FEB 18 1998
STA# 4

4 ENGINEERING DATA TRANSMITTAL

1. EDT 621918

2. To: (Receiving Organization)	3. From: (Originating Organization)	4. Related EDT No.:
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5. Proj./Prog./Dept./Div.:	**6. Design Authority/ Design Agent/Cog. Engr.:**	**7. Purchase Order No.:**
W-026/WRAP/WMH	K.J. Leist	N/A
8. Originator Remarks:		**9. Equip./Component No.:**
This EDT is to release supporting documentation for the WRAP Facility to Engineering Files.		N/A
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		2336-W
11. Receiver Remarks: **11A. Design Baseline Document?** [X] Yes [ ] No		**12. Major Assm. Dwg. No.:**
		N/A
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(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	(F) Approval Designator	(G) Reason for Transmittal	(H) Originator Disposition	(I) Receiver Disposition
1	HNF-SD-W026-OTR-014	N/A	0	TRU RWM OPERATIONAL TEST REPORT	Q,S	2	1	

16. KEY

Approval Designator (F)	Reason for Transmittal (G)	Disposition (H) & (I)
E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)	1. Approval 4. Review 2. Release 5. Post-Review 3. Information 6. Dist. (Receipt Acknow. Required)	1. Approved 4. Reviewed no/comment 2. Approved w/comment 5. Reviewed w/comment 3. Disapproved w/comment 6. Receipt acknowledged

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(G) Reason	(H) Disp.	(J) Name (K) Signature (L) Date (M) MSIN		(G) Reason	(H) Disp.	(J) Name (K) Signature (L) Date (M) MSIN
2	1	Design Authority KJ Leist	1/30/98 T4-52			
		Design Agent				
2	1	Cog.Eng. KJ Leist	1/30/98 T4-52			
2	1	Cog. Mgr. JR Weidert	1-29-98 T4-52			
2	1	QA WR Thackaberry	2-11-98 T4-52			
2	1	Safety RJ Koll	2/6/98 T4-51			
2	1	Operations Manager RJ Bottenus	2/4/98 T4-51			

18.	19.	20.	21. DOE APPROVAL (if required) Ctrl. No.
JK Kerstein		JR Weidert	[ ] Approved
Signature of EDT Originator	Authorized Representative for Receiving Organization	Design Authority/ Cognizant Manager	[ ] Approved w/comments
Date 1/29/98	Date	Date 1-29-98	[ ] Disapproved w/comments

W-026, TRANSURANIC WASTE RESTRICTED WASTE MANAGEMENT (TRU RWM) GLOVEBOX OPERATIONAL TEST REPORT

KJ Leist
Waste Management Federal Services of Hanford, Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-96RL13200

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Key Words: WRAP, OTR, Drum, Diversified Metal Products

Abstract: This document verifies the Plant Operating Procedures related to the TRU RWM Glovebox 401 are accurate so operations can be performed safely and desired results obtained. It also verifies the Data Management System can interface with the Plant Control System.

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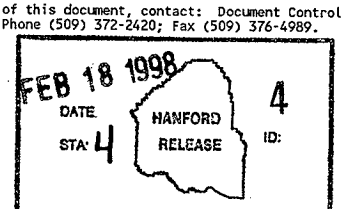


Release Stamp

Release Approval 2/18/98 Date

Approved for Public Release

WASTE RECEIVING AND PROCESSING FACILITY

(WRAP)

TRANSURANIC WASTE / RESTRICTED WASTE MANAGEMENT (TRU / RWM)

GLOVEBOX 401

OPERATIONAL TEST REPORT

HNF-SD-W026-OTR-014 Rev. 0

WASTE MANAGEMENT HANFORD COMPANY - PROJECT W-026

February 11, 1998

INTRODUCTION

The Transuranic Waste / Restricted Waste Management (LLW/RWM) Glovebox 401 is designed to accept and process waste from the Transuranic Process Glovebox 302. Waste is transferred to the glovebox via the Drath & Schraeder Bagless Transfer Port (DO-07-401) on a transfer stand. The stand is removed from the transfer drum with a hoist and the operator inspects the waste (with the aid of the Sampling & Treatment Director) to determine a course of action for each item.

The waste is separated into compliant and non compliant types. One Trip Port DO-07-402A is designated as "Compliant" and One Trip Port DO-07-402B is designated as "Non Compliant". As the processing (inspection, bar coding, sampling & treatment) of the transferred items takes place, residue is placed in the appropriate One Trip drum.

The status of the waste items is tracked by the Data Management System (DMS) via the Plant Control System (PCS) barcode interface. As an item is moved for sampling or storage or it's state altered by treatment, the Operator will track an items location using a portable barcode reader and entry any required data on the DMS console.

The Operational Test Procedure (OTP) will perform evolution's (described below) using the Plant Operating Procedures (POP) in order to verify that they are sufficient and accurate for controlled glovebox operation.

PURPOSE

The intent of this test was to satisfy two main objectives:

a. Verify that the Plant Operating Procedures related to TRU/RWM Glovebox 401 are accurate so that operations within the glovebox can be performed safely and desired results obtained.

   During the performance of the OTP, the POP's were redlined to correct errors found during testing. These corrections were incorporated into updated revisions of the POP's. The original POP's from which this OTP was conducted are included with this (Operational Test Report) OTR so the evolution to the present state of the POP's can be traced.

b. Verify that the Data Management System (DMS) could properly interface with the Plant Control System (PCS) to control and display the data obtained during sample/packet movement and treatment.

When both of the above objectives are met, the TRU/RWM Glovebox would be considered ready for operation.

NOTE:

Verification of glovebox equipment operation was already performed in the TRU/RWM Glovebox Acceptance Test Procedure.

DESCRIPTION

The Operational Test Procedure (HNF-SD-W026-OTP-014) was started on July 15, 1997 and consisted of six main sections as described below. A complete description is included at the beginning of each Test Case under General Description.

a. Glovebox Manual Operation

All three ports (DO-401, DO-402A & DO-402B) are operated in manual mode. The respective lift table is placed in manual mode and the drum is mated to the port. Then by using manual mode for the Bagless Transfer port or the maintenance menus for the One Trip (Compliant & None-Compliant) ports, a manual open/closed cycle is completed.

b. Glovebox Automatic Test Case 1

Transfer Drum 1 packets will be sorted and sampled, sample bottles are placed in STC 1 (Sample Transport Container).

c. Glovebox Automatic Test Case 2

Transfer Drum 2 packets will be sorted and sampled, sample bottles are placed in STC 2 (Sample Transport Container).

d. Glovebox Automatic Test Case 3

Transfer Drum 1 Collection Containers will be treated.

e. Glovebox Automatic Test Case 4

Transfer Drum 2 Collection Containers and STC-2 samples will be treated.

f. Glovebox Restart

The Glovebox Emergency Stop button is pushed during a port opening sequence. Equipment status is recorded for recovery.

TEST RESULTS

Exception Test Reports (ETR's) Summary

35 ETR's were written during test performance, of which 24 are DMS related. When the test was run, version 2.0 of the DMS software was installed. As of December 17, 1997, all ETR's have been cleared.

Additional Items

The Glovebox Manual Operation portion referenced WRP1-OP-0721 (RWM Gloveboxes Manual Operation) which included operation of lift tables manually.

WRP1-OP-0703 (Glovebox Lift Table Operation) was not referenced and therefore not verified in this OTP.

The "Glovebox Restart" portion of the OTP lacked enough depth to really verify that the glovebox can be successfully restarted for a selection of scenarios. Only one Emergency Stop pushbutton was checked. The balance of the section was merely a status check of the equipment in the glovebox. Operation Procedure OP-0722 should be enhanced to included flow charts or the like to demonstrate a logical course of action after the status of the systems are known.

CONCLUSIONS AND RECOMMENDATIONS

a. The STC Port can be open when the STC has been removed; no mechanical interlock exists. This can result in a loss of glovebox differential pressure and possible contamination of the STC port seal.

b. The Bagless Transfer Port DO-07-401 operation should be incorporated into the existing PLC interface instead of through a separate controller for the following reasons:

-The operator can only perform open and close functions when in automatic mode. Manual operation and recovery must be performed from the D&S controller.

-There is no feed back to the operator in maintenance mode as to the position of the port components as there is for the entry/exit ports in this glovebox.

-The controller is programmed in German, requiring outside support for program changes.
-By eliminating the controller, the system is made simpler and therefore more reliable.

c. Permanent bar code charts should be added to the glovebox. During the OTP barcodes were taped to a sheet of paper which in time will deteriorate and require replacement.

d. Since all ETR's have been cleared the Operational Test Procedure can be considered passed. However, modifications to the ports have been made since the completion of the OTP and will require verification prior to operation along with any other items that have been changed or reworked.

REFERENCES

Plant Operating Procedures

WRP1-OP-0708 Puncture/Drain Aerosol Cans
WRP1-OP-0710 Glovebox Waste Sampling
WRP1-OP-0711 Waste Treatment
WRP1-OP-0717 LLW/RWM Glovebox Operation
WRP1-OP-0721 RWM Gloveboxes Manual Operation
WRP1-OP-0722 Restart RWM Glovebox Operation

APPENDICES

Appendix A - Exception Test Reports

Appendix B - DMS Database Printouts

Appendix C - Plant Operating Procedures

R.D. Dunlap by JKK per telecon
R.D. Dunlap Startup & Test Group
1/23/98

ORGANIZATIONAL APPROVAL THAT ENGINEERING OPERATIONAL TEST PROCEDURE HAS BEEN COMPLETED SATISFACTORILY

RJ Bottenus _____ 2/4/98
WRAP 1 Operations Manager — Date

KJ Leist _____ 1/30/98
Cog Engineer — Date

JR Weidert _____ 1-29-98
WRAP 1 Engineering Manager — Date

RJ Koll _____ 2/6/98
WRAP 1 Safety — Date

WR Thackaberry _____ 2-11-98
WRAP 1 Quality Assurance — Date

HC Boynton _____ 2/4/98
WRAP 1 Environmental Compliance Officer — Date

TABLE OF CONTENTS

1.0 PURPOSE

1.1 This procedure has been prepared to verify that the TRU/RWM Process Glovebox operates in accordance with system design and specifications. This procedure will also validate the WRAP-1 plant operating procedures listed in Section 7.2.

2.0 SCOPE

2.1 This Operating Test will demonstrate the waste processing functions for the TRU/RWM Glovebox (107-GB-07-401).

2.2 Other interfacing systems outside the TRU/RWM Glovebox include the Internal Transport System, the Data Management System, the Plant Control System, and the Glovebox Barcode System.

2.3 When possible, this test will demonstrate all mechanical and control operations in manual and automatic modes. Restart of the glovebox from an emergency shutdown will also be demonstrated.

3.0 ACRONYMS

3.1 AGV - Automatic Guided Vehicle
3.2 DMS - Data Management System
3.3 HS - Hand Switch
3.4 OCS - Operating Control Station
3.5 OIU - Operator Interface Unit
3.6 OP - Operating Procedure
3.7 OTP - Operational Test Procedure
3.8 PCS - Plant Control System
3.9 PLC - Programmable Logic Controller
3.10 RCT - Radiological Control Technician
3.11 TD - Test Director
3.12 TE - Test Engineer
3.13 MC - Maintenance Craft

4.0 PRECAUTIONS AND LIMITATIONS

4.1 IF during performance of this procedure, any of the following conditions are found:

- Any equipment malfunction which could prevent fulfillment of functional requirements.
- Personnel error or procedural inadequacy which could prevent fulfillment of OTP procedural requirements.

THEN, IMMEDIATELY NOTIFY the TD and TE.

4.2 The TD and TE shall choose to stop work and place equipment in a safe condition based on the significance of a malfunction, error, or inadequacy.

4.3 Contact the TD and TE for additional instructions if changing plant conditions affect work or delays in work extending beyond (testing) shift.

4.4 IF any waste is generated during performance of this OTP, THEN, consult Environmental Compliance Officer for specific instructions to ensure compliance with HNF and DOE environmental standards, as applicable, for correct disposal.

4.5 Comply with HNF and plant/facility specific lock and tag and over-tagging procedures, as applicable.

4.6 Measuring and Test Equipment (M&TE), except timing devices used in the performance of this OTP, shall meet the following requirements:

- Be within its current calibration cycle as evidenced by an affixed calibration label.
- Be capable of the desired range.
- Have an accuracy (consistent with state-of-the-art limitations) equal to or greater than the accuracy specified in the OTP.

4.7 The equipment number and calibration information of M & TE used to perform this test shall recorded on the data sheets.

4.8 Timing measurements shall be made with commercially available timing devices.

4.9 All test data readings are to be taken and recorded for each location where the capability exists (i.e. local instrument, OIU, DMS terminal).

4.10 All test data readings are to be taken and recorded for each location where the capability exists (i.e. local observable instrument (LOI), operators screen (OS)).

5.0 RESPONSIBILITIES

5.1 Test Director:

- Schedules and reschedules operating tests as required.
- Notifies test participants before testing begins.
- Notifies personnel prior to testing of special safety precautions and conditions during testing.
- Schedules and conducts a daily pretest meeting with test participants.
- Record Data Exceptions and support OTP notes as required on the Attachment 1, TEST EXCEPTION LOG.
- Controls overall testing process and change record authorization for this OTP.
- Responsible for conducting the test, collecting data, and ensuring compliance with all OTP requirements.
- Ensures required changes to supporting operating procedures (OPs) are initiated upon completion of OTP testing.

5.2 Test Engineer:

- Provides technical support during testing.
- Provides programming support during testing.
- Participates in pre-test meetings, as necessary.
- Conducts a pre-test system walkdown, as necessary.
- Verifies that mechanical, electrical, and control systems are functioning correctly and can support testing.

5.3 Maintenance Craft:

- Provide assistance during OTP activities.

5.4 Operations Personnel:

- Perform manipulations on Systems and Test Equipment.
- Start, stop and operate equipment related to OTP.
- Control and monitor parameters from Control Panels and Control Room.
- Inform Duty Operations Supervisor of conditions affecting plant stability or safety.

6.0 CHANGE CONTROL

6.1 OTP and supporting Operating Procedure (OP) administrative or editorial changes required during testing may be accommodated as redline exceptions in the test report, if these changes do not affect operating facility function, performance or safety that could compromise or influence data results. Changes to acceptance criteria, requirement changes, or changes to Cautions, Warnings, or any other safety items, and environmental instructions in the OTP or OP shall be approved by the signatories initially approving the OTP.

7.0 REFERENCES

7.1 The following documents were used in the preparation of or are referenced in this procedure:

HSRCM-1, Hanford Site Radiological Control Manual
HNF-CM-5-34, Solid Waste Disposal Operations Administration
HNF-CM-5-36, SWD Internal Requirements
HNF-IP-0263-WRP1, Building Emergency Plan
HNF-CM-5-36, Chapter 1.10, Safety Manual
HNF-CM-5-36, Chapter 1.11, Industrial Hygiene Manual
HNF-CM-5-36, Chapter 3-5, Section 12.7
HNF-CM-5-36, Chapter 7.5, Environmental Compliance Manual
HNF-CM-5-34, Section 3.1.4, Lock-out, Tag-out

7.2 The following operating procedures (OPs) will be used to support test activities and objectives and will be validated during this OTP:

Procedure #	Procedure Title
WRP1-OP-0728,	TRU/RWM Glovebox Operation
WRP1-OP-0721,	RWM Gloveboxes Manual Operation
WRP1-OP-0722,	Restart RWM Glovebox Operation
WRP1-OP-0701,	Glovebox Housekeeping
WRP1-OP-0703,	Glovebox Lift Table Operation
WRP1-OP-0704,	Glovebox Manipulator Operation
WRP1-OP-0705,	Bagless Transfer Operation
WRP1-OP-0708,	Puncture/Drain Aerosol Cans
WRP1-OP-0710,	Glovebox Waste Sampling
WRP1-OP-0711,	Waste Treatment

All copies of the OPs used for testing shall be hand marked with the OTP number at the top of the first page and attached to the completed OTP test package.

Use of operating procedures to support the OTP will provide validation of the procedures and minimize the amount of test paperwork generated.

7.3 The following procedures will be used for alarm response during OTP activities, as required:

WRP1-AR-0700, Process Area Alarm Response
WRP1-AR-1106, Process Area (Zone II) HVAC Alarm Response
WRP1-AR-1107, Glovebox HVAC Alarm Response

7.4 The following administrative procedures control work performed in this OTP:

HSRCM-1, Hanford Site Radiological Control Manual
HNF-CM-5-34, Section 1.9, Quality Assurance Program Plan
HNF-CM-5-34, Section 3.1.4, Lock-out, Tag-out
HNF-CM-5-36, Chapter 1.10, Safety Manual
HNF-CM-5-36, Chapter 1.11, Industrial Hygiene Manual
HNF-CM-5-36, Chapter 4-2, Quality Assurance Manual
HNF-CM-5-36, Chapter 7-5, Environmental Compliance Manual
HNF-IP-0263-WRP1, Building Emergency Plan

8.0 SAFETY

8.1 WARNING - In addition to construction and/or chemical, electrical, and oil contamination hazards, operators should be aware of the possibility of coming into contact with biological hazards.

8.2 The gloveboxes are equipped with dry chemical fire suppression systems which will discharge into the glovebox if the interior temperature at the top of the gloveboxes rises to ~190 °F.

8.3 Use care to minimize injury. Possible safety hazards include:

- Tripping / Slipping
- Injuries to the hands/head
- Automatic Guided Vehicle traffic.

8.4 RADIATION - CONTAMINATION CONTROL - WRAP 1 is a new facility, no radiation contamination concerns are expected during OTP activities.

9.0 QUALITY ASSURANCE

9.1 No Quality Assurance witness, hold points or verifications are required in this OTP.

10.0 RECORDS

10.1 This TRU/RWM Glovebox OTP complete with attachments shall be filed as a permanent test record.

11.0 PREREQUISITES

11.1 VERIFY barcode labels attached to glovebox:

LOCATION	COMMAND LABELS
TRURWENTRY	END, CNCL PREV READ, CNCL OPERATION, YES, NO
TRURWCMPLT	END, CNCL PREV READ, CNCL OPERATION, YES, NO
TRURWEXIT	END, CNCL PREV READ, CNCL OPERATION, YES, NO
TRURW_PP	END, CNCL PREV READ, CNCL OPERATION, YES, NO
TRURWSAMPL	END, CNCL PREV READ, CNCL OPERATION, YES, NO
TRURWTREAT	END, CNCL PREV READ, CNCL OPERATION, YES, NO

11.2 VERIFY TRU/RWM process glovebox Acceptance Test Procedure is complete and all deficiencies or exceptions arising from the ATP have been resolved and closed out, or will not affect testing.

