
- Update the source code to reflect the SDD after the SDD has the "as-builts" incorporated.
- Document the "work-arounds" implemented to get Oracle Forms to perform as required.
- Standardize the "work-arounds" to get Oracle Forms to perform as required.

4.1 SYSTEM REQUIREMENTS SPECIFICATION (SRS) COMPARED TO SYSTEM DESIGN DOCUMENT (SDD)

4.1.1 Purpose

This analysis is to identify the level of consistency between the DMS functional requirements and the system design, and to report any inconsistencies noted.

4.1.2 Scope

This analysis focused on the requirements in the SRS as compared to the design description in the SDD. Appendix F of the SDD (Revision 2) was the primary focus of the SDD for comparison to the specifications located in that portion of the document. However, screen requirements and general miscellaneous requirements were compared to other SDD Sections as appropriate.

4.1.3 Description of Analysis Approach

For this analysis three types of matrices were prepared:

- One matrix type mapped SRS message requirements to the SDD Appendix F, citing the type of message, the Appendix F Unit Process intended to produce the message, and related comments. This matrix type was devised to address the fact that there is no direct SRS-to-module mapping for the messages required in the communication module. Instead, messages and other communication requirements are spread across all of the requirements as needed.
- One matrix type mapped SRS requirements with their associated processes, inputs, and outputs directly to the Appendix F module which matches the intended functional support of the design. Comments are again provided as necessary.
- One matrix type compared the SRS to the SDD for general requirements which apply to the system as a whole (security, log-on, user interfaces, system administration, etc.). These requirements are not specific to a particular process or system module.

These detailed matrices are compiled in the DMS project files as working papers. They are in binders marked as "WRAP 1 DMS V&V Analysis". They are available for

review should questions arise regarding the source of the discrepancies and comments provided in this V&V Report

Comments in all matrices are intended to point out discrepancies in the SRS-to-SDD mapping, or other insights which the analyst deemed necessary to bring to the system owner's attention. Where comments pertain to discrepancies, these were categorized to reflect their potential severity or impact on the design. (See the Introduction section of this V&V Report for a definition of discrepancy categories.)

4.1.4 Analytic Overview

4.1.4.1 General Observations

In addition to the specific comments and discrepancies noted in the matrices, the following general comments are noted:

Category 2 concerns:

- There is no clear SRS requirement for status checking across the systems to be channeled through DMS; i.e., the Plant Control System (PCS) could be doing its own status checking. Because of design and cross-contractor complexities across the various WRAP systems, all such status checking is being channeled through DMS. While this approach will satisfy any PCS requirement to keep abreast of system statuses, it does add additional complication to the DMS communication module and associated message traffic load on the WRAP1 Local Area Network (WLAN).
- The requirements for system administration and maintenance are poorly defined. They tend to be simple statements that these functions will be performed. The responsibilities and the expected technical capabilities for these persons should be defined in more detail.

Category 3 concerns:

- SRS paragraph 3.2.3, Software Interfaces only requires updates to SWITS. Several of the SRS requirements and the Appendix F processes retrieve data from SWITS.

4.1.4.2 Discrepancy Synopsis and Resolution Matrices

The following matrix contains a synopsis of the discrepancies which are described in the analytic matrices found in the DMS project files. This synopsis groups the discrepancies by category. It then provides resolution actions which were decided during the course of the V&V analysis. Those actions which are closed are also noted.

The resolution matrix will be considered a tracking mechanism to monitor all discrepancies until they are closed. Consequently, it will be periodically updated to reflect closed actions. If requirements are changed during the DMS development, these changes will be noted in the resolution matrix as pending actions and will be tracked as with any other actions.

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 1 DISCREPANCIES				
3.1.2.2.2 Drum or Box Container NDA Results	Signature Password for any comments that have been generated	Appendix F specifications for module 3.1.2.2, Drum or Box NDA, have no reference to signature password entry or validation for this process although screen 0202 shows a place for entry	unclear how the signature password will be applied to the module processing	1/30/96: Test Proc Review Meet: SRS should be updated regarding signature passwords - note signature password review matrix in V&V Report Appendix B Action Completed and Discrepancy Item Closed: 2/28/96
	Update DMS database with user comments after the Signature Password is verified	no indication of data base updates for comments or signature password - updates may be part of Exit button?	signature password specification unclear - comments update does not seem to be specified	1/30/96: Test Proc Review Meet: SRS should be updated to remove need for signature password for this process Action Completed and Discrepancy Item Closed: 2/28/96

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.2.3 NDA Verification and Background Containers	QC data from assays archived directly from SIE	assumed to be simply another update with an RESS message - unique only because of drum type	should verify - part of general archive specification requirement which has not been defined?	Comments provided after review of V&V discrepancies: need to verify with BNFL if RESS message will be sent - ***follow on information provided by DMS system owners: no requirement for DMS to store results data for background and verification containers - Discrepancy Item Closed as of 4/1/96
3.1.3.1.1 LLW Entry Glovebox	input: "Drum Contamination Status" message from the PCS	no such message specified - Process 3.1.8 (Message Handling) UP60 specifies such a message, but no indication of how it relates to this process	sets CONEXT_CONTAM_FLAG - no usage of this data element by process	1/30/96: Test Proc Review Meet: database update occurs in "background" by DMSCOM - not apparent to LLW process - SRS should be updated to restate requirement Action Completed and Discrepancy Item Closed: 2/28/96

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	process: Update the overpack drum contamination status field (not "Processing Status" field) for the drum currently at the LLW drum entry port	no drum status field on this screen - no update to the field specified in this UP - UP3 displays a DMSCOM default status for the Transfer Drum, and permits user modification related to Non-Compliant packets only	may not be able to retrieve or enter needed data	1/30/96: Test Proc Review Meet: SRS should be updated to specify action by DMSCOM Action Completed and Discrepancy Item Closed: 2/28/96
3.1.3.2.6 Perform Waste Treatment	Archive worksheet	UP15-16: Compliant Waste Loadout - basic record information saved	no indication of worksheet data saved or archived	Comments provided after review of V&V discrepancies: archive requirements TBD during Phase 2
3.1.4.3 Chain of Custody/Sample Analysis Request Form	Request/generate hard copy of "Chain of Custody/Sample Analysis Request" form when ready to send samples to the laboratory	no such form specified for display or printing	requirement not being fulfilled	DMSS0501, 504, 506, 507 and reports to be addressed in Phase 2
	Generate the "Sample Analysis Request" form			

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.4.4 Waste Designation	input user Signature Password	no specification for signature/password if user adding a sample	may be missing a necessary security check before action taken	1/30/96: Test Proc Review Meet: SRS should be updated - note signature password review matrix in V&V Report Appendix B Action Completed and Discrepancy Item Closed: 2/28/96
3.1.5.2.2 Certification Data to SWITS	A request by the user to transmit certification data and the location update information on the pending shipment shown on the "Loading Dock Container Shipping" screen to SWITS. This request is performed from the "Loading Dock Container Shipping" screen.	<p>UP11: DMS to transmit applicable SWITS data to SWITS for all drums sent to the Processing Area in WRAP</p> <p>UP12: DMS to transmit all applicable SWITS data to SWITS for all drums received by WRAP</p> <p>these UPs specify selection of In Transit button - updates SWITS tables - no DMSCOM message is found which sends this data</p>	SWITS update is not specified	Comments provided after review of V&V discrepancies: DMS directly updates the SWITS data base Discrepancy Item Closed

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	receive alarm/rejection message from SWITS	no mention of such an alarm receipt in Process 3.1.5 (Shipping) Process 3.1.8 (Message Handling) does not have such a message coming in from SWITS	if SWITS does generate an alarm/rejection message, there is no provision for receiving it	Comments provided after review of V&V discrepancies: SDD should be updated Action Completed and Discrepancy Item Closed as of 3/6/96
	Provide manual correction of PIN errors as required to correct SWITS rejection messages	no specification for SWITS rejection errors in this module, or of user reaction in editing PINs	specifications may not support requirements	Comments provided after review of V&V discrepancies: SRS should be updated Action Completed and Discrepancy Item Closed: 2/28/96
	Generate a message on the "Loading Dock Container Shipping" screen for the Shipping/Receiving terminal indicating the accept/reject of the database updates. No SWITS database updates are to be committed until all data for the shipment has been accepted.	no specification for a SWITS verification prior to updates - no specification for accept/reject messages from SWITS or for resultant messages		Comments provided after review of V&V discrepancies: SDD should be updated Action Completed and Discrepancy Item Closed as of 3/6/96

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SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
<p>3.1.7.3 TRU Glovebox Fissile Material Inventory Check</p> <p>3.1.7.4 TRU RWM Glovebox Fissile Material Inventory Check</p>	<p>User request to reset the TRU/TRU RWM process glovebox fissile material inventory to an assayed/surveyed value. This will normally be performed each time the glovebox is empty.</p>	<p>no specification for user reset</p>	<p>may be missing needed processing to fulfill requirement</p>	<p>Comments provided after review of V&V discrepancies: Proc 3.1.7/UP1 updated to provide this function (1101 screen) Action Completed and Discrepancy Item Closed as of 3/6/96</p>
	<p>When the SIE transmits a Pu-239 FGE value to the DMS for a drum PIN that matches a drum PIN on the TRU/TRU RWM Glovebox Drum List, the DMS will subtract the drum fissile material inventory from the TRU/TRU RWM glovebox running total, remove the drum PIN from the TRU/TRU RWM Glovebox Drum List, and add the drum PIN to the Facility inventory.</p>	<p>no specification for this processing</p>		<p>Comments provided after review of V&V discrepancies: SRS needs update to specify action taken when drum is at the discharge conveyor rather than when RESS message received. Action Completed and Discrepancy Item Closed as of 3/6/96</p>

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	Reset TRU/TRU RWM glovebox fissile material inventory to assayed/surveyed value	no specification for this processing		Comments provided after review of V&V discrepancies: 3.1.7/UP1 has been updated to provide this function (101 screen) Action Completed and Discrepancy Item Closed as of 3/6/96
	Send a fissile material level message to the PCS with the new TRU/TRU RWM glovebox fissile material inventory and an alarm if the glovebox inventory exceeds 90% of the limit.	UP42 of Process 3.1.8 (Message Handling) has an FML (Phase 3 message) generated upon receipt of a PCS CL - it only indicates "Y" or "N" whether an alarm is present - neither 3.1.7 nor the TRU processes specify calculation to determine if a 90% level has been reached		Comments provided after review of V&V discrepancies: SRS should be revised to delete 90% calculation - the FML message (3.1.8/UP42) has inventory value in field 4 Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.9 User Review/ Modification of WRAP 1 Waste Processing Data	update the database and log the changes with the user ID (signature password)	Appendix A screens for data review do not include signature passwords	may be missing an access safeguard for lower level data	1/30/96: Test Proc Review Meet: SRS should be updated to delete signature password requirement Action Completed and Discrepancy Item Closed: 2/28/96

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
<p>3.1.10.4 Ad Hoc Reporting</p>	<p>Select the "Ad Hoc Reporting" screen Input the structure query language (SQL) commands and procedural logic necessary to retrieve the data needed. If desired, invoke the print function. Invoke Oracle's SQL*Plus program. Using the SQL commands and procedural logic input by the user, search the database in a read-only mode and format the requested data for the terminal screen. If the print function is selected, format the selected data for the selected printer.</p>	<p>No reference to ad hoc reporting in either general or specific design specifications. The Main Menu does include a Reports selection, however, it is specified as "TBD". There is no indication that it may include an Ad Hoc reporting capability. All requirements for Ad Hoc reporting imply that the user will need to be comfortable with SQL to structure custom ad hoc reports. This would require extra training for DMS users or dependence on developer programming staff in order to retrieve such reports.</p>	<p>specifications do not address how this capability will be provided - even if SQL dependent, access to data tables and SQL query capability need specification</p>	<p>Reporting requirements to be addressed in Phase 2. DMS is designed so that Operations personnel should never require ad hoc reporting. Most ad hoc reporting use will be by Generators (waste "owners"), SWO, or facility management. SWITS users are already familiar with ad hoc reporting</p>

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
<p>3.1.11.1 SWITS Compatible Table Maintenance</p>	<p>system/database administrators able to download updated SWITS tables</p>	<p>no apparent system administration functions which permit the download of these tables as required by the system administrator - SDD does not indicate a design to support the system administrator rights and functions for this download</p>	<p>may not be able to accomplish this "on- call" as required</p>	<p>1/18/96: Test Proc Review Meet: no resolution during Phase 1 - the tools for this function have yet to be determined - this is pending definition of the procedures associated with the system administration function, which then impact the SA tool design</p>
<p>3.1.12 Error Detection and Recovery</p>	<p>provide diagnostic software for DMS and the status of the communication interfaces - to be defined during design</p>	<p>specifications not part of the SDD - still unclear how this requirement will be fulfilled</p>	<p>implementation of Phase 1 without this feature will preclude recovery capability</p>	<p>1/18/96: Test Proc Review Meet: no resolution during Phase 1 - Phase 2 is supposed to define the interaction with the journal - whether this is a SA duty or a programmer/developer duty is not defined</p>

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.5.4 Maintainability	global data changes provided under controlled conditions by authorized users - procedures, screens, methodology to be determined during design	global update capability is an implied capability of the data base administrator, but tools, techniques, procedures not mentioned in SDD	may not be able to accomplish global updates except for lookup tables	1/18/96: Test Proc Review Meet: global updates across the data base will be handled as enhancements/system changes via SCR - SRS to be updated to reflect this approach Action Completed and Discrepancy Item Closed: 2/28/96
3.6.1 Database	establish an historical database for drums shipped from the facility	SDD has no specific mention of any historical data retention or the specifications for archiving	may not be retaining the needed data for the needed duration	1/18/96: Test Proc Review Meet: no resolution during Phase 1 - SDD needs to be revised before Phase 2 to address necessary specifications
3.6.5.1 General (scheduling)	Data will be retained on the system to support year-end report/processing (15 month retention). The generation of these reports will not impact routine operations.	none	no specific "year end" reports specified	Specific report formats to be defined during operations. Closed: 4/10/96 (Weidert).

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 2 DISCREPANCIES				
none	none	para 5.2.1 - WRAP 1 DMS System Screen - WRAP 1 DMS User Menu shows the following selections not present as needed Main Menu selections in the SRS: Process (Glovebox) Operations, Table Maintenance, Sample Management, Shipping, System Administration, Reports, Pick List, Activity Comment. Appendix A reflects these in the screen design except for Activity Comments	need to validate SRS against SDD design and ensure the selections are intended for Main Menu selection	1/30/96: Test Proc Review Meet: Appendix A is correct - SRS should be updated Activity Comments is a Phase 2 development Comments provided after review of V&V discrepancies: decision that screen hierarchy is not appropriate to SRS Discrepancy Item Closed
1.2 SCOPE development has general goals	To provide other software products to enhance the user's need for analysis and display of information (e.g., graphics and report writer capabilities).	no specific mention of any graphic tools for users - reports only generated by system (i.e., no user report generator for custom reports) - however, implementation on a PC allows for possibility of any number of PC-based graphics and report tools	SDD should provide for inclusion of this requirement to support user output formats	To be addressed in Phase 2, at the earliest.

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
Paragraph 2.4 GENERAL CONSTRAINTS	Security. Users shall be restricted to specific applications for which they are authorized. These applications will be identified during system design.	SDD para 4.3.1: defines user role groups and rights of each for data and system access	role of System Administrator includes access to program level code - seems broader definition than System Administrator role discussed elsewhere	1/30/96: Test Proc Review Meet: SRS should be updated - security/roles to be further defined during Phase 2
3.0 SPECIFIC REQUIREMENTS	Any requirements that are not completely defined or appear as new requirements during the design phase will be added to the DMS SRS via engineering change to this document.	multiple "redlining" and updates to SDD very little update work done to the SRS	"baseline" definition valued of SRS has been eroded	SRS Revision 1 is a complete reissue of SRS, incorporating design changes to date, discrepancies. Closed: 4/10/96.
Paragraph 3.1 FUNCTIONAL REQUIREMENTS	Validate the User Password to startup the DMS system.	no reference in SDD regarding "system startup" rights - perhaps a de facto right by virtue of having password?	verify - is "DMS system startup" a general term for accessing the DMS or is it a special privilege tied to system operation rights?	1/30/96: Test Proc Review Meet: SRS should be updated to change "startup" to "logon" Action Completed and Discrepancy Item Closed as of 3/6/96

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SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
Signature Password SRS requirements	validate signature password	in general, these requirements indicate a need to validate signature passwords for their associated work - Appendix F tends to require entry of signature passwords, but only rarely mentions validation in the specifications - this may be an included part of the pseudo-code semantics	needs to be verified that simple entry of signature password is or is not sufficient	1/30/96: Test Proc Review meet: SDD needs a statement in general design constraints: unless otherwise specified, all commits/updates to the data base require signature password - inclusion of signature password requirement implies validation check across applicable security tables to validate update authorities - note signature password review matrix in V&V Report Appendix B regarding need to finalize signature password requirement for particular processes Comments provided after review of V&V discrepancies under general review - requirements to be added to front of Appendix F
3.1.1.2.4 Retrieve Drum or Box Container Data from SWITS				
3.1.2.2.2 Drum or Box Container NDA Results				
3.1.3.1.8 LLW Glovebox Product Drum Content Inventory Update				
3.1.3.2.1 LLW RWM Separate Compliant from Non-compliant				
3.1.3.2.3 LLW Glovebox Non-Compliant Item Screening				
3.1.4.1 Obtain Waste Sample and Initiate Chain of Custody				

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.1.2.1 Logging Received Drum or Box Containers	receive PINs as block input from PCS or manual input	CLW in Unit Process 39 of Process 3.1.8 (Message Handling) does not have date/time stamp	date/time stamp is stated as a requirement in SRS 3.1.8 for all location record updates - this design will not provide it for this message	1/4/96: Test Proc Review Meet: AS/RS pertains to location changes only - location updates not noted in all SRS process descriptions: deferred to table 1 of process 3.1.8 where the generic location discussion is considered to address this discrepancy Discrepancy Item Closed
	Allow user modification of the PINs.	UP2: Receive Drums or boxes - user can substitute IDs but cannot modify	phrasing in SRS may be wrong - should verify that intent is to modify PIN list and actual PINs	2/20/96: Text Proc Review Session: SRS needs to be updated - modification is to list by add/delete of PINs - individual PIN is not subject to editing Action Completed and Discrepancy Item Closed: 2/28/96

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
<p>3.1.1.2.2 Confirm Data on SWITS</p>	<p>Generate system status messages on the "Receiving" screen.</p>	<p>no indication of "system status" messages - only error messages for PIN comparisons</p>	<p>may be missing necessary screen information</p>	<p>2/20/96: Text Proc Review Session: SRS needs to be updated to rephrase term "system status" messages - the error messages in Appendix F are appropriate Action Completed and Discrepancy Item Closed: 2/28/96</p>
<p>3.1.1.2.2 Confirm Data on SWITS</p> <p>3.1.1.2.5 Generate DMS Drum or Box Container Records</p>	<p>Generate an alarm on the "Receiving" screen if the facility dose equivalent curie limit is exceeded. (Pop-up screen from Section 3.1.7.2.3)</p>	<p>during TRU glovebox, alarm is generated when limits exceed 90%</p>	<p>reactive vs. proactive? (is it too late to alarm <u>after</u> level exceeded?)</p>	<p>2/20/96: Text Proc Review Session: during the TRU specification development (Phase 2), a "limit" will be established - this may be at some point below a maximum safe level - regardless, the limit specified there will be applied to this UP - Discrepancy Item Closed</p>

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.1.2.4 Retrieve Drum or Box Container Data from SWITS	Display the "request for certification data" message on the "Container Receiving" screen.	no such message specified	may be missing necessary screen information	2/20/96: Text Proc Review Session: the message originally planned has been superseded by the design of system buttons Discrepancy Item Closed
3.1.2.1.1 Drum or Box Container NDE Data	User request for the drum or box located at one of the NDE drum or box vaults (container PIN number provided automatically from DMS database)	cannot find a message that transmits location NDE_A or NDE_B for drums	unclear how CONLOC_LOCN_ID is set for use by 3.1.2.1/UP1 screening	This is a PCSDMS-CL message transmitted per NetComm 3.1. Discrepancy Item Closed 4/10/96
3.1.2.1.2 Drum or Box Container NDE Results	NDE user comments, image information, verified/not verified status, and compliant/non-compliant status are added as inputs to the drum or box container "NDE" screen. Add the NDE user input to the DMS database against that drum or box container PIN.	3.1.2.1/UP1&2 - specifications do not cite editing permission for user to change displayed data - states "Header (Display Only)" specifications restrict user edit/entry to creation of new records - SRS does not differentiate between new and existing records and implies user entry OK for both	provisions for edit and display only for data may not be current with requirements	Comments provided after review of V&V discrepancies: SRS needs to be modified to replace "updates" with "inputs" - the "Header (display only)" in UP2/3 is for popups of SWITS data which are read only Action Completed and Discrepancy Item Closed as of 3/6/96

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	Display the confirmation of the NDE user update to the DMS database.	3.1.8/UP2-5: no specific confirmation message or feedback - dependent on what user sees - if user does create or modify records, allows save with signature/password, but no "Commit Button" - save on "Exit"?	does not seem to completely address requirements	Comments provided after review of V&V discrepancies: SDD modified to add Commit button and delete requirement for signature password Discrepancy Item Closed
3.1.2.2.1 Drum or Box Container NDA Data Revisit	send waste characterization data and isotopic data to BWAS with purpose of assay, REVISIT	3.1.8/UP12, 98: send generic BD message - so specific purpose "REVISIT" occurrence specified	may be missing a needed message occurrence	Comments provided after review of V&V discrepancies: the REVISIT message initiated by the 202 screen - BWAS messages to be implemented in Phase 2 - Appendix F 3.1.2.2 will be revised to add BD message to BWAS

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.2.2.2 Drum or Box Container NDA Results	Criticality alert message and Non-Listed Long Lived nuclide detected messages may be received from the SIE or BWAS.	CRIT and NLLL messages received via DMSCOM - data base updated - no indication 3.1.2.2 of awareness of CRIT message receipt - NLLL displayed as part of data base record read - unclear if NDA module should be reacting in real time with message traffic	timeliness of data display may be in question	Comments provided after review of V&V discrepancies: SRS revised to delete reference to criticality alert message - the NLLL message should be received prior to the RESS message so should not be a problem with timeliness Action Completed and Discrepancy Item Closed as of 3/6/96
	User request to view assay results for specific drum or box.	UP3 specifies a NDA Results which generates an NDA pop-up containing NDA record - shown for initial DMSS0202 but only specified in UP3 which is for Revisit	use of NDA Results button should be specified for all instances - may just reflect current placement in Appendix F	Comments provided after review of V&V discrepancies: SDD needs to be revised Action Completed and Discrepancy Item Closed as of 3/6/96

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	User entry of comments.	UPI specifies display of Generator Comments - no specification for edit or entry of comments	read vs. edit rights and screen interaction may not support requirements	Comments provided after review of V&V discrepancies: Generator Comments are on read only - SDD to be revised Action Completed and Discrepancy Item Closed 3/6/96
	If Non-Listed Long Live nuclide detected message is received save this data in the database.	Appendix F specifies setting NDA_NONLISED_FLAG - this data element does not exist 3.1.8 SIE and BWAS NLLL messages set CONEXT_NLLL_DETECTED=system date but Appendix C specifies the domain as either Y or N SIE message sets MSGLOG_INIT_FLAG to DF but this has been deleted from Appendix C	need to verify specification for NLLL message and subsequent update to data base	Comments provided after review of V&V discrepancies: SDD to be revised to reflect CONEXT_NLLL_DET_DT Action Completed and Discrepancy Item Closed as of 3/6/96

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.3.1.1 LLW Entry Glovebox	input: User requests "LLW Glovebox - Drum Status at Entry" from the "Process Operations" menu	user request screen (DMSS0311) from LLW Drum Process Menu - Process Menu actually on Main Menu	menu hierarchy should be validated	refer to the Main Menu discussion in V&V Report Appendix B
3.1.3.1.3 LLW Sorting Glovebox Sorting Table Operations	input: PINs of the drum at the sorting table and the drum at the compliant waste load out port	no specification differentiating between a drum at the sort table and a drum at the compliant waste load out port - only the sorting table drum PIN seems to be displayed	processing may not support requirement	1/30/96: Test Proc Review Meet: SRS contains a typo and should be updated - action shown in LLW non-compliant pop up Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.3.1.6 LLW Compactor/Storage	The original PIN will be retained for tracking of data in the DMS. Puck weight is recorded when the puck is first lifted by the puck grapple.	specifies weight calculations - SRS has no inputs/processing/outputs described in detail	calculations should be verified against requirements	1/30/96: Test Proc Review Meet: SRS should be updated - the SDD has the current information

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.3.1.7 Load out/Storage of LLW Feed Drums/Pucks	<p>The puck or drum is picked up by the grapple from the compactor discharge position or a storage location and the weight read by the PCS is transferred to the DMS.</p> <p>When the drum or puck is placed in the product drum, a message relating the over packed drum or puck and the load out drum is sent from the PCS to the DMS.</p>	weight and other drum and puck information is calculated - user entries are specified - receive message PCSDMS POPD - SRS has no inputs/processes/outputs described in detail	calculations should be verified against requirements	1/30/96: Test Proc Review Meet: SRS should be updated - the SDD has the current information
3.1.3.1.8 LLW Glovebox Product Drum Content Inventory Update	User requests the "Exit Glovebox" screen from the "Process Operations - LLW Glovebox" menu.	LLW Process menu not specified	menu hierarchy should be validated	refer to the Main Menu review in V&V Report Appendix B
	input: User Signature Password	specifies validation of signature/password when "Commit" button selected by user - no indication of when signature/password is entered except in UP2	security measure may not match needs of operation	1/30/96: Test Proc Review Meet: the parent screen signature password applies - refer to the signature password matrix in V&V Report Appendix B

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	Combine contents inventories of all puck/drum containers placed in the product drum into one list.	calculates "100 times the compacted height of each PHYSCOMP" then sums the PHYSCOMP_PUCKS for all like PHYSCOMP_DESCR - source of "100 times height"? may be an SRS omission	calculations should be verified against requirements	1/30/96: Test Proc Review Meet; SRS should be updated - the SDD has the current information
3.1.3.2.1 LLW RWM Separate Compliant from Non-compliant	input user Signature Password	<p>App A - screen 0322: shows place to enter signature password</p> <p>no "commit" operations associated with this process</p> <p>signature/password requirement done through screen 0321 - not clear how it is used on 0322</p> <p>App F - 3.1.3.2/UP1: requires signature password when user selects Commit button - however, no "commit" operations for UP2</p>	<p>signature/password in this case seems to limit access rather than updates - requirement done through screen 0321 - not clear how it is used on 0322</p> <p>unclear how UPs and screens interact with each other - seems to imply that higher level signature password is used at lower level process</p>	<p>Note signature password review matrix in V&V Report Appendix B. To be addressed during SDD update after Phase 2 function specification review</p> <p>Note signature password review matrix in V&V Report Appendix B. To be addressed during SDD update after Phase 2 function specification review</p>

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.3.2.6 Perform Waste Treatment	Commit the data collected on the "LLW RWM Treatment" screen to the DMS database after signature password has been entered.	UPI5-16: Compliant Waste Loadout - BOTTLE, CONTREAT, CONREL, SAMREL, WASTEXT records created with signature password required for Commit	UPI4: Items are treated and waste records populated - three records are created as an extension of processing - unclear if signature password is considered	See signature password matrix in Appendix B of V&V Report. To be addressed during SDD update after Phase 2 functional specification review
	input user Signature Password	App F - 3.1.3.2/UP 5&6: requires signature/password when user selects Next New Container and database updated; and when user selects Return To Sorting - refers to screens 0321 and 0322 - 0322 does not have signature password - implies using the signature password entered on 0321?	unclear when actual signature password is needed and how the screens relate in using the information	note signature password review matrix in V&V Report Appendix B
	User input of treatment results.	UPI4: Items are treated and waste records populated - specifies user entry of Material Group, Waste Description, Treatment Comments, check for Compliant - all other fields are display only	Treatment Comments seems to be only field oriented specifically to recording of actual treatment results	To be addressed during SDD update after Phase 2 functional specification review

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	<p>Display transfer drum PIN and PINs for all items to be removed from transfer drum on RWM glovebox DMS monitor. Indicate when each PIN has been removed from drum.</p>	<p>UP9-10: LLWRWM Staging of Items to be Treated - displays all information except when packet/sample removed from transfer drum</p>	<p>seems to be missing information on timing</p>	
<p>3.1.3.3.1 TRU Entry Glovebox</p>	<p>"Drum Contamination Status" message from the PCS.</p>	<p>UPI: TRU glovebox drum status at entry - no mention of relation to DCS - 3.1.8/UP60 specifies a DCS message - TRU module does not use the CONEXT_CONTAM_FLAG the DCS message updates - however, DCS message may be source of drum PIN associated with location TRU_SORT</p>	<p>unclear if DCS interacts with TRU process or how the two relate to their respective data base updates</p>	<p>2/20/96: Test Proc Review Meet: TRU process to be further specified during Phase 3 requirement reviews and subsequent specification updates. TRU and TRU RWM discrepancies will be addressed during those activities</p>
	<p>User requests "TRU Glovebox - Drum Status at Entry" from the "Process Operations" menu</p>	<p>UPI has the TRU Entry screen</p>	<p>may have superseded the original intent of the SRS</p>	

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.3.3.2 TRU Sorting Glovebox Sorting Table Operations	PINs of drum at the sorting table and the drums at the two compliant loadout ports received from the PCS.	UP3: TRU Sorting Table - displays PINS at sorting table - no specification for drums at compliant loadout ports	UP does not seem to incorporate all necessary information	
3.1.3.3.3 TRU Sorting Glovebox Non-compliant Waste Loadout	The PAM unit will perform a packet assay and report a Pu-240 equivalent value (along with uncertainty) to the PCS which then transfers the data to the DMS.	UP5: TRU Non-Compliant Packet - screen will display FGE data - PAMR message specifies display of FGE in a pop-up window with an OK button - overlap?	screens may be redundant or in conflict with each other	
	Display the attached RWM transfer drum cumulative Pu-239 FGE value.	UP5: TRU Non-Compliant Packet - FGE seems to be displayed only for the packets in the drum - does not seem to be a drum "roll up" for total FGE	may be missing necessary data on screen	

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.4 Sample Management: general discrepancy	none	<p>following screens are specified in SDD Appendix F, but can not be mapped to any SRS requirement:</p> <p>DMSS0507: Sample Management/COC</p> <p>DMSS0508: Sample Labels</p> <p>DMSS0509: Sample/Bottle Tracking Data</p> <p>DMSS0510: Purge Port/ Transfer Pig Location</p>	not clear if these fulfill a later identified requirement or if they are an increase in scope	These screens were identified in the SDD during design as being required to fulfill Sample Management functions. SRS to be updated following Phase 2 functional specification review meeting. Discrepancy Item Closed 4/10/96
3.1.4.4 Waste Designation	Packet PIN selected by user from list of all packets stored in transfer drums if screen is accessed from "Sample Management" menu or "Worksheet Data Entry" screen, or from list of packets in previously selected product drum if screen is accessed from "Processed Waste Data Review and Modification" screen.	<p>UPI0: Designation of packet waste characteristics in support of generation of the worksheet info/future treatment specifies required data from DMSS0506 and DMSS1221 selections</p> <p>no mention of display if selected from Sample Management menu - superseded by requirement to select DMSS0506?</p>	screen hierarchy needs to be clarified in the SRS	To be addressed during SDD update after Phase 2 function specification review

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	<p>Worksheet Number, PIN of container(s) to be treated, WRAP 1 treatment procedure number, TRU or LLW indicator, and file name of ASCII file to be displayed on monitor behind appropriate RWM glovebox. Verify that for all samples to be treated, if any, results have been received. Refer to SRS section 3.1.3.2.6 for application of treatment process.</p>	<p>UP12: Generation of Worksheet data in support of RWM Processing - Display all currently defined worksheets</p> <p>UP14: Display packets available for treatment on a pop-up screen</p> <p>required data displayed but packet data displayed only when user selects Add Packet button</p>	<p>data display may not be complete on basic screen</p>	
<p>3.1.4.5 Treatment Worksheet Entry</p>	<p>Perform input validation. Worksheet number field must be unique. Container type must be sample, packet, collection container or treatment container. Procedure entered must be a valid treatment procedure. File name entered must already exist. TRU or LLW indicator must correspond to the secondary waste type. Treatment procedure is checked to make sure it is not expired.</p>	<p>display and data retrievals are based on record keys for tables accessed - no specification for validation/edit checks for data entry</p>	<p>specifications should indicate that edit checks occur, but generally do not throughout the SDD - this is one of the few SRS requirements that go out the way to mention them -validation checking seems to be implied in the semantics of the SDD pseudo-code - perhaps should be part of the general design specifications?</p>	<p>To be clarified in the next revision of the SRS. Specific edit checks to be defined in BCSR as-built release of SDD</p>

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	Display the "Treatment Process Entry" screen with the treatment number and description.	no such screen	a reference back to DMSS0506 with an old/erroneous screen name?	
3.1.5.1 Generate Drum or Box Documentation	Manually entered data to complete shipping forms	UPs 2-6 specify displays of various information for form, with lookups to tables - user entry specified only for Special Nuclear Material (Y or N), To Building/Area, From Building/Area columns, etc. - most is display only	SRS is not specific on data to be entered and/or displayed only - specifications may need a final verification to ensure all necessary data entry can be accomplished	Comments provided after review of V&V discrepancies: shipping documentation to be reviewed during Phase 2
	Print the proper shipping reports.	UP1: Selection of WRAP shipment form to be completed - has a Print Button - selection of a particular report button enables print button, but apparently have to return to 0601 each time to print each report, one at a time - no indication of return to 0601 for printing when user selects Exit or Manifest Complete buttons	may be an awkward user interaction with screen flow - no way to print all at once	Comments provided after review of V&V discrepancies: shipping documentation to be reviewed during Phase 2

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SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.5.2.1 Requesting Retrieval of Drums for Shipment	PINs of drums at the shipping dock received from the PCS.	UP10: Update the container location as containers are removed from storage and transferred to the shipping dock - specifies CL message with SHIPDCK location as trigger to refresh screen only for the WRAP Shipment Number already displayed in UP9	PIN display from PCS limited to current WRAP Shipment Number - no others displayed - SRS requirement seems to be intended to identify new PINs to process for next shipment, but full intent is not clear	Publication of new SDD: Appendix F changes address this discrepancy Discrepancy Item Closed as of 4/15/96
	Update drum or box location to shipping dock. (Section 3.1.8)	UP10 specifies a DMSCOM trigger to form for PCSDMS CL (SHIPDCK) which causes screen to refresh with SHIPDCK located PINs that match SHIPPICK_WRAP_NUM - SRS paragraph 3.1.8 discuss location updates in general, but has no reference to location updates pertaining to shipping except for IN_TRANSIT - other messages update locations which are associated with the shipping dock (such as DISCHRVW), but actual SHPDCK location code does not seem to be set	trigger may not be set and data retrieval may not occur	Follow up information: updates of locations occur by DMSCOM in "background" and may not always affect other data base processing - Appendix F messages relate to DMSCOM traffic that affects other processes Discrepancy Item Closed: 3/15/96

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SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.5.2.2 Certification Data to SWITS	A request by the user to transmit certification data and the location update information on the pending shipment shown on the "Loading Dock Container Shipping" screen to SWITS. This request is performed from the "Loading Dock Container Shipping" screen.	UP11: DMS to transmit applicable SWITS data to SWITS for all drums sent to the Processing Area in WRAP and UP12: DMS to transmit all applicable SWITS data to SWITS for all drums received by WRAP specify selection of In Transit button - updates SWITS tables	"in transit" implies drums have left the facility - requirement seems to be oriented toward drums still in the facility and pending transit	05/02/96: Test Proc Review Meet: Update to SWITS occurs only when containers actually leave WRAP - so they are IN_TRANSIT - if SWITS rejects update, receiving facility will not be able to receive, and problem will be caught at that time Discrepancy Item Closed 4/12/96
3.1.5.3 Complete TRU Waste Shipping Data	send data update to SWITS	there are generic update messages specified in 3.1.5 (Shipping), but there is not specific mention of needing them for TRU waste	design may not support update for TRU processing	Comments provided after review of V&V discrepancies: process 3.1.5 revised to add this function Action Completed and Discrepancy Item Closed as of 3/6/96

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.5.3.1 Assemble TRU Waste Containers	input user Signature Password	screens and specifications for TRU load out drums do not refer to signature passwords, but part of TRU screen hierarchy, which has signature/password on main screen - should SRS refer to TRUPACT?	need to verify need for signature password and ensure it is as specified	note signature password review matrix in V&V Report Appendix B
3.1.5.3.3 Complete TRU Waste Shipping Data	input user signature password	only refers to signature/password entry for TRUPACT loading activities	may not be done for all shipping	
3.1.5.3.3 Complete TRU Waste Shipping Data (for boxes)	send data update to SWITS	specify a generic message but only for drums - no specific mention of TRU waste	design may not support this SWITS update	2/20/96: Test Proc Review Meet: TRU to be further specified during Phase 2 requirement reviews and subsequent specification updates - TRU and TRU/RWM discrepancies will be addressed during those activities

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SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.6.1 Process List Additions	allows user to resequence (change the order of) the sequence numbers	no mention of this capability in the SRS	should be verified that this is a required/desirable feature	2/20/96: Test Proc Review Meet: should update SRS to indicate desire for change in sequence numbering Action Completed and Discrepancy Item Closed: 2/28/96
3.1.6.2 Process Pick List	Generate a pop-up screen of route designation codes and descriptions when requested.	none	no such pop-up specified	2/20/96: Test Proc Review Meet: TRU to be further specified during Phase 2 and 3 requirement reviews and subsequent specification updates - TRU and TRU/RWM discrepancies will be addressed during those activities
	Generate a pop-up screen of profile IDs and descriptions when requested			
	Display PINs of any drums not on the Process Pick List but located in the AS/RS with the container WRAP status code of waiting for processing.	UP3: Process List - displays on bottom half of screen - indicates WRAP_STATUS_CD is part of display but does not describe a column for it on the screen	specifications may not support data display	
	Upload the Process Pick List only, including those drums currently in the AS/RS and flagged for the PCS	UP4: Process List uploads the picklist to PCS - says "IF CONLOC_LOCN_ID=AS_RS Send all PROC_PCS_FLAG = null"	unclear how "null" values applies	Revision to SDD: latest version of SDD changed "null" to "checked" - Discrepancy Item Closed as of 3/26/96

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.6.5 TRUPACT Assembly List	Display the assembly number and applicable drum PINs in the proper AS/RS retrieval sequence, along with PIN locations.	UP9: TRUPACT Assembly List Generation - contains "Sequence" column - shows lines 4-17 in Sequence column as "1" through "14" - no "pseudo-code" to map column to sequence number data element	may be missing data display	2/20/96: Test Proc Review Meet: TRU to be further specified during Phase 2 and 3 requirement reviews and subsequent specification updates - TRU and TRU/RWM discrepancies will be addressed during those activities
3.1.6.5 TRUPACT Assembly List	????	Process 3.1.8 (Message Handling) Unit Process 101 describes receipt of a TRUPACT assembly list in a TAC message from PCS - there is no direct SRS requirement noted for this message, but it appears in support of the TRUPACT assembly processes	may not be a necessary message based on known requirements	
3.1.7.1 Facility and Glovebox Radiological Limits Report	Display the facility dose equivalent curie inventory and the fissile loading for the TRU and TRU RWM gloveboxes along with the curie and fissile load limits. Hard copy reports will be available.	PRINT button specified to print screen - no reports being printed	need to verify that screen print meets reporting requirements	2/20/96: Test Proc. Review Meet: should clarify SRS statement to indicate that "hard copy report" is satisfied with screen print of displayed data Action Completed and Discrepancy Item Closed: 2/28/96

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.7.3 TRU Glovebox Fissile Material Inventory Check	Drum PIN and fissile material inventory from the SIE	no specification for this input - SIE may be the source for the screen display, but not clear -UP1 of Process 3.1.3.3 (TRU Process) indicates display of RADMAT_RAD_TOTAL and RADMAT_UNITS but does not cite SIE as source SIE RESS updates NDA and NDAISO tables	data source and display may not be meeting requirement	2/20/96: Test Proc Review Meet: TRU to be further specified during Phase 2 requirement reviews and subsequent specification updates - TRU and TRU/RWM discrepancies will be addressed during those activities.
3.1.7.4 TRU RWM Glovebox Fissile Material Inventory Check	Maintain a TRU glovebox fissile material inventory history	not yet specified	archiving and data retention issues not yet resolved	
3.1.8.4.1 Sample/ Container Inventory	receive sample and parent drum/packet message from PCS	not noted as a Phase 2 process, but refers to a Phase 2 message	process may be using a message that will not be available when the process is implemented	Comments provided after review of V&V discrepancies: SDD updated - 3.1.8/UP49 shows SPDP as Phase 2 Action Completed and Discrepancy Item Closed as of 3/6/96

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.8.11 BWAS Message Pass Through	????	Process 3.1.8 (Message Handling) has a message to receive an assay abort from the PCS and another message to pass the abort message to the BWAS - there is no mention of such an abort message pass through in the SRS - these are Phase 1 messages	may be an addition to scope	1/4/96: Test Proc Review Meet: need to update 3.1.8.11 in the SRS for messages Action Completed and Discrepancy Item Closed as of 3/6/96 both directions
3.1.9 User Review/Modification of WRAP 1 Waste Processing Data	Update the DMS database and log the change(s) with the user ID (signature password), old data element value(s), date, and time.	UP1-33 screens: affected tables updated signature password required to select Review Complete button after all screens reviewed	no specification regarding old data elements or history capture	Comments provided after review of V&V discrepancies: SDD should be updated to delete signature password requirement - journaling described in SDD 5.1 Action Completed and Discrepancy Item Closed as of 3/6/96
	Select specific "Process Data Review" screen from "WRAP 1 DMS Main Menu".	UP33: Display container PINS for containers receiving verification exams in WRAP 1 specifies user select screen DMSS1231 Verification Data Review	no such screen in Appendix A - may be superseded by 1221	Comments provided after review of V&V discrepancies: 1231 added to Appendix A Action Completed and Discrepancy Item Closed 3/6/96

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	User may flag the container as "data review complete" or "data review unsatisfactory" in the DMS drum status field	UP31: Update WRAP status code once all errors resolved, user can select Data Review Complete button - no provision for Data Review Unsatisfactory	specifications are not fulfilling requirement - however, system is automatically doing review and not allowing Data Review Complete access until modifications satisfy data review requirements	Comments provided after review of V&V discrepancies: SRS needs to be revised to distinguish between data review for verified waste and data review for processed waste
3.1.10.1 Facility Performance Data Reporting	running fissile material for specific time periods (weekly, monthly, quarterly, or annually) inventories	none: shipping and receiving actions record this data and provide alarm if levels exceeded	no report specified to provide facility totals as needed - none listed in Appendix B to be specified later	Report requirements to be further specified in Phase 2, when operable
3.1.10.1 Facility Performance Data Reporting 3.1.10.2 Waste Data Reporting 3.1.10.3 Reference Table Reporting	reports for: shipping, awaiting shipment, regulatory reports, reference table reporting	report types listed in Appendix B but not specified at this time	specifications need to be completed	Phase 2/3 specification work needed

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.2.1 User Interfaces	Help screens will be structured to accommodate a menu driven system.	5.1 GENERAL DESIGN SPECIFICATIONS - specifies...make use of the Autohint feature... - no other help specified in screens or table structure	help function does not seem to be as originally envisioned by SRS	SDD revision establishes new baseline for Phase 1--function operating correctly as verified in testing. Discrepancy Item Closed.
3.2.3 Software Interfaces	It is anticipated that SQL calls to/from the SWITS database will allow this remote access (to SIE, PCS, BWAS).	design does not communicate with BWAS, SIE, and PCS via SWITS - instead, DMS establishes a communication capability between SIE and BWAS via DMS to/from PCS - DMS deals directly with SWITS only regarding interaction between the DMS and SWITS data bases	see general category 2 discussion in V&V Report Appendix A, paragraph 2 - extra scope burden for DMS	Need to revise/clarify SRS
3.2.4 Communications Interfaces	The DMS will use the HLAN time to set the DMS system clock at startup. The DMS will provide a reference clock service to the other computers on WLAN as described in SII 1994.	para 3.1.2 Data Sources - Data sources...include... the HLAN time clock... - no reference to providing a "clock service" to other computers	does not specify processing as originally envisioned by SRS	Test procedures verify HLAN clock to set DMS computer--clock interaction with other systems to be determined during Phase 2

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.3.1 Number of Terminals to be Supported	The DMS must support 10 IBM compatible computers used as terminals plus 5 X-terminals concurrently.	no SDD discussion of concurrent operations	specifications should indicate factors that may need to be considered as potential performance impacts	Implementation of Phase 1 environment establishes baseline
3.3.3 Printing	One bar code printer in the Shipping/Receiving Office Three facility printers. One HLAN printer.	no SDD discussion of printer inventory		Discrepancy Item Closed
3.3.4 Response Times	Confirm required data on SWITS for twenty drums (3.1.1.2.2) in 30 seconds or less with SQL*Net interface. Includes user request to confirmation on the DMS terminal.	no specification for response times		Tested via DMS-F91. Discrepancy Item Closed
	Retrieve drum container data from SWITS for twenty drums (3.1.1.2.4) and generate DMS drum container records (3.1.1.2.5) in three minutes or less with SQL*Net interface. Includes user request to confirmation of DMS database update.		Tested via DMS-F91. Discrepancy Item Closed	

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	Receive the Pu-240 equivalent value from the PCS, calculate the Pu-239 FGE, and send the Pu-239 FGE to the PCS (3.1.3.3.3) in 3 seconds or less.			
	Display the TRU glovebox fissile material inventory (3.1.7.3) in less than 2 seconds.			
	Perform a LLW product drum content inventory update (3.1.3.1.8) in less than three seconds.			
	Perform a data field validity test in less than one second.			
3.4.1 Standards Compliance	The system will be compatible with the site naming standards for those items (e.g., buildings) that have site standard names.	no reference to central site systems for facilities, persons, contractors, etc.	PEOPLECORE, FACILITYCORE, and other central systems are "owners" of standard data definitions - should at least reference them and comply with their data definitions for applicable data	To be addressed in next revision of SRS. Validation for facility names, etc. is provided by SWITS-controlled tables.
	The DMS will be designed to satisfy site production standards.	aside from HLAN, no site standards for operation specified	should reference production standard expectations from the development	

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.5.2 Availability	The DMS operational availability shall be a minimum of 99% of scheduled plant operating time during normal operations as described in WRAP 1 Specification Sections 13461/13462. Normal plant operation is 6:00 AM to 8:00 PM on weekdays.	no reference to system availability - should be specified as a system parameter	specifications should indicate factors that may need to be considered as potential performance impacts	Needs to be addressed in next revision of SRS
3.6.1 Database	A historical database will be maintained on the DMS for all waste containers that have been shipped from the facility.	none	such an historical database, with the implications of archiving policies, is not specified - apparently set aside for phase 2 definition	Issue for Phase 2 or later--to be addressed during functional specification review
3.6.2 Operations	selected operational users can start and stop DMS without system administrator required	SDD does not specify how this will be accomplished	design does not implement any business rules or rights for this requirement	
3.6.5 Scheduling (see discussion on paragraph 3.5.2 pertaining to operating hours)	Some operations such as backup and large report generation may be performed during off hours.	none	specifications should indicate factors that may need to be considered as potential performance impacts	Needs to be addressed in next revision of SRS

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.6.5.1 General (scheduling)	Data will be retained on the system to support year-end report/processing (15 month retention). The generation of these reports will not impact routine operations.		such an historical database, with the implications of archiving policies, is not specified - apparently set aside for phase 2 definition	Issue for Phase 2 or later--to be addressed during functional specification review
3.6.5.2 Daily (scheduling)	...the DMS will be available for extended shift operations when necessary, except for regularly scheduled maintenance periods.		specifications should indicate factors that may need to be considered as potential performance impacts	Needs to be addressed in next revision of SRS
3.6.6 Reliability and Recovery	system will maintain a transaction log and system administrator will do periodic system backups	SDD has no specific mention of transaction log, but presumed to be a feature of the ORACLE software - unclear how system administrator can interact with the log for recovery	SA may not have tools to accomplish necessary recovery	1/18/96: Test Proc Review Meet: no resolution during Phase 1 - the tools for this function have yet to be determined - this is pending definition of the procedures associated with the system administration function, which then impact the SA tool design. Issue for Phase 2 or later

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.6.7 Audit	It is anticipated audited data fields will not exceed five percent of the data elements in the database.	no limit noted - unclear how system administrator interacts with journal	capabilities and expectations for system administration can affect level of detail for this portion of the development	1/30/96: Test Proc Review Meet: SRS should be updated for all of audit requirement - explain SA interaction by table rather than by data element - remove reference to 5%. Needs to be addressed in next revision of SRS
	It shall be possible for the data administrator to turn the audit trail on or off and to change the selection of data fields audited.	unclear how system administrator interacts with journal		
	The audit trail shall maintain a record of the data, time, previous value (for data changes), current value, and the identity of the person entering the data (identified through the signature password).	para 5.1: audit trail of database changes implemented through use of journal feature - no description of audit data captured	need to clarify that journal feature has necessary information to support audit	1/30/96: Test Proc Review Meet: change SRS to update requirement for data and log on passwords

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.6.13 Security and Privacy	network administrator perform network monitoring and network configuration changes	SDD has no provision for network administration - may be deferred to site network operations - however, WLAN and node-specific oversight not provided	may not have appropriate network maintenance functions covered	1/18/96: Test Proc Review Meet: no resolution during Phase 1 - definition of responsibilities between WRAP network administration and the HLAN network administration is not available
	A WRAP 1 operations manager will have the authority to add, change, or delete user access to the DMS. Once the manager has approved the changes, the system administrator will be empowered to make the necessary changes.	SDD has no discussion of Operations Manager interaction - a procedural function rather than a system one?	need to ensure procedural/system functions are synchronized	1/30/96: Test Proc Review Meet: deferred to procedural documentation when prepared
		para 5.1.4: system administrator responsible for maintenance of the software system, communications, and hardware - description in this SDD paragraph seems to imply a technical role rather than an administrative one	role of system administrator needs to be clarified - can affect final design to support this function	1/30/96: Test Proc Review Meet: SRS needs to be updated - SDD impacts should then be assessed and specifications clarified

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	There are three privileged users on the system: the system, database, and network administrators.	para 4.3.3: data/database administrator with authority to update the database structure, perform global data manipulation, maintain the data dictionary - described as a "developer interface" para 5.1.4: system administrator responsible for maintenance of the software system, communications, and hardware - no provision in the SDD for a network administrator		

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 3 DISCREPANCIES				
2.4 GENERAL CONSTRAINTS	Approval Designator. The DMS has been assigned a Approval Designator Q. In accordance with this assessment, the software development project must adhere to the requirements identified in WHC-CM-4-2, Quality Assurance Manual, QR 19.0, WHC-CM-6-1, Standard Engineering Practices, EP-2.1, and WHC-CM-3-10, Software Practices.	1.0 INTRODUCTION or elsewhere: WHC-CM-6-1 not cited or referenced	should be included for completeness	Needs to be addressed in next revision of SRS
3.1.1.1 Print Bar Code Package ID Labels	not shown as selection in SDD para 5.2.1	screen navigation description not correct	typo or error in SDD document as written - document needs to be clarified	Needs to be incorporated into system/next revision of SDD
3.1.1.2.1 Logging Received Drum or Box Containers	Display the "Container Receiving" screen with the drum or box container PINs at the Shipping/Receiving terminal for comparison to the shipping papers.	UP2: Receive Drums or boxes - screen displayed - has a second column for display of RECDISP_INNER_PKG_ID from SWITS	SRS should mention that shipping papers are hard copy items compared manually with the screen - no expectation to automate their display or capture them in the system	Action Completed and Discrepancy Item Closed as of 3/6/96

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.2.2 Drum or Box Container NDA Data Operation	send drum characterization & isotopic quantity data to SIE	Appendix F 3.1.2.2/UP3 only specifies this message flow for REVISIT occurrences	need to clarify Appendix F spec	Needs to be addressed in next revision of SRS
	Using the waste drum or box container PIN as the primary key, retrieve and transfer the data (characterization and quantitative) needed by the SIE or BWAS for its assay data revisit include the purpose of the assay, i.e. REVISIT	UP3: NDA Revisit - specifies send message to SIE - no mention of BWAS	typo or error in SDD document as written - document needs to be clarified - probable Phase 2 update	Comments provided after review of V&V discrepancies: BWAS messages to be implemented in Phase 2
3.1.3.2.1 LLW RWM Separate Compliant from Non-Compliant	receive packet PINs from PCS	(Redundant with 3.1.3.1.4?) Phase 2 messages also, described only in context of transfer stand add/remove	typo or error in SDD document as written - document needs to be clarified	Comments provided after review of V&V discrepancies: 3.1.3.1.4 is at LLW Glovebox with 3.1.3.2.1 is at LLW RWM Glovebox - no change required
3.1.3.2.6 Perform Waste Treatment	User requests the "LLW RWM Treatment" screen from the "Process Operations - LLW RWM Process Glovebox" menu.	UPI4: Items are treated and waste records populated - specifies selection of DMSS0326 LLW RWM TREATMENT screen from DMSS0324 LLW RWM Treatment Item Assembly	screen hierarchy different than envisioned in SRS - SRS should probably be updated	Needs to be addressed in next revision of SRS

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	User input of worksheet number from list of available worksheets.	UP13: All items to be treated (packets and samples) are on treatment table - specifies user entry of Worksheet ID - parent menu (0324) has a pop-up LOV to WORKSHEET table	LOV use is not available at this stage - Worksheet ID seems to carry down to this menu - Appendix F should be clarified	Revised update of "as-built" SDD. Discrepancy Item Closed
3.1.3.3 TRU Process Glovebox	The user selects "TRU Process Glovebox" from the "Glovebox Operations" screen.	UP1: TRU glovebox drum status at entry specifies user select DMSS0331 TRU Entry from TRU Glovebox Menu - no "Glovebox Operations" menu specified in SDD - TRU Glovebox menu has selections including TRU Entry	need to update screen hierarchy discussion in SRS	Needs to be addressed in next revision of SRS
3.1.3.3.3 TRU Sorting Glovebox Non-compliant Waste Loadout	Pu-240 value (and uncertainty) from the PCS.	UP5: TRU Non-Compliant Packet displays FGE - indicates relation to messages NCIP, NCIT - PU-240 data passed in PCSDMS message PAMR specified in 3.1.8/UP45 - not mentioned in this UP	specifications need to cite PAMR message as source of data and computation	To be addressed during Phase 2/3 functional specification reviews

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	<p>The DMS will utilize the Pu-240 value to calculate the Pu-239 FGE of the waste packet and display this value on the TRU Process Glovebox DMS terminal. This value will be retained in a temporary file (available for review by the Sorting glovebox user) until it is determined whether or not the packet is compliant or non-compliant.</p>	<p>UP5: TRU Non-Compliant Packet display only - requirement for "temporary storage" is not addressed</p>	<p>questionable that this should be stated in SRS - the storage and display of data seems to meet the processing requirements, and is done through the technical implementation of the requirements by the developer</p>	
<p>3.1.3.3.5 Empty Feed Drum Compaction</p>	<p>none</p>	<p>3.1.8/UP97 shows message EDPR - no specific SRS requirement noted - related to UP 7</p>	<p>need to update SRS description of message requirement for empty drums</p>	<p>Comments provided after review of V&V discrepancies: empty drum process route message added to SRS 3.1.8 Action Completed and Discrepancy Item Closed as of 3/6/96</p>
<p>3.1.4.1 Obtain Waste Sample & Initiate Chain of Custody</p>	<p>receive sample bottle ID and parent drum or packet PIN from PCS</p>	<p>indicates receipt of message - chain of custody starts in Unit Process 4</p>	<p>typo or error in SDD document as written - document needs to be clarified</p>	<p>Needs to be incorporated into system/next SDD</p>

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.4.5 Treatment Worksheet Entry	Store each Worksheet record entered.	SRS paragraph numbering not correct	need to fix typo in SRS	Needs to be addressed in next revision of SRS
3.1.5.1 Generate Drum or Box Documentation	Manually entered data to complete shipping forms	UP2: Update the Onsite Radioactive Shipment Record - specifies displays of all information for form, with lookups to tables - user entry specified only for Special Nuclear Material (Y or N), To Building/Area, From Building/Area columns	SRS is not specific on data to be entered and/or displayed only - specifications may need a final verification to ensure all necessary data entry can be accomplished	Needs to be addressed in next revision of SRS
	Generated list for drum or box shipment based on drum type (secondary waste type code)	UP1: Selection of WRAP shipment form to be completed - generates Container PINs in shipment - no reference to SWTYP_GROUP UP9: Display of waste containers for shipment - displays DMSS0602 with Shipment Container List display of TRU/LLS based on RDET_SWTYP_GROUP	screen content and hierarchy seem out of sync with requirements	Will be part of Phase 2/3 functional reviews and subsequent SDD update

**WRAP 1 VALIDATION AND
VERIFICATION REPORT**

HNF-1783
Revision 0
September 27, 1996

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
<p>3.1.5.2.1 Requesting Retrieval of Drums for Shipment and</p> <p>3.1.5.1 Generate Drum or Box Documentation</p>	<p>Upload the pick list to the PCS and</p> <p>User request for pick list download to the PCS.</p>	<p>UP9: Display of waste containers for shipping user selects Send Shipment Pick List to PCS button - generates TSPL and LSPL messages if RDET_SWTYP_GROUP equals either TRU or LLW</p>	<p>both requirements specify same action - appears consolidated in SDD - may be redundant requirements in SRS</p>	<p>Comments provided after review of V&V discrepancies: SRS updated to delete PCS upload requirement Action Completed and Discrepancy Item Closed as of 3/6/96</p>
<p>3.1.5.2.2 Certification Data to SWITS</p>	<p>send certification and location confirmation messages to SWITS</p>	<p>only mentions work for drums, none for boxes</p>	<p>typo or error in document as written - document needs to be clarified</p>	<p>SRS updated Action Completed and Discrepancy Item Closed: 3/6/96</p>
	<p>Display the message on the "Loading Dock Container Shipping" screen for the Shipping/Receiving terminal.</p>	<p>note: two paragraph "A" in SRS</p>	<p>typo in SRS document as written - document needs to be updated</p>	
	<p>Appendix F UP11: DMS to transmit applicable SWITS data to SWITS for all drums sent to the Processing Area in WRAP</p> <p>Appendix F UP12: DMS to transmit all applicable SWITS data to SWITS for all drums received by WRAP</p>	<p>wording of Unit Process titles in specifications seems to be oriented toward receiving rather than shipping</p>	<p>text copy from other part of the SDD and not edited?</p>	<p>Needs to be addressed in next revision of SRS</p>

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.5.3.1 Assemble TRU Waste Containers	User request for the "TRUPACT Payload Assembly" screen from the "Shipping" screen.	UP16: Display of data in support of TRUPACT II loading operations specifies user selection of DMSS0603, TRUPACT Cask Loading/Certification	specifications do not flag this operation as Phase 2 or 3, although SDD paragraph 2.1.1 indicates it is not Phase 1 - SDD should be reviewed for possible update in Appendix F to indicate appropriate phase	Needs to be addressed in next revision of SRS. Needs to be incorporated into system/next SDD. Issue for Phase 2 or later
3.1.5.3.2 Load the TRU Waste Assemblies into Casks	Confirmation of entered data and update of the DMS database.	UP16: Display of data in support of TRUPACT II loading operations - not specified, but may be a presumed result of displaying data on the screen as it is entered - no feedback to user indicating data posted to data base	SRS need for user feedback may be too strongly stated	Statement needs to be moved to be a general requirement--confirmation of commit/changes is appropriate
3.1.5.3.3 Complete TRU Waste Shipping Data	all	entire requirement seems to be very redundant with 3.1.5.3.2	should consider consolidating requirements and resultant design	Needs to be addressed in next revision of SRS. Issue for Phase 2 or later
3.1.6.2 Process Pick Lists	Generate the "Process List" screen showing PCS flag, sequence of drum PINs, location, bin number, route code, sample flag, compliant flag, and profile ID.	UP2: Process List screen generated with noted fields - also has PKG_ID: assumed to be an omission from the SRS	SRS should be updated	To be addressed in next SRS update