11.3 VERIFY all open (ATP/FTP) items will not effect OTP performance:

- Quality Assurance Nonconformance Reports (NCRs)
- Construction Punch Lists
- Outstanding Engineering Change Notices (ECNs)
- Startup-originated Design Change Requests (CRs)
- Test Deficiency Reports
- Master System Punch List items

11.4 VERIFY materials are available as follows:

55 ONE TRIP SPA 2/6/98 Empty ~~85~~ gallon ~~Entry/Exit~~ drum with lid and barcode label OTP-TRUR-PD-01
Empty 55 gallon ~~Entry/Exit~~ ONE TRIP drum with lid and barcode label OTP-TRUR-PD-11
55 gallon D&S transfer drum with barcode label OTP-TRUR-TD-01 attached, lid, and transfer stand inside containing the following packets: OTP6-97-000001: unwrapped aerosol can of saline solution. OTP6-97-000002: aerosol can of saline solution in bubble wrap & tape. OTP6-97-000003: aerosol can with no label, wrapped in cloth & tape.
55 gallon D&S transfer drum with barcode label OTP-TRUR-TD-02 attached, lid, and transfer stand inside containing the following packets: OTP6-97-000004: lead brick wrapped in two plastic bags & tape OTP6-97-000005: 1L bottle of unknown solvent & 1L bottle of oil, taped together and wrapped in cloth & tape. OTP6-97-000006: unwrapped 1L bottle partially full of acetic acid
5 Empty Sample Bottles (250ml)
2 Empty, unlabeled Collection Containers (1L)
2 Empty, unlabeled Treatment Containers (1L)
Sample Transport Container with barcode label OTP6-97-300001
Sample Transport Container with barcode label OTP6-97-300002
One Transfer Pig with barcode label OTP6-97-400001 PIG UNAVAILABLE SPA 2/6/98 2/6/98
Dispenser with the following packet and collection container barcode labels, at glovebox sample location: OTP6-97-000007, OTP6-97-000008, OTP6-97-000009, OTP6-97-000010, OTP6-97-000011
Dispenser with the following treatment container barcode labels, at glovebox treatment location: OTP6-97-900001, OTP6-97-900002, OTP6-97-900003, OTP6-97-900004, OTP6-97-900005
250ml SODIUM BICARBONATE, QUICK SOLID OR RADSORB, CHEMSORB and VOID SPACE FILLER as required

11.5 PREREQUISITES 11.1 through 11.4 complete:

TE Initials/Date: SPA 1/15/97

NOTE
Steps 11.6 through 11.15 may be performed in any order.

11.6 **PERFORM** a pretest briefing for all personnel involved in the OTP.

11.7 **VERIFY** two way portable radio communication (when necessary) between the testing and equipment locations.

11.8 **VERIFY** the official OTP document and all photocopies that will be used during testing are the latest approved revision.

11.9 **DETERMINE** appropriate interface support (personnel/equipment) from other departments and organizations and that support is available.

11.10 **VERIFY** personnel performing this procedure are qualified in accordance with HNF-CM-5-34, Section 1.8, Training Plan, HNF-IP-1242, WRAP 1 RGD Radiation Protection Program and on-the-job training.

11.11 **VERIFY** all personnel to be involved with this OTP have completed Attachment 3, SIGNATURE RECORD.

11.12 **VERIFY** all required TRU/RWM process glovebox components are installed and operational.

11.13 **VERIFY** all permanently installed and portable instrumentation listed in the applicable operating procedures and required for testing, is within it's current calibration cycle.

11.14 **VERIFY** the DMS, PCS and OIUs for the TRU/RWM process glovebox are available and operational.

11.15 **VERIFY** process area HVAC and glovebox alarms are activated.

11.16 PREREQUISITES 11.6 through 11.15 complete:

TD Initials/Date: SPA / 7/15/97

12.0 PROCEDURE

12.1 **PERFORM** Manual Operation test of the TRU/RWM Glovebox per Attachment 4, TEST PLAN, TRU/RWM GLOVEBOX MANUAL OPERATION.

12.2 **PERFORM** Automatic Operation test of the TRU/RWM Glovebox for Test Case 1 per Attachment 5, TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 1.

12.3 **PERFORM** Automatic Operation test of the TRU/RWM Glovebox for Test Case 2 per Attachment 6, TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 2.

12.4 **PERFORM** Automatic Operation test of the TRU/RWM Glovebox for Test Case 3 per Attachment 7, TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 3.

12.5 **PERFORM** Automatic Operation test of the TRU/RWM Glovebox for Test Case 4 per Attachment 8, TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4.

12.6 **PERFORM** Restart test of the TRU/RWM Glovebox per Attachment 9, TEST PLAN, TRU/RWM GLOVEBOX RESTART.

13.0 ACCEPTANCE CRITERIA

13.1 Test results of each section will be considered acceptable if the following conditions are met:

13.1.1 The procedure test section was performed as written with expected results OR:

13.1.1.1 For editorial changes:

- The procedure was redlined to reflect field conditions and the section in question performed as written with expected results.
- Redline and changes shall be in accordance with Section 6, Change Control.

13.1.1.2 For changes other than editorial:

- Exceptions are documented on Attachment 2, Test Exception Report, and the Disposition Section is approved by the Test Engineer.
- Each Test Exception Report is logged in Attachment 1, Test Exception Log.
- The Test Director shall review Attachment 1, Test Exception Log, and ensure timely completion of all Disposition Actions and Retest Requirements.

ATTACHMENT 1 - TEST EXCEPTION LOG FORM

NOT USED JD 7/15/97

TEST EXCEPTION LOG (Page of)

TE #	DATE	DESCRIPTION	DISPOSITION	DATE CLOSED

ATTACHMENT 2 - TEST EXCEPTION REPORT

TEST PROCEDURE NO. & SECTION:	TEST NAME:	EXCEPTION TRACKING NUMBER:

DESCRIPTION OF PROBLEM:

ORIGINATOR: ORG: DATE:	IMPACT ON TESTING: ☐ HOLD FOR RESOLUTION ☐ CONTINUE TEST DIRECTOR: DATE:

DISPOSITION:

DISPOSITION APPROVED BY: _____
TEST ENGINEER

DISPOSITION AND RETEST REQUIREMENTS COMPLETED BY: DATE:	DISPOSITION ACTIONS COMPLETE VERIFIED BY: DATE:
QAE CONCURRENCE WITH DISPOSITION (if required): DATE:	RETEST COMPLETE VERIFIED BY: DATE:

TEST EXCEPTION CLOSED:

TEST ENGINEER: _____ DATE: _____

TEST DIRECTOR: _____ DATE: _____

ATTACHMENT 3 - SIGNATURE RECORD

LOW LEVEL WASTE/RADWASTE MANAGEMENT GLOVEBOX OPERATIONAL TEST

INITIAL PRE-JOB PERFORMED 7/15/97 SPA 2/6/98

SIGNATURE RECORD: By signing below, I attest that I am aware of and understand my duties and responsibilities as described in the OTP and as assigned by the TD or TE.

PRINTED NAME	SIGNATURE	INITIALS	TITLE	ORGANIZATION
N. P. Willis	N.P. Willis	NPW	STD	ENV
Wayne A. Robertson	Wayne A Robertson	WAR	Engineer	WRAP Eng
Liz Vermeulen	Liz Vermeulen		NPO	OPS
Monty Downing	Monty Downing	MCD	NCO	OPS
C. K. Rosnick	C K Rosnick	CKR		BDM
M. P. Lane	Michael P Lane	M P L	Scientist	WRAP ENG.
S. P. Anderson	Scott Anderson	SPA	Engineer	WRAP ENG.
D. D Dunlap	D Dunlap		Engineer	S/u

ATTACHMENT 4 - TEST PLAN, TRU/RWM GLOVEBOX MANUAL OPERATION

1.0 GENERAL DESCRIPTION

1.1 This test plan will verify that each manual function of the glovebox components may be individually operated. These operations will be tested using procedure WRP1-OP-0721, RWM Gloveboxes Manual Operation, thereby also performing the required procedure validation.

2.0 SAFETY

2.1 Reference OTP Section 8, SAFETY.

3.0 TOOLS, EQUIPMENT AND SUPPLIES

- Drum handling (manual) equipment or Pallet fork truck
- Spill Kit/Decontamination Equipment (oils/chemicals)
- Tape and rags

4.0 TEST PREREQUISITES

4.1 VERIFY OTP Section 11.0, PREREQUISITES are complete.

4.2 VERIFY PCS and DMS are ready to support testing.

4.3 TEST PREREQUISITES are complete and acceptable.

TD Initials/Date: SPA / 12/30/97

ATTACHMENT 4 - TEST PLAN, TRU/RWM GLOVEBOX MANUAL OPERATION

5.0 PROCEDURE

5.1 REFERENCE procedure WRP1-OP-0721, RWM GLOVEBOXES MANUAL OPERATION:

5.1.1 PERFORM Section VIII.A, "RESET DIAGNOSTIC FLAGS ON TRU/RWM GLOVEBOX (107-GB-07-401)", of operating procedure as follows:

5.1.1.1 REDLINE procedure as needed during performance.

5.1.1.2 VERIFY results of performance are acceptable.

TD Initials/Date: SPA 1/15/97

5.1.2 PERFORM Section VIII.B, "ACCESS TRU/RWM GLOVEBOX MAINTENANCE MENUS", of operating procedure as follows:

5.1.2.1 REDLINE procedure as needed during performance.

5.1.2.2 VERIFY results of performance are acceptable.

TD Initials/Date: SPA 1/15/97

5.1.3 PERFORM Section VIII.C, "TRU/RWM GLOVEBOX HOIST (107-CR-07-401) MANUAL OPERATIONS", of operating procedure as follows:

5.1.3.1 REDLINE procedure as needed during performance.

5.1.3.2 VERIFY results of performance are acceptable.

TD Initials/Date: SPA 1/15/97

5.1.4 PERFORM Section VIII.D.1, "MATE DRUM TO BAGLESS TRANSFER PORT (107-DO-07-401)", of operating procedure as follows:

5.1.4.1 REDLINE procedure as needed during performance.

5.1.4.2 VERIFY results of performance are acceptable.

TD Initials/Date: SPA 1/15/97

ATTACHMENT 4 - TEST PLAN, TRU/RWM GLOVEBOX MANUAL OPERATION

5.1.5 **PERFORM** Section VIII.D.2, "OPEN/CLOSE BAGLESS TRANSFER PORT (107-DO-07-401)", of operating procedure as follows:

5.1.5.1 **REDLINE** procedure as needed during performance.

5.1.5.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: SPA / 7/15/97

5.1.6 **PERFORM** Section VIII.D.3, "REMOVE DRUM FROM BAGLESS TRANSFER PORT (107-DO-07-401)", of operating procedure as follows:

5.1.6.1 **REDLINE** procedure as needed during performance.

5.1.6.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: SPA / 7/15/97

5.1.7 **PERFORM** Section VIII.E.1, "MATE DRUM TO COMPLIANT WASTE PORT (107-GB-07-402A)", of operating procedure as follows:

5.1.7.1 **REDLINE** procedure as needed during performance.

5.1.7.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: SPA / 7/15/97

5.1.8 **PERFORM** Section VIII.E.2, "OPEN COMPLIANT WASTE PORT (107-GB-07-402A)", of operating procedure as follows:

5.1.8.1 **REDLINE** procedure as needed during performance.

5.1.8.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: SPA / 7/15/97

ATTACHMENT 4 - TEST PLAN, TRU/RWM GLOVEBOX MANUAL OPERATION

5.1.9 **PERFORM** Section VIII.E.3, "CLOSE COMPLIANT WASTE PORT (107-GB-07-402A)", of operating procedure as follows:

5.1.9.1 **REDLINE** procedure as needed during performance.

5.1.9.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: SPA / 7/15/97

4 SPA 2/6/98

5.1.10 **PERFORM** Section VIII.E.~~3~~ 4, "REMOVE DRUM FROM COMPLIANT WASTE PORT (107-GB-07-402A)", of operating procedure as follows:

5.1.10.1 **REDLINE** procedure as needed during performance.

5.1.10.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: SPA / 7/15/97

5.1.11 **PERFORM** Section VIII.F.1, "MATE DRUM TO NON-COMPLIANT WASTE PORT (107-GB-07-402B)", of operating procedure as follows:

5.1.11.1 **REDLINE** procedure as needed during performance.

5.1.11.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: SPA / 7/15/97

5.1.12 **PERFORM** Section VIII.F.2, "OPEN NON-COMPLIANT WASTE PORT (107-GB-07-402B)", of operating procedure as follows:

5.1.12.1 **REDLINE** procedure as needed during performance.

5.1.12.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: DO / 7/18/97

DO 7/18/97 ✓ ETR on Drum LD / retested DO 7/18/97

ATTACHMENT 4 - TEST PLAN, TRU/RWM GLOVEBOX MANUAL OPERATION

5.1.13 **PERFORM** Section VIII.F.3, "CLOSE NON-COMPLIANT WASTE PORT (107-GB-07-402B)", of operating procedure as follows:

5.1.13.1 **REDLINE** procedure as needed during performance.

5.1.13.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: [signature], 7/14/97

5.1.14 **PERFORM** Section VIII.F.4, "REMOVE DRUM FROM NON-COMPLIANT WASTE PORT (107-GB-07-402B)", of operating procedure as follows:

5.1.14.1 **REDLINE** procedure as needed during performance.

5.1.14.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: [signature], 7/14/97

ATTACHMENT 5 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 1

1.0 GENERAL DESCRIPTION

1.1 Test case one will sort and sample Test Drum 1 packets. These operations will be tested using procedures WRP1-OP-0710, Glovebox Waste Sampling, WRP1-OP-0728, TRU/RWM Glovebox Operation, and WRP1-OP-0708, Puncture/Drain Aerosol Cans thereby also performing the required procedure validation for sections performed. The sequence of events is as follows:

1.1.1 Empty 55 gallon Entry/exit drum OTP-TRUR-PD-11 is connected to the TRU/RWM glovebox compliant loadout port and the lid is removed.

1.1.2 STC OTP6-97-300001 is connected to the STC port.

1.1.3 Transfer drum OTP-TRUR-TD-01 is connected to the TRU/RWM entry port, the lid is removed, and the transfer stand is moved to the sample station.

1.1.4 Packets OTP6-97-000001, OTP6-97-000002, and OTP6-97-000003 are removed from the transfer stand.

1.1.5 Two one liter collection containers are loaded into the glovebox through the Consumable Materials port.

1.1.6 Packet barcode label OTP6-97-000007 is attached to a new collection container and the aerosol cans in packets OTP6-97-000001 and OTP6-97-000002 are drained in the collection container. The empty aerosol cans and the packet material are placed in the compliant loadout drum.

1.1.7 Packet barcode label OTP6-97-000008 is attached to a new collection container and the aerosol can in packet OTP6-97-000003 is drained in the collection container. The empty aerosol can and packet material are placed in the compliant loadout drum.

1.1.8 Physical component data for the waste in compliant waste loadout drum is entered into DMS.

1.1.9 Field screening is performed on the liquid in collection container OTP6-97-000008.

ATTACHMENT 5 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 1

1.1.10 A sample analysis request is prepared for collection container OTP6-97-000008. Sample 97-00001 is requested with analyses "AQLIQ" and "COND". One bottle is required for each analysis.

1.1.11 Sample bottle barcode labels 97-00001-01L and 97-00001-02L are printed in the sample management office and the labels are placed on empty sample bottles.

1.1.12 Empty sample bottles 97-00001-01L and 97-00001-02L are loaded into the TRU/RWM glovebox through the Consumable Materials port.

1.1.13 Liquid from collection container OTP6-97-000008 is collected in sample bottles 97-00001-01L and 97-00001-02L.

1.1.14 Sample bottles 97-00001-01L and 97-00001-02L are placed in STC OTP6-97-300001.

1.1.15 STC OTP6-97-300001 is removed from TRU/RWM sample port.

1.1.16 A transport pig is not used.

1.1.17 Collection containers OTP6-97-000007 and OTP6-97-000008 are placed on the transfer stand and the transfer stand is returned to transfer drum OTP-TRUR-TD-01.

1.1.18 Transfer drum OTP-TRUR-TD-01 is closed and removed from the transfer drum port and from lift table LT-09-201C.

2.0 SAFETY

2.1 Reference OTP Section 8, SAFETY.

3.0 TOOLS, EQUIPMENT AND SUPPLIES

- Drum handling (manual) equipment or Pallet fork truck
- Spill Kit/Decontamination Equipment (oils/chemicals)
- Tape and rags
- Other equipment, material or protective clothing (as required)

ATTACHMENT 5 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 1

4.0 TEST PREREQUISITES

4.1 VERIFY OTP Section 11.0, PREREQUISITES are complete.

4.2 SET initial conditions as follows:

> **NOTE**
> Supplies required during the test which cannot be loaded through the consumable materials port, will be loaded in the compliant waste loadout drum.

✓ 4.2.1 Empty 55 gallon, compliant waste loadout drum OTP-TRUR-PD-11 is on lift table LT-09-201B.

✓ 4.2.2 Transfer drum OTP-TRUR-TD-01 is on lift table LT-09-201C and contains the following packets from the TRU glovebox:

✓ 4.2.2.1 Packet OTP6-97-000001 contains an unwrapped aerosol can of saline solution.

✓ 4.2.2.2 Packet OTP6-97-000002 contains an aerosol can of saline solution wrapped in bubble wrap and tape.

✓ 4.2.2.3 Packet OTP6-97-000003 contains an aerosol can with no label, wrapped in cloth and tape.

✓ 4.2.3 Empty sample transport container OTP6-97-300001 (STC-1) is at glovebox ready to connect to the STC port.

✓ 4.2.4 Two empty, unlabeled, 1 liter collection containers are available for loading into glovebox through Consumable Materials port.

4.2.5 Two sequential packet barcode labels are available in the glovebox.

✓ 4.2.6 Required sampling supplies are available.

✓ 4.2.7 Two empty, unlabeled, 250 ml sample bottles are in the Sample Management Office.

ATTACHMENT 5 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 1

✓ 4.2.8 User with general operator (GENOP) privileges is logged on to DMS TRU Terminal (107-TE-12-104). 7/15/97

4.2.9 User with chemist privileges is logged on to Sample Management Office DMS Terminal (109-TE-12-107).

✓ 4.2.10 Sample-label barcode printer in Sample Management Office is loaded with blank labels and ready to print.

4.2.11 Test scripts have been run on the DMS server to:

4.2.11.1 Initialize the DMS database.

4.2.11.2 Load initial data for PINs:

OTP-TRUR-PD-01, OTP-TRUR-PD-11,
OTP-TRUR-TD-01, OTP-TRUR-TD-02,
OTP6-97-000001, OTP6-97-000002,
OTP6-97-000003, OTP6-97-000004,
OTP6-97-000005, OTP6-97-000006,
OTP6-97-300001, OTP6-97-300002,
OTP6-97-400001.

4.2.11.3 Print report of DMS database.

4.2.12 **VERIFY** conditions:

✓ 4.2.12.1 Port 107-DO-07-401, CLOSED and LOCKED.

✓ 4.2.12.2 Port 107-DO-07-402A, CLOSED and LOCKED.

✓ 4.2.12.3 Lift Table 107-LT-09-201B at AGV height.

✓ 4.2.12.4 Lift Table 107-LT-09-201B, MAINTENANCE/OFF/NORMAL (M/O/N) switch in NORMAL.

✓ 4.2.12.5 Lift Table 107-LT-09-201C at AGV height.

✓ 4.2.12.6 Lift Table 107-LT-09-201C, MAINTENANCE/OFF/NORMAL (M/O/N) switch in NORMAL.

ATTACHMENT 5 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 1

✓ 4.2.12.7 Manipulator 107-EM-07-401 PARKED.

4.2.13 UPDATE PCS Tracking Table as follows:

✓ 4.2.13.1 Drum OTP-TRUR-PD-11 at LT-09-201B.

✓ 4.2.13.2 Drum OTP-TRUR-TD-01 at LT-09-201C.

✓ 4.2.13.3 Drum OTP-TRUR-PD-01 at LT-09-201A.

PCS TRACKING TABLE FOR TRU/RWM LIFT TABLES		
LIFT TABLE	Registers	
	PIN	Drum Present (=1)
✓ LT-09-201A	N32 110-116	N32 121 bit 12
✓ LT-09-201B	N32 122-128	N32 133 bit 12
LT-09-201C	N32 134-140	N32 145 bit 12

4.3 TEST PREREQUISITES are complete and acceptable.

TD Initials/Date: [illegible] / 7/18/97

ATTACHMENT 5 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 1

5.0 PROCEDURE

5.1 **REFERENCE** procedure WRP1-OP-0710, GLOVEBOX WASTE SAMPLING:

5.1.1 **PERFORM** Section VII.D.1 "ATTACH STC TO GLOVEBOX", of operating procedure as required to attach empty STC-1 to glovebox.

5.1.1.1 **REDLINE** procedure as needed during performance.

5.1.1.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: DD / 7/15/97

5.2 **REFERENCE** procedure WRP1-OP-0728, TRU/RWM GLOVEBOX OPERATION:

DD 7/14/97 MANIPULATOR NOT FORCED DUE TO MINIMAL BIT FORCE.

5.2.1 **PERFORM** Section VII.A, "INITIALIZE SYSTEM", of operating procedure as follows:

5.2.1.1 **REDLINE** procedure as needed during performance.

5.2.1.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: DD / 7/15/97

5.2.2 **PERFORM** Section VII.B, "OPEN BAGLESS TRANSFER PORT (107-DO-07-401)", of operating procedure as follows:

5.2.2.1 **REDLINE** procedure as needed during performance.

5.2.2.2 **VERIFY** drum OTP-TRUR-TD-01 connected to port 107-DO-07-401 and port OPEN.

5.2.2.3 **VERIFY** results of performance are acceptable.

TD Initials/Date: DD / 7/15/97

ATTACHMENT 5 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 1

5.2.3 **PERFORM** Section VII.C, "REMOVE TRANSFER STAND FROM DRUM", of operating procedure as follows:

5.2.3.1 **REDLINE** procedure as needed during performance.

5.2.3.2 **VERIFY** transfer stand at glovebox sample station.

5.2.3.3 **VERIFY** results of performance are acceptable.

TD Initials/Date: LD / 7/18/97

5.2.4 **PERFORM** Section VII.D, "REMOVE WASTE ITEMS FROM TRANSFER STAND FOR SORTING/SAMPLING", of operating procedure as follows:

5.2.4.1 **REDLINE** procedure as needed during performance.

5.2.4.2 **VERIFY** DMSS0341 indicates packets OTP6-97-000001, OTP6-97-000002, and OTP6-97-000003 in transfer drum prior to removal from transfer stand.

5.2.4.3 **VERIFY** DMS indicates packets OTP6-97-000001, OTP6-97-000002, and OTP6-97-000003 at TRU/RWM sample station after removal from transfer stand.

5.2.4.4 **VERIFY** results of performance are acceptable.

TD Initials/Date: LD / 7/18/97

5.2.5 **PERFORM** Section VII.G, "OPEN COMPLIANT WASTE PORT (107-DO-07-402A)", of operating procedure as follows:

5.2.5.1 **REDLINE** procedure as needed during performance.

5.2.5.2 **VERIFY** drum OTP-TRUR-PD-11 connected to port 107-DO-07-402A and port OPEN.

5.2.5.3 **VERIFY** results of performance are acceptable.

TD Initials/Date: LD / 7/18/97

ATTACHMENT 5 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 1

5.2.6 PERFORM Section VII.I, "SORT WASTE ITEMS", of operating procedure as follows:

5.2.6.1 REDLINE procedure as needed during performance.

5.2.6.2 VERIFY barcode label OTP6-97-000007 is attached to a new collection container and aerosol cans in packets OTP6-97-000001 and OTP6-97-000002 are drained into collection container.

5.2.6.3 SCAN barcodes as directed by operating procedure.

5.2.6.4 ENTER packet information on DMSS0342 when directed by operating procedure:

OTP6-97-000007
Container type: CC
Material Group: LQ
Waste Description: "Bottle of Saline solution"

OTP-TRUR-PD-11
Compliant Waste: checked
Waste Description: "Two empty saline solution aerosol cans".

5.2.6.5 VERIFY barcode label OTP6-97-000008 is attached to a new collection container and the aerosol can in packet OTP6-97-000003 is drained into collection container.

5.2.6.6 SCAN barcodes as directed by operating procedure.

ATTACHMENT 5 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 1

√ 5.2.6.7 **ENTER** packet information on DMSS0342 when directed by operating procedure:

OTP6-97-000008
Container type: CC
Material Group: LQ
Waste Description: "Bottle of unknown liquid."

OTP-TRUR-PD-11
Compliant Waste: checked
Waste Description: add "Empty unmarked aerosol can".

√ 5.2.6.8 **VERIFY** all empty aerosol cans and packet material are placed in compliant loadout drum.

√ 5.2.6.9 **VERIFY** OTP-TRUR-PD-11 packet information updated in DMS when directed by operating procedure.

√ 5.2.6.10 **ENTER** compliant waste loadout drum information on DMSS0343 when directed by operating procedure:

- Description: PLASTIC/POLYURATHANE
- Volume Percent: 30
- Weight: 2

- Description: METAL/IRON/GALVANIZED/SHEET
- Volume Percent: 20
- Weight: 1

- Description: CLOTH/RAGS/NYLON/TAPE/ROPE
- Volume Percent: 50
- Weight: 2

√ 5.2.6.11 **VERIFY** results of performance are acceptable.

TD Initials/Date: 12/18/97

5.2.7 **PERFORM** Section VII.J, "SCREEN WASTE ITEMS", of operating procedure as follows:

ATTACHMENT 5 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 1

5.2.7.1 **REDLINE** procedure as needed during performance.

✓ 5.2.7.2 **VERIFY** field screening was performed on liquid in collection container OTP6-97-000008.

✓ 5.2.7.3 **ENTER** data for Screening ID 97-00001-01F on DMSS0503 when directed by operating procedures:

- Sampling Method: "INS"
- **SELECT** Analysis "PHDP" from list.
- **ENTER** Results: (field entry)

✓ 5.2.7.4 **VERIFY** sample analysis request was prepared in DMS for collection container OTP6-97-000008. Sample 97-00001 is requested with analyses "AQLIQ" and "COND". One bottle is required for each analysis.

✓ 5.2.7.5 **VERIFY** sample bottle barcode labels 97-00001-01L and 97-00001-02L are printed in the sample management office (DMSS0508) and the labels are placed on empty sample bottles.

✓ 5.2.7.6 **VERIFY** empty sample bottles 97-00001-01L and 97-00001-02L are loaded into glovebox through the Consumable Materials port.

✓ 5.2.7.7 **VERIFY** liquid from collection container OTP6-97-000008 is collected in sample bottles 97-00001-01L and 97-00001-02L. DO 7/11/97

✓ 5.2.7.8 **ENTER** data for ~~Screening~~ SAMPLE ID 97-00001-01~~F~~ L on DMSS0501 when directed by operating procedures:

- Room Temperature: current temp
- Sample Matrix: "L"
- Comments: "Unknown liquid"

71°F

ETR No DIRECTION from 7.10-A to B, C & E DO 7/11/97

ETR - ~~STC CHAIN OF CUSTODY MESSAGE APPEARED~~ N/A DO

TD Initials/Date: DO / 7/18/97

ATTACHMENT 5 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 1

5.3 REFERENCE procedure WRP1-OP-0710, GLOVEBOX WASTE SAMPLING:

5.3.1 PERFORM Section VII.G, "FINAL SAMPLE PREPARATION AND LOADOUT", of operating procedure.

5.3.1.1 REDLINE procedure as needed during performance.

5.3.1.2 VERIFY sample bottles 97-00001-01L, 97-00001-02L are placed in STC-1 and STC-1 removed from glovebox.

5.3.1.3 VERIFY results of performance are acceptable.

TD Initials/Date: DD 7/18/97

5.4 REFERENCE procedure WRP1-OP-0728, TRU/RWM GLOVEBOX OPERATION:

5.4.1 PERFORM Section VII.M, "ADD WASTE ITEMS TO TRANSFER STAND", of operating procedure as follows:

5.4.1.1 REDLINE procedure as needed during performance.

5.4.1.2 VERIFY DMSS0341 shows collection containers OTP6-97-000007, OTP6-97-000008 on transfer stand.

5.4.1.3 VERIFY after "Refresh" screen DMSS0341 shows all items removed from glovebox sample location.

5.4.1.4 VERIFY results of performance are acceptable.

TD Initials/Date: DD 7/18/97

ATTACHMENT 5 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 1

5.4.2 **PERFORM** Section VII.N, "LOAD TRANSFER STAND INTO RWM DRUM", of operating procedure as follows:

5.4.2.1 **REDLINE** procedure as needed during performance.

5.4.2.2 **VERIFY** transfer stand is returned to transfer drum OTP-TRUR-TD-01.

5.4.2.3 **VERIFY** results of performance are acceptable.

TD Initials/Date: DD 17/18/97

5.4.3 **PERFORM** Section VII.O, "CLOSE BAGLESS TRANSFER PORT (107-DO-07-401)", of operating procedure as follows:

5.4.3.1 **REDLINE** procedure as needed during performance.

5.4.3.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: DD 17/18/97

NOTE

Transfer drum OTP-TRUR-TD-01 with collection containers OTP6-97-000007 and OTP6-97-000008 will be used in Test Case 3.0. Storage should be nearby but out of work path.

5.4.4 **REMOVE** transfer drum OTP-TRUR-TD-01 with contents, from lift table.

5.4.4.1 **STORE** transfer drum OTP-TRUR-TD-01 until needed.

5.5 **RUN** DMS Report Script.

TD Initials/Date: DD 17/18/97

ATTACHMENT 6 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 2

1.0 GENERAL DESCRIPTION

1.1 Test case two will sort and sample Test Drum 2 packets. These operations will be tested using procedures WRP1-OP-0710, Glovebox Waste Sampling and WRP1-OP-0728, TRU/RWM Glovebox Operation, thereby also performing the required procedure validation for sections performed. The sequence of events is as follows:

1.1.1 STC OTP6-97-300002 is connected to the STC port.

1.1.2 Transfer drum OTP-TRUR-TD-02 is moved to the TRU/RWM glovebox entry port, the lid is removed, and the transfer stand is moved to the sample station.

1.1.3 Packets OTP6-97-000004, OTP6-97-000005, and OTP6-97-000006 are removed from the transfer stand.

1.1.4 Packet OTP6-97-000004 is opened and barcodes are scanned to associate the original packet with new non-compliant item OTP6-97-000009. The wrapping and compliant waste is placed in the compliant loadout drum.

1.1.5 Field screening is performed on non-compliant item OTP6-97-000009.

1.1.6 Packet OTP6-97-000005 is opened and separated into two non-compliant components. Bar codes are scanned to associate the original packet with new non-compliant items OTP6-97-000010 and OTP6-97-000011. The wrapping and compliant waste from OTP6-97-000005 are placed in the compliant loadout drum.

1.1.7 Physical component data for waste in the compliant waste loadout drum is updated in DMS.

1.1.8 Field screening is performed on non-compliant item OTP6-97-000010.

1.1.9 Two sample analysis requests are prepared for packet OTP6-97-000010. Samples 97-00002 and 97-00003 are requested, both with analysis "SOLVENTS". One bottle is required for each sample.

ATTACHMENT 6 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 2

1.1.10 Field screening is performed on non-compliant item OTP6-97-000011.

1.1.11 A sample analysis request is prepared for packet OTP6-97-000011. Sample 97-00004 is requested with analyses "OIL". One bottle is required for the analysis.

1.1.12 Field screening is performed on the liquid in packet OTP6-97-000006.

1.1.13 Barcode labels 97-00002-01L, 97-00003-01L, and 97-00004-01L are printed and the labels are placed on empty sample bottles.

1.1.14 Empty sample bottles 97-00002-01L, 97-00003-01L, and 97-00004-01L are loaded into the TRU RWM glovebox through the Consumable Materials port.

1.1.15 Sample material from new packet OTP6-97-000010 is collected in sample bottle 97-00002-01L.

1.1.16 Sample material from new packet OTP6-97-000010 is collected in sample bottle 97-00003-01L. The packet is then sealed.

1.1.17 Sample material from new packet OTP6-97-000011 is collected in sample bottle 97-00004-01L. The packet is then sealed.

1.1.18 Sample bottles 97-00002-01L, 97-00003-01L, and 97-00004-01L are placed in STC OTP6-97-300002.

1.1.19 STC OTP6-97-300002 is removed from the TRU/RWM STC port and placed in transfer pig OTP6-97-400001.

1.1.20 Packets OTP6-97-000006, OTP6-97-000009, OTP6-97-000010, and OTP6-97-000011 are placed on transfer stand and the transfer stand is returned to transfer drum TRU-OTP-TD-02.

1.1.21 Transfer drum TRU-OTP-TD-02 is closed and removed from the transfer drum port and from lift table LT-09-201C.

1.1.22 Run DMS report script.

ATTACHMENT 6 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 2

2.0 SAFETY

2.1 Reference OTP Section 8, SAFETY.

3.0 TOOLS, EQUIPMENT AND SUPPLIES

- Drum handling (manual) equipment or Pallet fork truck
- Spill Kit/Decontamination Equipment (oils/chemicals)
- Tape and rags
- Other equipment, material or protective clothing (as required)

4.0 TEST PREREQUISITES

4.1 VERIFY OTP Section 11.0, PREREQUISITES are complete.

4.2 SET initial conditions as follows:

✓ 4.2.1 55 gallon, compliant waste loadout drum OTP-TRUR-PD-11 is connected to port 107-DO-07-402A and OPEN.

✓ 4.2.2 Transfer drum OTP-TRUR-TD-02 is on lift table LT-09-201C and contains the following packets from the TRU glovebox:

✓ 4.2.2.1 Packet OTP6-97-000004 contains a lead brick (simulated), wrapped with two plastic bags and tape.

✓ 4.2.2.2 Packet OTP6-97-000005 contains a 1 liter bottle of unknown solvent and a 1 liter bottle of oil, taped together and wrapped with cloth and tape.

✓ 4.2.2.3 Packet OTP6-97-000006 contains a partially full 1 liter bottle of acid (simulated).

✓ 4.2.3 Empty sample transport container OTP6-97-300002 (STC-2) is at glovebox ready to connect to STC port.

✓ 4.2.4 Transfer pig OTP6-97-400001 is located near TRU/RWM STC port.

✓ 4.2.5 Three sequential packet barcode labels are available in glovebox.

ATTACHMENT 6 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 2

✓ 4.2.6 Required sampling supplies are available.

✓ 4.2.7 Three empty, unlabeled, 250 ml sample bottles are in the Sample Management Office.

✓ 4.2.8 User with general operator (GENOP) privileges is logged on to DMS TRU Terminal (107-TE-12-104).

✓ 4.2.9 User with chemist privileges is logged on to Sample Management Office DMS Terminal (109-TE-12-107).

✓ 4.2.10 Sample-label barcode printer in Sample Management Office is loaded with blank labels and ready to print.

✓ 4.2.11 DMS database is unchanged from Test Case 1.0 completion.

✓ 4.2.12 UPDATE PCS Tracking Table for OTP-TRUR-TD-02 at LT-09-201C as follows: ok X DD 7/21/97

PCS TRACKING TABLE FOR TRU/RWM LIFT TABLES		
LIFT TABLE	Registers	
	PIN	Drum Present (=1)
LT-09-201C	N32 134-140	N32 145 bit 12

4.3 TEST PREREQUISITES are complete and acceptable.

TD Initials/Date: DD / 7/21/97

ATTACHMENT 6 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 2

5.0 PROCEDURE

5.1 REFERENCE procedure WRP1-OP-0710, GLOVEBOX WASTE SAMPLING:

5.1.1 PERFORM Section VII.C, "LOAD EMPTY SAMPLE BOTTLES INTO GLOVEBOX", of operating procedure as required to attach empty STC-2 to glovebox.

5.1.1.1 REDLINE procedure as needed during performance.

5.1.1.2 VERIFY results of performance are acceptable. 7/21/97

TD Initials/Date: 17/21/97

5.2 REFERENCE procedure WRP1-OP-0728, TRU/RWM GLOVEBOX OPERATION:

5.2.1 PERFORM Section VII.A, "INITIALIZE SYSTEM", of operating procedure as follows:

5.2.1.1 REDLINE procedure as needed during performance.

5.2.1.2 VERIFY results of performance are acceptable.

TD Initials/Date: 17/21/97

5.2.2 PERFORM Section VII.B, "OPEN BAGLESS TRANSFER PORT (107-DO-07-401)", of operating procedure as follows:

5.2.2.1 REDLINE procedure as needed during performance.

5.2.2.2 VERIFY drum OTP-TRUR-TD-02 connected to port 107-DO-07-401 and port OPEN.

5.2.2.3 VERIFY results of performance are acceptable.

TD Initials/Date: 17/21/97

ATTACHMENT 6 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 2

5.2.3 **PERFORM** Section VII.C, "REMOVE TRANSFER STAND FROM DRUM", of operating procedure as follows:

5.2.3.1 **REDLINE** procedure as needed during performance.