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.6.3 AS/RS Retrieval & Storage via Transfer Car	Request "AS/RS Storage Pick List" screen from the "Pick List Menu."	UP5: AS/RS Retrieval & Storage via Transfer Car - states "Request screen (DMSS0903) from Pick List Menu" - no specification in this process for the Pick List Menu itself	need to include specifications in SDD for generation of basic menus	Addressed during SDD "as-built" update. Discrepancy Item Closed
	Transfer the selected drum PIN to the AS/RS Transfer Car Pick List	UP5 has no mention of PIN transfer - this transfer seems to occur in UP7 which transfers PINs across bins marked either as Ready for Shipment or Shipment	seems to be a mismatch between processing, as specified in the SRS, and the work being supported	
3.1.6.4 AS/RS Shipping Pick List	User selection of drums for entry on the pick list	UP7 indicates drum PKG_ID only in relation to bins - UP5 actually seems to deal with individual drums as described by this requirement		
	User input of shipment ID# for the selected PINs.	UP7: AS/RS Shipping Pick List - has a LOV (list of values) button for display and/or "allow user to create new"	extra scope?	Comments provided after review of V&V discrepancies: scope is appropriate Action Completed and Discrepancy Item Closed as of 3/6/96

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.6.5 TRUPACT Assembly List	User request to send TRUPACT assembly pick list to AS/RS.	UP9: TRUPACT Assembly List Generation - "Commit" button creates records and saves data - then "Transmit" button sends location "AS/RS" to PCS -	perhaps poorly worded in SRS - not clear why message would be sent "to AS/RS"	Comments provided after review of V&V discrepancies: SRS updated to send message to PCS. "Transmit button sends list <u>only</u> if location for all drums is currently AS/RS Action Completed and Discrepancy Item Closed as of 3/6/96
	User entry of TRUPACT assembly data including shipment number, assembly ID, and list of PINs by loading sequence.	UP9: TRUPACT Assembly List Generation - specifies all are manually entered or off a "pop up" screen	extra scope?	Comments provided after review of V&V discrepancies: scope is appropriate Action Completed and Discrepancy Item Closed as of 3/6/96

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.7.3 TRU Glovebox Fissile Material Inventory Check	Transfer drum PIN with previous location of TRU glovebox transfer drum port and a new location other than the TRU Glovebox RWM Transfer Port.	UP2: Container Locations and Relationships - locations entered by user - specifies "From PIN" and "To PIN" display as part of "Container Relationships" -actual location codes entered are presumed to be based on business rules for this process (i.e., TRU-related locations are not specified)	SRS should refer to business rules regarding codes needed for this requirement - should be specified as "manual" (i.e. not internal to system) process	To be addressed in next update of SRS after Phase 2/3 functional specification reviews
3.1.8.1 Drum or Box Inventory or if at LLW Entry Glovebox Lift table and drum not overpacked	if AGB at PAN, always send download data message instructing SIE to transmit drum database to specific PAN or GEA also, send location message with overpack drum PIN to PCS also, send location message with drum PIN to PCS	3.1.8 message sent when location = BDCVYR "x", N_NCRSL, AIRCVYR_"x", INFDCVYR	typo or error in SRS or SDD document as written - document needs to be clarified	To be addressed in next revision of SRS
	send location message with overpack drum PIN to PCS	requirement is for message if at LLW Entry Glovebox Lift table - 3.1.8/UP9-10 refer to CL when drum at LLW Entry Glovebox <u>Port</u>	should fix message occasion naming convention to ensure clarity	

SRS REFERENCE	REQUIREMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.8.10.2 Treatment Container and Loadout Drum	receive treatment container and loadout drum message from PCS	3.1.8/UP35, 36, 37 have CLW when "at airlock conveyor scale" leaving process area		
3.2.1 User Interfaces	All primary screens will have a "fast access" capability,	SDD para 5.2 refers to "fast access" discussion in Section 4.3.1 - actual reference should be 4.3.2	a "typo" update to the SDD	Needs to be incorporated into system/next SDD
3.4.1 Standards Compliance	The system will be compatible with applicable site standards.	no reference to site standards except as pertains to SWITS compatibility	should reference standards - although it is apparent that data naming standards are being followed as defined for Hanford	Addressed during SDD "as-built" revision
	The system will be compatible with the Site Naming Conventions found in WHC-CM-2-6, Section 3.6 "Business Naming Standard."			
3.5.3 Security	Host access control shall be used to protect the system from unauthorized access.	SRS not clear on term "host access" - could be defined as access to the system environment or as simple physical security over terminals	SRS document needs to be clarified	Needs to be addressed in next revision of SRS

4.2 SYSTEM DESIGN DOCUMENT (SDD) INTERNAL INTEGRITY

4.2.1 Purpose

This analysis compares the discreet features and elements specified in the SDD Appendices and text. The intent is to determine the consistency of the design across each part of the specification to gauge the overall design integrity.

4.2.2 Scope

This analysis focuses on the SDD, which is composed of a general specification and eight appendices. Each appendix describes a different aspect of the detailed design. While each of these SDD sections has a distinct focus, they are very interdependent with frequent cross-references among them. This analysis traces these cross-references and examines consistency within them.

This analysis is divided into two phases. The first phase focused on the analysis directly supporting issues that need resolution for Phase 1 of the DMS development. The second phase of the analysis was conducted to support specification reviews and updates for Phase 2 of the DMS development.

4.2.3 Description of Analysis Approach

For Phase 1 of this analysis three types of matrices were prepared for all of the DMS Phase 1 modules:

- One matrix type compared the data dictionary in Appendix C to the data usage in the Appendix F Process Model.
- One matrix type compared the specifications and data used in Appendix F with the general design screen navigation description, the screen design in Appendix A, and the data dictionary in Appendix C.
- One matrix type compared data definition consistency (i.e., the named data has the same data type and size) across Appendix C and the database record and table definitions.

For Phase 2, the preceding matrices were updated to include Phase 2 and Phase 3 DMS modules, and three more matrix types were added:

- One matrix type to compare report contents in Appendix B with the data dictionary data contents and the Appendix F specifications for these reports.

These detailed matrices are compiled in the DMS project files as working papers. They are in binders marked as "WRAP 1 DMS V&V Analysis". They are available for review should questions arise regarding the source of the discrepancies and comments provided in this V&V Report.

Comments in all matrices are intended to point out discrepancies in these comparisons, or other insights which the analyst deemed necessary to bring to the system owner's attention. Where comments pertain to discrepancies, these were categorized to reflect their potential severity or impact on the design. (See the Introduction section of this of V&V Report for a definition of discrepancy categories.)

4.2.4 Analytic Overview

4.2.4.1 General Observations

In addition to the comments and discrepancies noted in the matrices, the following general comments are noted:

Category 2 concerns:

- Appendix E of the SDD was not reviewed for internal design integrity, but was a good source for detailed explanations of the intended drum tracking requirements. It is very oriented toward a functional description of process flow through the WRAP 1 facility. For this reason, it is recommended that Appendix E be considered for incorporation into the SRS to replace the current SRS paragraph 3.1.8 discussion. The Appendix E matrix to be prepared during the second phase of this V&V effort report could serve to help streamline the contents of Appendix E and support its inclusion in an SRS baseline document.
- In many cases, the pseudo-code in Appendix F provides an "English" description of data elements which are not then defined by data element name in the Attributes column of the process model. This tends to create uncertainty regarding which

data element is actually being used and/or which table is being accessed. Some of this uncertainty is lessened if the developer is already intuitively aware of the interaction between the specification and its reliance on a different unit process in a different module. However, this relationship is not clearly referenced in the dependent unit process.

- Many Unit Processes in Appendix F cite required value entries for certain fields. In many cases, these required values are not noted as part of the domain definition for Appendix C definitions.
- The data dictionary is not always clear on its reference to data that is derived from or under data "ownership" in SWITS. Data element definitions should include this information for all affected data and tables.
- Screen specifications are missing for all System Administration and Maintenance screens and for the Main Menu screen in Appendix F.
- System administration, data base administration, and system developer/maintenance responsibilities are not clearly defined. Descriptions of these functions tend to overlap. The final determination of respective responsibilities and associated technical expertise required will affect some of the level of detail in development to support these functions.
- On many multi-window screens there are no add, delete, refresh, and commit buttons. Instead, these functions are automatically generated using ORACLE features or are dependent on parent level screens. While this approach will usually produce desired results, it deviates from some of the normal screen performance that the users become accustomed to on other screens. Even if redundant to built-in ORACLE features, consideration should be given to adding such buttons to preclude user confusion.

General Category 3 Concerns:

- The data stores affected by the Appendix F processes are not always listed. There appears to be a convention to list stores only when data is loaded into them (i.e., there is some update or edit affecting the data store), although in some cases not all stores are listed even for such updates. Since the stores are affected through either read or write operations, they should probably be listed for the sake of

clarity. It is often confusing to gauge the source of data element used by the specifications when the pseudo-code refers only to "PIN" or "location". Citing the data store would clarify the specific data element needed.

- The general listing for data elements and tables describes numeric fields with the term "NUM". The definition listing for data elements and tables uses the term "NUMBER". These should be consistent in the dictionary.

4.2.4.2 Discrepancy Synopsis and Resolution Matrices

The following matrix contains a synopsis of the discrepancies which are described in the analytic matrices found in the DMS project files. This synopsis groups the discrepancies by matrix type and, within each matrix type, by discrepancy category. It then provides resolution actions which were decided during the course of the V&V analysis. Those actions which are closed are also noted.

The resolution matrix will be considered a tracking mechanism to monitor all discrepancies until they are closed. Consequently, it will be periodically updated to reflect closed actions. Also, during Phase 2 and 3, the SDD will be updated to incorporate new and changed specifications for Phase 2 and 3 DMS modules. V&V analysis will be conducted on these updates and resulting discrepancies will be incorporated into this matrix.

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
PROCESS MODEL COMPARED TO DATA DICTIONARY				
CATEGORY 1 DISCREPANCIES				
3.1.1.2/UP4-13: Retrieve drum or box data from SWITS; Generate DMS drum or box container records	none	Appendix F specifies copy of (S)REDET_SWTYYP_CD to data element RDET_SWTYYP_CD - no such data element in Appendix C	need to verify that data base is not missing a data element - mapping may be wrong	2/20/96: Test Proc. Review Meet: later version of Appendix C (not the one used for V&V) has been updated to include data element Discrepancy Item Closed
		Appendix F specifies copy of (S)HDET_SCAT_CD into DMS data element HDET_SCAT_CD - no such data element in Appendix C		2/20/96: Test Proc. Review Meet: pending review and confirmation that SWITS SCAT_CD is of value to DMS - either Appendix C needs to be updated to incorporate data element or it should be removed from Appendix F. Decision: Update Appendix F Action Completed and Discrepancy Item Closed as of 3/6/96

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
		Appendix F specifies setting ISO_WRAP_FLAG to "Y" - no such data element in Appendix C	need to verify that data base is not missing a data element	2/20/96; Test Proc. Review Meet: use of SIEISO table supersedes the need for ISO_WRAP_FLAG - Appendix F needs to be updated to delete the reference to ISO_WRAP_FLAG
3.1.2.2/UPI-2: NDA Data Review in the Control Room		Appendix F specifies comparison between RADDETAIL and NDA records: following specified data elements are not listed in Appendix C: RDET_TOT_PU_FGE_TMU RDET_TOT_PE_CI_TMU RDET_THERMAL_POWER_TMU		Comments provided after review of V&V discrepancies: data element should be added to Appendix C Action Completed and Discrepancy Item Closed as of 3/6/96
		Appendix F specifies display of USE_CD_DESCR - no such data element in Appendix C - may be referring to CONTYP_CD and CNTYP_DESCR		Comments provided after review of V&V discrepancies: Appendix F reference to USE_CD_DESCR should be deleted Action Completed and Discrepancy Item Closed as of 3/6/96

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
		Appendix F specifies use of NDA_NONLISTED_FLAG - no such data element in Appendix C		Comments provided after review of V&V discrepancies: Appendix F should be changed to CONEXT_NLLL_DET_DT Action Completed and Discrepancy Item Closed as of 3/6/96
		Appendix F specifies use of MSGLOG_FLAG - no such data element - MSGLOG table only has a MSGLOG_ERROR_FLAG which does not seem to support the intended processing		Comments provided after review of V&V discrepancies: Appendix F reference to MSGLOG_FLAG should be deleted. Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.2.2/UP3-5: NDA Revisit		Appendix F specifies use of PISO_PROF_NUM - no such data element in Appendix C		Comments provided after review of V&V discrepancies: Appendix F should be changed to PISO_PROF_ID Action Completed and Discrepancy Item Closed as of 3/6/96

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
<p>3.1.3.1/UP 6-8: LLW Exit Glovebox Product Drum Update</p> <p>3.1.3.1/UP9: Create NDA record for the product drum</p>		<p>Appendix F specifies DEFAULT_PK_MTL_HGT - no such data element in Appendix C nor is there any apparent table that would store it</p>	<p>need to verify source and update either specifications or data dictionary - validate against physical data base</p>	<p>1/30/96: Test Proc Review Meet: need to update Appendix C to include data element in WRAPMISC table Action Completed and Discrepancy Item Closed as of 3/6/96</p>
<p>3.1.3.1/UP9: Create NDA record for the product drum</p>	<p>unknown</p>	<p>Appendix F cites two attributes of "TBD"</p>	<p>need to resolve to support development</p>	<p>1/30/96: Test Proc Review Meet: final decision on these data elements pending - will be a combining of HAZDETAIL and CHEMCOMP - deferred to Phase 2</p>
<p>3.1.3.2/UP2-4: Separation of Compliant and Non-Compliant Components</p>	<p>none</p>	<p>Appendix F cites use of MAT_PKG_ID - no such data element in Appendix C</p>	<p>need to verify that database is not missing a data element. (Phase 2 development?)</p>	<p>Data contents validated during testing. Revised data dictionary to be published as new baseline with "as-built" SDD revision. Discrepancy Item Closed</p>
<p>3.1.4/UP16-18: Display samples available for treatment on a pop-up screen</p>		<p>Appendix F cites use of SAM_RETURN_DT - no such data element in Appendix C</p>		
		<p>Appendix F cites use of WORKSHEET_PKG_ID - no such data element in Appendix C</p>		

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.4/UP24: Completion of sample/bottle tracking data (generally upon return of samples to WRAP)		Appendix F cites use of CONREL_USE_CD - no such data element in Appendix C - no value of 'O' for CONEXT_USE_CD, if that is the correct one		
3.1.5/UP12: DMS to transmit all applicable SWITS data to SWITS for all drums received by WRAP		Appendix F specifies CON_SHIP_DT - no such data element in Appendix H as a SWITS data element		Comments provided after review of V&V discrepancies: CON_SHIP_DT should be added to Appendix H Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.5/UP15: Archive applicable WRAP data		Appendix F specifies SWIR330 - no such data store in Appendix C		Comments provided after review of V&V discrepancies: Appendix F reference to SWIR330 should be deleted Action Completed and Discrepancy Item Closed as of 3/6/96

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
		Appendix F specifies archiving data to data store TRUPACT - no such data store in Appendix C		Comments provided after review of V&V discrepancies: Appendix F should be updated to delete TRUPACT - add TRUPAY, TRUSHIP, and TRUWASTE Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.6/UP9: TRUPACT Assembly List Generation		Appendix F specifies display of TRUPAY_ASBLY_ID - no such data element in Appendix C		2/20/96: Test Proc Review Meet: TRU processes to be further specified during Phase 3 requirement reviews and subsequent specification updates. TRU and TRU RWM discrepancies will be addressed during those activities.
3.1.6/UP10: Save Data to File		Appendix F specifies display of TRUPACT Assembly Pick List - no such data element in Appendix C		
		Appendix F specifies table TRUPAY - no such table in Appendix C		

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
		Appendix F specifies display of TRUPAY_SHIP_NUM - no such data element in Appendix C		
3.1.8/UP9: Drum at LLW Entry Glovebox Port	CON_CNTR_VOL	Appendix F specifies display of TRUPAY_ASBLY_ID - no such data element in Appendix C specifies CON_CNTNR_VOL but Appendix C has CON_CNTR_VOL	unclear which is proper data element name to use - code needs to be checked against physical data base and SDD updated	1/4/96: Test Proc Review Meet: CNTNR is a typo - need to change Appendix F Action Completed and Discrepancy Item Closed as of 3/6/96

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
<p>3.1.8/UP63: BWAS status from BWAS</p> <p>3.1.8/UP64 BWAS status to PCS</p> <p>3.1.8/UP78: SIE Status from the SIE</p> <p>3.1.8/UP79: SIE Status to the PCS</p> <p>3.1.8/UP85: DMS Status to the PCS</p> <p>3.1.8/UP86: PCS Status from the PCS</p>	<p>unclear</p>	<p>unit process cites an equipment error code - Appendix C only seems to have an ERR_NUM in ERRMESSAGE described for SWITS errors - no others found</p>	<p>unit process may be using non-existent data element</p>	<p>1/4/96: Test Proc Review Meet: in data element ERR_NUM of ERRMESSAGE, definition refers to Appendix E -</p> <p>change Appendix C so it is not SWITS-specific Action Completed and Discrepancy Item Closed as of 3/6/96</p> <p>add a table of error codes to Appendix E and change the Appendix C domain Action Completed and Included in Rev 2 of SDD</p>

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.9/UP27-29: Data review for drums which have undergone processing in the WRAP 1 Processing Area	none	Appendix F specifies display of HDET_SCAT_CD - no such data element in Appendix C	need to verify that data base is not missing a data element	2/20/96: Test Proc. Review Meet: pending review and confirmation that SWITS SCAT_CD is of value to DMS - either Appendix C needs to be updated to incorporate data element of it should be removed from Appendix F Decision: Update Appendix F Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.8/UP58: Treatment Container and Item Container relationship from PCS	SAMLOC_BOTTLE_ID?	Appendix F specifies use of SAMLOC_PKG_ID - no such data element in Appendix C	may be a reference to SAMPLOC_BOTTLE_ID - if not, data base may be missing a data element	Phase 2/3 SDD updates to be addressed as a result of feature functional specification reviews
3.1.8/UP101: TRUPACT assembly complete from PCS	none	Appendix F specifies a TRUPACT ID and "TBD" for data in this UP	specification data and processing of that data is not defined	

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 2 DISCREPANCIES				
<p>3.1.1.2/UP2: Receive drums or boxes</p> <p>Confirm drums or boxes on SWITS</p>	<p>RECDISP_BLK_NUM</p>	<p>Appendix F specifies RECDISP_BLOCK_ NUM</p>	<p>need to verify data element name against physical data base and data dictionary</p>	<p>2/20/96: Test Proc. Review Meet: need to update Appendix F - Appendix C data element is correct Action Completed and Discrepancy Item Closed as of 3/6/96</p>
<p>3.1.1.2/UP3: Facility curie limit check</p> <p>User correct data</p>	<p>RADMAT_RAD_TOT</p>	<p>Appendix F specifies RADMAT_RAD_TOTAL</p>		<p>2/20/96: Test Proc. Review Meet: Appendix C is correct - need to update Appendix F Action Completed and Discrepancy Item Closed as of 3/6/96</p>

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
<p>3.1.1.2/UP4-I3: Retrieve drum or data from SWITS</p> <p>Generate DMS drum or box container records</p>	<p>none</p>	<p>Appendix F specifies SWITS data store (S)RELOCHIST - not shown in Appendix H as shared table</p>	<p>table use/source needs to be verified</p>	<p>2/20/96: Test Proc. Review Meet: need to reconcile Appendix F with Appendix H - RELOC data and RELOCHIST table of questionable value to DMS</p> <p>Decision: Appendix H needs to change to note creation of RELOCHIST on SWITS - record not stored on DMS - CON_PKG_STATUS needs to be added to Appendix C</p> <p>Action Completed and Discrepancy Item Closed as of 3/6/96</p>
		<p>Appendix F specifies SWITS data:</p> <p>(S)CON_PKG_STATUS (S)RELOC_PKG_ID (S)RELOC_DT (S)RELOC_FROM_FACIL_ID (S)RELOC_FROM_SECTION (S)RELOC_FROM_UNIT these are not listed in Appendix C or H as being retrieved from SWITS (CON_PKG_STATUS is described as an upload to SWITS from DMS only)</p>	<p>data may not be available from cited source</p>	

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	HDET_PCB_REMOVED_DT	Appendix F specifies HDET_REMOVED_DT being loaded from (S)HDET_REMOVED_DT	need to verify data element name against physical data base and data dictionary - mapping may be wrong	2/20/96: Test Proc. Review Meet: need to update Appendix F - Appendix C data element is correct Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.2.2/UPI-2: NDA Data Review in the Control Room	CONEXT_USE_CD	Appendix F specifies USE_CODE - no such data element in Appendix C - possible reference to CONEXT_USE_CD	need to verify intended data element name	Comments provided after review of V&V discrepancies: need to update Appendix F - Appendix C is correct Action Completed and Discrepancy Item Closed as of 3/6/96
	NDA_TMU_PU_FGE	Appendix F specifies NDA_TOT_PU_FGE_TMU - no such data element in Appendix C - possible reference to NDA_TMU_PU_FGE?		Comments provided after review of V&V discrepancies: need to update Appendix F - Appendix C is correct Action Completed and Discrepancy Item Closed as of 3/6/96
	NDA_TMU_PE_CI	Appendix F specifies NDA_TOT_PE_CI_TMU - no such data element in Appendix C - possible reference to NDA_TMU_PE_CI		Comments provided after review of V&V discrepancies: need to update Appendix F - Appendix C is correct Action Completed and Discrepancy Item Closed as of 3/6/96

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	NDA_TMU_THERMAL_POWER	Appendix F specifies NDA_THERMAL_POWER_TMU - no such data element in Appendix C - possible reference to NDA_TMU_THERMAL_POWER		Comments provided after review of V&V discrepancies: need to update Appendix F - Appendix C is correct Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.3.1/UP1: LLW Glovebox Drum Status at Entry 3.1.3.1/UP2: LLW Sorting Table	none	no table specified for messages to be displayed - hard coded?	data dictionary may not be complete	1/30/96: Test Proc Review Meet: messages are hard coded and not stored in any table Discrepancy Item Closed
3.1.3.1/UP3-5: LLW Non-Compliant Packet	CONR_REL_CODE	Appendix F specifies CONREL_CODE	need to verify data element name against physical data base and data dictionary	1/30/96: Test Proc Review Meet: Appendix F should be updated. Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.3.1/UP6-8: LLW Exit Glovebox Product Drum Update	CONLOC_LOC_ID CONEXT_VER_GROSS_WGT	Appendix F specifies CONLOC_ID Appendix F specifies CONEXT_WGT		1/30/96: Test Proc Review Meet: Appendix F should be CON_GROSS_WGT Action Completed and Discrepancy Item Closed as of 3/6/96

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.3.1/UP9: Create NDA record for the product drum	NDA_THERMAL_POWER or NDA_TMU_THERMAL_POWER	Appendix F specifies NDA_TOT_THERMAL_POWER		1/30/96: Test Proc Review Meet: pending SCR - upon approval, Appendix F should be updated to NDA_THERMAL_POWER Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.3.1/UP10-13: Create NDAISO records for the product drum	WRAPMISC table	Appendix F specifies LLW_DEFLT_PROF as a data element in WRAPMISC - no such data element listed		1/30/96: Test Proc Review Meet: recently incorporated into Appendix C WRAPMISC table - Appendix C should be updated Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.3.2/UP7-8: Compliant Waste Loadout	CODE_FIELD_NAME	Appendix F specifies a value entry in this field = VOID - does not seem to be a valid entry or use of this field as defined in Appendix C	does not appear that logic check to support program will occur as intended	Data contents validated during testing. Revised data dictionary to be published as new baseline with "as-built" SDD revision. Discrepancy Item Closed
3.1.4/UP1: Lab Sample Acquisition	SAM_MATRIX_CD (?)	Appendix F specifies field named SAM_MATRIX - no such field in Appendix C - appears to intend use of SAM_MATRIX_CD with LOV to SAMPMATX_CD	either data dictionary is out of sync with data base, or specs do not use correct data element	Phase 2/3 SDD updates to be addressed as a result of feature functional specification reviews

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
<p>3.1.4/UP2-3: Purge Port Inventory Listing</p> <p>3.1.4/UP16-18: Display samples for treatment on a pop-up screen</p> <p>3.1.4/UP24: Completion of sample/bottle tracking data (generally upon return of samples to WRAP)</p>	<p>SAMREL_BOTTLE_ID (?)</p>	<p>Appendix F specifies field named SAMREL_SAMPLE_ID - no such field in Appendix F - probably intend use of SAMREL_BOTTLE_ID</p>		<p>Data contents validated during testing. Revised data dictionary to be published as new baseline with "as-built" SDD revision. Discrepancy Item Closed</p>
<p>3.1.4/UP4-5: Initiate Chain of Custody tracking as samples are removed from the gloveboxes</p>	<p>CON_PKG_ID (?)</p>	<p>Appendix F specifies pig PIN - intention could be to display CON_PKG_ID for CONEXT_USE_CD='TP'</p>	<p>need to confirm data element and table access</p>	
<p>3.1.4/UP6-7: Field Screening and data input to support verification of waste data or taking of lab samples</p>	<p>SCRN_ID (?)</p>	<p>Appendix F cites use of SCRN_SAMPLE_ID - no such data element in Appendix C - probably intend use of SCRN_ID</p>	<p>either data dictionary is out of sync with data base, or specs do not use correct data element</p>	

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	FIELD_SCRN_ID (?)	Appendix F cites use of FIELD_SAMPLE_ID - no such data element in Appendix C - probably intend use of FIELD_SCRN_ID		
3.1.4/UP9: Selection of method for obtaining lab samples. Number of sample bottles and analysis method are also defined.	BOTANAL_BOTTLE_ID (?)	Appendix F cites use of BOT_ANALYSIS_CD - no such data element in Appendix C - probably intend use of BOTANAL_BOTTLE_ID		
3.1.4/UI12: Generation of Worksheet data in support of RWM Processing - Display all currently defined worksheets	WORKITEM_ID (?)	Appendix F cites use of WORKSHEET_ID - no such data element in Appendix C - probably intend use of WORKITEM_ID		
3.1.4/UI14-15: Display packets available for treatment on a pop-up screen		Appendix F cites use of WORKSHEET_PKG_ID - no such data element in Appendix C - probably intend use of WORKITEM_ID		

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.4/UP25: Update purge port or pig location	N/A	Appendix F cites use of location code SAMPLE_MGT - no such location code in Appendix E	may be missing a needed location code or Appendix F should cite a more appropriate one	
3.1.5/UPI: Selection of WRAP shipment to be completed 3.1.5/UP8: Update of the Uniform Hazardous Waste Manifest (One form per shipment for every shipment leaving WRAP)	SHIPWRAP_MFST_NUM ?	Appendix F has SHIPWRAP_MAN_NUM	need to verify data element name against physical data base and data dictionary	Comments provided after review of V&V discrepancies: Appendix F should be updated Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.5/UP2: Update of the Onsite Radioactive Shipment Record (One form per shipment for every shipment leaving WRAP) Shipment To and From data completed	ISO_UNIT?	Appendix F specifies ISO_UNITS		

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.5/UP3: Carrier data input	SHIPWRAP_CARRIER_PERS_ID	Appendix F specifies SHIPWRAP_CARRIER_PERSON		
3.1.5/UP5: Detailed Packaging Description entered	computed value? stored in SHPITM_CNTR_COUNT ?	Appendix F specifies display sum of PINS for shipment	no attribute for store noted - unclear if simple screen display	<p>Comments provided after later review of V&V discrepancies: local variable only - not a data base element - count from UP1 query - "sum" is poor choice of words: "count" would have been better - however, screen works as specified</p> <p>Discrepancy Item Closed as of 5/16/96</p>
3.1.5/UP8: Update of the Uniform Hazardous Waste Manifest (One form per shipment for every shipment leaving WRAP)	SHIPWRAP_MFST_COMP_FLAG?	Appendix C specifies SHIPWRAP_MAN_COMP_FLAG	need to verify data element name against physical data base and data dictionary	<p>Comments provided after review of V&V discrepancies: Appendix F should be updated Action Completed and Discrepancy Item Closed as of 3/6/96</p>

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
<p>3.1.5/UP12: DMS to transmit all applicable SWITS data to SWITS for all drums received</p> <p>3.1.5/UP20: DMS to transmit all applicable SWITS data to SWITS for all boxes and empty drums received by WRAP</p>	none	<p>Appendix F cites CON_PKG_STATUS code of 'A' - Appendix C does not define valid values for CON_PKG_STATUS or PKGSTAT table</p>	<p>need to verify and list the data element domain to determine if this logic is correct</p>	<p>Data contents validated during testing. Revised data dictionary to be published as new baseline with "as-built" SDD revision. Discrepancy Item Closed</p>
<p>3.1.5/UP13: DMS to transmit data to SWITS to document the verification of generator supplied data</p>	RDET_WRAP_VERF_FLAG	<p>Appendix H states all data elements in RADDETAIL are copied and then lists the minimum that is required - this data element is not one of those</p>	<p>SWITS data transfer may not be correct</p>	<p>05/02/96: Test Proc Review Meet: SDD needs updated-combination of uploads from SHIPHIST, SHIPMENT, & SHIPITEM fulfill manifest recording requirements-no MANIFEST(S) involved</p> <p>Comments provided after review of V&V discrepancies; data element should be deleted from Appendix C - VERIFICATION table will be used instead. Action Completed and Discrepancy Item Closed as of 3/6/96</p>

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
<p>3.1.5/UP15: Archive applicable WRAP data</p> <p>3.1.5/UP23: Archive applicable WRAP data</p> <p>3.1.5/UP14: Update of PCS database and adjust radiologic inventory for the facility</p> <p>3.1.5/UP22: Update of PCS database and adjust radiologic inventory for the facility</p>	all	these two unit processes are identical in name, intent, content	should simplify with elimination of one or the other	Phase 2/3 SDD updates to be addressed as a result of feature functional specification reviews
	N/A	specifies screen 605 data TO a CL message as specified in 3.1.8/UP41 - 3.1.8 specification indicates this message is generated from screen 602	Appendix F inconsistent across the 3.1.5 and the 3.1.8 modules'	
3.1.6/UP1: Process List Additions	unclear: PROCADD_SEQ_NUM or PROC_SEQ_NUM	Appendix F cites column with Seq - unclear on which sequence number to use	may be retrieving wrong data element	2/20/96: Test Proc. Review Meet: update Appendix F to cite correct data element Action Completed and Discrepancy Item Closed as of 3/6/96