5.2.3.2 **VERIFY** transfer stand at glovebox sample station.

5.2.3.3 **VERIFY** results of performance are acceptable.

TD Initials/Date: RO 7/21/97

5.2.4 **PERFORM** Section VII.D, "REMOVE WASTE ITEMS FROM TRANSFER STAND FOR SORTING/SAMPLING", of operating procedure as follows:

5.2.4.1 **REDLINE** procedure as needed during performance.

✓ 5.2.4.2 **VERIFY** DMSS0341 indicates packets OTP6-97-000004, OTP6-97-000005, and OTP6-97-000006 in transfer drum prior to removal from transfer stand.

✓ 5.2.4.3 **VERIFY** DMSS0341 indicates packets OTP6-97-000004, OTP6-97-000005, and OTP6-97-000006 at TRU/RWM sample station after removal from transfer stand.

5.2.4.4 **VERIFY** results of performance are acceptable.

TD Initials/Date: RO 7/21/97

5.2.5 **PERFORM** Section VII.I, "SORT WASTE ITEMS", of operating procedure as follows:

5.2.5.1 **REDLINE** procedure as needed during performance.

✓ 5.2.5.2 **VERIFY** packet OTP6-97-000004 is opened and barcodes are scanned to associate the original packet with new non-compliant item OTP6-97-000009.

RO 7/21/97
CTR-OTP6-97-000008 opened from 7.

ATTACHMENT 6 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 2

5.2.5.3 ENTER packet information on DMSS0342 when directed by operating procedure:

OTP6-97-000009
- Container type: PK
- Material Group: PB
- Waste Description: "Lead brick"

OTP-TRUR-PD-11
- Compliant Waste: checked
- Waste Description: add "Plastic sheet".

5.2.5.4 VERIFY packet OTP6-97-000005 is opened and separated into two non-compliant items. Barcodes are scanned to associate original packet with new non-compliant items OTP6-97-000010 & OTP6-97-000011.

5.2.5.5 ENTER packet information on DMSS0342 when directed by operating procedure:

OTP6-97-000010
- Container type: PK
- Material Group: LQ
- Waste Description: "Unknown solvent"

OTP6-97-000011
- Container type: PK
- Material Group: OL
- Waste Description: "Oil"

OTP-TRUR-PD-11
- Compliant Waste: checked
- Waste Description: add "cloth & tape".

5.2.5.6 VERIFY wrapping and compliant waste from OTP6-97-000005 are placed in compliant loadout drum.

ATTACHMENT 6 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 2

✓ 5.2.5.7 **UPDATE** compliant waste loadout drum information on DMSS0343 when directed by operating procedure:

- Description: PLASTIC/POLYURATHANE
- ✓ Volume Percent: 30
- Weight: 3

- ✓ Description: METAL/IRON/GALVANIZED/ SHEET
- Volume Percent: 10
- Weight: 1

- Description: CLOTH/RAGS/NYLON/TAPE/ ROPE
- ✓ Volume Percent: 60
- Weight: 4

5.2.5.8 **VERIFY** results of performance are acceptable.

TD Initials/Date: DD 7/21/97

5.2.6 **PERFORM** Section VII.J, "SCREEN WASTE ITEMS", of operating procedure as follows:

5.2.6.1 **REDLINE** procedure as needed during performance.

✓ 5.2.6.2 **VERIFY** field screening is performed on non-compliant item OTP6-97-000009. DD 7/21/97

✓ 5.2.6.3 **ENTER** data for Screening ID 97-00002-01F on DMSS0503 when directed by operating procedures:

- Sampling Method: "INS"
- SELECT Analysis "LEAD" from list
- ENTER Results: (field entry)

✓ 5.2.6.4 **VERIFY** field screening is performed on non-compliant item OTP6-97-000010.

ATTACHMENT 6 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 2

✓ 5.2.6.5 ENTER data for Screening ID 97-00003-01F in DMSS0503 when directed by operating procedures:

- Sampling Method: "INS"
- SELECT Analysis "CLOR" from list.
- ENTER Results: (field entry)

✓ 5.2.6.6 VERIFY two sample analysis requests are prepared in DMS for packet OTP6-97-000010. Sample 97-00002 and 97-00003 requested, both with analysis "SOLVENTS". One bottle is required for each sample.

✓ 5.2.6.7 VERIFY field screening is performed on non-compliant item OTP6-97-000011.

✓ 5.2.6.8 ENTER data for Screening ID 97-00004-01F on DMSS0503 when directed by operating procedures:

- Sampling Method: "INS"
- SELECT Analysis "PCBO" from list.
- ENTER Results: (field entry)

✓ 5.2.6.9 VERIFY sample analysis request is prepared in DMS for packet OTP6-97-000011. Sample 97-00004 is requested with analyses "OIL". One bottle is required for the analysis.

✓ 5.2.6.10 VERIFY field screening is performed on liquid in packet OTP6-97-000006.

✓ 5.2.6.11 ENTER data for Screening ID 97-00005-01F on DMSS0503 when directed by operating procedures:

- Sampling Method: "INS"
- SELECT Analysis "PHDP" from list.
- ENTER Results: (field entry)

✓ 5.2.6.12 VERIFY barcode labels 97-00002-01L, 97-00003-01L, and 97-00004-01L are printed and placed on empty sample bottles.

ATTACHMENT 6 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 2

✓ 5.2.6.13 VERIFY empty sample bottles 97-00002-01L, 97-00003-01L, and 97-00004-01L are loaded into glovebox through Consumable Materials port.

✓ 5.2.6.14 VERIFY sample material from new packet OTP6-97-000010 is collected in sample bottle 97-00002-01L.

✓ 5.2.6.15 ENTER data for sample 97-00002-01L on DMSS0501 when directed by operating procedures:

- Room Temperature: (current temp)
- Sample Matrix: "L"
- Comments: "Unknown solvent"

✓ 5.2.6.16 VERIFY sample material from new packet OTP6-97-000010 is collected in sample bottle 97-00003-01L. The packet is then sealed.

✓ 5.2.6.17 ENTER data for sample 97-00003-01L on DMSS0501 when directed by operating procedures:

- Room Temperature: (current temp)
- Sample Matrix: "L"
- Comments: "Unknown solvent"

✓ 5.2.6.18 VERIFY sample material from new packet OTP6-97-000011 is collected in sample bottle 97-00004-01L. The packet is then sealed.

✓ 5.2.6.19 ENTER data for sample 97-00004-01L on DMSS0501 when directed by operating procedures:

- Room Temperature: (current temp)
- Sample Matrix: "L"
- Comments: "Oil"

✓ 5.2.6.20 VERIFY results of performance are acceptable.

TD Initials/Date: MP 12/21/97

ATTACHMENT 6 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 2

5.3 REFERENCE procedure WRP1-OP-0710, GLOVEBOX WASTE SAMPLING:

5.3.1 PERFORM Section VII.G, "FINAL SAMPLE PREPARATION AND LOADOUT", of operating procedure.

5.3.1.1 REDLINE procedure as needed during performance.

5.3.1.2 VERIFY sample bottles 97-00002-01L, ~~97-00002-02L,~~ 97-00002-03L, 97-00002-04L are placed in STC-2.

5.3.1.3 VERIFY screen DMSS0501 shows sample bottles in STC-2 after refresh.

5.3.1.4 VERIFY STC-2 removed from glovebox ~~and placed in transfer pig OTP6-97-400001.~~

5.3.1.5 VERIFY results of performance are acceptable.

TD Initials/Date: 7/21/97

5.4 REFERENCE procedure WRP1-OP-0728, TRU/RWM GLOVEBOX OPERATION:

5.4.1 PERFORM Section VII.I, "TREATED WASTE ITEM LOADOUT", of operating procedure as follows:

5.4.1.1 REDLINE procedure as needed during performance.

5.4.1.2 VERIFY results of performance are acceptable.

TD Initials/Date: _____/_____

ATTACHMENT 6 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 2

5.4.2 PERFORM Section VII.M, "ADD WASTE ITEMS TO TRANSFER STAND", of operating procedure as follows:

5.4.2.1 REDLINE procedure as needed during performance.

✓ 5.4.2.2 VERIFY DMSS0341 shows packets OTP6-97-000006, OTP6-97-000009, OTP6-97-000010, and OTP6-97-000011 on transfer stand.

5.4.2.3 VERIFY results of performance are acceptable.

TD Initials/Date: DD 7/21/97

5.4.3 PERFORM Section VII.N, "LOAD TRANSFER STAND INTO RWM DRUM", of operating procedure as follows:

5.4.3.1 REDLINE procedure as needed during performance.

✓ 5.4.3.2 VERIFY transfer stand is returned to transfer drum transfer drum OTP-TRUR-TD-02.

5.4.3.3 VERIFY results of performance are acceptable.

TD Initials/Date: DD 7/21/97

5.4.4 PERFORM Section VII.O, "CLOSE BAGLESS TRANSFER PORT (107-DO-07-401)", of operating procedure as follows:

5.4.4.1 REDLINE procedure as needed during performance.

✓ 5.4.4.2 Transfer drum OTP-TRUR-TD-02 is closed and removed from the transfer drum port.

5.4.4.3 VERIFY results of performance are acceptable.

TD Initials/Date: DD 7/21/97

ATTACHMENT 6 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 2

NOTE

Transfer drum OTP-TRUR-TD-02 with packets OTP6-97-000006, OTP6-97-000009, OTP6-97-000010, and OTP6-97-000011 will be used in Test Case 4. Storage should be nearby but out of work path.

5.4.5 REMOVE transfer drum OTP-TRUR-TD-02 with contents, from lift table.

✓ 5.4.5.1 STORE transfer drum OTP-TRUR-TD-02 until needed.

5.4.6 RUN DMS Report Script.

TD Initials/Date: 1/21/97

ATTACHMENT 7 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 3

1.0 GENERAL DESCRIPTION

1.1 Test Case three will treat items in Transfer Drum 1 Collection Containers. These operations will be tested using procedures WRP1-OP-0728, TRU/RWM Glovebox Operation and WRP1-OP-0711, Waste Treatment, thereby also performing the required procedure validation for sections performed. The sequence of events is as follows:

SS DO ONE TRIP

1.1.1 Empty ~~85~~ gallon ~~Entry/exit~~ drum OTP-TRUR-PD-01 is connected to TRU/RWM glovebox treated waste loadout port and lid is removed.

✓ 1.1.2 Transfer drum OTP-TRUR-TD-01 is connected to the TRU/RWM ~~entry~~ port, the lid is removed, and the transfer stand is moved to the treatment station.

DO ONE TRIP

✓ 1.1.3 Collection containers OTP6-97-000007 and OTP6-97-000008 are removed from the transfer stand.

✓ 1.1.4 Treatment container barcode label OTP6-97-900001 is applied to collection container OTP6-97-000007. The barcode labels are scanned to associate the treatment container with the collection container.

✓ 1.1.5 Contents of treatment container OTP6-97-900001 are treated.

1.1.6 Treatment container OTP6-97-900001 and contents are placed in treated waste loadout drum OTP-TRUR-PD-01.

✓ 1.1.7 Treatment container barcode label OTP6-97-900002 is applied to collection container OTP6-97-000008. The barcode labels are scanned to associate the treatment container with the collection container.

1.1.8 Contents of treatment container OTP6-97-900002 are treated.

1.1.9 Treatment Container OTP6-97-900002 and contents are placed in treated waste loadout drum OTP-TRUR-PD-01.

1.1.10 Physical component data for waste in the treated waste loadout drum is entered into DMS.

ATTACHMENT 7 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 3

1.1.11 Empty transfer stand is returned to transfer drum OTP-TRUR-TD-01. Transfer drum is closed and removed from transfer drum port and from lift table LT-09-201C.

2.0 SAFETY

2.1 Reference OTP Section 8, SAFETY.

3.0 TOOLS, EQUIPMENT AND SUPPLIES

- Drum handling (manual) equipment or Pallet fork truck
- Spill Kit/Decontamination Equipment (oils/chemicals)
- Tape and rags
- Other equipment, material or protective clothing (as required)

4.0 TEST PREREQUISITES

4.1 VERIFY OTP Section 11.0, PREREQUISITES are complete.

4.2 SET initial conditions as follows:

✓ 4.2.1 55 gallon, compliant waste loadout drum OTP-TRUR-PD-11 is connected to port 107-DO-07-402A and OPEN.

✓ 4.2.2 Transfer drum OTP-TRUR-TD-01 is on lift table LT-09-201C and contains the following collection containers from Test Case 1.0:

- OTP6-97-000007
- OTP6-97-000008

5 KD 9/22/97

✓ 4.2.3 Empty 85 gallon drum OTP-TRUR-PD-01 is at lift table LT-09-201A.

✓ 4.2.4 Two sequential treatment container barcode labels are available in the glovebox.

✓ 4.2.5 Required treatment supplies are available.

✓ 4.2.6 User with general operator (GENOP) privileges is logged on to DMS TRU Terminal (107-TE-12-104)

ATTACHMENT 7 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 3

✓ 4.2.7 Test scripts have been run to update DMS database as follows:

4.2.7.1 Load data for Treatment Worksheets OTPWRK01, OTPWRK02, OTPWRK03, OTPWRK05 and OTPWRK05.

4.2.7.2 Change location of transfer drums OTP-TRUR-TD-01 and OTP-TRUR-TD-02 to RWM-CRSL.

4.2.7.3 Change location of STC OTP6-97-300001 and transfer pig OTP6-97-400001 to SAMPLE_MGT.

4.2.7.4 Set BOT_RETURN_DT for sample bottles 97-00002-01L, 97-00003-01L, and 97-00004-01L to the system date/time.

4.2.7.5 Run DMS report script.

✓ 4.2.8 PCS database unchanged form Test Case 2.0.

✓ 4.2.9 UPDATE PCS Tracking Table for Drum OTP-TRUR-TD-01 at LT-09-201C as follows:

PCS TRACKING TABLE FOR TRU/RWM LIFT TABLES		
LIFT TABLE	Registers	
	PIN	Drum Present (=1)
LT-09-201C	N32 134-140	N32 145 bit 12

4.3 TEST PREREQUISITES are complete and acceptable.

TD Initials/Date: QV 12/22/97

ATTACHMENT 7 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 3

5.0 PROCEDURE

5.1 **REFERENCE** procedure WRP1-OP-0728, TRU/RWM GLOVEBOX OPERATION:

5.1.1 **PERFORM** Section VII.A, "INITIALIZE SYSTEM", of operating procedure as follows:

5.1.1.1 **REDLINE** procedure as needed during performance.

5.1.1.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: AD / 7/22/97

5.1.2 **PERFORM** Section VII.B, "OPEN BAGLESS TRANSFER PORT (107-DO-07-401)", of operating procedure as follows:

5.1.2.1 **REDLINE** procedure as needed during performance.

✓ 5.1.2.2 **VERIFY** drum OTP-TRUR-TD-01 connected to port 107-DO-07-401 and port OPEN.

5.1.2.3 **VERIFY** results of performance are acceptable.

TD Initials/Date: AD / 7/22/97

5.1.3 **PERFORM** Section VII.C, "REMOVE TRANSFER STAND FROM DRUM", of operating procedure as follows:

5.1.3.1 **REDLINE** procedure as needed during performance.

✓ 5.1.3.2 **VERIFY** transfer stand at glovebox treatment station.

5.1.3.3 **VERIFY** results of performance are acceptable.

TD Initials/Date: AD / 7/22/97

ATTACHMENT 7 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 3

5.1.4 **PERFORM** Section VII.E, "REMOVE WASTE ITEMS FROM TRANSFER STAND FOR TREATMENT", of operating procedure as follows:

5.1.4.1 **REDLINE** procedure as needed during performance.

5.1.4.2 **REMOVE** items specified on worksheet OTPWRK01.

✓ 5.1.4.3 **VERIFY** DMSS0341 indicates collection container OTP6-97-000007 in transfer drum prior to removal from transfer stand.

✓ 5.1.4.4 **VERIFY** DMSS0341 indicates collection container OTP6-97-000007 at TRU/RWM treatment station after removal from transfer stand.

✓ 5.1.4.5 **VERIFY** results of performance are acceptable.

TD Initials/Date: 7/22/97

5.1.5 **PERFORM** Section VII.H, "OPEN NON-COMPLIANT WASTE PORT (107-DO-07-402B)", of operating procedure as follows:

5.1.5.1 **REDLINE** procedure as needed during performance.

✓ 5.1.5.2 **VERIFY** drum OTP-TRUR-PD-01 connected to port 107-DO-07-402B and port OPEN.

5.1.5.3 **VERIFY** results of performance are acceptable.

TD Initials/Date: 7/22/97

ATTACHMENT 7 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 3

5.1.6 PERFORM Section VII.E, "REMOVE WASTE ITEMS FROM TRANSFER STAND FOR TREATMENT", of operating procedure as follows:

5.1.6.1 REDLINE procedure as needed during performance.

5.1.6.2 REMOVE items specified on worksheet OTPWRK02.

5.1.6.3 VERIFY DMSS0341 indicates collection container OTP6-97-000008 in transfer drum prior to removal from transfer stand.

5.1.6.4 VERIFY DMSS0341 indicates collection container OTP6-97-000008 at TRU/RWM treatment station after removal from transfer stand.

5.1.6.5 VERIFY results of performance are acceptable.

TD Initials/Date: 7/22/97

5.1.7 PERFORM Section VII.K, "TREAT NON-COMPLIANT WASTE ITEMS", of operating procedure as follows:

5.1.7.1 REDLINE procedure as needed during performance.

5.1.7.2 TREAT items specified on worksheet OTPWRK01.

ATTACHMENT 7 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 3

NOTE
Section VII.K, "TREAT NON-COMPLIANT WASTE ITEMS" of WRP1-OP-0728 directs performance of WRP1-OP-0711, Waste Treatment. Completion of this step will validate WRP1-OP-0711.

5.1.7.3 **PERFORM** procedure WRP1-OP-0711, Waste Treatment when directed by glovebox operating procedure.

✓ 5.1.7.4 **VERIFY** treatment container barcode label OTP6-97-900001 is applied to collection container OTP6-97-000007. The barcode labels are scanned to associate the treatment container with the collection container.

✓ 5.1.7.5 **VERIFY** contents of treatment container OTP6-97-900001 are treated.

✓ 5.1.7.6 **ENTER** data for Treatment Container OTP6-97-900001 on DMSS0346 when directed by operating procedures:

- Waste Description: 1L bottle of saline solution treated with (field entry)
- Treatment Comments: (field entry)
- "Compliant" box for OTP6-97-000007 not checked

✓ 5.1.7.7 **VERIFY** treatment container barcode label OTP6-97-900002 is applied to collection container OTP6-97-000008 and barcode labels are scanned to associate the treatment container with the collection container.

✓ 5.1.7.8 **VERIFY** contents of treatment container OTP6-97-900002 are treated.

9/24/97
ETR: JAR WILL NOT EFFECTIVE WITH LOW WATER VOLUME IN TREATMENT CONTAINER

ATTACHMENT 7 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 3

✓ 5.1.7.9 **ENTER** data for Treatment Container OTP6-97-900002 on DMSS0346 when directed by operating procedures:

- Waste Description: 1L bottle of acetic acid treated with (field entry)
- Treatment Comments: (field entry)
- "Compliant" box for OTP6-97-000008 not checked

5.1.7.10 **VERIFY** results of performance are acceptable.

TD Initials/Date: QQ 1/22/97

5.1.8 **PERFORM** Section VII.L, "TREATED WASTE ITEM LOADOUT", of operating procedure as follows:

5.1.8.1 **REDLINE** procedure as needed during performance.

5.1.8.2 **VERIFY** Treatment container OTP6-97-900001 and contents are placed in non-compliant waste loadout drum OTP-TRUR-PD-01.

5.1.8.3 **VERIFY** Treatment container OTP6-97-900002 and contents are placed in non-compliant waste loadout drum OTP-TRUR-PD-01.

5.1.8.4 **ENTER** treated waste drum information on DMSS0348 PHYSCOMP screen when directed by operating procedure:

- Description: ABSORBED AQUEOUS
- Volume Percent: 95
- Weight: 4

- Description: PLASTIC/POLYURATHANE
- Volume Percent: 5
- Weight: 1

5.1.8.5 **VERIFY** results of performance are acceptable.

TD Initials/Date: SPA 1/22/97

ATTACHMENT 7 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 3

5.1.9 **PERFORM** Section VII.N, "LOAD TRANSFER STAND INTO RWM DRUM", of operating procedure as follows:

5.1.9.1 **REDLINE** procedure as needed during performance.

5.1.9.2 **VERIFY** empty transfer stand is returned to transfer drum OTP-TRUR-TD-01.

5.1.9.3 **VERIFY** results of performance are acceptable.

TD Initials/Date: SPA 1/22/97

5.1.10 **PERFORM** Section VII.O, "CLOSE BAGLESS TRANSFER PORT (107-DO-07-401)", of operating procedure as follows:

5.1.10.1 **REDLINE** procedure as needed during performance.

5.1.10.2 **VERIFY** transfer drum is closed and lowered from transfer port.

5.1.10.3 **VERIFY** results of performance are acceptable.

TD Initials/Date: SPA 1/22/97

NOTE
Transfer drum OTP-TRUR-TD-01 will not be used for duration of test.

5.2 **REMOVE** transfer drum OTP-TRUR-TD-01 from lift table LT-09-201C and **STORE** for disposal at end of testing.

TD Initials/Date: SPA 1/22/97

— TEST SCRIPT RUN

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

1.0 GENERAL DESCRIPTION

1.1 Test Case four will treat items in Transfer Drum 2 packets and samples in STC-2 which were taken from these items. These operations will be tested using procedures WRP1-OP-0710, Glovebox Waste Sampling, WRP1-OP-0728, TRU/RWM Glovebox Operation and WRP1-OP-0711, Waste Treatment, thereby also performing the required procedure validation for sections performed. The sequence of events is as follows:

1.1.1 STC OTP6-97-300002 is connected to the TRU/RWM glovebox STC port

1.1.2 Transfer drum OTP-TRUR-TD-02 is connected to the TRU/RWM entry port, the lid is removed, and the transfer stand is moved to the treatment station.

1.1.3 The two treatment containers are loaded into the glovebox through the Consumable Materials port.

1.1.4 Worksheet OTPWRK03 is selected and Packet OTP6-97-000010 is removed from the transfer stand.

1.1.5 Sample bottles 97-00002-01L and 97-00003-01L are removed from STC OTP6-97-300002.

1.1.6 Treatment container barcode label OTP6-97-900003 is applied to an empty treatment container. The contents of packet OTP6-97-000010 and sample bottles 97-00002-01L and 97-00003-01L are added to the treatment container. The packet bottle and sample bottles are added to compliant waste loadout drum OTP-TRUR-PD-11.

1.1.7 The contents of treatment container OTP6-97-900003 are treated.

1.1.8 Treatment Container OTP6-97-900003 and contents are placed in the treated waste loadout drum OTP-TRUR-PD-01.

1.1.9 Worksheet OTPWRK04 is selected and Packet OTP6-97-000011 is removed from the transfer stand.

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

1.1.10 Sample bottle 97-00004-01L is removed from STC OTP6-97-300002.

1.1.11 Treatment container barcode label OTP6-97-900004 is applied to an empty treatment container. The contents of packet OTP6-97-000011 and sample bottle 97-00004-01L are added to the treatment container. The packet bottle and sample bottle are added to compliant waste loadout drum OTP-TRUR-PD-11.

1.1.12 The contents of treatment container OTP6-97-900004 are treated.

1.1.13 Treatment container OTP6-97-900004 and contents are placed in the treated waste loadout drum OTP-TRUR-PD-01.

1.1.14 Worksheet OTPWRK05 is selected and Packet OTP6-97-000006 is removed from the transfer stand.

1.1.15 Treatment container barcode label OTP6-97-900005 is applied to collection container OTP6-97-000006. The barcode labels are scanned to associate the treatment container with the collection container.

1.1.16 The contents of treatment container OTP6-97-900005 are treated.

1.1.17 Treatment Container OTP6-97-900005 and contents are placed in treated waste loadout drum OTP-TRUR-PD-01.

1.1.18 The transfer stand with packet OTP6-97-000009 is returned to transfer drum OTP-TRUR-TD-02. The transfer drum is closed and removed from the transfer drum port and from lift table LT-09-201C.

1.1.19 Empty STC OTP6-97-300002 is removed from TRU/RWM glovebox STC port.

1.1.20 Physical component data for waste in the treated waste drum is updated in DMS.

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

1.1.21 Hazardous chemical component data for waste in the treated waste drum is entered into DMS.

NOT AVAILABLE DO 7/22/97

1.1.22 ~~Filler is added to Treated waste drum OTP-TRUR-PD-01 and the drum is prepared for loadout.~~

1.1.23 Treated waste drum OTP-TRUR-PD-01 is closed and removed from the treated waste loadout port. The drum is surveyed and a seal attached, then removed from lift table LT-09-201A.

1.1.24 Physical component data for waste in the compliant waste loadout drum is updated in DMS.

1.1.25 Compliant waste loadout drum OTP-TRUR-PD-11 is prepared for loadout.

1.1.26 Compliant waste loadout drum OTP-TRUR-PD-11 is closed and removed from the compliant waste loadout port. The drum is surveyed and a seal attached, then removed from lift table LT-09-201B.

1.1.27 Print DMS database.

2.0 SAFETY

2.1 Reference OTP Section 8, SAFETY.

3.0 TOOLS, EQUIPMENT AND SUPPLIES

- Drum handling (manual) equipment or Pallet fork truck
- Spill Kit/Decontamination Equipment (oils/chemicals)
- Tape and rags
- Other equipment, material or protective clothing (as required)

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

4.0 TEST PREREQUISITES

4.1 VERIFY OTP Section 11.0, PREREQUISITES are complete.

4.2 SET initial conditions as follows:

✓ 4.2.1 55 gallon, compliant waste loadout drum OTP-TRUR-PD-11 is connected to port 107-DO-07-402A and OPEN.

✓ 4.2.2 ~~85~~ 55 gallon, non-compliant waste loadout drum OTP-TRUR-PD-01 connected to port 107-DO-07-402B and OPEN.

✓ 4.2.3 Transfer drum OTP-TRUR-TD-02 is on lift table LT-09-201C and contains the following packets from Test Case 2.0:

- OTP6-97-000006,
- OTP6-97-000009
- OTP6-97-000010
- OTP6-97-000011

✓ 4.2.4 Sample Transport Container OTP6-97-300002 (STC-2) is at the Sample Management Office and contains the following samples from Test Case 2.0:

- 97-00002-01L
- 97-00003-01L
- 97-00004-01L

✓ 4.2.5 Two, one liter treatment containers are ready for loading into the glovebox through the Consumable Materials port.

✓ 4.2.6 Three sequential treatment container barcode labels are available in the glovebox.

✓ 4.2.7 Required sampling supplies are available.

✓ 4.2.8 User with general operator (GENOP) privileges is logged on to DMS TRU Terminal (107-TE-12-104).

✓ 4.2.9 DMS database is unchanged from Test Case 3.0.

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

✓ 4.2.10 PCS database is unchanged from Test Case 3.0.

✓ 4.2.11 UPDATE PCS Tracking Table for Drum OTP-TRUR-TD-02 at LT-09-201C as follows:

PCS TRACKING TABLE FOR TRU/RWM LIFT TABLES		
LIFT TABLE	Registers	
	PIN	Drum Present (=1)
LT-09-201C	N32 134-140	N32 145 bit 12

4.3 TEST PREREQUISITES are complete and acceptable.

TD Initials/Date: DD / 12/22/97

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

5.0 PROCEDURE

5.1 REFERENCE procedure WRP1-OP-0710, GLOVEBOX WASTE SAMPLING:

5.1.1 PERFORM Section VII.D.1 "ATTACH STC TO GLOVEBOX", of operating procedure as required to attach STC-2 to glovebox.

5.1.1.1 REDLINE procedure as needed during performance.

5.1.1.2 VERIFY results of performance are acceptable.

TD Initials/Date: 1/22/97

5.1.2 PERFORM Section VII.D.2, "OPEN STC", of operating procedure as required to open STC-2.

5.1.2.1 REDLINE procedure as needed during performance.

5.1.2.2 VERIFY results of performance are acceptable.

TD Initials/Date: 1/22/97

5.2 REFERENCE procedure WRP1-OP-0728, TRU/RWM GLOVEBOX OPERATION:

5.2.1 PERFORM Section VII.A, "INITIALIZE SYSTEM", of operating procedure as follows:

5.2.1.1 REDLINE procedure as needed during performance.

5.2.1.2 VERIFY results of performance are acceptable.

TD Initials/Date: 1/22/97

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

5.2.2 **PERFORM** Section VII.B, "OPEN BAGLESS TRANSFER PORT (107-DO-07-401)", of operating procedure as follows:

5.2.2.1 **REDLINE** procedure as needed during performance.

5.2.2.2 **VERIFY** drum OTP-TRUR-TD-02 connected to port 107-DO-07-401 and port OPEN.

5.2.2.3 **VERIFY** results of performance are acceptable.

TD Initials/Date: AD / 7/22/97

5.2.3 **PERFORM** Section VII.C, "REMOVE TRANSFER STAND FROM DRUM", of operating procedure as follows:

5.2.3.1 **REDLINE** procedure as needed during performance.

5.2.3.2 **VERIFY** transfer stand at glovebox treatment station.

5.2.3.3 **VERIFY** results of performance are acceptable.

TD Initials/Date: AD / 7/22/97

5.2.4 **PERFORM** Section VII.E, "REMOVE WASTE ITEMS FROM TRANSFER STAND FOR TREATMENT", of operating procedure as follows:

ETR Form 4016: No contrabes items

5.2.4.1 **REDLINE** procedure as needed during performance.

✓ 5.2.4.2 **REMOVE** items specified on worksheet OTPWRK03.

✓ 5.2.4.3 **VERIFY** DMS screen DMSS0344, worksheet OTPWRK03 indicates packet OTP6-97-000010 in transfer drum prior to removal from transfer stand.

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

NOTE

Packet OTP6-97-000009 is on a different worksheet & should not show on worksheet OTPWRK02.

✓ 5.2.4.4 **VERIFY** DMS worksheet OTPWRK02 does not indicate packet OTP6-97-000009.

✓ 5.2.4.5 **VERIFY** packet OTP6-97-000010 removed from transfer stand.

5.2.4.6 **VERIFY** after "refresh" of DMS screen DMSS0344, Worksheet OTPWRK03 that DMS indicates:

✓ • Packet OTP6-97-000010 at glovebox treatment station.

✓ • "Item Containers to be Retrieved" is "0" for packets and "1" for samples.

5.2.4.7 **VERIFY** results of performance are acceptable.

TD Initials/Date: 1/24/97

5.2.5 **PERFORM** Section VII.F, "REMOVE SAMPLE BOTTLES FROM STC FOR TREATMENT", of operating procedure as required to unload samples from STC, as follows:

5.2.5.1 **REDLINE** procedure as needed during performance.

✓ 5.2.5.2 **VERIFY** DMS screen DMSS0344, Worksheet OTPWRK03, indicates sample bottles 97-00002-01L and 97-00003-01L in STC-2 prior to removal from STC.

✓ 5.2.5.3 **VERIFY** samples 97-00002-01L and 97-00003-01L, are removed from STC-2.

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

5.2.5.4 **VERIFY** after "refresh" of DMS screen DMSS0344, Worksheet OTPWRK02 that DMS indicates:

- ✓ Samples 97-00002-01L and 97-00003-01L at glovebox treatment station.
- ✓ "Item Containers to be Retrieved" is "0" for both packets and samples.

5.2.5.5 **VERIFY** results of performance are acceptable.

TD Initials/Date: QD / 7/22/97

5.2.6 **PERFORM** Section VII.E, "REMOVE WASTE ITEMS FROM TRANSFER STAND FOR TREATMENT", of operating procedure as follows:

5.2.6.1 **REDLINE** procedure as needed during performance.

✓ 5.2.6.2 **REMOVE** items specified on worksheet OTPWRK04.

✓ 5.2.6.3 **VERIFY** DMS screen DMSS0344, worksheet OTPWRK04 indicates packet OTP6-97-000011 in transfer drum prior to removal from transfer stand.

✓ 5.2.6.4 **VERIFY** packet OTP6-97-000011 removed from transfer stand.

✓ 5.2.6.5 **VERIFY** after "refresh" of DMS screen DMSS0344, Worksheet OTPWRK04 that DMS indicates:

- ✓ Packet OTP6-97-000011 at glovebox treatment station.
- ✓ "Item Containers to be Retrieved" is "0" for packets and "0" for samples.

5.2.6.6 **VERIFY** results of performance are acceptable.

TD Initials/Date: QD / 7/22/97

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

5.2.7 **PERFORM** Section VII.F, "REMOVE SAMPLE BOTTLES FROM STC FOR TREATMENT", of operating procedure as required to remove sample bottles from STC-2 as follows:

5.2.7.1 **REDLINE** procedure as needed during performance.

✓ 5.2.7.2 **VERIFY** DMS screen DMSS0344, Worksheet OTPWRK04, indicates sample bottle 97-00004-01L.

✓ 5.2.7.3 **VERIFY** sample 97-00004-01L removed from STC-2.

✓ 5.2.7.4 **VERIFY** after "refresh" of DMS screen DMSS0344, Worksheet OTPWRK04 that DMS indicates:

- ✓ Sample 97-00004-01L at glovebox treatment station.
- ✓ "Item Containers to be Retrieved" is "0" for both packets and samples.

5.2.7.5 **VERIFY** results of performance are acceptable.

TD Initials/Date: DD 12/22/97

5.2.8 **PERFORM** Section VII.K, "TREAT NON-COMPLIANT WASTE ITEMS", of operating procedure as follows:

5.2.8.1 **REDLINE** procedure as needed during performance.

✓ 5.2.8.2 **TREAT** items specified on worksheet OTPWRK03.

NOTE
Section VII.K, "TREAT NON-COMPLIANT WASTE ITEMS" of WRP1-OP-0728 directs performance of WRP1-OP-0711, Waste Treatment. Completion of this step will validate WRP1-OP-0711.

✓ 5.2.8.3 **PERFORM** procedure WRP1-OP-0711, Waste Treatment when directed by glovebox operating procedure.

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

✓ 5.2.8.4 **VERIFY** empty treatment containers are loaded into glovebox through Consumable Materials port, when required.

✓ 5.2.8.5 **VERIFY** Treatment container barcode label OTP6-97-900003 is applied to an empty treatment container:

✓ 1) Contents of packet OTP6-97-000010 and sample bottles 97-00002-01L and 97-00003-01L are added to the treatment container.

✓ 2) Packet bottle and sample bottles are added to compliant waste loadout drum OTP-TRUR-PD-11.

5.2.8.6 **VERIFY** on DMSS0346 for Treatment Container OTP6-97-900003:

✓ • "Compliant" boxes "checked" for packet OTP6-97-000010 and sample bottles 97-00002-01L and 97-00003-01L.

5.2.8.7 **UPDATE** Compliant Loadout Drum OTP-TRUR-PD-11 information on DMSS0346 when directed by operating procedures:

✓ • Waste Description: add "Empty 1L plastic bottle. Two empty sample bottles."

✓ 5.2.8.8 **VERIFY** contents of treatment container OTP6-97-900003 are treated.

5.2.8.9 **ENTER** data for Treatment Container OTP6-97-900003 on DMSS0346 when directed by operating procedures:

✓ • Waste Description: 1L bottle of solvent treated with (field entry)

✓ • Treatment Comments: (field entry)

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

✓ 5.2.8.10 **VERIFY** treatment container barcode label OTP6-97-900004 is applied to empty treatment container:

✓ 1) **VERIFY** contents of packet OTP6-97-000011 and sample bottle 97-00004-01L are added to the treatment container OTP6-97-900004.

✓ 2) **VERIFY** packet bottle and sample bottle are added to compliant waste loadout drum OTP-TRUR-PD-11.

5.2.8.11 **ENTER** data for Treatment Container OTP6-97-900004 on DMSS0346 when directed by operating procedures:

✓ • Check "Compliant" boxes for packet OTP6-97-000011 and sample bottle 97-00004-01L.

5.2.8.12 **UPDATE** compliant waste loadout drum information on DMSS0346 when directed by operating procedures:

✓ • Waste Description: ~~add~~ modify "Two empty 1L plastic bottles. Three empty sample bottles." DD 7/24/97

✓ 5.2.8.13 **VERIFY** contents of treatment container OTP6-97-900004 are treated.

✓ 5.2.8.14 **ENTER** data for Treatment Container OTP6-97-900004 on DMSS0346 when directed by operating procedures:

- Waste Description: 1L bottle of oil treated with (field entry)
- Treatment Comments: (field entry)

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

5.2.9 PERFORM Section VII.E, "REMOVE WASTE ITEMS FROM TRANSFER STAND FOR TREATMENT", of operating procedure as follows:

5.2.9.1 REDLINE procedure as needed during performance.

✓ 5.2.9.2 REMOVE items specified on worksheet OTPWRK05.