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	unclear: ERR_DESCR?	Appendix F specifies show error for "Duplicate PIN already on Process List" - no reference to ERRMESSAGE table	unclear if a table access or if hard coded - error lookup values not contained in Appendix C	1/4/96: Test Proc. Review Meet: add a table of error codes to Appendix E and change the Appendix C domain - Additional information provided after V&V review: Appendix E table only lists messages related to DMSCOM - ERRMESSAGE table is viewable via the Error Message Table screen under System Admin - meanwhile Appendix C updated in Rev 2 of SDD Action Completed and Discrepancy Item Closed as of 5/16/96
3.1.6/UP2-4: Process List	PROC_PROF_ID (?)	Appendix F specifies PROC_PROFILE_ID	need to verify data element name against physical data base and data dictionary	Comments provided after review of V&V discrepancies: Appendix F should be updated Action Completed and Discrepancy Item Closed as of 3/6/96
	CONEXT_WRAP_STAT_CD (?)	Appendix F specifies CONEXT_WRAP_STATUS_CD		

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.6/UPI0: Save Data to File	PROC_PKG_IDS?	Appendix F specifies display of cask assembly PINs	need to clarify table access - may be related to TRUPAY discussions in Category 1 discrepancies	Comments provided after review of V&V discrepancies: PAYLOAD_PKG_ID is correct data element for this process, because this is a TRUPACT Assembly pick list, not a process pick list Discrepancy Item Closed as of 5/16/96
3.1.7/UPI1: Radiologic Inventory Summary	RADMAT_RAD_TOT	Appendix F specifies RADMAT_RAD_TOTAL	need to verify data element name against physical data base and data dictionary	2/20/96: Test Proc. Review Meet: Appendix C is correct - need to update Appendix F Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.8/UPI1: Log all Messages	MSGLOG_ERROR_FLAG	cites MSGLOG_ERROR_TRANS_FLAG but Appendix C has MSGLOG_ERROR_FLAG	unclear which is proper data element name to use - name needs to be checked against physical data base and SDD updated	1/4/96: Test Proc Review Meet: drop the "TRANS" in Appendix F Action Completed and Discrepancy Item Closed as of 3/6/96

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.8/UP7: Empty drum on Empty Drum In-feed Conveyor	unclear	specifies "send process route" - source unknown: could be ROUTE_CD, ROUTE_DESCR, or CONEXT_ROUTE_CD	unit process unclear of source for data	1/4/96: Test Proc Review Meet: note CONEXT_ROUTE_CD in Appendix F Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.8/UP15: Drum at TRU Glovebox Entry Port	Appendix F UP2 specifies CL message with field 4 = location and field 6 = no. of containers	UP15 specifies field 3 = TRU_ENTRY (location), field 4 = 1 (no. of containers?)	mismatch between this CL instance and the specification for CL format	Phase 2/3 SDD updates to be addressed as a result of feature functional specification reviews
	UP15 specifies field 5 = CONR_FROM_PKG_ID	field is supposed to display pallet bin loc	mismatch between fields and data elements	
	UP15 specifies field 5 is set to = received message field 7	Appendix F UP2 specification for CL shows field 7 = PIN - UP15 specification seems to set pallet location (field 5) to PIN number		

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<p>3.1.8/UP15: Drum at TRU Glovebox Entry Port</p> <p>3.1.8/UP16: Empty 85- gallon Drum at TRU Compact Loadout Port</p> <p>3.1.8/UP52: Non-Compliant item and Packet relationship from PCS</p>	<p>PKG_STATUS values</p>	<p>Appendix F cites values to be checked or entered - no permitted values shown in Appendix C for valid entries</p>	<p>data dictionary should indicate domain of data element</p>	
<p>3.1.8/UP27: Drum stored in NDE/NDA Carousel</p>	<p>PISO_ISO_NAME</p>	<p>specifies PISO_NAME but Appendix C has PISO_ISO_NAME</p>	<p>unclear which is proper data element name to use - code needs to be checked against physical data base and SDD updated</p>	<p>1/4/96: Test Proc Review Meet: change Appendix F to include _ISO_ Action Completed and Discrepancy Item Closed as of 3/6/96</p>
	<p>PISO_PROF_ID?</p>	<p>unit process specifies PISO_PROF_NUM but this is not found in Appendix C - may be PISO_PROF_ID</p>	<p>unit process may be using non-existent data element</p>	<p>1/4/96: Test Proc Review Meet: change Appendix F to PROF_ID Action Completed and Discrepancy Item Closed as of 3/6/96</p>

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.8/UP30: Puck at LLW Exit Glovebox Puck Receipt Position	unclear	specifies LLW puck bar code and LLW drum PIN - unclear of source, but may be CON_PKG_ID	unit process unclear of source for data	1/4/96: Test Proc Review Meet: change Appendix F to clearly specify CON_PKG_ID Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.8/UP31: Drum at the Infeed Conveyor Scale		cites "PIN and waste data for the inner waste drum" - unclear of source, but may be CONEXT_MAT_GRP_CD		1/4/96: Test Proc Review Meet: change Appendix F to add CONR_FROM_PKG_ID Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.8/UP32: Drum at the Infeed Conveyor Scale	PISO_ISO_NAME	specifies PISO_NAME but Appendix C has PISO_ISO_NAME	unclear which is proper data element name to use - code needs to be checked against physical data base and SDD updated	1/4/96: Test Proc Review Meet: change Appendix F to include_ISO_ Action Completed and Discrepancy Item Closed as of 3/6/96
	PISO_PROF_ID	unit process specifies PISO_PROF_NUM but this is not found in Appendix C - may be PISO_PROF_ID	unit process may be using non-existent data element	1/4/96: Test Proc Review Meet: change Appendix F to PROF_ID Action Completed and Discrepancy Item Closed as of 3/6/96

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.8/UP35: Drum at Airlock Conveyor scale, leaving process area	PISO_ISO_NAME	cites PISO_NAME, but Appendix C has PISO_ISO_NAME	unclear which is proper data element name to use - code needs to be checked against physical data base and SDD updated	1/4/96: Test Proc Review Meet: change Appendix F to include _ISO_ Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.8/UP36: Drum at Airlock Conveyor scale	PISO_PROF_ID	unit process specifies PISO_PROF_NUM - but this is not found in Appendix C - may be PISO_PROF_ID	unit process may be using non-existent data element	1/4/96: Test Proc Review Meet: change Appendix F to PROF_ID Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.8/UP38: Drum at Discharge Conveyor scale	CONLOC_LOCN_ID	cites CONLOC_LOCN but Appendix C has CONLOC_LOCN_ID	unclear which is proper data element name to use - code needs to be checked against physical data base and SDD updated	1/4/96: Test Proc Review Meet: change Appendix F to add _ID Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.8/UP40: PIN of waste drum at the LLW or TRU entry glovebox sent to the PCS	unclear	cites inner drum IDs and PINs of non-overpacked drums - unclear of source: may be CONR_FROM_PKG_ID and CONR_TO_PKG_ID	unit process unclear of source for data	1/4/96: Test Proc Review Meet: message traces back to UP9 - if just a single PIN, use CONR_PKG_ID, otherwise use CONR_TO_PKG_ID Discrepancy Item Closed

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.8/UP43: Facility Curie Level to PCS Message Type: DMSPCS FCL	RADMAT_RAD_TOT	unit process specifies RADMAT_RAD_TOTAL, but Appendix C has RADMAT_RAD_TOT	unclear which is proper data element name to use - code needs to be checked against physical data base and SDD updated	2/20/96: Test Proc. Review Meet: Appendix C is correct - need to update Appendix F Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.8/UP46: RW Packet and Parent Drum relationship from PCS	unclear	cites location - unclear of source: may be CONLOC_LOCN_ID	unit process unclear of source for data	1/4/96: Test Proc Review Meet: a received location from PCS - not stored in DMS, so no data base element Discrepancy Item Closed
3.1.8/UP50: Sample and Purge Port relationship from PCS	CONEXT_USE_CD?	specifies value PP - not related to any particular field - presumed to be CONEXT_USE_CD	Appendix C should cite source/data element involved	Data contents validated during testing. Revised data dictionary to be published as new baseline with "as-built" SDD revision. Discrepancy Item Closed
3.1.8/UP51: Puck and Overpack Drum relationship from PCS	cites update of container record	unclear: could be WASTE or WASTEXT table - or record in other tables?	need to clarify affected table	

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3.1.8/UP53: Aerosol Can Collection Container relationship from PCS	specifies Aerosol Can ID as being CONR_FROM_PKG_ID	seems to assign a transport or product drum ID to a packet within the drum?	need to verify that cited data element is correct identifier	
3.1.8/UP54: Removal from Transfer Stand	specifies number of packets in transfer drum	not clear - probably a computed field?	specifications should indicate data source	
3.1.8/UP54: Removal from Transfer Stand 3.1.8/UP55: Added to Transfer Stand from PCS	specifies RWM Xfer Drum ID	could be either CON_PKG_ID or CONEXT_PKG_ID?	unclear which data element is needed	
3.1.8/UP56: Non-Compliant Item Presented for Treatment message from PCS	specifies LLWRWM TREATMENT DESCRIPTION	no data element cited - could be TREATPROC_DESCR?		
	specifies WORKSHEET_PKG_ID	no such data element in Appendix C - should be WORKITEM_PKG_ID?		

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.8/UP57: Samples Presented for Treatment from PCS	specifies Purge Port Identification = to SAMREL_PKG_ID	should be SAMLOC_LOCN_ID?	apparent mismatch between specifications and data element	
	specifies RWM Treatment Location	unclear data source - CONLOC_LOCN_ID?	unclear which data element is needed	
3.1.8/UP58: Treatment Container and Item Container relationship form PCS	cites Location field in the message	source unclear - could be CONLOC_LOCN_ID		
3.1.8/UP59: Treatment Container and Loadout Drum relationship form PCS				
3.1.8/UP58: Treatment Container and Item Container relationship form PCS	cites treatment container field in the message	source unclear - could be CONR_TO_PKG_ID		

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3.1.8/UP78: SIE Status from the SIE	ERR_NUM	ERR_NUM? Appendix C only describes ERRMESSAGE for SWITS	data element and data ownership rights should be confirmed to ensure message is passing correct code	1/18/96: Test Proc Review Meet: need to update Appendix H to indicate this is not a SWITS shared table - see also: resolution of Category 1 equipment code discrepancy on 1/4/96 Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.8/UP79: SIE status to the PCS				
3.1.8/UP85: DMS Status to the PCS				
3.1.8/UP86: PCS Status from the PCS				
3.1.8/UP92: Drum Database to SIE	unclear	specifies % PU-239 - unclear of source - could be computed? RAD_QTY? NDA_RATIO?	unit process unclear of source for data	1/30/96: Test Proc Review Meet: division operation and value content/format need to be confirmed with SIE and SWITS Action Completed and Discrepancy Item Closed as of 3/6/96: value confirmed with vendor

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	none	<p>specifies CHAD - value: not specified in Appendix C or G</p> <p>specifies ABUN - value: not in Appendix C or G</p>		<p>1/30/96: Test Proc Review Meet: CHAD and ABUN are not stored in DMS Discrepancy Item Closed</p>
<p>3.1.8/UP95: Assay results from SIE</p>	<p>NDA/NDAISO</p>	<p>specifies NDA_TOT_PU_CI - Appendix C has NDA_TOT_PE_CI</p> <p>specifies NDA_TMU_PU_CI - Appendix C has NDA_TMU_PE_CI</p> <p>specifies NDA_THERMAL_POWER_TMU - Appendix C has NDA_TMU_THERMAL_POWER</p>	<p>unclear which is proper data element name to use - name needs to be checked against physical data base and SDD updated</p>	<p>1/30/96: Test Proc Review Meet: Appendix F contains typos and should be updated Action Completed and Discrepancy Item Closed as of 3/6/96</p>

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.8/UP96: Non-listed, long-lived nuclides detected from SIE	MSGLOG	specifies MSGLOG_INIT_FLAG - Appendix C has no such data element	may be trying to access a non-existent data element	1/30/96: Test Proc Review Meet: SCR in place to change "date" to a flag Comments provided after review of V&V discrepancies: Appendix F reference to MSGLOG should be deleted Action Completed and Discrepancy Item Closed as of 3/6/96
	WASTEXT	specifies CONEXT_NLL_ DETECTED - Appendix C has CONEXT_NLL_DET_ FLAG	unclear which is proper data element name to use - name needs to be checked against physical data base and SDD updated	1/30/96: Test Proc Review Meet: both Appendix C and F should be updated - correct data element is now CONEXT_NLL_DET_DT Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.8/UP99: Assay Results from BWAS	cites LLW category with values 1, 3, >3 to set NDA_WASTE_CAT values to WC1, WC, and GTWC3	NDA_WASTE_CAT values are 1, 3, >3	apparent mismatch between specified values and Appendix C domain definition	Phase 2/3 SDD updates to be addressed as a result of feature functional specification reviews

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.9/UP3-4: User review of the various assays which might exist for a single drum PIN	CONEXT_NLL_DET_FLAG?	specifies CONEXT_NLLL_DET	unclear which is proper data element name to use - name needs to be checked against physical data base and SDD updated	Comments provided after review of V&V discrepancies: Appendix F should be updated Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.9/UP8-10: Compacted Drum data review ONLY ACTIVATED FOR WASTE FORM	NDAISO_QTY_TMU?	specifies NDAISO_TMU		
3.1.9/UP13: User review of the various assays which might exist for a single drum				
3.1.9/UPS: User selection of the appropriate product drum assay to be recorded as the drum certification assay	ISO_ALPHA_CI_FACTR?	specifies ISO_ALPHA_FACTR		

APPENDIX F PROCESS/UNIT PROCESS	APPENDIX C DATA ELEMENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	RAD_ALPHA_CI?	specifies RAD_ALPHA		Revisions to SDD: recent SDD update shows RAD_ALPHA_CI for both Appendix F and C Discrepancy Item Closed as of 3/27/96
3.1.9/UP23: Display of processed waste drum PINs for data review	unclear	specifies display of a description of the type of data error - no apparent source for storage of such errors, except perhaps the CODECHECK table - no value domain shown for CODECHECK in Appendix C	unclear whether data error types can be displayed	Comments provided after V&V Review: local variables only - dynamically generated - Discrepancy Item Closed as of 5/17/96
3.1.9/UP24-25: Update of container relationships prior to data review	value in CONR_REL_CD	specifies value of "W" - Appendix C domain for CONR_REL_CD does not contain this value code	unclear if code is correct and/or will pass validation checks	Comments provided after review of V&V discrepancies: Appendix C should be updated Action Completed and Discrepancy Item Closed as of 3/6/96

The following is a supplemental screen comparison which focuses on signature password use. It summarizes Appendix A screens with signature password entry displays as compared to the Appendix F specifications for signature passwords.

ALL ENTRIES IN THIS MATRIX: CATEGORY 2 DISCREPANCIES

In general, it is difficult to map signature password requirements to the design in Appendix F: it is not clear where passwords are required for data editing or general access. It is also not clear how the screens interact: in many screen hierarchies, signature passwords are required at an upper level screen, but not in lower level screens. Yet Appendix F indicates signature passwords should be required for those screens. This implies that the upper level signature password is being used, but it is not always applicable to the all of the activities for the lower level screen. It appears that a general review should be conducted to validate signature password usage.

APPENDIX A SCREEN PRINTS: DISPLAY OF SIGNATURE PASSWORDS	APPENDIX F SPECIFICATIONS FOR SIGNATURE PASSWORDS	RESOLUTION
0101: Container Receiving	signature password only required when user selects "Request Cert Data"	01/30/96: Test Proc Review Meet: SDD general design specifications paragraph 5.1 requires a general statement: "For all screens, the term "commit" refers to an ORACLE commit where data is updated to the data base - in general, all such commits require signature password." Accordingly, this screen is specified correctly.

APPENDIX A SCREEN PRINTS: DISPLAY OF SIGNATURE PASSWORDS	APPENDIX F SPECIFICATIONS FOR SIGNATURE PASSWORDS	RESOLUTION
0201: NDE	states "User may modify containers at all three vaults simultaneously, to save Signature/Password" - no other reference to signature password mentioned	01/30/96: Test Proc Review Meet: no signature password is required - should be removed from Appendix A screen Action Completed and Discrepancy Item Closed as of 5/17/96
0202: NDA	no reference to signature password	01/30/96: Test Proc Review Meet: under review - may be required only to change comments Follow on comment provided as of 5/17/96: Signature password should be required for Commit and for Request Revisit
0312: LLW Sorting Table	requires signature password when user selects "Commit", "Exit", or "Refresh"	01/30/96: Test Proc Review Meet: SDD general design specifications paragraph 5.1 requires a general statement: "For all screens, the term "commit" refers to an ORACLE commit where data is updated to the data base - in general, all such commits require signature password." Accordingly, this screen is specified correctly.
0315: LLW Exit Glovebox	requires signature password when user selects "Commit", "Exit"	
0321: LLW RWM Waste Sorting	requires signature password when user selects "Commit"	

APPENDIX A SCREEN PRINTS: DISPLAY OF SIGNATURE PASSWORDS	APPENDIX F SPECIFICATIONS FOR SIGNATURE PASSWORDS	RESOLUTION
0322: LLW RWM Waste Repackaging	requires signature password when user selects "Next New Container", "Return to Sorting"	01/30/96: Test Proc Review Meet: SDD general design specifications paragraph 5.1 requires a general statement: "For all screens, the term "commit" refers to an ORACLE commit where data is updated to the data base - in general, all such commits require signature password." Since the data base is updated when these buttons are selected, this screen is specified correctly.
0323: LLW RWM Compliant Waste Loadout	when user selects "Commit", states "Record saved upon entry of Signature/Password"	01/30/96: Test Proc Review Meet: SDD general design specifications paragraph 5.1 requires a general statement: "For all screens, the term "commit" refers to an ORACLE commit where data is updated to the data base - in general, all such commits require signature password." Accordingly, this screen is specified correctly.
0324: LLW RWM Treatment Item Assembly	no reference to signature password except when 0326 sub-screen is active	01/30/96: Test Proc Review Meet: to be determined as a Phase 2 design issue.
0326: LLW RWM Treatment	when user selects "Commit", states "Record saved upon entry of Signature/Password"	

APPENDIX A SCREEN PRINTS: DISPLAY OF SIGNATURE PASSWORDS	APPENDIX F SPECIFICATIONS FOR SIGNATURE PASSWORDS	RESOLUTION
0328: LLW RWM Treated Waste Loadout	when user selects "Commit", states "Record saved upon entry of Signature/Password". CHEMCOMP and PHYSCOMP data also saved.	01/30/96: Test Proc Review Meet: SDD general design specifications paragraph 5.1 requires a general statement: "For all screens, the term "commit" refers to an ORACLE commit where data is updated to the data base - in general, all such commits require signature password." Accordingly, this screen is specified correctly.
0332: TRU Sorting Table	when user selects "Commit", states "Commit all data revised on subscreens excluding the Sample screen DMSS0501 upon signature/password" not clear how interacts with the signature password on screen 0501 - redundant?	01/30/96: Test Proc Review Meet: to be determined as a Phase 3 design issue.
*** none on Non-Compliant subscreen	when user selects "Refresh" from TRU Non-Compliant Packet Screen, states "Commit data and regenerate all fields on the screen upon entry of signature/password."	01/30/96: Test Proc Review Meet: signature password applies to this subscreen via reference to the parent screen entry
*** none on 0334 TRU Physical Components	when user selects "Commit", states "Save all data to DMS database upon entry of signature/password."	

APPENDIX A SCREEN PRINTS: DISPLAY OF SIGNATURE PASSWORDS	APPENDIX F SPECIFICATIONS FOR SIGNATURE PASSWORDS	RESOLUTION
*** no screen print - 0341, TRU RWM Waste Sorting: Phase 2	when user selects "Commit", states "Signature/Password required"	01/30/96: Test Proc Review Meet: SDD general design specifications paragraph 5.1 requires a general statement: "For all screens, the term "commit" refers to an ORACLE commit where data is updated to the data base - in general, all such commits require signature password." Accordingly, this screen is specified correctly.
*** no screen print - 0342, TRU RWM Separation of Compliant and Non-Compliant Components: Phase 2	when user selects "Next New Container" and "Return to Sorting", states "Signature/Password required"	01/30/96: Test Proc Review Meet: SDD general design specifications paragraph 5.1 requires a general statement: "For all screens, the term "commit" refers to an ORACLE commit where data is updated to the data base - in general, all such commits require signature password." Since these selections generate an update to the database, this screen is specified correctly.
*** no screen print - 0343, TRU RWM Compliant Waste Loadout: Phase 2	when user selects "Commit", states "Record saved upon entry of Signature/Password"	01/30/96: Test Proc Review Meet: SDD general design specifications paragraph 5.1 requires a general statement: "For all screens, the term "commit" refers to an ORACLE commit where data is updated to the data base - in general, all such commits require signature password." Accordingly, this screen is specified correctly.
*** no screen print - 0346, TRU RWM Treatment: Phase 2		
*** no screen print - 0348, Treated Waste Loadout Drum Contents: Phase 2		

APPENDIX A SCREEN PRINTS: DISPLAY OF SIGNATURE PASSWORDS	APPENDIX F SPECIFICATIONS FOR SIGNATURE PASSWORDS	RESOLUTION
0501: Lab Sample Acquisition	<p>when user selects "Next Sample", states "Commit currently displayed data upon entry of signature/password"</p> <p>when user selects "Analysis Request", states "IF data has been entered on DMSS0501 screen, commit data upon entry of signature/password."</p>	01/30/96: Test Proc Review Meet: to be determined as a Phase 2/3 design issue.
0502: Chain of Custody (has signature password for "Relinquished By" and "Received By")	requires entry of signature password in line 7, columns 1 and 2 - uses data store COCXFR - compares the two entries	01/30/96: Test Proc Review Meet: specification correct - no update to data base, but comparison is required
0503: Field Screening	states "Return to DMSS0504 without updating database or requiring signature/password"	01/30/96: Test Proc Review Meet: since no data base commit occurs, specification is correct - signature password should be removed from Appendix A - Phase 2 review activity
none on 0504 Laboratory Sample Analysis Request screen print	when user selects "Delete Sample", states "commit data upon entry of signature/password"	01/30/96: Test Proc Review Meet: SDD general design specifications paragraph 5.1 requires a general statement: "For all screens, the term "commit" refers to an ORACLE commit where data is updated to the data base - in general, all such commits require signature password." Since this selection commits data, this screen is specified correctly.

APPENDIX A SCREEN PRINTS: DISPLAY OF SIGNATURE PASSWORDS	APPENDIX F SPECIFICATIONS FOR SIGNATURE PASSWORDS	RESOLUTION
none on 0507 Sample Management/COC	when user selects "Commit", states "No Signature/Password required"	01/30/96: Test Proc Review Meet: SDD general design specifications paragraph 5.1 requires a general statement: "For all screens, the term "commit" refers to an ORACLE commit where data is updated to the data base - in general, all such commits require signature password." Accordingly, this screen is specified correctly.
none on 0509 Sample/Bottle Tracking Data		01/30/96: Test Proc Review Meet: validated that this instance is correct for samples due to the nature of the data and its placement in the general data base
none on 0510 Purge Port/Transfer Pig Location	when user selects "Commit", states "Signature/Password not required"	
none on 0511 Returned Samples		
none on 0601 Loading Dock Shipping Data	when user selects "Exit", states "Requests Signature/Password for Shipping Organization Representative"	01/30/96: Test Proc Review Meet: requirement under review - Phase 2 review
0602: Loading Dock Container Shipping	when user selects "Send Shipment Pick List to PCS", states "Require Signature/Password"	1/30/96: Test Proc Review Meet: Specification needed; Appendix F should be updated
	as a Trigger for the "In Transit" operation, states "Requires signature/password to implement this function"	1/30/96: Test Proc Review Meet: specification needed; Appendix F should be updated

APPENDIX A SCREEN PRINTS: DISPLAY OF SIGNATURE PASSWORDS	APPENDIX F SPECIFICATIONS FOR SIGNATURE PASSWORDS	RESOLUTION
0603: TRUPACT Cask Loading/Certification	when user selects "Commit", states "Signature/password required"	01/30/96: Test Proc Review Meet: SDD general design specifications paragraph 5.1 requires a general statement: "For all screens, the term "commit" refers to an ORACLE commit where data is updated to the data base - in general, all such commits require signature password." Accordingly, this screen is specified correctly
0902: Process List	no signature password specified for Shipping screens	01/30/96: Test Proc Review Meet: Appendix F specification is wrong and should be updated
none on 1212 Comparison of Certification and Verification of DNA Data for newly generated waste	when user selects "Review Complete", states "Signature/Password required"	01/30/96: Test Proc Review Meet: Appendix F specification is wrong and should be updated Action Completed and Discrepancy Item Closed as of 5/17/96
1301: Activity Comment	no Appendix F specification for this screen	01/30/96: Test Proc Review Meet: Appendix F specification needs to be added - Phase 2 review

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
SCREENS: SYSTEM NAVIGATION COMPARED TO APPENDICES F, A, C, and (where applicable), APPENDIX H				
CATEGORY 1 DISCREPANCIES				
0202: NDA	NDA_PU_FGE, NDA_PE_CI, RADETAIL_PU_FGE, RADETAIL_PE_CI	NDA and RADETAIL PU_FGE data is being specified for display in the PE_CI field on the screen - and vice versa	data mapping into screen display is reversed	Comments provided after review of V&V discrepancies: Appendix F should be updated Action Completed and Discrepancy Item Closed as of 3/6/96
Pop-Up: LLW Chemical Composition	display and allow user to modify chemical composition for drum being sorted	Appendix F says to display PHYS_COMP_ID - Appendix C has a PHYS_ PKG_ID - no specification for display of other fields on screen - no place on Appendix A screen for display	screen display may not be accurate	1/30/96: Test Proc Review Meet: discrepancy should actually refer to PHYS_COMP_DESCR - no display of PKG_ID - Appendix F should be updated to reflect PHYS_COMP_DESCR Action Completed and Discrepancy Item Closed as of 3/6/96

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
0321: LLW RWM Waste Sorting	Appendix F specifies use of CON_FROM_PKG_ID to identify packets	CON_FROM_PKG_ID seems intended to identify source drum - perhaps logic should be to display CON_PKG_ID where CON_FROM_PKG_ID is not null?!	need to verify data display to ensure correct data being retrieved	Phase 2/3 SDD updates to be addressed as a result of feature functional specification reviews
0322: LLW RWM Repackaging	material group described as display where MAT_PKG_ID = CON_PGK_ID	no MAT_PKG_ID in data dictionary		
0502: Electronic Chain of Custody	system navigation states labs will be treated as a single custodian for purpose of WRAP 1 facility tracking	all COC references in Appendix F and Appendix C are for persons - a "lab" person will have to be created with all of the usual person data elements, and possibly entered into the PERSON table	subsequent domain definitions in Appendix C should include this	

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
0505: Worksheet Data Entry	system navigation specifies that user is allowed to specify treatment instructions, and identify them with a treatment process number	no edit or amendment of a worksheet or assignment/edit of treatment for a worksheet is allowed in Appendix F	either wording in system navigation is incorrect, or design functionality is incorrect	Screen navigation specifications to be finalized as a result of Phase 2/3 functional specification reviews
0509: Sample/Bottle Tracking	Appendix A screen print shows a display of a comments field	no Appendix F data element mapping specified for comments	design may not be supporting required data display	Phase 2/3 SDD updates to be addressed as a result of feature functional specification reviews
Shipping Menu	TRUPACT shipping documentation required	none specified: deferred until later phases	design needs update for this functionality	Screen navigation specifications to be finalized as a result of Phase 2/3 functional specification reviews
0601: Loading Dock Shipping Data: user allowed to reroute drums back through the process to collect missing data	IN_TRANSIT button not enabled until all WRAP locations listed as SHIPDCK - other displays curtailed or indicating missing data	however, no provision for reprocessing or specification on how problems to be corrected	specification does not appear to support processing described in screen navigation	

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
<p>0603: TRUPACT Cask Loading/ Certification: screen printed and taken to TRUPACT loading bay where data will be manually recorded on the screen print</p>	<p>none</p>	<p>no print button specified to generate this hard copy</p>	<p>cannot support processing as described in screen navigation</p>	
<p>0604: TRUPACT Shipping Documentation - allow user to print the applicable TRUPACT shipping documentation to support shipment of TRUPACTS from WRAP 1 facility</p>		<p>screen not specified in Appendix C or F - no specification for including it on the Shipping Menu</p>	<p>specifications not complete - may be deferred to a later phase?</p>	
<p>0701: Error Message Table</p>	<p>ERRMESSAGE table</p>	<p>Appendix H indicates ERRMESSAGE is shared with SWITS and under joint configuration control</p>	<p>all other SWITS shared tables have been omitted from SDD screen specs - this may not be a DMS-updated table</p>	<p>1/18/96: Test Proc Review Meet: need to update Appendix H to indicate this is not a SWITS shared table Action Completed and Discrepancy Item Closed as of 3/6/96</p>

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
0702: User Table	USER table	Appendix C USR_USERID described as ID of a SWITS user - edited in DMS?	should validate that this is a DMS- updated field	1/18/96: Test Proc Review Meet: need to change Appendix C - not a SWITS user ID Action Completed and Discrepancy Item Closed as of 3/6/96
0705: System Bulletin	SYSBUL table	table exists in Appendix C but Appendix A does not specify screen	may be missing a table that needs updating	1/18/96: Test Proc Review Meet: "defunct" table - need to delete it from the physical data base and update Appendix C Action Completed and Discrepancy Item Closed as of 3/6/96
New 0705: Report Table	REPORTABLE	new maintenance screen added to latest version of SDD - no screen print available	unable to validate screen	Screen navigation specifications to be finalized as a result of Phase 2/3 functional specification reviews
0708: User Role Table	USERROLE table?	no description field described in Appendix C	may be trying to edit/update a non- existent field	1/18/96: Test Proc Review Meet: field is pulled from the ROLE table for display on this screen Discrepancy Item Closed
0710: Field Help Table	DATADICT	listed in latest version of SDD as a SWITS lookup table	should be maintained in SWITS	Phase 2/3 SDD updates to be addressed as a result of feature functional specification reviews

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
0712: New User Setup (listed in System Navigation Only)	USER table	no screen specified in Appendix A - unclear if some fields being updated from other screens	no apparent screen to add/change/delete users - unclear if this is performed via other tables	1/18/96: Test Proc Review Meet: new users now maintained through screen 0708 - need to update SDD to remove screen from System Navigation paragraphs Action Completed and Discrepancy Item Closed as of 3/6/96
	PERSON table	PERSON is listed in Appendix H as being under joint configuration control	should validate that this is a DMS- updated table	1/18/96: Test Proc Review Meet: see above - no screen - see screen 0702 above discussion regarding PERSON table Action Completed and Discrepancy Item Closed as of 3/6/96

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
none	COMMUNICATION_ TABLE table SECURTY table USERSIGNPASS table	no screens defined for maintenance of these tables which are in Appendix C	may be missing tables that need editing	<p>1/18/96: Test Proc Review Meet: COMMUNICATION_ TABLE is a "mailbox" - no lookup/validation - SECURITY table should be deleted from Appendix C because it has been deleted from design - Action Completed and Discrepancy Item Closed as of 3/6/96</p> <p>USERSIGNPASS maintenance has no resolution in Phase 1 -not defined yet because procedures regarding assignment and maintenance of these are not defined--To be addressed during Phase 2/3 functional specification reviews</p>

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
1201: Processed Waste NDA Data Review and Modification	user reviews NDA data associated with waste drums which are processed in WRAP 1 - Appendix F UPI has several buttons used to display specific data categories	screen print has data which is not specified in Appendix F - no specification for display of: Total Isotopic Records, Thermal Power, Waste Category, Total Alpha Ci, TMU Alpha Ci, Sec Waste Type, NLLL Detected, Total PE Ci, TMU PE Ci, Profile, Revisit, Profile ID, Future Eval Required, Total PE FGE, TMU PE FGE	unclear how large portion of screen to be generated - screen design seems to be significantly in excess of screen specification	Comments provided after review of V&V discrepancies: screen reviews have defined actual data to display on these screens - SDD "as built" updates reflect new requirements to display data from NDA, NDAISO tables - Action Completed and Discrepancy Item Closed as of 3/6/96
1202: Compacted Drum NDA Data Review	user reviews NDA data associated with individual waste pucks which comprise a product drum generated in process area LLW Glovebox			
1211: Verification NDA Data Review	user reviews NDA data associated with waste drums which are not processed in WRAP facility			
1231: Verification Data Review Waste Compliant	allow the user to review and modify data for a specific drum that has only undergone NDE and NDA exams in WRAP - allow modification of WRAP generated data	no screen specifications or screen print in Appendix A - unable to validate screen against Appendix F specifications	screen missing or deferred to later development	Comments provided after review of V&V discrepancies: Appendix A should be updated Action Completed and Discrepancy Item Closed as of 3/6/96

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 2 DISCREPANCIES				
WRAP 1 DMS User Menu: NDE/NDA Operations	Appendix F implies there are two different selections for DMSS0201 and 0202 -	screen print only shows one screen selection for both	may be requiring an undesirable menu "branch" to activate operations that should be accessed directly	1/30/96: Test Proc Review Meet: menu selection actually creates a menu pull down with multiple choices - screen print is correct - menu selection bar should be shown on Appendix A screens in the SDD Action taken in Rev 2 of SDD - Discrepancy Item Closed as of 5/17/96

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
WRAP 1 DMS User Menu: Process (Glovebox) Operations	Appendix A shows Process Ops	<p>in Appendix F the following operations start by selecting a lower hierarchy menu - not clear if this is supposed to be a submenu under the Process Ops selection on the Main Menu - for all, when user selects Exit, returns to Main Menu:</p> <p>3.1.3.1 - UPI: request DMSS0311 from LLW Process Menu</p> <p>3.1.3.2 - UPI: request DMSS0321 from LLW RWM Process Menu</p> <p>3.1.3.3 - UPI: request DMSS0331 from TRU Glovebox Menu</p> <p>3.1.3.4 - UP2: request DMSS0341 from TRU</p>	screen hierarchy should be verified	1/30/96: Test Proc Review Meet: screen hierarchy is shown in Fig 5-1 in a later revision of the SDD - not available for V&V at time of analysis - screen operation is validated as correctly stated in Appendix F Discrepancy Item Closed

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
WRAP 1 DMS User Menu: Table Maintenance	Appendix A shows Table Maint	no specification in Appendix F	design specifications are not available	1/30/96: Test Proc Review Meet: design will be incorporated into O&M Manual Discrepancy Item Closed for WHC
WRAP 1 DMS User Menu: Sample Management	Appendix A shows Sample Mgmt	3.1.4 - UPI: specifies selection of sample management from DMSS0312, DMSS0322, DMSS0332, DMSS0342 - no mention of Main Menu for selection - however Exit returns to Main Menu	screen hierarchy should be verified	1/30/96: Test Proc Review Meet: Appendix F should be updated Corrected in Rev 2 of SDD - Action Completed and Discrepancy Item Closed as of 5/17/96
App F: 3.1.4/UP25 specifies selection of DMSS0510 from Main Menu	apparent submenu selection	should be submenu under Sample Management?		1/30/96: Test Proc Review Meet: Appendix A should be updated to include screen hierarchy Action Completed and Discrepancy Item Closed as of 3/6/96
App F: 3.1.4/UP26 specifies selection of DMSS0511 from Main Menu		should be submenu under Sample Management?		

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
WRAP 1 DMS User Menu: Shipping	Appendix A shows Shipping	DMSS0601 - no mention of Main Menu in Appendix F for selection - however Exit from DMSS0603 returns to Main Menu		Appendix F should be updated
WRAP 1 DMS User Menu: System Administration	Appendix A shows Admin	no Appendix F specifications for System Administration	developer does not have approved specifications to work from	1/30/96: Test Proc Review Meet: Appendix F should be updated Comments provided after review of V&V discrepancies: system administrative procedures will be defined in the O&M manual and the System Administration Manual when they are published
WRAP 1 DMS User Menu: Reports	Appendix A shows Reports	no Appendix F specifications for Reports	unclear how reports will be developed	1/30/96: Test Proc Review Meet: Appendix B is considered to contain report specifications - actual screen mechanism for selecting and producing reports is to be addressed in Phase 2
WRAP 1 DMS User Menu: Pick List	Appendix A shows Pick List	DMSS0901 - no mention of Main Menu in Appendix F for selection - however Exit returns to Main Menu	screen hierarchy should be verified	1/30/96: Test Proc Review Meet: Appendix A should be updated with new screen hierarchy Action Completed and Discrepancy Item Closed as of 3/6/96

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
WRAP 1 DMS User Menu: Activity Comment	none	no specification	not clear if this is a needed Main Menu feature	1/30/96: Test Proc Review Meet: screen is required as shown in Appendix A - Appendix F should be updated Action Completed and Discrepancy Item Closed as of 3/6/96
none	Appendix A shows Edit		unclear of the intention of this selection	1/30/96: Test Proc Review Meet: refers to Windows "clipboard" feature - not a DMS application development Discrepancy Item Closed
0102: Bar Code Package ID Labels	available as a screen selection from DMSS0101	specified to be a screen selection from DMSS0101 and 0102, but no selection shown on Appendix A	screen hierarchy should be verified	1/30/96: Test Proc Review Meet: Appendix A should be updated - labels menu on Main Menu is correct Action Completed and Discrepancy Item Closed as of 3/6/96
0201: NDE	Appendix F describes pop-up screens for display of Waste Record, Phys Comp, Rad Detail buttons	Appendix A has no pop-up displays for these selections	cannot verify how Appendix F compares to screen content	Comments provided after review of V&V discrepancies: displays are for individual database records as selected from the Appendix F buttons Action Completed and Discrepancy Item Closed as of 3/6/96

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
0312: LLW Sorting Table	provide user with information necessary for separating compliant and non-compliant waste	Appendix F specifies selection from 0311 - actual screen to select from is contradictory between App F and System Nav	screen hierarchy may not be correct	1/30/96: Test Proc Review Meet: Update screen navigation text Comments provided after V&V review: Appendix F specifies selection from LLW Process Menu - in Rev 2 of SDD, all sections consistent Action Completed and Discrepancy Item Closed as of 5/17/96
0322: LLW RWM Repackaging 0326: LLW RWM Treatment	screen print shows check box for Compliant Waste - Appendix F specifies checkbox display	no Appendix F mapping of checkbox to a data element - probably CONEXT_COMPLIANT_FLAG	specifications should be reviewed against field for data storage	Phase 2/3 SDD updates to be addressed as a result of feature functional specification reviews
0323: LLW RWM Compliant Waste Loadout	specifies user entry for all data except Waste Description system navigation describes entry of general waste drum description via screen 0322	since Waste Description is for displayed drum PIN, appears it should be edited as drum contents are changed requires user to return to upper level screen for data entry, while remainder of update done at lower level screen	should verify editing rights for this field screen hierarchy interaction should be verified - may not be best support of user work flow	Screen navigation specifications to be finalized as a result of Phase 2/3 functional specification reviews

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
0325: LLW RWM Processing Instructions	screen print appears to provide for display of two unnamed text fields	Appendix F specifies display of TREAT_PROC_DESCR in one of the fields - no display specified for the other field	data presentation may not be complete	Phase 2/3 SDD updates to be addressed as a result of feature functional specification reviews
0326: LLW RWM Treatment	specifies Matl Group column display of CONEXT_USE_CD "if column 2 = CONR_FROM_PKG_ID"	no "else" statement: i.e., no specification of what to display if column 2 does not = CONR_FROM_PKG_ID	logic may not support all instances of record status or display	
0452: Location Table	system administration of the LOCN table	no mention in latest SDD version Screen Navigation - however, screen print still in Appendix A	unclear if desired for development - table still needs maintenance	Screen navigation specifications to be finalized as a result of Phase 2/3 functional specification reviews

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
0501: LLW Sample Data	sample management screen called	no mention in Screen Navigation or Appendix A - not clear how signature password will be requested or entered - requirements for signature password discussed in V&V Appendix A, paragraph 3.3.a Security	signature password necessity and use needs to be validated	note signature password matrix following process-- Data Dictionary matrix preceding
Pop-Up: LLW Physical Composition	display and allow user to modify physical composition for drum being sorted	UP2: LLW Sorting Table allows deletion of records - unclear if Appendix F is permitting delete/add of entire records or discreet data in records or both	edit rights should be clarified	1/30/96: Test Proc Review Meet: screen navigation description should be updated Comments provided after review of V&V discrepancies: ORACLE requires delete prior to update of records - terminology includes technical solution which fulfills screen navigation as described Discrepancy Item Closed
0315: LLW Exit Glovebox	user allowed to modify the outer drum waste description, seal number and void code	UP6: LLW Exit Glovebox Product Drum Update specifies display of CONLOC_ID - uses a location code - probably intended to be LOCN_ID?	should validate data to be displayed on screen	1/30/96: Test Proc Review Meet: Appendix F should specify CONLOC_LOCN_ID Action Completed in Rev 2 of SDD - Discrepancy Item Closed

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	puck height displayed is a default system setup parameter	UP6: LLW Exit Glovebox Product Drum Update source has no indication of source for Puck Height system default	data may not be available for display	1/30/96: Test Proc Review Meet: data element added to WRAPMISC table - need to update lookup table values in Appendix G Action Completed with table C-3 in Rev 2 of SDD - Discrepancy Item Closed
	none	UP9: Create NDA record for the product drum and UP10: Create NDAISO records for the product drum, have no trigger specified for NDA and NDAISO records - implies a part of 0315 intention - System Navigation does not mention processing -	should verify that screen navigation is not fully descriptive	1/30/96: Test Proc Review Meet: should update Screen Navigation text - need to revise Para 5.2.4.10
		Appendix F description of Commit button, but no discussion of what happens when used except to request signature password not clear how signature password will be requested or entered	implies data base update - signature password checking not clear	1/30/96: Test Proc Review Meet: SDD paragraph 5.1 will be updated to require a signature password for all data base commits - the term "commit" is in reference to an ORACLE commit

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
Sample Management Menu: allow user to select...(list of screens)	Appendix F also specifies an additional screen called "Returned Samples"	no other indication of need for this screen	appears Appendix F ahead of design in other parts of SDD	Screen navigation specifications to be finalized as a result of Phase 2/3 functional specification reviews
502: Electronic Chain of Custody allow user update of electronic chain of custody record retained for life of sample	specifies user entry	no specification for data element update/display - unclear of relationship between PKG_ID and CONEXT_USE_CD = 'TP'	need to specify clearly the data element to retrieve	
allow user to enter specific data related to handling of samples	no record retention specifications	process flows seem to imply (or cause) record stays active through the duration for the UPs that affect the data - happens by "default"	if more formal approach needed to safeguard data, it should be specified	
	Appendix F has no such specification for entering of sample data	screen specified only permits review and confirmation of chain of custody	data interaction by user needs to be confirmed	

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
0505: Waste Designation allow user to update descriptions and designation codes	no specification for edit of description or comments	all fields in HAZDETAIL, CHEMCOMP, APPMSDS are available for user selection	"edit" and "update" terms may be confused in semantics	
0506: Worksheet Data Entry instructions displayed on back of gloveboxes	none	no mention in Appendix F of display on a glovebox monitor	specified in RWM specs - should be included here	
0508: Sample Labels	List of Values Button	no specification for use of LOV button or display of it	specifications need to be validated against screen requirements	
0509: Sample/Bottle Tracking	screen print shows List of Values Button	no Appendix F mapping to LOV		
0511: Returned Samples	no system navigation description - shown in Appendix A and specified in Appendix C	seems identical to 0510 expect for radio buttons - perhaps could use same screen and simple subdue buttons based on a determination of "new" or "returned"	specifications may be ahead of other parts of SDD design - use of previous screen could simplify design	

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
Shipping Menu: prompt user for any additional data required to complete appropriate shipping forms	UP1: Selection of WRAP shipment to be completed - no "prompt", but all data displayed for user review and edit, as appropriate to edit rights	no Appendix A specifications for screen displays described in Appendix F for RSR Data and UHWM Data	cannot verify content of subscreens	
601: Loading Dock Shipping Data - forms to be completed: Uniform Hazardous Waste Manifest (UHWM) Radioactive Shipment Record (RSR) Solid Waste Storage/ Disposal Record (SWSDR)	UP1: Selection of WRAP shipment to be completed - specifies RSR and UHWM for selection - subscreens then describe forms	additional buttons listed but never specified: LLWSDR, RMWAS -	may be missing necessary support - or additional support is planned and not implemented	
602: Loading Dock Container Shipping	UP9: Display of waste containers for shipment - user select buttons: SEND SHIPMENT PICK LIST TO PCS, IN TRANSIT	no specification citing shipment authorization, however, these buttons imply "de facto" authorization and signature/password authority is required	unclear if screen design supports needed processing	

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
all administration and maintenance screens	N/A	no specifications exist for any screens, validation rules, table calls, edit rights, etc.	action of screen dependent on interpretation of screen print	Comments provided after review of V&V discrepancies: screens will be addressed in O&M and System Administration Manuals
	none	no system administration or maintenance screens specified for tables: PKGSTAT TRUSHIPCAT USERSIGNPASS WRAPROLE	unclear how tables to be maintained	Screen navigation specifications to be finalized as a result of Phase 2/3 functional specification reviews
0702: User Table	USER table	unclear how USR_USERID, USR_NAME, USR_PERS_ID relate to Person table - edited here and loaded to PERSON?	Appendix H has been updated, but design issue of interaction with PERSON table still unresolved as of phase 2 V&V	1/18/96: Test Proc Review Meet: no forced relationship between USER and PERSON table - can pull in data if available in PERSON, but not updated back - future design item, not in Phase 1 - remove PERSON table from Appendix H as a joint SWITS table Appendix H update Action Completed and that portion of Discrepancy Item Closed as of 3/6/96

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
0710: Field Help Table (Screen Navigation only)	DATADICT table	not listed in Appendix A - listed in Appendix H as a shared table with SWITS	should clarify data edit rights for each system	1/18/96: Test Proc Review Meet: need to update Appendix H - not a shared table with SWITS - update Appendix A to indicate a table for future definition Action Completed and Discrepancy Item Closed as of 3/6/96
0711: Form Help Table		listed in Appendix A, but no screen print available for review	may be an unnecessary screen as of Phase 2 V&V, still open	1/18/96: Test Proc Review Meet: update Appendix A to indicate a table for future definition. Screen navigation specifications to be finalized as a result of Phase 2/3 functional specification reviews
		listed in Appendix H as a shared table with SWITS	may have superseded need for screen	1/18/96: Test Proc Review Meet: need to update Appendix H - not a shared table with SWITS Action Completed and Discrepancy Item Closed as of 3/6/96
0901: Download Processing List	no match	3.1.6/UPI: Process List Additions - allows user to resequence numbers and to Reorder and Commit - no such discussion in Screen Navigation	should verify that sequence numbers are not system generated	2/20/96: Test Proc. Review Meet: need to update Screen Navigation discussion to include need for resequencing Action Completed and Discrepancy Item Closed as of 3/6/96

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	PIN placed on AS/RS retrieval via transfer car pick list	3.1.6/UP5: AS/RS Retrieval and Storage Via Transfer Car - displays pick list data for bins with matching RDET_SWTYP_ GROUP - no indication of adding to list - specifications seem to display an existing pick list rather than allowing user to add to the pick list	may not be supporting desired processing	Comments provided after V&V Review: ability to pick an empty bin or bin storing empty drums needs to be addressed during Phase 2 specification reviews
	Screen Navigation states system should store from either transfer car or pallet stand	3.1.6/UP5: AS/RS Retrieval and Storage Via Transfer Car does not differentiate between AS/RS pallet or transfer car - UP implies that entire process relates to transfer car	may not support required functionality	Comments provided after review of V&V discrepancies: screen navigation should be updated to clarify storage is only from transfer car Action Completed and Discrepancy Item Closed as of 3/6/96

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
0904: AS/RS Shipping Pick List	<p>allow user to group drums into a shipment from loading dock</p> <p>assign a shipment ID to the set</p>	<p>UP7: AS/RS Shipping Pick List - specifies access to SHIPWRAP for SHIPWRAP_NUM and to SHIPPICK for SHIPPICK_WRAP_NUM and SHIPPICK_PKG_ID, yet only uses SHIPPICK_WRAP_NUM -</p>	<p>unclear how the other two data elements apply</p>	<p>Comments provided after review of V&V discrepancies: Appendix F 3.1.6/UP8 should be updated</p> <p>Action Completed and Discrepancy Item Closed as of 3/6/96</p>
1101: Radiological Inventory Summary	<p>Appendix F, UP1 says if DMS role authorizes, allow modification of Total, but user cannot enter total equal to or exceeding limit</p> <p>Appendix F, UP1 has a Commit button to update Rad Alarm if Rad Total modified</p>	<p>no mention of modification in Screen Navigation description</p>	<p>need to verify that modification is desired function of this screen</p>	<p>2/20/96: Test Proc. Review Meet: update screen navigation description to indicate need for data element modifications</p> <p>Action Completed and Discrepancy Item Closed as of 3/6/96</p>

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
1201: Processed Waste NDA Data Review and Modification	user reviews NDA data associated with waste drums which are processed in WRAP 1 - Appendix F UP1 has several buttons used to display specific data categories	in general: screen design specified in Appendix F varies from screen print layout in Appendix A - besides inclusion of new contents discussed in Category 1 (see above), Appendix F specifies headers, user selection activity, and data which does not appear supported by the screen print	unclear if screen print supports required functionality - if so, Appendix F is out of date	Comments provided after V&V review: deviations pertain to pop-ups which are not expected to be included in Appendix A - Appendix F specifications will be followed Discrepancy Item Closed as of 5/17/96
1202: Compacted Drum NDA Data Review	user reviews NDA data associated with individual waste pucks which comprise a product drum generated in process area LLW Glovebox			
1211: Verification NDA Data Review	user reviews NDA data associated with waste drums which are not processed in WRAP facility			

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
<p>1201: Processed Waste NDA Data Review and Modification</p> <p>1202: Compacted Drum NDA Data Review</p> <p>1211: Verification NDA Data Review</p>	<p>screens require display of Total Isotopic Records</p> <p>screens require display of Revisit and Future Eval Required</p>	<p>no Appendix F specification for data element or computation needed to display Total Isotopic Records</p> <p>Appendix F associated Future Eval Required with NDA_RVST_FLAG - no indication of how this relates or interacts with Revisit display field</p>	<p>if specifications are followed, screen display may not be generated</p> <p>unclear how these displays relate to each other - what data element is associated with Revisit display and how is field used/loaded</p>	<p>Comments provided after V&V Review: need to revise Appendix F to require display - this will be a local variable - count of query results (number of corresponding NDAISO records). Screen navigation specifications to be finalized as a result of Phase 2/3 functional specification reviews</p> <p>Comments provided after V&V Review: revisit = NDA_RVST_FLAG - future evaluation = NDA_FUT_EVAL_REQD - specifications are correct, no action needed Discrepancy Item Closed as of 5/17/96</p>
<p>1202: Compacted Drum NDA Data Review</p>	<p>screen is activated for compacted drums only</p>	<p>Appendix F refers to screen 1201 retrieval for CONR_FROM_PKG_ID (LOV) CONR_TO_PKG_ ID=CON_PKG_ID - no reference to CONEXT_USE_CD=PU</p>	<p>unclear how logic will result in retrieval of only compacted drums</p>	<p>Comments provided after V&V Review: 1202 screen only available when "compacted" selected on 1201 screen - see UP1 for logic (CONR_FROM_PKG_ID can be either PU or EC) - no action needed Discrepancy Item Closed as of 5/17/96</p>

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
1231: Verification Data Review Waste Compliant	allow the user to review and modify data for a specific drum that has only undergone NDE and NDA exams in WRAP	Appendix F specifies display of containers indicating NDE Verified, Assay Verified, Gross Weight Verified flags set	unclear how PINs displayed are identified as not otherwise processed in WRAP	Comments provided after V&V Review: drums are designated as verification only by route code which sets use code (3.1.6/UP4) - boxes, by definition, are verification only - no action needed Discrepancy Item Closed as of 5/17/96
	only allow modification of WRAP generated data		unclear how system will identify and restrict modification to WRAP generated data	Comments provided after V&V Review: Appendix F CONEXT_ data elements are WRAP only data - screen only displays WRAP data - no action needed Discrepancy Item Closed
1301: Activity Comments	use LOV to look up CODECHECK for ACT_CD	no reference to CODECHECK table in Appendix C data definition - Appendix C lists all ACT_CD values as domain of ACT_CD	appears that ACT_CD is intended for lookup - not clear if reference to CODECHECK is required	Phase 2/3 SDD updates to be addressed as a result of feature functional specification reviews

SCREEN NAVIGATION and APPENDIX A SCREENS	APPENDIX F, A, C CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	system navigation discusses access to 1301 from any screen via "fast access" function - not specified anywhere in SDD	no reference to "fast access" in any SDD section or specification	should probably include at least in general design standards as a generic feature of DMS	Screen navigation specifications to be finalized as a result of Phase 2/3 functional specification reviews

TABLE	NAME LISTING	DATA DEFINITION LISTING	RATIONALE FOR CATEGORY	RESOLUTION
DATA DICTIONARY TABLE/DATA ELEMENT NAME LISTING COMPARED TO DATA DICTIONARY TABLE/DATA DEFINITION LISTING				
CATEGORY 1 DISCREPANCIES				
BOTANAL	BOTANAL_ANAL_CD marked as a primary key and a foreign key	BOTANAL_ANAL_CD specifies only a foreign key	may affect table access for correct record	Comments provided after review of V&V discrepancies: Appendix C should be updated. Action Completed and Discrepancy Item Closed as of 5/17/96
FIELDSCRN	SCRN_COMMENTS marked as a foreign key	SCRN_COMMENTS not marked as a key		
	SCRN_ID marked as a primary and a foreign key	SCRN_ID specifies only a primary key		
HAZDETAIL	HDET_PCB_WGT marked as a foreign key	HDET_PCB_WGT not marked as a key		
PAYLOADASBLY	ASBLY_SHIPMENT_NUM marked as a primary key	ASBLY_SHIPMENT_NUM specifies a foreign key		Comments provided after review of V&V discrepancies: Appendix C should be updated - Phase 3 review

TABLE	NAME LISTING	DATA DEFINITION LISTING	RATIONALE FOR CATEGORY	RESOLUTION
PROCADD	PROCADD_PKG_ID marked as a primary key	PROCADD_PKG_ID marked as a primary and a foreign key		Comments provided after review of V&V discrepancies: Appendix C should be updated. Action Completed and Discrepancy Item Closed as of 5/17/96
PROFILEISOO	PISO_ISO_NAME marked as a primary key	PISO_ISO_NAME marked as a primary and a foreign key		
RADDETAIL	RDET_WRAP_CAT marked as a foreign key	RDET_WRAP_CAT not marked as a key		
SECLOG	SLOG_USER_ID marked as a foreign key	SLOG_USER marked as a foreign key	mismatch in data element name for foreign keys - may affect table access for correct record	Comments provided after review of V&V discrepancies: Appendix C should be updated. Action Completed and Discrepancy Item Closed as of 5/17/96; table deleted
SHIPPICK	SHIPPICK_WRAP_NUM marked as a foreign and primary key	SHIPPICK_WRAP_NUM marked only as a primary key	may affect table access for correct record	Comments provided after review of V&V discrepancies: Appendix C should be updated. Action Completed and Discrepancy Item Closed as of 5/17/96
SHIPWRAP	SHIPWRAP_NUM marked as a primary key	SHIPWRAP_NUM marked as both a primary and a foreign key		
SIEISO	SIE_ISO_NUM marked as a secondary key	SIE_ISO_NUM not marked as a key		

TABLE	NAME LISTING	DATA DEFINITION LISTING	RATIONALE FOR CATEGORY	RESOLUTION
WASTE	CON_LOCN_FACIL_AREA marked as a foreign key	CON_LOCN_FACIL_AREA not marked as a key		Comments provided after review of V&V discrepancies: Appendix C should be updated. Action Completed and Discrepancy Item Closed as of 5/17/96 - marked on both listings as a unique index (U)
	CON_SEC_PKG_ID not marked as a key	CON_SEC_PKG_ID specified as a foreign key		

TABLE	NAME LISTING	DATA DEFINITION LISTING	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 2 DISCREPANCIES				
BOTTLE	BOT_COMMENTS	none	data is not defined	Comments provided after review of V&V discrepancies: Appendix C should be updated Action Completed and Discrepancy Item Closed as of 3/6/96
	BOT_RETURN			
	none	BOT_RETURN_TO_PKG	either name listing or definition list is not up to date	Comments provided after review of V&V discrepancies: Appendix C should be updated Action Completed and Discrepancy Item Closed as of 5/17/96
FACILITY	FACIL_NAME specified as CHAR(55)	FACIL_NAME specified as CHAR(50)	mismatch in field length - correct one to use unknown	Comments provided after review of V&V discrepancies: Appendix C should be updated. Action Completed and Discrepancy Item Closed as of 3/6/96

TABLE	NAME LISTING	DATA DEFINITION LISTING	RATIONALE FOR CATEGORY	RESOLUTION
MATL	MATL_GRP_CD	MAT_GRP_CD	mismatch in data element name - correct one to use unknown	Comments provided after review of V&V discrepancies: Appendix C should be updated. Action Completed and Discrepancy Item Closed as of 5/17/96
SAMPLE	SAM_RETURN "redlined" out of data element name listing	SAM_RETURN shown with a definition as a data element still be used	either name listing or definition list is not up to date	
SECWASTYPE	none	SWTYP_DESCR shown with a definition	no listing for this data element in the name listing - with name listing or definition list is not up to date	

DATA DICTIONARY CONTENT COMPARED TO DATA USAGE BY APPENDIX F SPECIFICATIONS

The data dictionary appears to contain data elements that are:

- never loaded or used by any Appendix F process;
- loaded by some process, but not used;
- used by some process, but never loaded.

The following list of data elements should be reviewed to determine:

- if data is needed and missing from specifications;
- if data is not needed and should be deleted from data base.

This review process should be considered a Category 1 discrepancy resolution. If any needed data are missing, the DMS system will not fulfill all of its purpose.

DATA ELEMENT	COMMENTS	RESOLUTION
Data Never Loaded or Used in the Specifications		
BOT_RETURN_TO_PKG	Module 3.1.4/UP24 does use a BOT_RETURN_DT	Data contents validated during testing. Revised data dictionary to be published as new baseline with "as-built" SDD revision. Discrepancy Item Closed
all of BOTANAL table		
COC_BILL_OF_LADING		
COC_PROPERTY_NUM		
COC_SAF_NUM		
COC_SPEC_HANDLING	redundant with COC_SPEC_INSTRUCTIONS?	
CONTREAT_PKG_ID	may be simply a foreign key passed from WASTE - CON_PKG_ID - and used by system to access table, while not being used for any especial report or process	
FIELD_SCRN_ID	a foreign key from some table?	
HDET_CNTR_STATUS	these HAZDETAIL data elements are reviewed during Data Review, but never seem to initialized - they may be loaded from SWITS at some point, although they are not named - they do not seem to have any use during DMS processing	
HDET_IND_DOT_ID_NUM		
HDET_IND_NOS_DESCR		

DATA ELEMENT	COMMENTS	RESOLUTION
HDET_IND_SHIP_NAME		
HDET_WASTE_STATUS		
ASBLY_CONFIGURATION		
ASBLY_SHIP_CAT		
ASBLY_SHIP_CAT_HEAT_LTFLOAT		
entire PKGDW table		
RADMAT_DT		
SAM_RETURN		
SHPHST_NMIT_NUM		
SHPHST_RETURN		
SHPHST_741_NUM		
SHPITM_PROFILE_NUM		
SHPMNT_TSD_ACCEPT_DT		
SHIPWRAP_CARRIER_PERS_ID		
SHIPWRAP_MFST_COMP_FLAG		
TRUSHIP_DT		

DATA ELEMENT	COMMENTS	RESOLUTION
CONEXT_HAZ_VER_FLAG		
CONEXT_RVST_FLAG		
CONEXT_SCRN_VER_FLAG	redundant with CONEXT_VER_NDE_FLAG?	
CONEXT_WRAP_SAM_FLAG		
Data Elements that are Loaded, but Never Seem to be Used During Processing		
HDET_PCB_REMOVED_DT		
RDET_ASSAY_NUM		
RDET_CERT_DT		
RDET_DE_CI_FLAG		
RDET_HANDLING		
RDET_ORGANIC_WGT		
RDET_PDR_NUM		
RDET_RSWIMS_COUNT		
RDET_THERMAL_POWER_TMU		
RDET_TOT_ALPHA_CI_TMU		
RDET_TOT_PE_CI_TMU		

DATA ELEMENT	COMMENTS	RESOLUTION
RDET_TOT_PU_FGE_TMU		
CON_CHEM_NATURE_CD		
CON_MFST_NUM	may be a foreign key used only for table access	
CON_ROUTINE		
CON_SRCE_CHRG_CD		
CON_SRCE_CMPNY_TYPE		
CON_SRCE_ORG		
CON_TREATMENT_DT		
METRIC table does not seem to get created		

PHYSICAL (AS-BUILT ON MAY 1, 1996) DATABASE COMPARED TO DATA DICTIONARY

This analysis compares all Phase 1 processing data elements and data elements having tables defined in Oracle in the SDD, against all data elements in the physical Oracle Database ("as built" as of May 1, 1996). Due to the difficulty in determining the proper phase for each data element, some phase 2 and phase 3 data elements were included for this V&V analysis. If, in the summary section of the SDD, a table was defined as phase 2 or phase 3, and it is not present in Oracle, then it was excluded from the analysis.