✓ 5.2.9.3 VERIFY DMS screen DMSS0344, worksheet OTPWRK05 indicates packet OTP6-97-000006 in transfer drum prior to removal from transfer stand.

✓ 5.2.9.4 VERIFY packet OTP6-97-000006 removed from transfer stand.

✓ 5.2.9.5 VERIFY after "refresh" of DMS screen DMSS0344, Worksheet OTPWRK04 that DMS indicates:

- Packet OTP6-97-000006 at glovebox treatment station.
- "Item Containers to be Retrieved" is "0" for packets and "1" for samples.

✓ 5.2.9.6 VERIFY results of performance are acceptable.

TD Initials/Date: TD 1/22/97

✓ 5.2.9.7 VERIFY treatment container barcode label OTP6-97-900005 is applied to collection container OTP6-97-000006 and barcode labels are scanned to associate the treatment container with the collection container.

✓ 5.2.9.8 VERIFY contents of treatment container OTP6-97-900005 are treated.

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

5.2.9.9 ENTER data for Treatment Container OTP6-97-900005 on DMSS0346 when directed by operating procedures:

✓
- Waste Description: 1L bottle of acid treated with (field entry)
- Treatment Comments: (field entry)
- "Compliant" box for OTP6-97-000006 "not checked"

5.2.9.10 VERIFY results of performance are acceptable.

TD Initials/Date: DD / 7/22/97

5.2.10 PERFORM Section VII.L, "TREATED WASTE ITEM LOADOUT", of operating procedure as follows:

5.2.10.1 REDLINE procedure as needed during performance.

✓ 5.2.10.2 VERIFY Treatment container OTP6-97-900003 and contents are placed in non-compliant waste loadout drum OTP-TRUR-PD-01.

✓ 5.2.10.3 VERIFY Treatment container OTP6-97-900004 and contents are placed in non-compliant waste loadout drum OTP-TRUR-PD-01.

✓ 5.2.10.4 VERIFY Treatment container OTP6-97-900005 and contents are placed in non-compliant waste loadout drum OTP-TRUR-PD-01.

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

✓ 5.2.10.5 UPDATE treated waste drum information on DMSS0348 PHYSCOMP when directed by operating procedure:

- Description: ABSORBED AQUEOUS
- Volume Percent: ~~60~~ 5 DD 7/22/97
- Weight: 6

- Description: PLASTIC/POLYURATHANE
- Volume Percent: 5
- Weight: 2

- Description: HAZARDOUS CONSTITUENTS
- Volume Percent: 45
- Weight: 4

✓ 5.2.10.6 ENTER treated waste drum information on DMSS0348 CHEMCOMP when directed by operating procedure:

- ID: Temp 0429 DD 7/22/97 ~~67-64-1~~
- Description: ACETONE
- Weight: 2

- ID: Temp2118 DD 7/22/97 ~~64742-63-8~~
- Description: ~~REFINED PETROLEUM OIL~~ LUBRICANT
- Weight: 2

5.2.10.7 VERIFY results of performance are acceptable.

TD Initials/Date: DD 7/22/97

5.2.11 PERFORM Section VII.N, "LOAD TRANSFER STAND INTO RWM DRUM", of operating procedure as follows:

5.2.11.1 REDLINE procedure as needed during performance.

5.2.11.2 VERIFY transfer stand with packet OTP6-97-000009 is returned to transfer drum OTP-TRUR-TD-02.

5.2.11.3 VERIFY results of performance are acceptable.

TD Initials/Date: DD 7/22/97

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

5.2.12 **PERFORM** Section VII.O, "CLOSE BAGLESS TRANSFER PORT (107-DO-07-401)", of operating procedure as follows:

5.2.12.1 **REDLINE** procedure as needed during performance.

NOTE
Transfer drum OTP-TRUR-TD-01 will not be used for duration of test.

5.2.12.2 **VERIFY** transfer drum is closed and lowered from transfer port.

√ 5.2.12.3 **UPDATE** compliant waste loadout drum information DMSS0343 PHYSCOMP when directed by operating procedure:

- Description: PLASTIC/POLYURATHANE
- Volume Percent: 40
- Weight: 4

- Description: METAL/IRON/GALVANIZED/ SHEET
- Volume Percent: 10
- Weight: 1

- Description: CLOTH/RAGS/NYLON/TAPE/ ROPE
- Volume Percent: 50
- Weight: 4

5.2.12.4 **VERIFY** results of performance are acceptable.

TD Initials/Date: DD 12/22/97

5.2.13 **PERFORM** Section VII.P, "CLOSE COMPLIANT WASTE PORT (107-DO-07-402A)", of operating procedure as follows:

5.2.13.1 **REDLINE** procedure as needed during performance.

√ 5.2.13.2 **VERIFY** compliant waste loadout drum OTP-TRUR-PD-11 is prepared for loadout.

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

ETR ✓ DRUM STUCK ON PORT WHEN PORT LOCKED. DP 7/22/97

✓ 5.2.13.3 **ENTER** compliant waste loadout drum data on DMSS0343 when directed by operating procedures:

- Primary Waste Type = R
- Haz. Waste Storage Cat. = ANY
- Assay Profile No. = TRU-10
- ~~Assay~~ Profile ~~Flag~~ = N DEFAULT ID DP 7/22/97

ETR Need to adjust lock sensor.

✓ 5.2.13.4 **VERIFY** compliant waste drum OTP-TRUR-PD-11 is closed and lowered from port.

Simulated → 5.2.13.5 **VERIFY** drum is surveyed by RCT and a seal attached.

→ 5.2.13.6 **ENTER** treated waste drum data on DMSS0343 when directed by operating procedures:

- Beta/Gamma Dose Rate = 5 mr

5.2.13.7 **VERIFY** results of performance are acceptable.

TD Initials/Date: DD / ~~7/22~~ 7/22/97

5.2.14 **PERFORM** Section VII.Q, "CLOSE NON-COMPLIANT WASTE PORT (107-DO-07-402B)", of operating procedure as follows:

5.2.14.1 **REDLINE** procedure as needed during performance.

✓ 5.2.14.2 **VERIFY** Filler is added to non-compliant waste drum OTP-TRUR-PD-01 and the drum is prepared for loadout.

✓ 5.2.14.3 **ENTER** treated waste loadout drum data on DMSS0348 when directed by operating procedures:

Not available DD 2/11/98 per telecon Jpk

- ~~Void Filler = (field entry)~~
- ~~Filler Weight = (field entry)~~
- Primary Waste Type = M
- Haz. Waste Storage Cat. = ANY
- Assay Profile No. = TRU-10
- Assay Profile Flag = N

ATTACHMENT 8 - TEST PLAN, TRU/RWM GLOVEBOX AUTOMATIC TEST CASE 4

✓ 5.2.14.4 VERIFY drum OTP-TRUR-PD-01 is closed and lowered from port.

5.2.14.5 VERIFY drum is surveyed by RCT and a seal attached.

5.2.14.6 ENTER treated waste loadout drum data on screen DMSS0348 when directed by operating procedures:

- Beta/Gamma Dose Rate = 5

5.2.14.7 VERIFY results of performance are acceptable.

TD Initials/Date: AD / 7/23/97

5.3 REFERENCE procedure WRP1-OP-0710, GLOVEBOX WASTE SAMPLING:

5.3.1 PERFORM Section VII.G, "FINAL SAMPLE PREPARATION AND LOADOUT", of operating procedure as required to remove STC-2 from glovebox.

5.3.1.1 VERIFY results of performance are acceptable.

TD Initials/Date: /

NOTE
Steps 5.4 through 5.6 may be performed in any order.

5.4 REMOVE transfer drum OTP-TRUR-TD-01 from lift table LT-09-201C.

TD Initials/Date: AD / 7/23/97

5.5 REMOVE drum OTP-TRUR-PD-01 from lift table LT-09-201A.

TD Initials/Date: AD / 7/23/97

5.6 REMOVE drum OTP-TRUR-PD-11 from lift table LT-09-201B.

TD Initials/Date: AD / 7/23/97

5.7 RUN DMS Report Script.

TD Initials/Date: AD / 7/23/97

ATTACHMENT 9 - TEST PLAN, TRU/RWM GLOVEBOX RESTART

1.0 GENERAL DESCRIPTION

1.1 This procedure provides instructions for testing restart of the TRU/RWM Glovebox. These operations will be tested using procedure WRP1-OP-0722, Restart RWM Glovebox Operation, thereby also performing the required procedure validation.

2.0 SAFETY

2.1 Reference OTP Section 8, SAFETY.

3.0 TOOLS, EQUIPMENT AND SUPPLIES

- Drum handling (manual) equipment or Pallet fork truck
- Spill Kit/Decontamination Equipment (oils/chemicals)
- Tape and rags
- Other equipment, material or protective clothing (as required)

4.0 TEST PREREQUISITES

4.1 VERIFY OTP Section 11.0, PREREQUISITES are complete.

4.2 Transfer drum OTP-TRUR-TD-01 on lift table LT-09-201C.

4.3 Drum OTP-TRUR-PD-01 on lift table LT-09-201A.

4.4 Drum OTP-TRUR-PD-11 on lift table LT-09-201B.

TD Initials/Date: SPA 1/15/97

ATTACHMENT 9 - TEST PLAN, TRU/RWM GLOVEBOX RESTART

4.5 UPDATE PCS Tracking Table as follows:

4.5.1 Drum OTP-TRUR-PD-11 at LT-09-201B.

4.5.2 Drum OTP-TRUR-TD-01 at LT-09-201C.

4.5.3 Drum OTP-TRUR-PD-01 at LT-09-201A.

PCS TRACKING TABLE FOR TRU/RWM LIFT TABLES		
LIFT TABLE	Registers	
	PIN	Drum Present (=1)
LT-09-201A	N32 110-116	N32 121 bit 12
LT-09-201B	N32 122-128	N32 133 bit 12
LT-09-201C	N32 134-140	N32 145 bit 12

4.6 TEST PREREQUISITES are complete and acceptable.

TD Initials/Date: SPA 1/15/97

ATTACHMENT 9 - TEST PLAN, TRU/RWM GLOVEBOX RESTART

5.0 PROCEDURE

5.1 **REFERENCE** procedure WRP1-OP-0728, TRU/RWM GLOVEBOX OPERATION:

5.1.1 **PERFORM** Section VII.A, "INITIALIZE SYSTEM", of operating procedure as follows:

5.1.1.1 **VERIFY** results of performance are acceptable.

TD Initials/Date: SPA / 7/15/97

5.1.2 **PERFORM** Section VII.B, "OPEN BAGLESS TRANSFER PORT (107-DO-07-401)", of operating procedure as follows:

5.1.2.1 **VERIFY** drum OTP-TRUR-TD-01 connected to port 107-DO-07-401 and port OPEN.

5.1.2.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: SPA / 7/15/97

ATTACHMENT 9 - TEST PLAN, TRU/RWM GLOVEBOX RESTART

5.1.3 **PERFORM** Section VII.C, "REMOVE TRANSFER STAND FROM DRUM", of operating procedure as follows:

5.1.3.1 **VERIFY** transfer stand at glovebox sample station.

5.1.3.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: SPA 7/15/97

NOTE
The exact point at which EMERGENCY STOP is pressed is not critical, so long as port 107-DO-07-402A has not completed the opening sequence.

5.1.4 **PERFORM** Section VII.G, "OPEN COMPLIANT WASTE PORT (107-DO-07-402A)", of operating procedure as follows:

5.1.4.1 **WHEN** port 107-DO-07-402A is approximately half way open,
THEN, PRESS EMERGENCY STOP switch (107-HS-07-315) on DMS console (107-TE-12-103).

TD Initials/Date: SPA 7/15/97

5.1.4.2 **VERIFY** TRU/RWM Glovebox operations STOP.

ETR

TD Initials/Date: SPA 7/15/97

5.2 **REFERENCE** procedure WRP1-OP-0722, Restart RWM Glovebox Operation:

5.2.1 **PERFORM** Section VII.A, "DETERMINE GLOVEBOX EQUIPMENT STATUS", of operating procedure as follows:

5.2.1.1 **REDLINE** procedure as needed during performance.

5.2.1.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: SPA 7/15/97

ATTACHMENT 9 - TEST PLAN, TRU/RWM GLOVEBOX RESTART

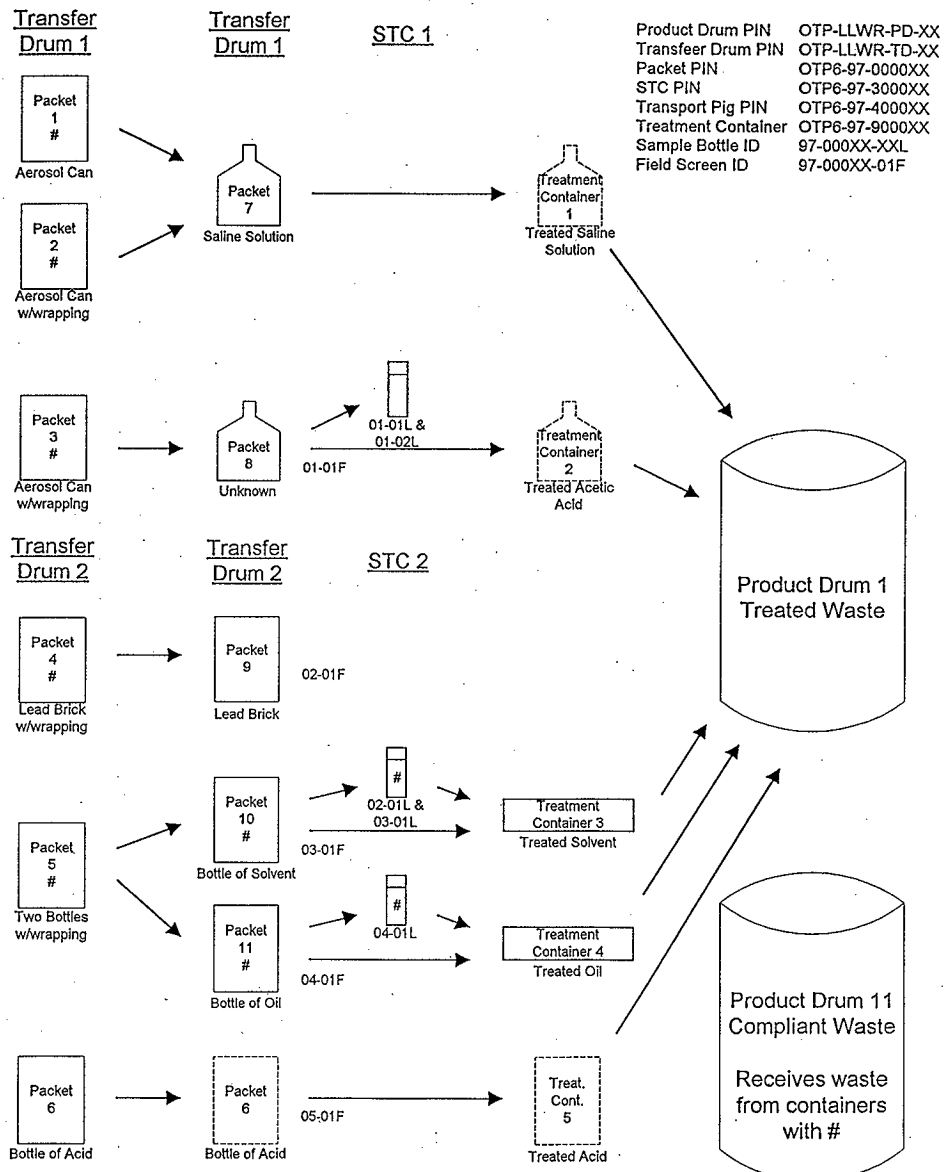
5.2.2 **PERFORM** Section VII.B, "RETURN RWM GLOVEBOXES TO OPERATION", of operating procedure as follows:

5.2.2.1 **REDLINE** procedure as needed during performance.

5.2.2.2 **VERIFY** results of performance are acceptable.

TD Initials/Date: SPA / 7/15/97

LLW RWM GLOVEBOX OTP WASTE AND SAMPLE TRACKING



WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 132

: N DMS

: HNF-SD-W026-OTP-014

Step : Att 5, 5.2.4 **Equipment Tag #:** DMS Software

Exception : 1

Revision :

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weldert

Exception Description :

DMS screen DMSS0341. When there is no transfer drum present and [Exit] button is selected, the pop-up message "FRM-40202 field must be entered [OK]" is displayed. When [OK] is selected screen is exited.

Exception Disposition :

Duplicate of #162 and #181.

Exception Status :

Exception Closed By : Rosnick E K Rosnick **Date :** 7/24/97

APPROVAL OF RESOLUTION

Contractor Representative: *(Only as needed)* N/A Date:

WMH Representative: L R Weldert Date: 12-10-97

Additional Approval: *(Only as needed)* Date:

FDNW Representative: Date:

6:51:11 AM,

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 162

ATP_YN : N DMS

Test : HNF-SD-W026-OTP-014

Step : ATT. 5, 5.2.4 Equipment Tag #: DMS Software

Exception :

Revision :

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weidert

Exception Description :

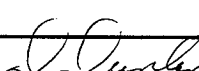
DMS Screen MMSS0341. When there is no transfer drum present and [Exit] button is selected, the pop-up message "FRM-40202 Field must be entered [ok]" is displayed. When [ok] is selected screen is exited.

Exception Disposition :

Duplicate of #132 and #181. Software corrected.

Exception Status :

Ready to test.

Exception Closed By : Dunlap  **Date :** 9/15/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative:  Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 163

ATP_YN : N DMS

Exception : 2

Test : HNF-SD-W026-OTP-014

Revision :

Step : ATT. 5, 5.2.6 **Equipment Tag #:** DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weldert

Exception Description :

DMS Screen DMSS0342.
When the screen is accessed, the complaint loadout drum PIN is displayed only if there are NCIP messages to process. The screen should always display the PIN if a drum is present.

Exception Disposition :

Software corrected.

Exception Status :

Closed

Exception Closed By : Dunlap **Date :** 8/6/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 164

ATP_YN : N DMS

Exception : 3

Test : HNF-SD-W026-OTP-014

Revision :

Step : ATT. 5, 5.2.6.4 **Equipment Tag #:** DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weidert

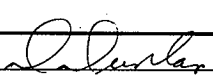
Exception Description :

DMS Screen DMSS0342.
The date/time for the packet to complaint - loadout - drum relationship record (CONR_DT) does not include the time. Time is set to 00:00:00.