General Category 2 Discrepancy:

- Appendix C of the SDD has a summary table noting the phase tables and data elements belong to. It also notes the phase a data element belongs to in the detailed section of data definitions. These two sections are not consistent: The detail section lists three tables having phase 2 or phase 3 data elements-- NDA, NDAISO and ISOTOPE. The summary section list 29 tables as phase 2 or phase 3 as follows:

<u>Table Name</u>	<u>Phase</u>	<u>Comment</u>
ACTCOM	2	Phase 2/3 SDD updates
BOTANAL	2	to be addressed as a
BOTTLE	2	result of feature
COC	2	functional specification
COXFR	2	
CONTREAT	2	
FIELDANAL	2	
FIELDSCRN	2	
FLDANALTYP	2	
LAB	2	

<u>Table Name</u>	<u>Phase</u>	<u>Comment</u>
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LABANAL	2
METRICS	2
PAM	3
PAYLOAD	3
PAYLOADASBLY	3
SAMLOC	2
SAMPCONTYP	2
SAMPLE	2
SAMPMATX	2
SAMPMETH	2
SAMREL	2
SAR	2
TREATPROC	2
TRUCON	3
TRUSHIP	3
TRUSHIPCAT	3
VERIFICATION	2
WORKITEM	2
WORKSHEET	2

TABLE	COLUMN	DISCREPANCY	RESOLUTION
CATEGORY 1 DISCREPANCIES			
NDA	NDA_ASSAY_NUM	Field not defined as part of the index in Oracle Oracle Position: N Dictionary Position: Y	Data contents validated during testing. Revised data dictionary to be published as new baseline with "as-built" SDD revision. Discrepancy Item Closed
		Required Constraint not in Sync Oracle Nullable Constraint: Y Dictionary Required Constraint: Y	
COC references LAB	Foreign Key COC_LAB_ID references LAB_ID	Foreign key not defined in ORACLE	
CONTREAT references WASTE	Foreign Key CON_PKG_ID references CONTREAT_PKG_ID		
FIELDANAL references FIELDSCRN	Foreign Key FIELD_SCRN_ID references SCRN_ID		
WORKITEM references WASTE	Foreign Key WORKITEM_PKG_ID references CON_PKG_ID		

TABLE	COLUMN	DISCREPANCY	RESOLUTION
CATEGORY 2 DISCREPANCIES			
ACTCOM	ACT_COMMENTS	Dictionary Data Element does not exist in Oracle	Data contents validated during testing. Revised data dictionary to be published as new baseline with "as-built" SDD revision. Discrepancy Item Closed
COC	COC_LAB_ID		
	COC_SHIP_DT		
FIELDANAL	FIELD_SCRN_ID		
FIELDSCRN	SCRN_COMMENTS		
	SCRN_ID		
ISOTOPE	ISO_ALPHA_CI_FACTR		
	ISO_PE_CI_FACTR		
	ISO_PE_CI_FACTOR		
NDA	NDA_THERMAL_POWER_TMU		
	NDA_TOT_ALPHA_CI_TMU		
	NDA_TOT_PE_CI_TMU		
	NDA_TOT_PU_FGE_TMU		
NDAISO	NDAISO_ASSAY_NUM		
SAMPLE	SAM_COC_FORM_ID		

TABLE	COLUMN	DISCREPANCY	RESOLUTION
	SAM_PKG_ID		
SAMREL	SAMREL_BOTTLE_ID		
TRUCON	TRUCON_CD		
	TRUCON_DESCR		
GENSQL		Table in Oracle does not exist in Dictionary	
SECURITY			
SYSBULL			
TABLE_INFO			
NDA	NDA_ASSAY_NUM	Data Types do not match Oracle Data Type: VARCHAR2 Dictionary Data Type: NUMBER	
	NDA_PKG_ID	Field not defined as part of the index by the Data Dictionary	
NDAISO	NDAISO_PKG_ID	Oracle Primary Key: Y	
RECDISP	RECDISP_PKG_ID	Dictionary Primary Key: N	
	RECDISP_INNER_PKG_ID	Unique Constraint not in Sync Oracle Unique Constraint: N Dictionary Unique Constraint: Y	
WASTE	CON_SEC_PKG_ID		

Oracle PL/SQL Stored Procedures

PROCEDURE NAME	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 1 DISCREPANCIES			
I_602_SWITS_RADETAIL	The Oracle database has the field RDET_THERMAL_POWER_TMU implemented in DMS. The PL/SQL does not update this data element in SWITS from DMS.	SWITS is not being updated.	Data contents validated during testing. Revised data dictionary to be published as new baseline with "as-built" SDD revision. Discrepancy Item Closed
	The Oracle database has the field RDET_TOT_ALPHA_CI_TMU implemented in DMS. The PL/SQL does not update this data element in SWITS from DMS.		
	The Oracle database has the field RDET_TOT_PE_CI_TMU implemented in DMS. The PL/SQL does not update this data element in SWITS		
	The Oracle database has the field RDET_TOT_PU_FGE_TMU implemented in DMS. The PL/SQL does not update this data element in SWITS from DMS.		

PROCEDURE NAME	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
I_RADDET_SWITS	The Oracle database has the field RDET_THERMAL_POWER_TMU implemented in DMS. The PL/SQL does not update this data element in DMS from SWITS.	DMS is not being updated.	
	The Oracle database has the field RDET_TOT_ALPHA_CI_TMU implemented in DMS. The PL/SQL does not update this data element in DMS from SWITS.		
	The Oracle database has the field RDET_TOT_PE_CI_TMU implemented in DMS. The PL/SQL does not update this data element in this data element in DMS from SWITS.		
	The Oracle database has the field RDET_TOT_PU_FGE_TMU implemented in DMS. The PL/SQL does not update this data element in this data element in DMS from SWITS.		
i_602_swits_isoqty	The Oracle database has the field RAD_QTY_TMU implemented in DMS. The PL/SQL does not update this data element in SWITS from DMS.	SWITS is not being updated.	
I_ISOQTY_SWITS	The Oracle database has the field RAD_QTY_TMU implemented in DMS. The PL/SQL does not update this data element in DMS from SWITS.	DMS is not being updated.	

PROCEDURE NAME	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
REN_WASTE_PRIMKEY	<p>PROCADD table not being updated due to table lock. Code is commented out.</p> <p>/* * THE FOLLOWING HAS BEEN COMMENTED OUT BECAUSE * THERE EXISTS A FULL TABLE LOCK ON THESE TWO * TABLES. IF THIS IS A PROBLEM FOR THIS KIND OF * UPDATING OF A PKG ID IN THE FUTURE, THIS WILL * NEED TO BE RE-THOUGHT OUT. UPDATE PROCADD SET PROCADD_PKG_ID = NEW_PKG_ID WHERE PROCADD_PKG_ID = OLD_PKG_ID; UPDATE PROCLIST SET PROC_PKG_ID = NEW_PKG_ID WHERE PROC_PKG_ID = OLD_PKG_ID; */</p>		

PROCEDURE NAME	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
REN_WASTE_PRIMKEY	<p>PROCLIST table not being updated due to table lock. Code is commented out.</p> <p>/* * THE FOLLOWING HAS BEEN COMMENTED OUT BECAUSE * THERE EXISTS A FULL TABLE LOCK ON THESE TWO * TABLES. IF THIS IS A PROBLEM FOR THIS KIND OF * UPDATING OF A PKG ID IN THE FUTURE, THIS WILL * NEED TO BE RE-THOUGHT OUT. UPDATE PROCADD SET PROCADD_PKG_ID = NEW_PKG_ID WHERE PROCADD_PKG_ID = OLD_PKG_ID; UPDATE PROCLIST SET PROC_PKG_ID = NEW_PKG_ID WHERE PROC_PKG_ID = OLD_PKG_ID; */</p>		

APPENDIX B INTERNAL CONTENTS COMPARED WITH EACH OTHER AND COMPARED TO APPENDIX C

General Category 1 design concern:

- Appendix C defines a METRICS table which is supposed to exist for the Facility Metrics reports (1101, 1102, 1103, 1104). Of the 11 data elements in this table, only 4 are used by these reports. Most of the data in the reports is apparently retrieved from the WASTE and CONLOC tables directly. If the METRIC table is used as implied, the access to the WASTE and CONLOC tables is via the MET_PKG_ID data element. The concept of a table to support reports should help address performance and update conflicts associated with real time reporting (see following bullet). However, it is apparent that the current METRIC table use is not yet defined.
- General design specifications stipulate an assumption that all data is available at report time from all data entry activities: in other words, "real time" access to "real time" data on line. While the system design is oriented around real time data entry, on line, the simultaneous overhead of trying to run reporting access against tables being updated can have an adverse affect on performance. Reports that can be run from "batch" information should be identified and used as much as possible (e.g. data retrieved from the data base at night, or from special report tables which are updated each night).

General Category 2 design concerns:

- Many reports react to user entry for waste types - not clear if report appears on screen for data entry, and then generates resultant query (need a "go" button?), or if query is entered on a separate report query screen and form then generates. There is no specification for menu selections to enter queries.
- Not clear if the reports are only available from the Report selection of the Main Menu or from within other Main Menu selections. For example, may be desirable to access shipping reports from within the Shipping menu.
- Various reports seem to use differing fonts. For simplicity and standardization, should consider always using the same font type for all standard reports.

- Many of the report samples field definitions show field displays with character lengths and decimal positions different than what is defined in the data dictionary (Appendix C). While it is understood that these are samples only, they should be revised to portray field displays as actually available. These can affect actual report layouts because of size and fit problems. Consequently, data envisioned to appear on single lines or grouped in certain ways for ease of use may not actually appear in a desirable manner on the final report.

REPORT	DESIGN CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 1 DISCREPANCIES				
R1102: Building Inventory Report	Waste Type column (noted as Waste Type Description on report sample): specification retrieves 2 and 3 character fields for apparent display of PRIWASTYPE and SECWASTYPE table description fields	PRIWASTYPE and SECWASTYPE description fields are 20 and 50 characters, respectively	report display needs to be reconsidered to ensure correct data is retrieved	All reporting to be finally specified as a result of Phase 2/3 functional specification review
R1201: Container Listing Report for Package ID	Data Quality Code	no specification to map this heading to a specific data element	data retrieval may be wrong	
	specification describes a: Physical State Code; Organic Wt (kg)	report sample is missing this column heading and data display	data retrieval may not support report requirement	
	Backlog Flag column for display of CON_BACKLOG_FLAG	Appendix C does contain this data element		
	report sample has Action Taken column and Shipment Arrived	specifications do not define these columns or their related data mapping	report will have blank fields	

REPORT	DESIGN CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 2 DISCREPANCIES				
R0351: Transfer Drum Status Report	page break specified to occur "as required"	implies that page break will occur as page fills (line 66?) - if so, certain data groupings and headings will be broken up	should consider page breaks to also occur at end of data grouping	All reporting to be finally specified as a result of Phase 2/3 functional specification review
R0501: Open Sample Status Detail Report	display needed for multiple sample comments	each comment field is 255 characters - report will either contain a great amount of "white space" (where comments are shorter than 255 characters), or there will need to be truncation rules for shortened displays of large comment fields, or line wrap with concatenation to use just as much space as needed	should have a user review to decide on preferable solution	
	query for all open samples	report will return all samples, grouped in order by Package ID, in a large print out - search for a discreet sample will be difficult	should consider permitting user query on a single Package ID and/or Sample ID	
R1101: Empty Container Inventory Report	facility location shown in the heading and for each discreet record	since data grouped by Facility Location, should simplify report by only presenting data once: in the heading	may generate a "cluttered" report	

REPORT	DESIGN CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
R1102: Building Inventory Report	WRAP Location, Storage Category, Container Use Code	all three are shown in both report heading and repeated again for each record retrieved	since data is grouped according to the heading data, having the data in the column display will be redundant - should eliminate need for column display to simplify logic and data retrieval	
R1104: WRAP Processing Report	Container Use Code	shown in both report heading and repeated again for each record retrieved		
	Data Selects for start and end dates of report	no field specified for data entry or logic comparisons - may be a start date of CON_ACCUM_DT and an end date of current CONLOC_LOCN_DT?	no way to bound report logic for needed time windows	Update Appendix B - specify user data bounds are on CON_ACCUM_DT
R1201: Container Listing Report for Package ID	specifies a "calculated" Waste Type Description	use of "calculated" does not seem clear - perhaps intention is to "derive" SWTYP_DESCR from SECWASTYPE table using SWTYP_CD key	data retrieval is not clearly defined - this is actually a lookup to SWTYP_DESCR on SWTYP_CD key	Update Appendix B - replace "calculated" with "SWTYP_DESCRP" for "CON SWTYP_CD"
	Container Volume, Container Empty Tare Wt, Container Total Wt, DW Waste #, Neutron Dose Rate	Appendix C defines larger prime number and different decimal space storage requirements for these fields than are being allowed for on the report	number truncation or "round-off" rules need to be defined if entire stored numeric value is not to be displayed	All reporting to be finally specified as a result of Phase 2/3 functional specification review

REPORT	DESIGN CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	Generator Information, Hazardous Package Detail	shown on report sample as a discreet field with a defined character display area - shown in screen definition as a heading for data grouping	data content is not clear - either definition or report sample is not accurate	
	specifies a "calculated" Company Title	use of "calculated" does not seem clear - perhaps intention is to "derive" CMPNY_TITLE from COMPANY table using CMPNY_ID key	data retrieval is not clearly defined	Update Appendix B - replace "calculated" with "CMPNY_TITLE" for "CON_CMPNY_ID"
	Total Alpha (Ci), Total Beta-Gamma (Ci), Dose Rate, Total Pu Equivalent (Ci), Thermal Power, Alpha Ci, PE-Ci, PU-FGE Isotope Activity	Appendix C defines these as FLOAT fields - no definition for their display	need to define if these are also "floating" sized fields or if there are truncation or "round-off" rules	All reporting to be finally specified as a result of Phase 2/3 functional specification review
	RSR report display	fields have been condensed to abbreviated headings and shortened data element display space	need to reconsider need to have all RSR report on one line - not likely to fit - perhaps a separate report?	

REPORT	DESIGN CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	Schedule and Frequency	report has potential for large volume and significant table access; probable performance impact during business hours	should consider off-hour batch generation and/or work against special refreshed report table	
	Page Break	defined as "as required" - will likely break up data groupings and column headings	consider occurring at end of each page 1 and end of data for each CON_PKG_ID	

ARCHIVE/JOURNALING: ORACLE DATABASE TRIGGERS USED FOR JOURNALING

A. General V&V Findings

Category 1 Discrepancy

There are no requirements or specifications noted for archiving. Under the current implementation, the retention of journaled data, plus all other "closed out" records (such as for containers shipped from WRAP-1) will be retained indefinitely in the DMS system. This will eventually lead to obvious storage problems. An archiving set of specifications is required which will specify retention periods for types of data, batch or other routines for purging and saving this data, archiving mechanisms (tape, hard copy, separate disk, etc.), and the retention periods for archived data.

Category 2 Discrepancy

Database Triggers are defined for all phase 1 tables marked for journaling in the SDD. The SDD only defines which tables are journaled; it does not specify the logic to be used. Consequently, the following V&V results should be reviewed by the system manager to ensure that what is happening is, in fact, the desired/required approach to the journaling for the DMS functionality.

B. Description of Current Journaling Implementation

1. Table Structure In Support of Journaling

The Journal is a set of ORACLE tables with all the columns that are in the journaled table, plus five additional columns. The Database Trigger journals all columns for a given table and updates these five additional columns:

OPERATION	The insert, update or delete operation.
DATETIME	The system date at time of journaling
ORACLE_USER	The ORACLE user logon.
COMMIT_USER	The commit user.
APPLN	The application performing the insert, update or delete.

A Journal Table will have the same name of the table it is making journal changes to, plus the suffix '_JN'. The following tables each have a Database Trigger and a Journal Table to handle journaling:

APPMDS	CHEMCOMP
COC	CONLOC
CONREL	HAZDETAIL
ISOQTY	PHYSCOMP
PKGDW	PROCADD
RADDETAIL	RADMAT
SAMPLE	SAMREL
SAR	SHIPWRAP
TREATPROC	USERS
WASTE	WASTEXT

2. Database Triggers

The Database Triggers are activated whenever an insert, update or delete operation occurs on a table which has a trigger. All of the Database Triggers perform these functions:

- For insert or update operations, the new data is written to the table and the journal.
- For delete operations, the old data is written to the journal and the old data is deleted from the table.

The Database Trigger for the CONLOC table has this additional functionality:

- If inserting and NEW.CONLOC_LOCN_ID='AS_RS' and NEW.CONLOC_PKG_ID not in PROCLIST, then NEW.CONLOC_PKG_ID is inserted into NOTPROCLIST.
- If updating and OLD.CONLOC_LOCN_ID='AS_RS' then delete from NOTPROCLIST for NOTPROC_PKG_ID=OLD.CONLOC_PKG_ID. If NEW.CONLOC_LOCN_ID = 'AS_RS' and NEW.CONLOC_LOCN_ID not in PROCLIST then NEW.CONLOC_PKG_ID is inserted into NOTPROCLIST.

- If deleting and OLD.CONLOC_LOCN_ID='AS_RS' then delete from NOTPROCLIST for NOTPROC_PKG_ID=OLD.CONLOC_PKG_ID.

C. Journaling In Support of Auditing

The journaling strategy can be awkward for auditing purposes. For example, to examine a row's previous contents for a given primary key, the auditor must:

1. Determine the oldest operation for a given primary key.
2. If the oldest operation was insert, the row previously did not exist.
3. If the oldest operation was update, retrieve the next oldest row for a given primary key.
4. If the oldest operation was delete, retrieve the oldest row for a given primary key.

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 3 DISCREPANCIES FOR ALL SDD REVIEW MATRICES				
Report DMSR0351: Transfer Drum Status Report	screen definition: column heading of Waste Type	screen sample breaks into two fields	sample and specification are not consistent	To be resolved with publication of new "as-built" ADD revision. Discrepancy Item Closed
	screen sample for display of Drum Status shows 1 character field	Appendix C defines data element with 2 characters	sample display inconsistent with data dictionary	
	screen definition: Drum Status contains CONEXT_CNTNR_STATUS	field name is CONEXT_CNTR_STATUS	typo: should be corrected in definition	
	screen definition: column heading of WRAP Location	screen sample shows Drum Location	sample and specification are not consistent	
	screen definition: column heading of Location Date	screen sample shows two fields: date and time		
	screen definition: column heading of Inner Package PINs	screen sample shows Inner Package ID		
Report DMSR1101: Empty Container Inventory Report	Facility Receipt Date definition	typos: RECKCK for RECDCK missing "e" in receipt for clarity: move close paren outside of 2nd RECDCK	typos: should be corrected in definition	
	screen definition: column heading of WRAP Location	screen sample shows Facility Location	sample and specification are not consistent	

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
Report DMSR1103: Waste Package Location History Report	screen sample for display of WRAP Location shows 9 character field	Appendix C defines data element with 10 characters	sample display inconsistent with data dictionary sample and specifications are not consistent	
	screen definition: column heading of Facility Location	screen sample shows Container Location		
	screen definition: column heading of Package ID	screen sample shows Waste Container ID		
	screen definition: column heading of Facility Location	screen sample shows WRAP Location		
	screen definition: column heading of WRAP Relocation Date	screen sample shows Relocation Date		
	screen definition: no column heading of Relocation Time	screen sample shows Relocation Time		
screen definition: Sort Sequence specifies CONOC_DT	field name is CONLOC_DT	typo: should be corrected in definition		
Report DMSR1104: WRAP Processing Report	WASTE Type in heading: sample shows actual field names as examples for users to follow when doing data entry	actual field names are often of little meaning to most users	should consider using examples of "typical" data such as is used for Container Use Code	
	screen definition: column heading of Total: Containers Verified	screen sample shows Total: Containers Certified	sample and specification are not consistent	

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
Report DMSR1201: Container Listing Report for Package ID	screen sample for display of SDAR Approval Number shows 12 character field	Appendix C defines data element with 14 characters	sample display inconsistent with data dictionary	
	screen sample for display of Secondary Waste Group shows 2 character field	Appendix C defines data element with 3 characters		
	screen sample for display of Container Description shows 12 character field	Appendix C defines data element with 14 characters		
	screen sample for display of Container Contents is deficient	Appendix C indicates need to display 255 characters		
	screen definition: column heading of Generating Company/Company Title	screen sample does not show Title in column heading, although field layout indicates apparent space for display	sample and specification are not consistent	
	screen sample for display of Organization shows 5 character field	Appendix C defines data element with 8 characters		
	screen sample for display of Source Facility shows 8 character field	Appendix C defines data element with 11 characters		

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	screen sample for display of Charge Code shows 4 character field	Appendix C defines data element with 8 characters		
	screen sample for display of Generator Comments is deficient	Appendix C indicates need to display 255 characters		
	screen sample for display of Designation Code shows 2 character field	Appendix C defines data element with 3 characters		
	screen sample for display of Flashpoint shows 4 character field	Appendix C defines data element with 6 characters		
	screen sample for display of Hazardous Properties Cd shows 2 character field			
	screen sample for display of LandBan shows 2 character field	Appendix C defines data element with 17 characters		
	screen sample for display of numbered LandBan fields shows 2 character field	Appendix C defines data element with 8 characters		
	screen sample for display of Assay Number shows 12 character field	Appendix C defines data element with 14 characters		

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	screen sample for display of Void Cd shows 2 character field	Appendix C defines data element with 6 characters		
	screen sample for display of Area shows 4 character field			
	screen sample for display of Facility ID shows 6 character field	Appendix C defines data element with 11 characters		
	screen sample for display of Weight and Volume only shows display of whole numbers	Appendix C defines data elements with decimal points		
	screen definition for RSR report column heading spells each one completely	screen sample abbreviates many - apparent attempt to keep RSR report data on a single line		
3.1.1.2/UP1: Print drum or box bar code label	system navigation refers to Bar Code ID Labels screen	Appendix A specifies Bar Code Generator screen	should update system navigation to get consistency in screen naming convention	Comments provided after review of V&V discrepancies: screen navigation should be updated Action Completed and Discrepancy Item Closed as of 3/6/96

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.1.2/UP2: Receive Drum or boxes	system navigation refers to using data for comparison to shipping papers	Appendix F makes no reference to shipping paper interaction	presumed to be a manual process outside of system - dependent on administrative processes - Appendix F should make reference to this interaction with the system to clarify that the shipping papers are not required from the system	Comments provided after review of V&V discrepancies: screen navigation should be updated Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.2.1/UP4: Physical Composition Record pop-up	Appendix F condition/event specification states "PIN PHYS_PKG_ID"	word "PIN" in pseudo-code is either a typo or poorly placed in text string	should be reworded/corrected for clarity	Comments provided after review of V&V discrepancies: decision: may be redundant but not harmful - no action
3.1.2.2/UP1-2: NDA Data Review in the Control Room	Appendix A screen print shows "NDE results"	screen supports NDA operations	should change screen display example	Comments provided after review of V&V discrepancies: screen has been implemented correctly - new screen print should be included in Appendix A Action Completed and Discrepancy Item Closed as of 5/17/96

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.3.1/UP1: Glovebox Drum Status at Entry	system navigation discussion refers to display of PIN of the inner drum	Appendix A screen print and Appendix F UP specify display of both inner and outer drum PIN	should update system navigation discussion for sake of completeness	Comments provided after V&V Review: need to update SDD para 5.2.4.3
3.1.3.1/UP3: LLW Non-Compliant Packet	Appendix F specifies column header name "PIN"	Appendix A screen print shows "Packet PIN"	should update Appendix F column name for consistency	Comments provided after review of V&V discrepancies: Appendix F should be updated Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.3.1/UP6: LLW Exit Glovebox Product Drum Update	Appendix F specifies use of CONEXT_WGT in estimated gross weight calculation	Appendix F attributes specify CONEXT_FILLER_WGT which is in Appendix C WASTEXT table	should update Appendix F calculation reference	

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
LLW RWM Process Glovebox Menu	system navigation describes selection of LLW RWM Process Glovebox from Glovebox Operations Menu to provide access to: LLW RWM Waste Sorting LLW RWM Compliant Waste Load Out LLW RWM Treatment Item Assembly	Appendix A hierarchy shows a Process Ops menu selection from the Main Menu, which provides LLW RWM Glovebox selection - then access provided to Sorting and Compliant screens - however, Treatment Item Assembly seems to be superseded by Treatment and Treatment Loadout screen selections for other screens in LLW RWM module: frequent inconsistency in screen naming across system navigation, Appendix A, and Appendix F	Appendix A is out of sync with System Navigation description	To be revised with publication of new "as-built" SDD revision. Discrepancy Item Closed
3.1.3.2/UPI: LLWRWM Glovebox Operations - Accumulation of Waste at Sample Station Area	Appendix F specifies use of CON_PKG_FROM_ID	field name is CONR_FROM_PKG_ID	typo: need to update Appendix F	

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.3.2/UP7-8: Compliant Waste Loadout	Appendix F specifies use of RDET_BG_DOSE_RT	field name is RDET_BG_DOSE_RATE		
3.1.3.2/UP9-12: LLWRWM Staging of Items to be Treated	Appendix F specifies use of WORK_ITEM_ID	field name is WORKITEM_ID		
	Appendix F specifies use of SAMREL_CON_USE_CD	field name is SAMREL_USE_CD		
3.2.3.2/UP15-16: Compliant Waste Loadout	Appendix F specifies use of BOTTLE_COMMENTS	field name is BOT_COMMENTS		
	Appendix F specifies use of USR_USER_ID	field name is USR_USERID		
	Appendix F specifies use of CONREL_CD	field name is CONR_REL_CD		
3.1.4: Sample Management Menu	no Appendix F specification for generating the pull down selections of this menu	Appendix A contains selections in hierarchy	should refer to Appendix A in specifications?	
3.1.4/UP1: Lab Sample Acquisition	Appendix F specifies use of SAMPLE_ID	field name is SAM_SAMPLE_ID	typo: need to update Appendix F	
	Appendix F specifies use of LABANAL_CON_TYPE_CD	field name is LABANAL_CONTYP_CD		

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.4/UP2-3: Purge Port Inventory Listing	Appendix F specifies use of COMMUNICATION	Appendix C has table name of COMMUNICATION_TABLE	typo: need to update either Appendix F or Appendix C	
3.1.4/UP6-7: Field Screening and data input to support verification of waste data or taking of lab samples	Appendix F specifies use of FIELD_ANAL_RES	field name is FIELD_RES	typo: need to update Appendix F	
3.1.4/UP10-11: Designation of packet waste characteristics in support of generation of the worksheet info/future treatment	Appendix F specifies data store named HDET	table name is HAZDETAIL		
	system navigation requires selection of 0505 from Sample Management Menu	Appendix F specifies selection from screen 0506 and I221	need to update system navigation description - out of sync with final design	
3.1.4/UP14-15: Display packets available for treatment on a pop-up screen	Appendix F specifies use of MAT_GRP_CD	field name is MATL_GRP_CD	typo: need to update Appendix F	
3.1.4/UP19-21: Custody tracking once samples are removed from the glovebox	Appendix F specifies data store named LABORATORY	Appendix C has table name of LAB	typo: need to update Appendix F or Appendix C	

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.4/UP22-23: Printing of Sample Labels for Sample Bottles	system navigation specifies selection of 0508 from Sample Management Menu	Appendix F selects 0508 from both Sample Management Menu and screen 0504	system navigation out of sync with final design	
3.1.4/UP24: Completion of sample/bottle tracking data (generally upon return of samples to WRAP)	Appendix F specifies use of BOT_RETURNED_DT	field name is BOT_RETURN_DT	typo: need to update Appendix F	
	Appendix F specifies use of SAMREL_DATE	field name is SAMREL_DT		
	Appendix F specifies use of CONREL_DT	field name is CONR_DT		
3.1.4/UP25: Update purge port or pig location	system navigation specifies selection of 0510 from Sample Management Menu	Appendix F specifies selection from Main Menu - Main Menu does provide Sample Management Menu, but specs imply screen is a Main Menu discreet selection	Appendix F description probably needs to be brought in line with system navigation	
3.1.4/UP26: Log-in returned pigs, purge ports, and samples	Appendix F specifies use of SAMR_BOTTLE_ID	field name is SAMREL_BOTTLE_ID	typo: need to update Appendix F	
	Appendix F specifies use of SAMR_PKG_ID	field name is SAMREL_PKG_ID		

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.5/UP11: DMS to transmit all applicable SWITS data to SWITS for drums sent to the Processing Area in WRAP	Appendix F specifies HDET(S) and HDET	table name is (S)HAZDETAIL and HAZDETAIL	typo: need to correct Appendix F	Comments provided after review of V&V discrepancies: Appendix F should be updated Action Completed and Discrepancy Item Closed as of 3/6/96
	screen 0602 described as being for drums sent to the Processing Area in WRAP	wording implies this is for drums received rather than shipped - could refer to drums <u>previously</u> sent to processing?	need to confirm intent of UP - may need to update semantics or change wording	
	UP 11 and UP 12 only describe drum processing	cite use of CONEXT_USE_CD which also includes boxes	need to update terminology	

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
<p>3.1.5/UP12: DMS to transmit all applicable SWITS data to SWITS for all drums received by WRAP</p> <p>3.1.5/UP20: DMS to transmit all applicable SWITS data to SWITS for all boxes and empty drums received by WRAP</p>	<p>Appendix F specifies a location code of TRANSIT</p>	<p>code is named IN_TRANSIT</p>	<p>typo: need to correct Appendix F</p>	
<p>3.1.5/UP14: Update of PCS database and adjust radiologic inventory for facility</p> <p>3.1.5/UP22: Update of PCS database and adjust radiologic inventory for the facility</p>	<p>Appendix F specifies RADMAT_RAD_TOTAL</p>	<p>data element name is RADMAT_RAD_TOT</p>		