Exception Disposition :

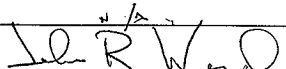
Problem fixed and tested in dry run.

Exception Status :

Exception Closed By : Dunlap  **Date :** 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date: _____
(Only as needed)

WMH Representative:  Date: 12-10-97

Additional Approval: _____ Date: _____
(Only as needed)

FDNW Representative: N/A Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 165

ATP_YN : N DMS

Exception : 4

Test : HNF-SD-W026-OTP-014

Revision :

Step : ATT. 5, 5.2.6.6. **Equipment Tag #:** DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weidert

Exception Description :

DMS Screen DMSS0504.
The "Analysis Selected" field is not wide enough. "Solvents" is truncated to "OLVENTS".

Exception Disposition :

Software corrected.

Exception Status :

Closed.

Exception Closed By : Dunlap **Date :** 8/6/97

APPROVAL OF RESOLUTION

Contractor Representative: n/a Date:
(Only as needed)

WMH Representative: Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: n/a Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 166

ATP_YN : N DMS

Exception : 5

Test : HNF-SD-W026-OTP-014

Revision :

Step : ATT.5, 5.2.6.10 **Equipment Tag #:** DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weldert

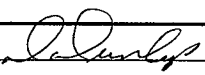
Exception Description :

DMS Screen DMSS0343.
When entering the screen, the complaint waste loadout drum Profile ID was automatically set to NULL and the Default Profile to "N". NULL is not a valid Profile ID.

Exception Disposition :

Problem fixed and tested in dry run.

Exception Status :

Exception Closed By : Dunlap  **Date :** 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative: _____ Date: _____
(Only as needed)

WMH Representative:  Date: 12-16-97

Additional Approval: _____ Date: _____
(Only as needed)

FDNW Representative: _____ Date: _____

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 167

ATP_YN : N DMS

Test : HNF-SD-W026-OTP-014

Step : ATT.5, 5.2.6.10 **Equipment Tag #:** DMS Software

Exception : 6

Revision :

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weldert

Exception Description :

DMS Screen DMSS0341. When returning from DMSS0342 to DMSS0341, screen DMSS0341 is not refreshed. See PSDD, Appendix F, 3.1.3.4, UP 5.

Exception Disposition :

Problem fixed in dry run.

Exception Status :

Exception Closed By : Dunlap **Date :** 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative: n/a Date:
(Only as needed)

WMH Representative: Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: n/a Date:

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 168

ATP_YN : N DMS

Exception : 7

Test : HNF-SD-W026-OTP-014

Revision :

Step : ATT.5, 5.2.7.3 **Equipment Tag #:** DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weidert

Exception Description :

DMS Screen DMSS0503.
The PIN List of values is in descending order. The LOV should be in ascending order, like the PIN LOV screen for DMSS0504.

Exception Disposition :

Software corrected.

Exception Status :

Closed.

Exception Closed By : Dunlap **Date :** 8/6/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date: _____
(Only as needed)

WMH Representative: J. R. Weidert Date: 12-10-97

Additional Approval: _____ Date: _____
(Only as needed)

FDNW Representative: N/A Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 169

ATP_YN : N DMS

Test : HNF-SD-W026-OTP-014

Step : ATT.5,5.2.7.3/4 **Equipment Tag #:** DMS Software

Exception :

Revision :

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weidert

Exception Description :

When entering screen DMSS0503 (Field Screening) there is an automatic LOV for PIN number. Screen DMSS0504 (Analysis Request) does not have an automatic LOV for the PIN. The screens should be consistent.

Exception Disposition :

Software corrected.

Exception Status :

Closed.

Exception Closed By : Dunlap **Date :** 8/6/97

APPROVAL OF RESOLUTION

Contractor Representative: n/a Date:
(Only as needed)

WMH Representative: J. R. Weidert Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: n/a Date:

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 170

ATP_YN : N DMS

Exception : 9

Test : HNF-SD-W026-OTP-014

Revision :

Step : ATT.6, 5.3.1.4 **Equipment Tag #:** DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weidert

Exception Description :

The transport pig PIN is shown as the STC PIN and no sample bottles are listed. If the most recent PIN is a pig (CONEXT_USE_CD = 'TP') the STC PIN field should be blank.

Exception Disposition :

Problem fixed and tested in dry run.

Exception Status :

Ready for testing

Exception Closed By : Rosnick C K Rosnick **Date :** 7/24/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date: _____
(Only as needed)

WMH Representative: J R Weidert Date: 12-10-97

Additional Approval: _____ Date: _____
(Only as needed)

FDNW Representative: N/A Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 171

ATP_YN : N DMS

Exception : 10

Test : HNF-SD-W026-OTP-014

Revision :

Step : ATT.7, 5.1.4 **Equipment Tag #:** DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weidert

Exception Description :

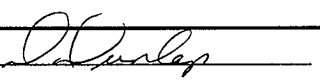
DMS Screen DMSS0344.
The Worksheet LOV truncates the last digit.

See LLW/RWM OTP Exception 10 for screen DMSS0324 exception.

Exception Disposition :

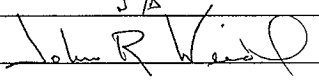
Problem fixed and tested in dry run

Exception Status :

Exception Closed By : Dunlap  **Date :** 8/6/97

APPROVAL OF RESOLUTION

Contractor Representative:  Date: _____
(Only as needed)

WMH Representative:  Date: 12-10-97

Additional Approval: _____ Date: _____
(Only as needed)

FDNW Representative: N/A Date: _____

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 172

ATP_YN : N DMS

Exception : 11

Test : HNF-SD-W026-OTP-014

Revision :

Step : ATT.7, 5.1.7 **Equipment Tag #:** DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weidert

Exception Description :

DMS Screen DMSS0346.
When [List of Values] was selected and there were no treatment containers to list, the screen was left in query mode and it was necessary to cancel the query from the menu in order to Exit the screen.

Exception Disposition :

Software corrected.

Exception Status :

Ready for retest.

Exception Closed By : Dunlap **Date :** 9/15/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 173

ATP_YN : N DMS **Exception :** 12

Test : HNF-SD-W026-OTP-014 **Revision :**

Step : ATT.7, 5.1.7.7 **Equipment Tag #:** DMS Software **Date:**

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weidert

Exception Description :

DMS Screen DMSS0344.
The treatment container was listed with "Packets/Samples not on Worksheet". A treatment container used with the current worksheet should not be listed.

See LLW/RWM OTP Exception 18 for screen DMSS0324 exception.

Exception Disposition :

Problem fixed and tested in dry run.

Exception Status :

Exception Closed By : Dunlap **Date :** 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: J. R. Weidert Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 174

ATP_YN : N DMS

Exception : 13

Test : HNF-SD-W026-OTP-014

Revision :

Step : ATT.7, 5.1.7.7 Equipment Tag #: DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weidert

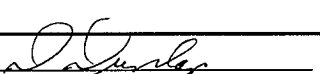
Exception Description :

DMS SCreen DMSS0344.
The [OK] button on "Packet/Sample Not on Worksheet" pop-up does not work. The pop-up on DMSS0324 is identical but an exception was not noted in the LLW/RWM OTP.

Exception Disposition :

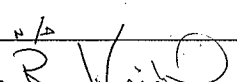
Problem fixed and tested in dry run

Exception Status :

Exception Closed By : Dunlap  **Date :** 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative: n/a Date:
(Only as needed)

WMH Representative:  Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: n/a Date:

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 175

ATP_YN : N DMS

Exception : 14

Test : HNF-SD-W026-OTP-014

Revision :

Step : ATT.7, 5.1.8.4 **Equipment Tag #:** DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weidert

Exception Description :

DMS Screen DMSS0348.
When entering the screen, the complaint waste loadout drum Porfile ID was automatically set to NULL and the Default Profile to "N". NULL is not a valid Profile ID.

Exception Disposition :

Problem fixed and tested in dry run.

Exception Status :

Exception Closed By : Dunlap D. C. Dunlap **Date :** 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date: _____
(Only as needed)

WMH Representative: J. R. Weidert Date: 12-10-97

Additional Approval: _____ Date: _____
(Only as needed)

FDNW Representative: N/A Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 176

ATP_YN : N DMS

Exception : 15

Test : HNF-SD-W026-OTP-014

Revision :

Step : ATT.8, 5.2.8.11 **Equipment Tag #:** DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weidert

Exception Description :

DMS Screen DMSS0346.
When data had been entered but not committed and [Return] was selected, pop-up screen "E617 - Must be entered to send packages to PCS [OK]" was displayed.

Exception Disposition :

Problem fixed and tested in dry run.

Exception Status :

Exception Closed By : Dunlap **Date :** 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative: n/a Date:
(Only as needed)

WMH Representative: Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: n/a Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 177

ATP_YN : N DMS

Exception : 16

Test : HNF-SD-W026-OTP-014

Revision :

Step : ATT.8, 5.2.10.6 **Equipment Tag #:** DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weidert

Exception Description :

DMS Screen DMSS0348.
The hazardous component weight percent is required on this screen. However, this value is not known at this time since the total waste weight is not known. The weight percent is calculated and recorded at the airlock after the drum is weighed.

Exception Disposition :

Software changed so weight percent is not required. Tested in dry run.

Exception Status :

Exception Closed By : Dunlap **Date :** 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: J. R. Weidert Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 178

ATP_YN : N DMS

Test : HNF-SD-W026-OTP-014

Step : ATT.8, 5.2.14 **Equipment Tag #:** DMS Software

Exception : 17

Revision :

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weldert

Exception Description :

DMS Screen DMSS0348.
The LOV pop-ups for this screen have mixed fonts.

Exception Disposition :

Problem fixed and tested in dry run.

Exception Status :

Exception Closed By : Dunlap **Date :** 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 179

ATP_YN : N DMS

Exception : 18

Test : HNF-SD-W026-OTP-014

Revision :

Step : ATT.8, 5.2.14.6 Equipment Tag #: DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weldert

Exception Description :

DMS Screen SMSS0348.
"Beta/Gamma Dose Rate" and "Container QC Seal No." are write protected.

Exception Disposition :

Problem fixed and tested in dry run.

Exception Status :

Exception Closed By : Rosnick C. R. Rosnick Date : 7/24/97

APPROVAL OF RESOLUTION

Contractor Representative: n/a Date:
(Only as needed)

WMH Representative: J. R. Weldert Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: n/a Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 181

ATP_YN : N DMS

Test : HNF-SD-W026-OTP-014

Step : ATT. 5, 5.2.4 **Equipment Tag #:** DMS Software

Exception : 1

Revision :

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weldert

Exception Description :

DMS Screen DMSS0341. When there is no transfer drum present and [Exit] button is selected, the pop-up message "FRM-40202 Field must be entered [OK]" is displayed. When [OK] is selected screen is exited.

Exception Disposition :

Problem fixed and tested in dry run.

Exception Status :

Closed.

Exception Closed By : Dunlap **Date :** 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative: n/a Date: _____
(Only as needed)

WMH Representative: _____ Date: 12-10-97

Additional Approval: _____ Date: _____
(Only as needed)

FDNW Representative: n/a Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 182

ATP_YN : N DMS

Exception : 19

Test : HNF-SD-W026-OTP-0I14

Revision :

Step : Att. 5, 5.2.5 **Equipment Tag #:** DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weldert

Exception Description :

DMS PSDD, Apendix F, 3.1.8. up 21

DMSCOM The secondary waste type group (RDET_SWTY_GRP) was not set for the product durms.

Exception Disposition :

Problem Corrected.

Exception Status :

Closed.

Exception Closed By : Dunlap **Date :** 8/5/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 183

ATP_YN : N DMS

Exception : 20

Test : HNF-SD-W026-OTP-014

Revision :

Step : Att. 5, 5.1.6 **Equipment Tag #:** DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Rosnick

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weldert

Exception Description :

DMSCOM The contain status (CONEXT_CNTR_STATUS) for transfer drum 1 was not changed from 'P' to 'E' when all packets been removed for treatment.

Exception Disposition :

Problem corrected.

Exception Status :

Closed.

Exception Closed By : Dunlap **Date :** 8/6/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 184

ATP_YN : N

Exception : 1

Test : HNF-SD-W026-OTP-014

Revision :

Step : Att.5.2.14.4 A8 **Equipment Tag #:** DO-07-402B

Date:

Specification Section : 13461

Test Witness/Author : Dunlap

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Drum swage failed

Exception Disposition :

Exception Status :

9-3-97 R Warmenhoven has craft adjust swage heads, retest satisfactory. Closed.

Exception Closed By : Warmenhoven **Date :** 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 185

ATP_YN : N

Exception : 2

Test : HNF-SD-W026-OTP-014

Revision :

Step : 5.2.13.4 A8 **Equipment Tag #:** DO-07-402A

Date:

Specification Section : 13461

Test Witness/Author : Dunlap

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Drum stubs on port when lowered.

Exception Disposition :

Exception Status :

9-3-97 Duplicateof #49. Closed.

Exception Closed By : Leist 12/16/97 **Date :** 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 186

ATP_YN : N

Exception : 3

Test : HNF-SD-W026-OTP-014

Revision :

Step : 5.2.13.4 A8 **Equipment Tag #:** DO-07-402A

Date:

Specification Section : 13461

Test Witness/Author : Dunlap

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

"Sequence fail" alarm in closing port. South side lock sensor misadjusted.

Exception Disposition :

Exception Status :

9-3-97 - MP Lane to retest. 12-12-97. Retested satisfactory. Closed

Exception Closed By : Michael P Lee **Date :** 12-12-97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: Date: 12-12-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 187

ATP_YN : N

Test : HNF-SD-W026-OTP-014

Step : 5.2.6 A/6 **Equipment Tag #:** ACP DEVICE-111

Exception : 11

Revision :

Date:

Specification Section : 13462

Test Witness/Author : Dunlap

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Aerosol can punture device leaks at handle.

Exception Disposition :

Exception Status :

9-3-97 Duplicate of #34. Closed.

Exception Closed By : Leist 12/16/97 **Date :** 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative: _____ Date: _____
(Only as needed)

WMH Representative: _____ Date: 12-10-97

Additional Approval: _____ Date: _____
(Only as needed)

FDNW Representative: _____ Date: _____

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 188

ATP_YN : N

Exception : 4

Test : HNF-SD-W026-OTP-014

Revision :

Step : 5.1.7.8 A7 **Equipment Tag #:** XX-07-4-2

Date:

Specification Section : 13462

Test Witness/Author : Dunlap

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : N/A

Responsible Individual: Willis

Exception Description :

Jar Mill not effective when low volume of water in treatment container

Exception Disposition :

Exception Status :

Jar mill has been removed from the glove box

Exception Closed By : [signature] **Date :** 12-10-97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: [signature] Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 189

ATP_YN : N DMS

Exception : 5

Test : HNF-SD-W026-OTP-014

Revision :

Step : 5.1.6 Att.7 **Equipment Tag #:** DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Dunlap

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : SII

Responsible Individual: TBD

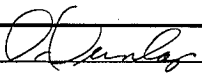
Exception Description :

Location record for a treatment container was advertently scanned twice while trying to establish a treatment to collection container relation. Had to manually enter Conloc for treatment container.

Exception Disposition :

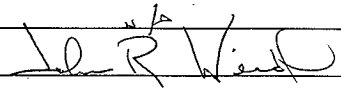
Add code to PCS to prevent scanning the same PIN twice drums this condition.

Exception Status :

Exception Closed By : Dunlap  **Date :** 9/12/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date: _____
(Only as needed)

WMH Representative:  Date: 12-10-97

Additional Approval: _____ Date: _____
(Only as needed)

FDNW Representative: N/A Date: _____

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 190

ATP_YN : N

Exception : 6

Test : HNF-SD-W026-OTP-014

Revision :

Step : Equipment Tag #: PCS S/W

Date:

Specification Section : 13462

Test Witness/Author : Dunlap

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : SII

Responsible Individual: TBD

Exception Description :

It is possible to scan an item other than a treated or treatment container to a non-compliant drum for loadout. DMS records are being generated inadvertantly.

Exception Disposition :

Exception Status :

12-12-97. Code modified to limit treated item loadout valid scans to treatment containers, closed.

Exception Closed By : Michael P Dunlap Date : 12-12-97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: Date: 12-12-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 191

ATP_YN : N

Test : HNF-SD-W026-OTP-014

Step : 5.2.4 Att.6 **Equipment Tag #:** PCS S/W

Exception : 7

Revision :

Date:

Specification Section : 13461

Test Witness/Author : Dunlap

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : SII

Responsible Individual: TBD

Exception Description :

PCS sends a previously composed message when TRU RWSAMPL. Location is scanned, this caused an extra container to appear at that location.

Exception Disposition :

Caused by a race condition in the ladder logic where a location bit is unlatched before the new message is composed.

Exception Status :

Removed location bit check to eliminate race condition. The condition did not occur later in the OTP under the same circumstances.

Exception Closed By : Michael P Dean **Date :** 12/12/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: J R Wu Date: 12-12-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: n/a Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 192

ATP_YN : N

Exception : 9

Test : HNF-SD-W026-OTP-014

Revision :

Step : 5.2.7/AC **Equipment Tag #:** OP-710

Date:

Specification Section : 13462

Test Witness/Author : Dunlap

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : PARSONS

Responsible Individual: Schaeffer

Exception Description :

OP-710 does not provide direction from section A , B, C, E.

Exception Disposition :

Exception Status :

Procedure is in POST OTP directory on the I: drive and does have detailed definition in the referenced sections

Exception Closed By : John R Weno **Date :** 12-10-97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: John R Weno Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 193

ATP_YN : N DMS

Test : HNF-SD-W026-OTP-014

Step : 5.2.6 /AC **Equipment Tag #:** DMS Software

Exception : 10

Revision :

Date:

Specification Section : DMS

Test Witness/Author : Dunlap

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weidert

Exception Description :

DMS Screen 342.
Button "Next New Container" needs wording change to include both "orginal" & "new" container.

Exception Disposition :

Software corrected.

Exception Status :

Ready to test.

Exception Closed By : Dunlap **Date :** 9/12/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 194

ATP_YN : N

Test : HNF-SD-W026-OTP-014

Step : 5.1.12 A/C **Equipment Tag #:** DO-07-402B

Exception : 12

Revision :

Date:

Specification Section : 13462

Test Witness/Author : Dunlap

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : N/A

Responsible Individual: Leist

Exception Description :

One trip port drum lid would not fit to allow port to open.

Exception Disposition :

Another lid was used and port operated properly.