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.5/UP19: Update of container location as containers are removed from storage and transferred to the shipping dock	Appendix F specifies a location code of SHIPDCK	code is named SHPDCK		
3.1.6/UP2: Process List	Appendix F specifies user is allowed to Reorder and Commit data to create PROCLIST table records	system navigation makes no reference to creation of records	since preceding screens and processing are obviously intended to create records, system navigation text should be updated	Comments provided after V&V Review: need to update SDD para 5.2.10.3
3.1.6/UP5: AS/RS Retrieval and Storage Via Transfer Car	Appendix F specifies screen selection "from menu"	does not mention which menu, but context implies Pick List menu	should specify menu hierarchy selection for clarity	Comments provided after review of V&V discrepancies: Appendix F should be updated Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.6/UP9: TRUPACT Assembly List Generation	specification not flagged for later phases	no mention of process being Phase 2 or 3	convention has been for all phase 2 and 3 development work to be clearly marked as such - this should be flagged accordingly	
3.1.6/UP10: Save Data to File				

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.6/UPI0: Save Data to File	no specification for activity in system navigation	save data to file is obvious intent of preceding processing	system navigation should be updated to specify need for file updates at end of work	Comments provided after V&V Review: need to update SDD Para 5.2.10.6 - Phase 3 activity
3.1.7/UPI1: Radiologic Inventory	system navigation refers to selection of Radiologic Inventory Summary from Facility Metrics and Inventories Screen	no specification anywhere for a Facility Metrics and Inventories Screen	system navigation should be updated to reflect latest version of screen hierarchy	Comments provided after V&V review: current menu selection is "Rad Inv" - needs to be reviewed form sufficiency (see Appendix A hierarchy) - Phase 2 activity
	Appendix F specifies that a screen print be generated	no mention in system navigation	system navigation should be updated to include all processing	Comments provided after review of V&V discrepancies: screen navigation should be updated Action Completed and Discrepancy Item Closed as of 3/6/96

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.7/UP2: Container Locations and Relationships	system navigation refers to selection of Container Locations and Relationships from Facility Metrics and Inventories Screen	no specification anywhere for a Facility Metrics and Inventories Screen	system navigation should be updated to reflect latest version of screen hierarchy	Comments provided after V&V Review: in Rev 2 of SDD note, Sect 5.2.11.2, Appendix A fig A-86, Appendix F 3.1.7/UP2 Action Completed and Discrepancy Item Closed as of 5/17/96
3.1.8/UP15: Drum at TRU Glovebox Entry Port 3.1.8/UP20: Transfer Drum at TRU RWM Glovebox Entry Port 3.1.8/UP24: Drum at the S&R Discharge Conveyor 3.1.8/UP42: TRU Glovebox or TRU RWM Glovebox Fissile Material Level to PCS	specifies use of RADMAT_RAD_TOTAL	field name is RADMAT_RAD_TOT	typo: need to correct Appendix F	To be resolved with publication of new "as-built" SDD revision. Discrepancy Item Closed

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.8/UP50: Sample and Purge Port relationship from PCS	specifies use of SAM_LOCATION	field name is SAM_LOCN_ID		
3.1.8./UP58: Treatment Container and Item Container relationship from PCS	specifies use of CONREL_REL_CD	field name is CONR_REL_CD		
3.1.8/UP98: Box Database to BWAS	message has fields 5,6,7	same fields in pseudo-code are referred to as 1,2,3		
	message has fields 4,5,6	same fields in pseudo-code are referred to as 1,2,3		
	specifies use of PISO_PROF_NUM	field name is PISO_PROF_ID	typo: need to correct Appendix F	
3.1.8/UP99: Assay Results from BWAS	specifies use of NDA_TMU_ALPHA_CI	field name is NDA_TOT_ALPHA_CI_TMU		
	specifies use of NDA_TMU_PU_CI	field name is NDA_TOT_PE_CI_TMU		
	specifies use of NDA_TMU_PU_FGE	field name is NDA_TOT_PU_FGE_TMU		
	specifies use of NDA_TOT_PU_CI	field name is NDA_TOT_PE_CI		

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
<p>3.1.9/UP1: Update of container NDA data for processed waste drums</p> <p>3.1.9/UP8: Compacted Drum data review</p> <p>3.1.9/UP11: Review of NDA Result data for containers which don't go to processing in WRAP 1</p>	<p>Appendix A shows display of Total PE FGE</p>	<p>data element named PU FGE</p>	<p>apparent typo in screen print</p>	<p>Comments provided after review of V&V discrepancies: screen should be updated Action Completed and Discrepancy Item Closed as of 5/17/96</p>
<p>3.1.4/UP3: User selection of the appropriate product drum assay to be recorded as the drum certification assay</p>	<p>Appendix F cites NDA_ISO_NAME</p>	<p>Appendix C has NDAISO_NAME</p>	<p>typo: need to correct Appendix F</p>	<p>To be resolved with publication of new "as-built" SDD revision. Discrepancy Item Closed</p>

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.9/UP8: Compacted Drum data review	system navigation refers to selection of Puck Data button	Appendix F specifies a Compacted Drum Data button	need to change one Appendix to reflect actual button name	Comments provided after review of V&V discrepancies: screen navigation should be updated Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.9/UP4s and UP5s	same unit process numbers used	more than one UP 4 and UP 5	need to change unit process numbering to be unique for each UP in a module	Comments provided after review of V&V discrepancies: Appendix F should be updated Action Completed and Discrepancy Item Closed as of 3/6/96
3.1.9/UP5-7(?): User review and modification of drum ISOQTY certification records	Appendix F specifies RAD data store	no RAD table in Appendix C - given context of UP and data elements used, obvious reference to ISOQTY	need to correct Appendix F table call	
3.1.9/UP21: User denotes assay data review is complete and updates the WRAP status code	Appendix F specifies CONEXT data store	no CONEXT table in Appendix C - given context of UP and data elements used, obvious reference to WASTEXT		

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
3.1.9/UP24-25: Update of container relationships prior to data review	Appendix F lists attributes starting with "CONREL" in data element name	no such data elements in Appendix C - given context and data store involved, obvious reference to data elements named with "CONR"	need to correct Appendix F data element names	
System Administration: Screen 0451	system navigation specifies a screen to maintain the Container Location Table	no screen print for maintenance of this table	table is in a regular state of update during processing - may not need a special screen - system navigation should be updated	Comments provided after V&V Review: cited action needs to be taken Action Completed and Discrepancy Item Closed as of 5/17/96
System Administration: Screen 0453	system navigation refers to Treatment Procedure Table screen DMSS0453	Appendix A labels this screen 0466	need to update system navigation to correct screen number	Comments provided after review of V&V discrepancies: screen navigation should be updated Action Completed and Discrepancy Item Closed as of 3/6/96

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
System Administration: Screen 0456	system navigation refers to Shipment Picklist Description Table screen DMSS0456	Appendix A labels this screen Shipping Pick List Type	need to update system navigation to correct screen name	Comments provided after review of V&V discrepancies: screen navigation should be updated Action Completed and Discrepancy Item Closed as of 3/6/96
System Administration: Screen 0461	screen is for maintenance of the WRAP Miscellaneous Table	Appendix A screen print uses sample data which is not in the domain of this table	should use more representative table examples to preclude confusion for reviewers	Comments provided after V&V Review: cited action needs to be taken Action Completed and Discrepancy Item Closed as of 5/17/96
System Administration: Screen 0706	system navigation refers to User Role Table screen DMSS0706	Appendix A labels this screen 0708	need to update system navigation to correct screen number	Comments provided after review of V&V discrepancies: screen navigation should be updated Action Completed and Discrepancy Item Closed as of 3/6/96

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
Table PKGDW	Data Element/Table name listing has PDW_PKG_ID	Data Element/Table definition listing has PDW_PGK_ID	apparent typo in the definition listing - all package IDs in the system have been named "PKG_ID"	Comments provided after review of V&V discrepancies: Appendix C should be updated Action Completed and Discrepancy Item Closed as of 3/6/96
Table ACTCOM	ACT_OP_COMMENTS	Data Element in Oracle does not exist in Dictionary	Need to update Appendix C to match "as built" or need to update Oracle structure to match approved design (i.e., SCRs) or "tag-along" SWITS data element not used by WRAP	To be resolved with publication of new "as- built" SDD revision. Discrepancy Item Closed
Table CONSIZE	CSZ_BILL_VOL			
Table DOTSPEC	DOT_CNTYP_CD			
Table FIELDANAL	FIELD_SAMPLE_ID			
Table FIELDSCRN	SCRN_SAMPLE_ID			
Table HAZCOMP	HCC_DISCARD			
Table HAZDETAIL	HDET_SHIP_CD			
	HDET_SI_COMPAT_GRP			
	HDET_SI_NUM			
	HDET_SI_WASTE_DESCR			

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
Table HAZDETAIL_JN	HDET_SHIP_CD			
	HDET_SI_COMPAT_GRP			
	HDET_SI_NUM			
	HDET_SI_WASTE_DESCR			
Table ISOTOPE	ISO_A2_LIM			
	ISO_LFMW_LIM			
	ISO_LOV			
Table NDA	NDA_PROF_FLAG			
	NDA_TMU_ALPHA_CI			
	NDA_TMU_PE_CI			
	NDA_TMU_PU_FGE			
	NDA_TMU_THERMAL_POWER			
Table NDAISO	NDAISO_DT			
Table NDE	NDE_PASSED_FLAG			

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	NDE_VTAPE_STOR_LOCN			
Table PERSON	PERS_ANALYST			
	PERS_ENTRY			
	PERS_FIRST			
	PERS_OPS			
	PERS_RECEIPT			
	PERS_TECH			
	PERS_VERIF			
Table PHYSDISC	PDESC_LOV			
Table PROFILE	PROF_PU239			
Table RADETAIL	RDET_BEG_COORD_N			
	RDET_BEG_COORD_W			
	RDET_CMPCT_PCT			
	RDET_CMPCT_PIN			
	RDET_END_COORD_N			

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	RDET_END_COORD_W			
	RDET_PRORATED_CMPCT_WGT			
	RDET_RELOC_DT			
	RDET_SWSDR_NUM			
Table RADDETAIL_JN	RDET_BEG_COORD_N			
	RDET_BEG_COORD_W			
	RDET_CMPCT_PCT			
	RDET_CMPCT_PIN			
	RDET_END_COORD_N			
	RDET_END_COORD_W			
	RDET_PRORATED_CMPCT_WGT			
	RDET_RELOC_DT			
	RDET_SWSDR_NUM			
Table SAMPLE	SAM_DISP_BY			
	SAM_DISP_DT			

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	SAM_DISP_METHOD			
	SAM_FORM_ID			
	SAM_LAB_ID			
	SAM_OK_AT_LAB			
	SAM_RAD_REPORT_DT			
	SAM_RETURN_DT			
	SAM_RETURN_TO_PKG			
	SAM_TO_LAB_DT			
	SAM_TO_RAD_LAB_DT			
Table SAMPLE_JN	SAM_DISP_BY			
	SAM_DISP_DT			
	SAM_DISP_METHOD			
	SAM_FORM_ID			
	SAM_LAB_ID			
	SAM_OK_AT_LAB			

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	SAM_RAD_REPORT_DT			
	SAM_RETURN_DT			
	SAM_RETURN_TO_PKG			
	SAM_TO_LAB_DT			
	SAM_TO_RAD_LAB_DT			
Table SAMREL	SAMREL_SAMPLE_ID			
Table SAMREL_JN	SAMREL_SAMPLE_ID			
Table SHIPITEM	SHIPITM_CELLS			
	SHIPITM_CELL_TEXT_CD			
	SHIPITM_COMMENT			
	SHIPITM_DISP_COST			
	SHIPITM_PACKING_GRP			
Table SHIPMENT	SHPMNT_ARRIVAL_DT			
	SHPMNT_COST_EST			
	SHPMNT_INVOICE			

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	SHPMNT_PO_NUM			
	SHPMNT_REQ_NUM			
Table STORAGEECAT	SCAT_616			
Table TRUCON	TRU_CON_CD			
	TRU_CON_DESCR			
Table TSDFACIL	TFAC_CLASS			
	TFAC_PHONE			
Table WASTE	CON_ABS_TYPE			
	CON_ADTL_COMMENT			
	CON_ALERT_FLAG			
	CON_ALERT_REASON_CD			
	CON_BACKLOG_FLAG			
	CON_CNTR_RECV_DT			
	CON_CODE1			
	CON_CODE2			

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	CON_CODE3			
	CON_COM1			
	CON_COM2			
	CON_COM3			
	CON_DATA_QUAL_CD			
	CON_DATE1			
	CON_DATE2			
	CON_DATE3			
	CON_DEADLINE_DT			
	CON_DEBRIS_CAT			
	CON_DEBRIS_TYPE			
	CON_DESTRUCT_DT			
	CON_DOT_TRANS_CAT			
	CON_FILLER_TYPE			
	CON_FOOT_FROM			

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	CON_FOOT_TO			
	CON_GENER_ID			
	CON_GENER_VER_FLAG			
	CON_GGRP_ID			
	CON_LOCN_GEN_DETAIL			
	CON_LOCN_LAST_ONSITE			
	CON_LOCN_MODULE			
	CON_LOCN_SECTION			
	CON_LOCN_TIER_LVL			
	CON_LOCN_TIER_POS			
	CON_LOCN_UNIT			
	CON_REQ_NUM			
	CON_SERIAL_NUM			
	CON_SRCE_PROG			
	CON_SRCE_RPT_GRP			

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	CON_STORAGE_SITE			
	ON_SWE_COMMENT			
	CON_TEMP_CNTR_COUNT			
	CON_WASTE_STREAM			
	CON_WELL_NUM			
	CON_YN1			
	CON_YN2			
	CON_YN3			
Table WASTEXT	CONEXT_NLLL_DET_FLAG			
	CONEXT_SO_PKG_ID			
	CONEXT_TRUCON_CD			
Table WASTEXT_JN	CONEXT_NLLL_DET_FLAG			
	CONEXT_SO_PKG_ID			
	CONEXT_TRUCON_CD			
Table WASTE_JN	CON_ABS_TYPE			

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	CON_ADTL_COMMENT			
	CON_ALERT_FLAG			
	CON_ALERT_REASON_CD			
	CON_BACKLOG_FLAG			
	CON_CNTR_RECV_DT			
	CON_CODE1			
	CON_CODE2			
	CON_CODE3			
	CON_COM1			
	CON_COM2			
	CON_COM3			
	CON_DATA_QUAL_CD			
	CON_DATE1			
	CON_DATE2			
	CON_DATE3			

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	CON_DEADLINE_DT			
	CON_DEBRIS_CAT			
	CON_DEBRIS_TYPE			
	CON_DESTRUCT_DT			
	CON_DOT_TRANS_CAT			
	CON_FILLER_TYPE			
	CON_FOOT_FROM			
	CON_FOOT_TO			
	CON_GENER_ID			
	CON_GENER_VER_FLAG			
	CON_GGRP_ID			
	CON_LOCN_GEN_DETAIL			
	CON_LOCN_LAST_ONSITE			
	CON_LOCN_MODULE			
	CON_LOCN_SECTION			

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	CON_LOCN_TIER_LVL			
	CON_LOCN_TIER_POS			
	CON_LOCN_UNIT			
	CON_REQ_NUM			
	CON_SERIAL_NUM			
	CON_SRCE_PROG			
	CON_SRCE_RPT_GRP			
	CON_STORAGE_SITE			
	CON_SWE_COMMENT			
	CON_TEMP_CNTR_COUNT			
	CON_WASTE_STREAM			
	CON_WELL_NUM			
	CON_YN1			
	CON_YN2			
	CON_YN3			

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
Table DOTSPEC references CONTYPE	DOT_CNTYP_CD references CNTYP_CD	Foreign Key not defined in Data Dictionary		
Table FIELDANAL references SAMPLE	FIELD_SAMPLE_ID references			
Table SAMPLE references LAB	SAM_LAB_ID references LAB_ID			
Table SAMREL references SAMPLE	SAMREL_SAMPLE_ID references SAMPLE_ID			
Table SAR references LABANAL	SAR_ANAL_CD references LABANAL_ID			
Table SAR references SAMPLE	SAR_SAMPLE_ID references SAMPLE_ID			
Table SECURITY references USER	SEC_USERID references USR_USERID			

DESIGN FEATURE A	DESIGN FEATURE B	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
Main Menu	no specification in screen hierarchy	N/A	need to update Appendix A screen hierarchy to reflect interplay with Main Menu	Comments provided after review of V&V discrepancies: screen hierarchy should be added to Appendix A Action Completed and Discrepancy Item Closed as of 3/6/96
	system navigation has no discussion on selection of Bar Code Label from Main Menu	Appendix F and A show screen 0102 as being available from Main Menu	need to update system navigation text	Comments provided after review of V&V discrepancies: screen navigation should be updated Action Completed and Discrepancy Item Closed as of 3/6/96

4.3 DMS COMMUNICATIONS MODULE

4.3.1 Purpose

This analysis compares the discreet features and elements specified in the SDD Appendices and text. It then compares the DMSCOM source code to the SDD. The intent is to determine the consistency of the design across each part of the SDD specification to gauge the overall design integrity, and to determine the resultant accuracy of the code.

4.3.2 Scope

This analysis examined the source code for all Phase 1 development messages and compared it to the Appendix F specifications and the Appendix C data definitions.

A comparison of the Appendix F specifications with their use of data elements in Appendix C was conducted and is reported in Section 4.2.

4.3.3 Description of Analysis Approach

For this analysis one matrix was prepared.

Comments in the matrix are intended to point out discrepancies in the comparisons, or other insights which the analyst deemed necessary to bring to the system owner's attention.

Where comments pertain to discrepancies, these were categorized to reflect their potential severity or impact on the design.

4.3.4 Analytic Overview

4.3.4.1 General Observations

In addition to the comments and discrepancies noted in the matrices, the following general comments are noted:

General Category 1 Discrepancy for DMSSIE DD: Possible memory 'over-run' condition

When the ora_pcstdms_cl() is called, the memory for variable msg_is, used by DMSCOM to hold the message string, is 500 characters. Depending on the number of 'CHAD' and 'ABUN' sub-messages, a memory 'over-run' condition could occur. The message string could over write other program data and object code. Ten or more CHAD sub-messages with no ABUN sub-messages will cause an memory 'over-run' condition. Nine or more ABUN sub-messages with no CHAD sub-messages will cause an memory 'over-run' condition. In fact, if a total of ten sub-messages in any combination of either CHAD or ABUN will cause a memory 'over-run' condition. The SDD does not mention the maximum number of sub-messages.

When the dmssie_dd() function is called the memory allocated for holding XDR messages in the format is 2000 characters. The original message is an ASCII character string having numerics as ASCII characters. The XDR message format has numerics as binary, which is more space efficient than ASCII. The msg_is variable ora_pcstdms_cl() should be larger than the message variable in dmssie_dd().

Resolution: 01/30/96: Test Proc Review Meet: DD will be set to 5000 characters - all others will be set to 2000

4.3.4.2 Discrepancy Synopsis and Resolution Matrices

The following matrix contains a synopsis of the discrepancies which are described in more detail in the analytic matrices found in the DMS project files. This synopsis groups the discrepancies by category. It then provides resolution actions which were decided during the course of the V&V analysis. Those actions which are closed are also noted.

The resolution matrix will be considered a tracking mechanism to monitor all discrepancies until they are closed. Consequently, it will be periodically updated to reflect closed actions. If requirements are changed during the DMS development, these changes will be noted in the resolution matrix as pending actions and tracked as with any other actions.

APPENDIX F DESIGN (PROCESS 3.1.8)	DESIGN CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 1 DISCREPANCIES				
UP1: Log all Messages	Throughout DSMCOM	Not all of the routines log messages	Appropriate action may not be taken	Message code validated during testing. Revised specifications to be published as new baseline with "as-built" SDD revision. Discrepancy item closed
UP26: Background drum at Background Drum storage Conveyers	PCSDMS.PC: lines 1847, 2038, 2595, 3176	DMSSIE DD message not correctly formatted due to incorrect test of counter1 - the source code tests local variable counter1 for true or false. If counter1 is true (non-zero), an empty ABUN message is formatted and appended to the message string to be sent. If counter1 is false (zero), the "else" portion of the "if" statement is executed to format ABUN message. However, no message is formatted because counter1 is zero, and there is no data to format	SIE not receiving drum database; thus not performing required function	
UP27: Drum stored in NDE / NDA Carousel				
UP31: Drum at the infeed Conveyor Scale				
UP37: Drum at Airlock Conveyor Scale				

APPENDIX F DESIGN (PROCESS 3.1.8)	DESIGN CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	PCSDMS.PC: lines 1861, 2052, 2068, 3189	DMSSIE DD message not correctly formatted due to incorrect test of counter2 - the source code tests local variable counter2 for true or false. If counter2 is true (non-zero), an empty isotope message is formatted and appended to the message string to be sent. If counter2 is false (zero), the "else" portion of the "if" statement is executed to format isotope message. However, no message is formatted because counter2 is zero, and there is no data to format		
UP61: Request for BWAS status from PCS	PCSDMS.PC: line 5446	Source code not in sinc with SDD. Message not sent. The function dmsrba_rbwa() does not exist. The line of code that calls this function is commented out	DMS does not receive status of BWAS	
UP64: BWAS Status to PCS		Does not seem to be implemented. There is a comment stating "the sending of the DMSPCS SBWA message was sent in function "bwadms_sbwa()" (not yet written as of 7/30/95." The function "bwadms_sbwa()" does not exist. Source code is not in sinc with SDD		

APPENDIX F DESIGN (PROCESS 3.1.8)	DESIGN CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
UP67: BWAS Assay Aborted from BWAS		Does not seem to be implemented. Source code is not in sync with SDD	DMS does not know and record BWAS Assay being aborted	
UP87: Processing Pick List Items to PCS	MSGPCSDM.C	According to the SDD, Appendix F, DMSCOM selects the data from the database. Nowhere has this been found. The routine functions as if PCS sends to DMS the items to be processed. source code is not in sync with SDD	The proper message pick list message is not sent	
UP96: Non-listed, long- lived nuclides detected from SIE	PCSDMS.PC	The routine does not update MSGLOG_INIT_FLAG to 'DF' or CONTEXT_NLLL_DETECTED to system date. It does, however, set conext_nlll_dat_flag = 'Y'. Source code not in sync with SDD	Database is not properly updated	1/30/96: Test Proc Review Meet: should refer to MSGLOG_INIT_FLAG

APPENDIX F DESIGN (PROCESS 3.1.8)	DESIGN CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 2 DISCREPANCIES				
UPI: Log All Messages	PCSDMS.PC	Binary output of the message only occurs if pcs_log_flag is true	System may not be logging all messages	Message code validated during testing. Revised specifications to be published as new baseline with "as-built" SDD revision. Discrepancy item closed.
UPI2: BOX at box NDA Vault	PCSDMS.PC: lines 5418-5422	Phase 2 requirements in code: Cited lines update DMS for conloc_locn_id = BOXNDA	Database is not properly updated	
UP24: Drum at the S&R Drum Discharge Conveyor	PCSDMS.PC: lines 1583-1586 and 1588-1590	The source code contains both Phase 1 and Phase 3 requirements. The source code lines (1607-1637) for the Phase 3 requirements are NOT commented out. The source code (lines 1639-1656) for Phase 3 ARE commented out.	Additional functionality is performed. Messages are sent for which the rest of the system is not ready to handle	
UP26: Background drum at Background Drum Storage Conveyers	PCSDMS.PC: lines 1693-1725	The SDD Appendix F states the third field for characterization is '0'. The source code has '1'. The fourth field should be NULL. The source code has 'T'	Message is not properly sent	
	PCSDMS.PCL: lines 1726-1874	Cited lines are NOT supported by SDD Appendix F. This code is almost exactly the same as the code for the next location in the SDD Appendix F 'N_NCRSL'	Additional functionality is performed. Messages are sent which are not required by SDD Appendix F	

APPENDIX F DESIGN (PROCESS 3.1.8)	DESIGN CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
UP34: Box at NDE vault scale	PCSDMS.PC: lines 2683-2743	There are 170 lines of code commented out for this section. There is a comment that states the DMSBWA DD message needs to be defined. The code is for a DMSSIE DD message which will need to be modified	The SDD is lacking design definition. Not clear as of this review whether design issue has been resolved and code is included in Phase 1 implementation	
UP39: Waste containers have been accepted into WRAP at the receiving dock	PCSDMS.PC	Not identified where DMSS0101 calls this function. This function is defined in two modules: PCSECHO.C and MSCDMSPC.C and is different in each	The wrong module might be called. Potential source code maintenance problem	
UP40: PIN of waste drum at the LLW or TRU entry glovebox sent to the PCS		The code for the LLW_ENTRY is in sync with the SDD, but the code for TRU_ENTRY is commented out. The TRU_ENTRY code is not in sync with the SDD	Functionality has not been implemented. Appendix F indicates this is a Phase 1 development. However, para 2.0 of the SDD indicates TRU is a later Phase process. Need to confirm the necessity for this function in the appropriate phase	

APPENDIX F DESIGN (PROCESS 3.1.8)	DESIGN CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
UP41: PINs of drums or boxes shipped from WRAP sent to PCS		Not identified where DMSS0602 calls this function. This function is defined in two modules: PCSECHO.C and MSCDMSPC.C and is different in each.	Implementation of SDD may be missing. The wrong module might be called. Potential source code maintenance problem	
UP60: Drum Contamination Status message from PCS	PCSDMS.PC: lines 5418-5422	The lines 5418-5422 are additional features not specified in the SDD	Additional functionality may interfere with proper operation	
UP62: Request for BWAS Status to BWAS	PCSDMS.PC: line 7816	Function ora_dmsrbwa_rbwa only logs the message. It does not send anything	Implementation of SDD may be missing	
UP63: BWAS Status from BWAS	PCSDMS.PC: line 7447	Function ora_bwadms_sbwa only logs the message. It does not send anything		
UP65: Request for Abort BWAS Assay from PCS	PCSDMS.PC	Function ora_pcrdms_abwa only logs the message. It does not send a DMSBWAS ABWA nor a DMSRBWA ABWA	Assay not aborted when requested	
UP66: Request for Abort BWAS Assay to BWAS		Function ora_dmsrbwa_abwa only logs the message. It does not send anything. Where ora_dmsrbwa_abwa is called from cannot be found		

APPENDIX F DESIGN (PROCESS 3.1.8)	DESIGN CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
UP74: Criticality Alert from BWAS	MSGDMSPC.C	Function ora_bwadms_crit logs the message and calls dmspcs_criticality_alert() in module MSGDMSPC.C. Where ora_bwadms_crit is called from cannot be found	Implementation of SDD may be missing	

APPENDIX F DESIGN (PROCESS 3.1.8)	DESIGN CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 3 DISCREPANCIES				
UP1: Log all Messages		String is delimited with "~" not "^"	A programmer might write a routine that incorrectly parses the message	Message code validated during testing. Revised specifications to be published as new baseline with "as-built" SDD revision. Discrepancy item closed
UP2: Drum or Box Location from PCS	PCSDMS.PC: lines 1143-1145	In these lines is a discussion between two programmers discussing how something should be implemented - code commented out	Implementation of SDD is unclear and may be missing. As of this review, not known if issue is resolved	
	PCSDMS.PC: lines 1089-1099	Two additional parameters are passed: message - as sent or received across TCP/IP msg_length - number of bytes of the message Field numbers are correct when two is added to them	Functionality may exceed SDD intent, or SDD should be updated	
	PCSDMS.PC: lines 1016-1027	Message 1001 is not logged. Message 1007 is not logged, but Message 1008, which is not in the SDD, is logged.	Should be checked to see if this is simply a typo in the code or Appendix F	

APPENDIX F DESIGN (PROCESS 3.1.8)	DESIGN CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	PCSDMS.PC: lines 1111-1206	SDD says to flag and report an unrecognized location and drum/box PIN. Actually, DMSCOM insures there is a row in CONLOC. If an invalid package ID is passed, DMSCOM will create a row in CONLOC rather than flag an error	Should ensure entry of new record desirable - or if unknown drum should be rejected and not allowed until discrepancy resolved	
UP6: Drum(s) removed from AS/RS	PCSDMS.PC: lines 1244-1247	In addition to the SDD Appendix F specification, an error 1008 is logged if an Oracle 1403 error is detected	Functionality may exceed SDD intent, or SDD should be updated	
UP9: Drum at LLW Entry Glovebox Port UP10: Drum at LLW Entry Glove Box Port	PCSDMS.PC: lines 679-732	The Container extension table rows are copied in the same fashion		
UP29: Drum or Box Location with Weight from PCS	PCSDMS.PC	Two additional parameters are passed: message and msg_length Message 1008 is logged. None of the other messages is logged		

APPENDIX F DESIGN (PROCESS 3.1.8)	DESIGN CONTENT	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
UP44: RW Packet and Transfer Drum relationship from PCS UP46: RW Packet and Parent Drum relationship from PCS		Two additional parameters are passed: Message: as sent or received across TCP/IP msg_length: number of bytes of the messages. The field numbers are correct when two is added to them		

4.4 SCREEN SOURCE CODE REVIEW

4.4.1 Purpose

This analysis compares the source code for the DMS Phase 1 screens with the SDD specifications to determine if the screens will perform as specified.

4.4.2 Scope

This analysis compared the SDD Appendix F specifications with the source code for DMS screens:

- DMSS0101 Container Receiving
- DMSS0201 NDE Screen
- DMSS0202 NDA Screen
- DMSS0311 LLW Drum Status at Entry
- DMSS0312 LLW Sorting Table
- DMSS0315 Some Waste Records
- DMSS0602 Loading Dock Container Shipping
- DMSS0901 Processing List Additions
- DMSS0902 Process Pick List
- DMSS0903 AS/RS Storage Pick List
- DMSS0904 AS/RS Shipping Pick List
- DMSS1101 Radiological Inventory Summary
- DMSS1221 Processed Waste Data Review/Modification

4.4.3 Description of Analysis Approach

For this analysis, matrices were prepared for each screen showing the screen name, the code source to implement the screen functions, and comments regarding how these compare to the SDD Appendix F specifications. Where discrepancies are noted, they are categorized according to their severity. (See the Introduction section of this V&V Report for a definition of discrepancy categories.)

Due to the quantity of source code, the matrices only contain cases where source code and specifications are not in complete agreement. Code lines and Appendix F design features not mentioned are considered to be acceptable as specified.

4.4.4 Analytic Overview

4.4.4.1 General Observations

In addition to the comments and discrepancies noted in the matrices, the following general comments are noted:

Category 2 concerns:

SDD contents:

- SDD does not specify display of date & time.
- SDD does not specify when screen objects, (buttons, fields, check boxes, etc...) are active or inactive.
- SDD does not specify Pop-up List of Values.
- SDD does not specify screen colors.

4.4.4.2 Discrepancy Synopsis and Resolution Matrices

The following matrix contains a synopsis of the discrepancies which are described in more detail in the analytic matrices found in the DMS project files. This synopsis groups the discrepancies by category. It then provides resolution actions which were decided during the course of the V&V analysis. Those actions which are closed are also noted.

The resolution matrix will be considered a tracking mechanism to monitor all discrepancies until they are closed. Consequently, it will be periodically updated to reflect closed actions. If requirements are changed during the DMS development, these changes will be noted in the resolution matrix as pending actions and tracked as with any other actions.

(Note: as of September 27, 1996, these discrepancies have been provided to the developer. Due to the urgency of workload, not all resolution actions were reported back to the V&V Analysts by the development team. Those that were are noted in the following matrix. For the remaining discrepancies, the DMS functional testing should be considered to supersede this report. Where discrepancies were obviously corrected by the development team, as verified during the testing and acceptance of the system modules, this result was considered as closure on those discrepancies. Resolution comments indicate where this was the case.)

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 1 DISCREPANCIES				
DMSS0101 - Facility curie limit check		Cannot determine if Pop-up message "Facility Radiological Inventory limit has been exceeded" is being executed.	If this feature is not implemented a safety hazard could occur	2/20/96: Test Proc Review Meet: need to confirm that update happens. Follow-on Test Results: DMS-F12 tests this feature and it passed. Discrepancy Item Closed

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
DMSS0101 - Retrieve drum or box data from SWITS	Request Button	Cannot determine if a check for signature password is performed.	Can not verify this feature has been implemented	2/20/96: Test Proc Review Meet: signature password routine used in programs should be verified - seems to be multiple names BCSR E-MAIL of 2/22/96: all should be using PERFORM_ROLE_SECURITY routine in the PRE_COMMIT trigger - there are some old version routines which are supposed to be named differently and are not used - will watch for any cases where wrong routine used - Discrepancy Item Closed

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	insert_wastext()	<p>The form places the cursor to recdisp.recdisp_inner_pck_id and presents a Pop-up of route codes. This is not in the SDD. The screen print for this screen does not show a field for route code.</p>	<p>This is a feature not specified in the design document</p>	<p>2/20/96: Test Proc Review Meet: a pending SCR may cause a need for an update to the SDD Follow-on Test Results: DMS-F12 tests this feature and it passed. - Inner PIN is not updatable by the user. It is only filled in on [Confirm Data]. Therefore no route code popup appears when the field is chosen. This is consistent with the Current SDD. As-built status for SRS/SDD unknown. Discrepancy Item Closed</p>
	i_isoqty_swits()	<p>The SDD states "Only download those ISOQTY records with ISO_WRAP_FLAG = 'Y'"</p> <p>This test is not performed. All ISOQTY records are downloaded for a given package id.</p>	<p>DMS might not be able to process the additional ISOQTY records</p>	<p>2/20/96: Test Proc Review Meet: test and associated data element are overtaken by events (see discussion in mapping of Appendix C to Appendix F) - dropped from specs Discrepancy Item Closed</p>

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
DMSS0201 - Drum or Box NDE Certification Data	Table names in source code	The tables are referenced via WRAPADM.tablename instead of the table name directly.	The wrong table might be referenced	2/22/96: Test Proc Review Meet: need to drop WRAPADM - it's a matter of how pulled during programming
DMSS0202 - NDA Data Review in the Control Room	DMS transmit DMSSIE DD message	ABUN portion of DMSSIE DD message is not sent.	Message may not be generated with correct content	2/22/96: Test Proc Review Meet: need to clarify with BNFL - ABUN is probably needed but need to know what SIE has
	DMS transmit DMSSIE DD message	Cannot find where MSGLOG_FLAG is set to 'FD'.	May not have complete processing	2/22/96: Test Proc Review Meet: need to remove spec from SDD
	Table names in source code	The tables are referenced via WRAPADM.tablename instead of the table name directly.	The wrong table might be referenced	2/22/96: Test Proc Review Meet: need to drop WRAPADM - it's a matter of how pulled during programming

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
DMSS0312 - LLW Sorting Table	Request screen from LLW Process menu	<p>SDD Appendix F specifies if LLW_SORT not found create a new record that will be modified during this process.</p> <p>As implemented: if LLW_SORT not found exit form.</p> <p>The SDD does not specify how to select the puck record.</p>	Feature may not have been designed and/or implemented correctly	Screen code validated during testing. Revised specification to be published as new baseline with "as-built" SDD revision. Discrepancy item closed
DMSS0312 - Sample Button	sample_btn	The code to call screen DMSS0501 is commented out. This function is not performed.	Sample screen DMSS0501 cannot be called from DMSS0312	
DMSS0315 - Sum Waste Records	SUM_WASTE_RECORDS	<p>The SDD states-- DIVIDE PHYSCOMP_VAR by PHYSCOMP_HGT for each PHYSCOMP_DESCR and STORE to product drum PHYS_COMP_VOL_PCT.</p> <p>This is not implemented.</p>	Not sure if feature has been designed and/or implemented correctly	

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
		<p>The SDD states-- Combine waste records for RADDETAIL, HAZDETAIL, and CHEMCOMP in accordance with SWITS algorithms.</p> <p>SWITS is not being accessed.</p>	<p>Feature not implemented</p>	

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	<p>Results from WRAP NDA: Create NDA record for NDA_PKG_ID = CONLOC_ PKG_ID where CONLOC_ LOCN_ID = 'LLW_EXIT' Set NDA_DT = current system date</p> <p>Set NDA_ASSAY_NUM = 'CALC' Set NDA_SWTYP_GROUP = 'LLW'</p> <p>Set NDA_TOT_PE_CI = sum of NDA_TOT_PE_CI for pucks</p> <p>Set NDA_TOT_PU_FGE = sum of NDA_TOT_PU_FGE for pucks</p> <p>Set NDA_TOT_ALPHA_CI =sum of NDA_TOT_ ALPHA_CI for pucks</p> <p>Set NDA_TOT_THERMAL_ POWER = sum of NDA_ TOT_THERMAL_POWER for pucks multiplied by ratio 7.35/11.36</p>	<p>The SDD states the-- NDA results need to be summed for each puck in the product drum (the latest puck assays are to be used if more than one assay exists for a single puck) and store the results into the product drum NDAISO (Table).</p> <p>This is not being performed.</p>		

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	<p>Results from WRAP NDA. (continued) Sum NDAISO_QTY Set NDAISO_QTY_TMU: Create a temporary variable for each isotope = the sum of the inverse of all puck TMUs squared for that isotope. Take the square root of the inverse of the temporary variable and set the NDAISO_QTY_TMU for the outer drum equal to that result. NOTE: This assigns the square root of the sum of the squares for the product drum TMU. NDAISO_DT = NDA_DT NOTE: This assigns the NDA record date for the product drum to the NDAISO record WRAPMISC Table and sets CONEXT_PROF_FLAG = 'Y' for the product drum only</p>			

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	<p>Results from WRAP NDA. (continued) IF CONEXT_PROF_ID = CONEXT_PROF_ID for all puck records Set loadout (product drum) CONEXT_PROF_ID = puck CONEXT_PROF_ID (all puck profile IDs in a product drum should be the same) and set CONEXT_PROF_ FLAG = 'N' for the product drum only ELSE Set loadout CONEXT_ PROF_ID = LLW_ DEFLT_PROF from WRAPMISC Table and set CONEXT_PROF_FL AG = 'Y' for the product drum only ENDIF (All location records associated with the feed drum and the puck will be deleted)</p>			

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
DMSS0602 - Loading Dock Container Shipping	Function update_swits_btn button	Functions insert_swits_pkgdw(), insert_swits_shipment(), insert_swits_shipitem(), insert_swits_shiphist(), insert_swits_verification() are commented out. A comment states: "procedures swqits_pkgdw, shipment, shipitem, shiphist and verification won't work until those tables database function (602_db.functions) for those tables are created on DMS."	Not sure if feature has been designed and/or implemented correctly	05/01/96: Test Proc Review Meet: These are upper level data base functions stored in the database Discrepancy Item Closed
	Function in_transit_btn button	This function first sends PCS a CL message of IN_TRANSIT. Then updates SWITS. If the update of SWITS fails are the drums still shipped?		05/01/96: Test Proc Review Meet: still flagged as IN_TRANSIT even if SWITS update fails - record would not be updated and would still be noted as needing closeout Discrepancy Item Closed

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	Send Picklist Button	The SDD states signature/password is required for this function. However, the check is not implemented.		05/01/96: Test Proc Review Meet: signature password is checked for IN_TRANSIT and COMMIT - SDD needs to be updated
DMSS0901 - Process List Additions	Resequenece Button	Instead of executing the resequence_procadd procedure the adjust_seq_num procedure is executed.		2/20/96: Test Proc Review Meet: purpose of functions to be reviewed and ensure the proper one is being called BCSR E-MAIL of 2/22/96: review complete - name of function called can be adjusted later - not currently a problem "if it ain't broke, don't fix it" - for purposes of V&V in support of Phase 1, Discrepancy Item Closed
	Resequenece _procadd	Not attached to a trigger.		2/20/96: Test Proc Review Meet: OK as coded Discrepancy Item Closed

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
		general conflict	Form DMSS0901 can not be used if DMSS0902 is being used at the same time. This is because DMSS0902 has a table lock on proclist and DMSS0901 performs insert and update operations to this table. There is no error message displayed in the "add_to_process_list_btn" routine for a table lock condition in proclist	2/20/96: Test Proc Review Meet: developer has put this on list to research - generally agreed there needs to be a better approach

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
DMSS0902 - Process List Additions	Request screen from Pick List menu	<p>The SDD specifies the SQL where clause as "where CONLOC_PKG_ID < > PROC_PKG_ID AND CONLOC_LOCN_ID = 'AS_RS' AND CONEXT_WRAP_STATUS_C D = 'W'"</p> <p>The Oracle form has "where exists (select 'x' from wastext where notproc_pkg_id = conext_pkg_id and conext_wrap_stat_cd = 'W').</p>	system may not differ from desired functionality	3/26/96: BCSR E-Mail: verified that code is supporting desire functionality - "where" clause is pseudo-code Discrepancy Item Closed
		general conflict	Form DMSS0901 can not be used if DMSS0902 is being used at the same time. This is because DMSS0902 has a table lock on proclist and DMSS0901 performs insert and update operations to this table	Screen code validated during testing. Revised specifications to be published as new baseline with "as-built" SDD revision. Discrepancy item closed

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
DMSS0903 - AS/RS Storage Pick List	[Retrieve Bin] Button	The source code executes a go_block('proclist') and a go_block('notproclist'). These blocks are not part of screen DMSS0903.	Not sure if feature has been designed and/or implemented correctly	03/26/96: BCSR E-mail: verified that 'proclist' and 'notproclist' should be 'bin' and 'discharge' - hold over from "cut and paste" code - needs to be deleted
DMSS1221: Processed Waste Data Review/Modifications	Data field RDET_HANDLING	The source code references field RDET_HANDLING in the RAADDETAIL table which is not in the SDD data dictionary.		Update to SDD: latest revision of SDD includes data element in the data dictionary Discrepancy Item Closed as of 3/26/96
	Data field RDET_RSWIMS_COUNT	The source code references field RDET_RSWIMS_COUNT in the RAADDETAIL table which is not in the SDD data dictionary.		
	Data field CON_DATA_QUAL_CD	The source code references field CON_DATA_QUAL_CD in the WASTE table which is not in the SDD data dictionary.		

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	Data field CON_GENER_ID	The source code references field CON_GENER_ID in the WASTE table which is not in the SDD data dictionary.		06/06/96: Test Proc Review Meet: SDD needs to be updated to include this field in the data dictionary
	Data field CON_GGRP_ID	The source code references field CON_GGRP_ID in the WASTE table which is not in the SDD data dictionary.		
	Data field CON_WASTE_STREAM	The source code references field CON_WASTE_STREAM in the WASTE table which is not in the SDD data dictionary.		
	Data field HDET_SHIP_CD	The source code references field HDET_SHIP_CD in the HAZDETAIL table which is not in the SDD data dictionary.		06/06/96: Test Proc Review Meet: old SWITS field that has been left in the data base as a "place holder" in case it is needed later for future interfaces Discrepancy Item Closed

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 2 DISCREPANCIES				
<p>DMSS0101 - Confirm drums or boxes on SWITS</p> <p>Validate all required SWITS fields</p>	<p>s_valid_swits()</p>	<p>SDD lists CON_LOCN_FACIL_AREA as a required field. The code is not verifying the existence of data.</p>	<p>Unsure of impact</p>	<p>2/20/96: Test Proc Review Meet: some of RELOC is to be determined - SWITS has already forced the data into the data base - this may be sufficient - needs review Follow-on Test Results: This is sufficient. DMS-F12 tests verification of necessary fields and they passed. Discrepancy item closed</p>
<p>DMSS0101 - Retrieve drum or box data from SWITS</p>	<p>i_update_swits()</p>	<p>The function i_update_swits is updating column con_locn_facil_area to '200W'. This is ready done in function u_swits().</p>	<p>This is redundant. This could cause a software maintenance problem</p>	<p>2/20/96: Test Proc Review Meet: developer needs to review to determine if both needed BCSR E-MAIL of 2/22/96: review complete - update occurs for both inner and outer drum - since not an immediate apparent problem, decision to leave as is for now - Discrepancy Item Closed</p>

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
DMSS0101 - Commit Button	do_key('commit_form')	Cannot identify what is performed during a commit form.	Not sure if feature has been designed and/or implemented correctly	2/20/96: Test Proc Review Meet: need to review forms book to see what goes over commit
DMSS0101 - Exit Button	exit_form Button	The SDD states "saves or delete RECDISP Data and exit". This button does not delete any records. There is a "Delete Button" not specified by the SDD.		2/20/96: Test Proc Review Meet: need to reword SDD to change "delete". Follow on resolution: SDD OK on [Exit] button. [Delete] button is a standard function. Discrepancy Item Closed
	Screen field RECDISP_ERROR_STATUS	The SDD does not specify this field. It is a non-displayed field with a Pop-up associated with it. The Pop-up is not specified in the SDD either.		2/20/96: Test Proc Review Meet: SDD needs to be updated
	Screen field RECDISP_INNER_PCK_ID	The SDD does not specify an LOV for this field.		2/20/96: Test Proc Review Meet: status field should be trigger - need to verify how acting - what is causing Pop up - update SDD
	Screen field DISP_PCK_STATUS	The SDD does not specify this field. It is a non-displayed field.		

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	Screen field DISP_ROUTE_CD	The SDD does not specify this field. It is a non-displayed field with a Pop-up associated with it. The Pop-up is not specified in the SDD either.		
	Pop-up List of Values Button	There are Pop-up List of Values but no button to activate.		
DMSS0201 - Drum or Box NDE Certification Data	SELECT ITEM Button	The SDD does not have an SELECT Button. The Screen Print does not have an SELECT Button. The source code DOES have an SELECT Button.	Can not verify implementation due to lack of design specification	2/20/96: Test Proc Review Meet: need to change screen print
	CONLOC_LOCN_ID field	The SDD does not mention the display of this data. However, implementation has it displayed and editable.		2/20/96: Test Proc Review Meet: need to update Appendix F

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	Security check on the COMMIT Button	The function perform_role_security is commented out.	Security is not in place	2/20/96: Test Proc Review Meet: commented out for development and testing purposes - comments will be taken out when program goes "live" Discrepancy Item Closed
DMSS0201 - Drum or Box NDE Certification	Waste Record Pop-up	There is a wide disparity between the data specified for display and the actual data elements being displayed by the code	Need to validate that the "as built" code is appropriate	2/20/96: Test Proc Review Meet: SDD will be updated to "as built" - code is set up to retrieve all table fields, although only a smaller number are actually ever displayed - final screen content has been approved - code needs to be updated to drop all unneeded fields
DataDMSS0202 - NDA Data Review in the Control Room	Radioactive Detail Record Pop-up			
	NDA Data Review in the Control Room			
DMSS0202 - NDA Data Review in the Control Room	Display pop-up of PROFILE Table	The SDD does not list any of the fields to display.	Can not verify implementation due to lack of design specification	2/20/96: Test Proc Review Meet: need to update Appendix F to as-built spec - uses an LOV button

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	User select [NDA Results]			2/20/96: Test Proc Review Meet: intent of Pop Up is to display all fields in the table Discrepancy Item Closed
	User select [Isotopic Data]			2/20/96: Test Proc Review Meet: intent of Pop Up is to display all fields in NDAISO table Discrepancy Item Closed
DMSS0311 - LLW Glovebox Drum Status at Entry	validate_drum_entry	A message is posted if there are 2 or more drums. The message is "2 or more drums at LLW Entry Lift Table". This message is not specified by the SDD. Further processing for this screen is halted.	If the system detects 2 or more drums at the LLW Entry Lift Table processing is stopped. Manual intervention is required	1/30/96: Test Proc Review Meet: code should be changed to address use of the newest drum Follow-on Test Results: DMS-F11 test has been successfully completed. This message does not appear. Only the newest PIN at that location is displayed. SDD OK. Discrepancy item closed

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	Screen field - INNER_PKG_ID	The code allows editing this field. This field is not saved.	Not sure if feature has been designed and/or implemented correctly	Follow-on Test Results: No data entry is allowed from this screen. Cursor can't even be placed in any field. SDD OK. Discrepancy item Closed
DMSS0312 - LLW Non-Compliant Screen	DISP_MAT_GRP_CD WHEN-VALIDATE-ITEM trigger	The following code is present: if :global.query_nc_packet = 'N' then update wastext set conext_mat_grp_cd = :nc_packet.disp_mat_grp_cd where conext_pkg_id = :nc_packet.con_pkg_id; :nc_packet.con_gener_waste_de scr := :nc_packet.con_gener_waste_de scr; else :global.query_nc_packet := 'N' end if	1. If the user validates this field a second time an update will occur. 2. Unclear why :nc_packet.con_gener_waste_desc being set to its own value. May need to be set to another value instead	Screen code validated during testing. Revised specification to be published as new baseline with "as-built" SDD revision. Discrepancy item closed

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
DMSS0312 - Chemical Component Screen DMSS0312 - Physical Component Screen	No add, delete, refresh, or commit button on pop-ups	Commit done on parent 0312 screen. Data updated when user selects Return To Sorting Table Screen button. Raises question on how user verifies data entry on pop-ups since there is no "refresh" feed-back prior to going to an upper level screen for the final commit.	Not sure if feature will cause functional problems - may want to consider a Refresh button for these two pop-ups which acts like the Refresh button on the Non-Compliant screen	
DMSS0315 - Sum Waste Records	RDET_VOID_CD	The screen print does not show RDET_VOID_CD. However, it is in the SDD Appendix F and it is implemented.	Not sure if feature has been designed and/or implemented correctly	
DMSS0602 - Loading Dock Container Shipping	Update SWITS Button	The SDD does not have a button to update SWITS. However a button is implemented to update SWITS		
	Refresh Location Button	The SDD does not have a button to refresh container location. However, a button is implemented to refresh container location.		05/01/96: Test Proc Review Meet: appears on new screen prints in Appendix A of revised SDD Discrepancy Item Closed

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	Function e_602_edit_swits() Function i_602_swits_appmsds() Function i_602_swits_chemcomp() Function i_602_swits_conrel() Function i_602_swits_hazdetail() Function i_602_swits_isoqty() Function i_602_swits_physcomp() Function i_602_swits_pkgdw() Function i_602_swits_raddetail() Function i_602_swits_shiphist()	No source code is available for these functions.	Not sure if features have been designed and/or implemented correctly	05/01/96: Test Proc Review Meet: upper data base functions contained in data base Discrepancy Item Closed

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	Function i_602_swits_shipitem() Function i_602_swits_shipment() Function i_602_swits_verification() Function u_602_swits_waste() Function u_602_swits_rpkgstatus()			Screen code validated during testing. Revised specification to be published as new baseline with "as-built" SDD revision. Discrepancy item closed
DMSS0901 - Process List Additions	Insert Button	The SDD does not specify an action for the Insert Button.	Not sure if feature has been designed and/or implemented correctly	2/20/96: Test Proc Review Meet: SDD does not show a "process" if they are selected - update SDD or decide OK as stands Follow-on Test Results: These are standard buttons for inserting or deleting a row of data. OK as is. Discrepancy item closed
	Delete Button			

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	Add to Process List	Cannot determine if the proper error message is being displayed for duplicate pin number.		2/20/96: Test Proc Review Meet: error codes should be reviewed to determine if they are operating correctly - BCSR E-MAIL of 2/22/96: Action Completed and Discrepancy Item Closed
DMSS0902 - Process List Additions	Move Button	Although this agrees with the SDD there is no way to move a package_id from the 'process list' to the 'not process list'. The code for that feature is commented out.	Feature may not be implemented	3/25/96: Test Proc Review Meet: OK - defunct code - rereads data base instead of "moving" anything - needs to be cleaned out. SDD is OK Code should be cleaned up
		The code assumes it is on cursor block 'notproclist' by testing if it is not on cursor 'proclist'. Does the form have to be on one of the cursors?	Needs to be verified	3/25/96: Test Proc Review Meet: doesn't affect screen performance - considered a "programmers call" on logic - need to check to see what testing shows for results Follow-on Test Results: Test DMS-F21 has successfully passed. Discrepancy item Closed

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
DMSS0903 - AS/RS Storage Pick List	Drum direction indicator	The SDD states... Provide arrow or other indicator to show direction of drum movement is from the bottom to top of list. No indicator is present.	Not sure if feature has been designed and/or implemented correctly	3/25/96: Test Proc Review Meet: arrow hard coded - latest revision to SDD now shows arrow in screen print Discrepancy Item Closed
	Data field RDET_PDR_NUM	The SDD data dictionary has RDET_PDR_NUM in the RADETAIL table. The source code does not.		Update to SDD: latest revision of SDD shows new data elements added to data dictionary Discrepancy Item Closed
	Data field HDET_IND_DOT_ID_NUM	The SDD data dictionary has HDET_IND_DOT_ID_NUM in the HAZDETAIL table. The source code does not.		
	Data field HDET_IND_NOS_DESCR	The SDD data dictionary has HDET_IND_NOS_DESCR in the HAZDETAIL table. The source code does not.		
	Data field HDET_IND_SHIP_NAME	The SDD data dictionary has HDET_IND_SHIP_NAME in the HAZDETAIL table. The source code does not.		

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
DMSS0904 - AS/RS Shipping Pick List	LLW Button/TRU Button	<p>The SDD has "Select BIN, RADDETAIL, CONLOC, WASTEXT where all BIN_PKG_ID # = RDET_PKG_ID and RDET_SWTYP_GROUP = 'SWTYP'"</p> <p>proper values for RDET_SWTYP_GROUP are LLW for the LLW Button and TRU for the TRU Button</p>	SDD specifies an inappropriate comparison	<p>05/01/96: Test Proc Review Meet: screen acts in testing as intended - sets button for the SWTYP_GROUP as required Discrepancy Item Closed</p>

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 3 DISCREPANCIES				
DMSS0101 - Commit Button	send_cl_to_pcs	This feature is not in the SDD.	Not sure if feature has been designed and/or implemented correctly	Resolution provided after V&V Review: Screen has been successfully tested and accepted. Discrepancy Item Closed
	Buttons in General	The SDD does not specify when a particular button shall be active or inactive.	Although a feature is implemented it can not be determined if it is available at the time it is needed	Resolution provided after V&V Review: True. Buttons are not consistently specified as active or inactive. Screens are being tested and accepted as is without this consistency. Discrepancy Item Closed
DMSS0201 - Drum or Box NDE Certification Data	Save Button	The SDD lists a SAVE Button the screen print has a COMMIT Button.	Should update Appendix F to be consistent	2/20/96: Test Proc Review Meet: need to change SDD

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
DMSS0312 - Sample Button	sample_btn	<p>The SDD -- Go to DMSS0501 (DMSS0212 screen data should not have to be committed before going to DMSS0312 screen)</p> <p>This is vague. Is this in error and should read (DMSS0212 screen data should not have to be committed before going to DMSS0501 screen)</p> <p>or (DMSS0212 screen data should not have to be committed before coming back to DMSS0312 screen)</p> <p>or both.</p>	Not sure if feature has been designed and/or implemented correctly	Screen code validated during testing. Revised specification to be published as new baseline with "as-built" SDD revision. Discrepancy item closed
DMSS0901 - Process List Additions	Request screen from Pick List menu	The SDD does not define a screen field for column 1 "Seq"		<p>Follow-on Test Results: Screen works properly as tested in DMS-F21. SDD should specify this field. Resolution provided after V&V Review: SDD does specify this field. Discrepancy Item Closed</p>

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	up button	This feature is not in the SDD.		<p>Follow-on Test Results: This is a standard button and is not generally described in the SDD for any of the screens. Discrepancy Item Closed</p>
	down button			<p>Follow-on Test Results: This is a standard button and is not generally described in the SDD for any of the screens. Discrepancy Item Closed.</p>
	scroll-up button			<p>Follow-on Test Results: This is a standard button and is not generally described in the SDD for any of the screens. Discrepancy Item Closed</p>
	scroll-down button			<p>Follow-on Test Results: This is a standard button and is not generally described in the SDD for any of the screens. Discrepancy Item Closed</p>

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
DMSS0902 - Process List Additions	Request screen from Pick List menu	The SDD has the column title for column 1 "PCS Flag" it is implemented as "PICK LIST"		Follow-on Test Results: Feature implemented properly but should be PICK LIST in the SDD.
	up button	This feature is not in the SDD.		Follow-on Test Results: This is a standard button and is not generally described in the SDD for any of the screens. Discrepancy Item Closed
	down button			Follow-on Test Results: Screen works properly as tested in DMS-F21. Discrepancy Item Closed
	scroll-up button			
	scroll-down button			
	send_to_pcs	The SDD has "Send all PROC_PCS_FLAG = null" The code has "proc_pcs_flag='Y'"		

SCREEN	CODE/SCREEN FEATURE	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
	send_to_pcs	The SDD does not specify a maximum number of drums for the pick list screen to handle. The variable which holds the message text to be sent is 2000 characters. This allows for about 82 drums. This seems like plenty, but a maximum should be specified.		Screen code validated during testing. Revised specification to be published as new baseline with "as-built" SDD revision. Discrepancy item closed

4.5 BWAS SIMULATOR SOURCE CODE REVIEW

4.5.1 Purpose

This analysis compares the source code for the BWAS Simulator with the DMS design specifications to determine if the simulator will accurately pass and receive data and messages to and from the DMS modules.

4.5.2 Scope

This analysis focused on the ORACLE source code and the DMS modules that process boxed waste and interact with the assay conducted by the BWAS.

While reviewing the BWAS Simulator, some considerations affecting the System Integration Equipment (SIE) Simulator were noted and included in this analysis.

4.5.3 Analysis Approach

For this analysis, one matrix was prepared comparing the source code and the functional intent of the BWAS Simulator. This analysis compares the source code for the BWAS Simulator with the DMS design specifications to determine if the simulator will accurately pass and receive data and messages to and from the DMS modules.

4.5.4 Analytic Overview

4.5.4.1 General Observations

The BWAS Simulator is based on the SIE Simulator. The BWAS Simulator is not simply designed after the SIE Simulator: it is, in fact, almost identical. The SIE Simulator has been modified only for different TCP/IP addresses, port addresses, DMS messages, and some cosmetic changes of some of the variable names. The only messages not processed by the BWAS Simulator that the SIE Simulator processes are `dmsrsie_sdp()` and `dmsrsie_sdg()`, which send the drum database to the PAN and GEA. These two functions are not needed for handling boxed waste. The BWAS Simulator should function as designed, which is to send messages to DMS and log messages received.

4.5.4.2 Discrepancy Synopsis and Resolution Matrix

The following matrix contains a synopsis of the discrepancies that are described in more detail in the analytic matrices found in the DMS project files. This synopsis groups the discrepancies by category. It then provides resolution actions that were decided during the course of the V&V analysis. As of the date of this report, the DMS development that will use the BWAS Simulator has not started. Consequently, the information reported has not yet been acted upon.

The resolution matrix will be considered a tracking mechanism to monitor all discrepancies until they are closed. Consequently, it will be periodically updated to reflect closed actions. If requirements are changed during the DMS development, these changes will be noted in the resolution matrix as pending actions and tracked as with any other actions.

PROCEDURE NAME	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 2 DISCREPANCIES			
dmsbwa_bd()	The log message function logs ch_number_radionuclides twice. The equivalent message dmssie_dd() logs ch_number_radionuclides only once	Does not seem to be a need for this value to be sent twice	Should be sent once
CATEGORY 3 DISCREPANCIES			
dmsrba_abwa()	No equivalent function for the SIE Simulator	May be a need for an equivalent message for SIE Simulator	Should consider update of SDD
bwadms_bas()			
bwadms_baa()			
bwadms_bac()			

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The following matrix contains a synopsis of the discrepancies that are described in more detail in the analytic matrices found in the DMS project files. This synopsis groups the discrepancies by category. It then provides resolution actions that were decided during the course of the V&V analysis. As of the date of this report, the DMS development that will use the BWAS Simulator has not started. Consequently, the information reported has not yet been acted upon.

The resolution matrix will be considered a tracking mechanism to monitor all discrepancies until they are closed. Consequently, it will be periodically updated to reflect closed actions. If requirements are changed during the DMS development, these changes will be noted in the resolution matrix as pending actions and tracked as with any other actions.

PROCEDURE NAME	DISCREPANCY	RATIONALE FOR CATEGORY	RESOLUTION
CATEGORY 2 DISCREPANCIES			
dmsbwa_bd()	The log message function logs ch_number_radionuclides twice. The equivalent message dmssie_dd() logs ch_number_radionuclides only once .	Does not seem to be a need for this value to be sent twice	Should be sent once
CATEGORY 3 DISCREPANCIES			
dmsrbwa_abwa()	No equivalent function for the SIE Simulator	May be a need for an equivalent message for SIE Simulator	Should consider update of SDD
bwadms_bas()			
bwadms_baa()			
bwadms_bac()			

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