Exception Status :

closed

Exception Closed By : Dunlap D. Dunlap **Date :** 7/18/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: J. R. Weed Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 195

ATP_YN : N DMS

Exception : 13

Test : HNF-SD-W026-OTP-014

Revision :

Step : 5.14 A7, 5.2.4 **Equipment Tag #:** DMS Software

Date:

Specification Section : DMS

Test Witness/Author : Dunlap

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Weidert

Exception Description :

Message "FRM 40106 no ????? items" would be displayed unexpectedly.

Exception Disposition :

Software corrected.

Exception Status :

Ready to test.

Exception Closed By : Dunlap *L a Dunlap* **Date :** 9/12/97

APPROVAL OF RESOLUTION

Contractor Representative: *(Only as needed)* N/A Date:

WMH Representative: Date: 12-10-97

Additional Approval: *(Only as needed)* Date:

FDNW Representative: N/A Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 247

ATP_YN : Y DMS

Test : HNMF-SP-W026-OTP-014

Step : AH.5,5.3 **Equipment Tag #:** DMS Software

Exception :

Revision :

Date:

Specification Section : DMS

Test Witness/Author : Dunlap

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Weidert

Exception Description :

Duplicate sample/container (SAMREL) records were recorded in the DMS when the barcodes were scanned multiple times.

Specification is WHC-SD-W026-SDD-001.

Exception Disposition :

Software corrected.

Exception Status :

Ready to test.

Exception Closed By : C K Ramsel **Date :** 11/17/97

APPROVAL OF RESOLUTION

Contractor Representative: N/A Date:
(Only as needed)

WMH Representative: J D R W Date: 12-10-97

Additional Approval: Date:
(Only as needed)

FDNW Representative: N/A Date:

CASE1A.718 DMS DATABASE AT THE END OF TRU/RWM GLOVEBOX OTP CASE 1 7/18/97

CON_PKG_ID	OTP-TRUR-PD-01
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	U
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31
CON_PKG_ID	OTP-TRUR-PD-11
CON_CNTYP_CD	DM
CON_GENER_WASTE_DESCR	2 EMPTY SALINE SOLUTION AEROSOL CAN
1 EMPTY UNMARK	
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	I
CON_SIZE_DESCR	55 GALLON
CON_TARE_WGT	27
CON_PKG_ID	OTP-TRUR-TD-01
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	G
CON_SCAT_CD	ANY
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31
CON_PKG_ID	OTP-TRUR-TD-02
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	G
CON_SCAT_CD	ANY
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31
CON_PKG_ID	OTP6-97-000001
CON_GENER_WASTE_DESCR	AEROSOL CAN OF SALINE SOLUTION
CON_PKG_STATUS	R
CON_PKG_ID	OTP6-97-000002
CON_GENER_WASTE_DESCR	AEROSOL CAN OF SALINE SOLUTION
CON_PKG_STATUS	R
CON_PKG_ID	OTP6-97-000003
CON_GENER_WASTE_DESCR	UNLABELED AEROSOL CAN
CON_PKG_STATUS	R
CON_PKG_ID	OTP6-97-000004
CON_GENER_WASTE_DESCR	LEAD BRICK
CON_PKG_ID	OTP6-97-000005
CON_GENER_WASTE_DESCR	BOTTLE OF SOLVENT AND BOTTLE OF OIL
CON_PKG_ID	OTP6-97-000006
CON_GENER_WASTE_DESCR	BOTTLE OF ACID
CON_PKG_ID	OTP6-97-000007
CON_GENER_WASTE_DESCR	BOTTLE OF ABSORBED SALINE SOLUTION
CON_PKG_DT	19-JUL-27
CON_PKG_STATUS	G
CON_PKG_ID	OTP6-97-000008
CON_GENER_WASTE_DESCR	BOTTLE OF UNKNOWN LIQUID
CON_PKG_DT	19-JUL-27
CON_PKG_STATUS	G
CON_PKG_ID	OTP6-97-300001
CON_PKG_ID	OTP6-97-300002
CON_PKG_ID	OTP6-97-400001

CONEXT_PKG_ID	OTP-TRUR-PD-01
CONEXT_USE_CD	EC
CONEXT_WRAP_STAT_CD	I
CONEXT_PKG_ID	OTP-TRUR-PD-11
CONEXT_PROF_FLAG	Y
CONEXT_PROF_ID	TRU-10
CONEXT_USE_CD	PD
CONEXT_WRAP_STAT_CD	I
CONEXT_PKG_ID	OTP-TRUR-TD-01
CONEXT_CNTR_STATUS	P
CONEXT_USE_CD	TD
CONEXT_WRAP_STAT_CD	I
CONEXT_PKG_ID	OTP-TRUR-TD-02
CONEXT_CNTR_STATUS	P
CONEXT_USE_CD	TD
CONEXT_WRAP_STAT_CD	I
CONEXT_PKG_ID	OTP6-97-000001
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000002
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000003
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000004
CONEXT_MAT_GRP_CD	PB
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000005
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000006
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000007
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	CC
CONEXT_PKG_ID	OTP6-97-000008
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	CC
CONEXT_PKG_ID	OTP6-97-300001
CONEXT_USE_CD	PP
CONEXT_PKG_ID	OTP6-97-300002
CONEXT_USE_CD	PP
CONEXT_PKG_ID	OTP6-97-400001
CONEXT_USE_CD	TP
CONLOC_PKG_ID	OTP-TRUR-PD-01
CONLOC_DT	05-FEB-97
CONLOC_LOCN_ID	RWM_CRSL
CONLOC_PKG_ID	OTP-TRUR-PD-11
CONLOC_DT	19-JUL-27
CONLOC_LOCN_ID	TRURWCMPLT
CONLOC_PKG_ID	OTP-TRUR-TD-01
CONLOC_DT	19-JUL-27
CONLOC_LOCN_ID	TRURWENTRY

CONLOC_PKG_ID	OTP-TRUR-TD-02
CONLOC_DT	05-FEB-97
CONLOC_LOCN_ID	RWM_CRSL
CONLOC_PKG_ID	OTP6-97-300001
CONLOC_DT	19-JUL-27
CONLOC_LOCN_ID	TRURW_PP
CONLOC_PKG_ID	OTP6-97-300002
CONLOC_DT	04-FEB-97
CONLOC_LOCN_ID	SAMPLE_MGT
CONLOC_PKG_ID	OTP6-97-400001
CONLOC_DT	04-FEB-97
CONLOC_LOCN_ID	SAMPLE_MGT
CONR_FROM_PKG_ID	OTP6-97-000001
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	18-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000001
CONR_TO_PKG_ID	OTP6-97-000007
CONR_DT	19-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000002
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	18-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000002
CONR_TO_PKG_ID	OTP6-97-000007
CONR_DT	19-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000003
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	18-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000003
CONR_TO_PKG_ID	OTP6-97-000008
CONR_DT	19-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000004
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	05-FEB-97
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000005
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	05-FEB-97
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000006
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	05-FEB-97
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000007
CONR_TO_PKG_ID	OTP-TRUR-TD-01
CONR_DT	19-JUL-27
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000008
CONR_TO_PKG_ID	OTP-TRUR-TD-01
CONR_DT	19-JUL-27
CONR_REL_CD	O
PHYS_PKG_ID	OTP-TRUR-PD-11
PHYS_COMP_DESCR	CLOTH/RAGS/NYLON
PHYS_COMP_VOL_PCT	50
PHYS_COMP_WGT	2
PHYS_PKG_ID	OTP-TRUR-PD-11
PHYS_COMP_DESCR	METAL/IRON/GALVANIZED/SHEET
PHYS_COMP_VOL_PCT	20
PHYS_COMP_WGT	1
PHYS_PKG_ID	OTP-TRUR-PD-11
PHYS_COMP_DESCR	PLASTIC/POLYURATHANE
PHYS_COMP_VOL_PCT	30
PHYS_COMP_WGT	2
SAM_SAMPLE_ID	97-00001
SAM_CLOSED_FLAG	N
SAM_COMMENTS	unknown liquid
SAM_LOCN_ID	TRURWSAMPL
SAM_MATRIX_CD	L
SAM_TAKEN_BY	62264
SAM_TAKEN_DT	18-JUL-97
SAM_TEMP	22
SAM_PKG_ID	OTP6-97-000008
SAR_SAMPLE_ID	97-00001
SAR_ANAL_CD	AQLIQ
SAR_SAMPLE_ID	97-00001
SAR_ANAL_CD	COND
BOT_BOTTLE_ID	97-00001-01L
BOT_SAMPLE_ID	97-00001
BOT_ANAL_CD	AQLIQ
BOT_BOTTLE_ID	97-00001-02L
BOT_SAMPLE_ID	97-00001
BOT_ANAL_CD	COND
SAMREL_BOTTLE_ID	97-00001-01L
SAMREL_PKG_ID	OTP6-97-000008
SAMREL_DT	18-JUL-97
SAMREL_USE_CD	CC
SAMREL_BOTTLE_ID	97-00001-01L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-000008
SAMREL_DT	18-JUL-97
SAMREL_USE_CD	CC
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
MSGLOG_DT	14-JUL-97
MSGLOG_ERROR_FLAG	N
MSGLOG_GEN_TYPE	PCSDMS
MSGLOG_SEQ_NUM	51057
MSGLOG_SPEC_TYPE	CL
MSGLOG_STRING1	PCSDMS~CL~3077856656~TRUREXIT~~1~OTP-TRUR-PD-01~
MSGLOG_DT	14-JUL-97
MSGLOG_ERROR_FLAG	N
MSGLOG_GEN_TYPE	PCSDMS

CASE1A.718 DMS DATABASE AT THE END OF TRU/RWM GLOVEBOX OTP CASE 1 7/18/97

CON_PKG_ID	OTP-TRUR-PD-01
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	U
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31
CON_PKG_ID	OTP-TRUR-PD-11
CON_CNTYP_CD	DM
CON_GENER_WASTE_DESCR	2 EMPTY SALINE SOLUTION AEROSOL CAN
	1 EMPTY UNMARK
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	I
CON_SIZE_DESCR	55 GALLON
CON_TARE_WGT	27
CON_PKG_ID	OTP-TRUR-TD-01
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	G
CON_SCAT_CD	ANY
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31
CON_PKG_ID	OTP-TRUR-TD-02
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	G
CON_SCAT_CD	ANY
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31
CON_PKG_ID	OTP6-97-000001
CON_GENER_WASTE_DESCR	AEROSOL CAN OF SALINE SOLUTION
CON_PKG_STATUS	R
CON_PKG_ID	OTP6-97-000002
CON_GENER_WASTE_DESCR	AEROSOL CAN OF SALINE SOLUTION
CON_PKG_STATUS	R
CON_PKG_ID	OTP6-97-000003
CON_GENER_WASTE_DESCR	UNLABELED AEROSOL CAN
CON_PKG_STATUS	R
CON_PKG_ID	OTP6-97-000004
CON_GENER_WASTE_DESCR	LEAD BRICK
CON_PKG_ID	OTP6-97-000005
CON_GENER_WASTE_DESCR	BOTTLE OF SOLVENT AND BOTTLE OF OIL
CON_PKG_ID	OTP6-97-000006
CON_GENER_WASTE_DESCR	BOTTLE OF ACID
CON_PKG_ID	OTP6-97-000007
CON_GENER_WASTE_DESCR	BOTTLE OF ABSORBED SALINE SOLUTION
CON_PKG_DT	19-JUL-27
CON_PKG_STATUS	G
CON_PKG_ID	OTP6-97-000008
CON_GENER_WASTE_DESCR	BOTTLE OF UNKNOWN LIQUID
CON_PKG_DT	19-JUL-27
CON_PKG_STATUS	G
CON_PKG_ID	OTP6-97-300001
CON_PKG_ID	OTP6-97-300002
CON_PKG_ID	OTP6-97-400001

CONEXT_PKG_ID	OTP-TRUR-PD-01
CONEXT_USE_CD	EC
CONEXT_WRAP_STAT_CD	I
CONEXT_PKG_ID	OTP-TRUR-PD-11
CONEXT_PROF_FLAG	Y
CONEXT_PROF_ID	TRU-10
CONEXT_USE_CD	PD
CONEXT_WRAP_STAT_CD	I
CONEXT_PKG_ID	OTP-TRUR-TD-01
CONEXT_CNTR_STATUS	P
CONEXT_USE_CD	TD
CONEXT_WRAP_STAT_CD	I
CONEXT_PKG_ID	OTP-TRUR-TD-02
CONEXT_CNTR_STATUS	P
CONEXT_USE_CD	TD
CONEXT_WRAP_STAT_CD	I
CONEXT_PKG_ID	OTP6-97-000001
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000002
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000003
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000004
CONEXT_MAT_GRP_CD	PB
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000005
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000006
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000007
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	CC
CONEXT_PKG_ID	OTP6-97-000008
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	CC
CONEXT_PKG_ID	OTP6-97-300001
CONEXT_USE_CD	PP
CONEXT_PKG_ID	OTP6-97-300002
CONEXT_USE_CD	PP
CONEXT_PKG_ID	OTP6-97-400001
CONEXT_USE_CD	TP
CONLOC_PKG_ID	OTP-TRUR-PD-01
CONLOC_DT	05-FEB-97
CONLOC_LOCN_ID	RWM_CRSL
CONLOC_PKG_ID	OTP-TRUR-PD-11
CONLOC_DT	19-JUL-27
CONLOC_LOCN_ID	TRURWCMPLT
CONLOC_PKG_ID	OTP-TRUR-TD-01
CONLOC_DT	19-JUL-27
CONLOC_LOCN_ID	TRURWENTRY

CONLOC_PKG_ID	OTP-TRUR-TD-02
CONLOC_DT	05-FEB-97
CONLOC_LOCN_ID	RWM_CRSL
CONLOC_PKG_ID	OTP6-97-300001
CONLOC_DT	19-JUL-27
CONLOC_LOCN_ID	TRURW_PP
CONLOC_PKG_ID	OTP6-97-300002
CONLOC_DT	04-FEB-97
CONLOC_LOCN_ID	SAMPLE_MGT
CONLOC_PKG_ID	OTP6-97-400001
CONLOC_DT	04-FEB-97
CONLOC_LOCN_ID	SAMPLE_MGT
CONR_FROM_PKG_ID	OTP6-97-000001
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	18-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000001
CONR_TO_PKG_ID	OTP6-97-000007
CONR_DT	19-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000002
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	18-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000002
CONR_TO_PKG_ID	OTP6-97-000007
CONR_DT	19-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000003
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	18-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000003
CONR_TO_PKG_ID	OTP6-97-000008
CONR_DT	19-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000004
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	05-FEB-97
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000005
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	05-FEB-97
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000006
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	05-FEB-97
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000007
CONR_TO_PKG_ID	OTP-TRUR-TD-01
CONR_DT	19-JUL-27
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000008
CONR_TO_PKG_ID	OTP-TRUR-TD-01
CONR_DT	19-JUL-27
CONR_REL_CD	O
PHYS_PKG_ID	OTP-TRUR-PD-11
PHYS_COMP_DESCR	CLOTH/RAGS/NYLON
PHYS_COMP_VOL_PCT	50
PHYS_COMP_WGT	2
PHYS_PKG_ID	OTP-TRUR-PD-11
PHYS_COMP_DESCR	METAL/IRON/GALVANIZED/SHEET
PHYS_COMP_VOL_PCT	20
PHYS_COMP_WGT	1
PHYS_PKG_ID	OTP-TRUR-PD-11
PHYS_COMP_DESCR	PLASTIC/POLYURATHANE
PHYS_COMP_VOL_PCT	30
PHYS_COMP_WGT	2
SAM_SAMPLE_ID	97-00001
SAM_CLOSED_FLAG	N
SAM_COMMENTS	unknown liquid
SAM_LOCN_ID	TRURWSAMPL
SAM_MATRIX_CD	L
SAM_TAKEN_BY	62264
SAM_TAKEN_DT	18-JUL-97
SAM_TEMP	22
SAM_PKG_ID	OTP6-97-000008
SAR_SAMPLE_ID	97-00001
SAR_ANAL_CD	AQLIQ
SAR_SAMPLE_ID	97-00001
SAR_ANAL_CD	COND
BOT_BOTTLE_ID	97-00001-01L
BOT_SAMPLE_ID	97-00001
BOT_ANAL_CD	AQLIQ
BOT_BOTTLE_ID	97-00001-02L
BOT_SAMPLE_ID	97-00001
BOT_ANAL_CD	COND
SAMREL_BOTTLE_ID	97-00001-01L
SAMREL_PKG_ID	OTP6-97-000008
SAMREL_DT	18-JUL-97
SAMREL_USE_CD	CC
SAMREL_BOTTLE_ID	97-00001-01L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-000008
SAMREL_DT	18-JUL-97
SAMREL_USE_CD	CC
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
RADMAT_ID	F
RADMAT_DESCR	WRAP 1 FACILITY
RADMAT_LIMIT	100
RADMAT_RAD_TOT	10
RADMAT_UNITS	CI
RADMAT_ALARM	N
RADMAT_ID	R
RADMAT_DESCR	TRU RWM GLOVEBOX
RADMAT_LIMIT	200

RADMAT_RAD_TOT	150
RADMAT_UNITS	FGE
RADMAT_ALARM	N
RADMAT_ID	T
RADMAT_DESCR	TRU GLOVEBOX
RADMAT_LIMIT	200
RADMAT_RAD_TOT	110
RADMAT_UNITS	FGE
RADMAT_ALARM	N

CASE2A.721 DMS DATABASE AT THE END OF TRU/RWM GLOVEBOX OTP CASE 2 7/21/97

CON_PKG_ID	OTP-TRUR-PD-01
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	U
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31
CON_PKG_ID	OTP-TRUR-PD-11
CON_CNTYP_CD	DM
CON_GENER_WASTE_DESCR	2 EMPTY SALINE SOLUTION AEROSOL CAN
1 EMPTY UNMARK	
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	I
CON_SIZE_DESCR	55 GALLON
CON_TARE_WGT	27
CON_PKG_ID	OTP-TRUR-TD-01
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	G
CON_SCAT_CD	ANY
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31
CON_PKG_ID	OTP-TRUR-TD-02
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	G
CON_SCAT_CD	ANY
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31
CON_PKG_ID	OTP6-97-000001
CON_GENER_WASTE_DESCR	AEROSOL CAN OF SALINE SOLUTION
CON_PKG_STATUS	R
CON_PKG_ID	OTP6-97-000002
CON_GENER_WASTE_DESCR	AEROSOL CAN OF SALINE SOLUTION
CON_PKG_STATUS	R
CON_PKG_ID	OTP6-97-000003
CON_GENER_WASTE_DESCR	UNLABELED AEROSOL CAN
CON_PKG_STATUS	R
CON_PKG_ID	OTP6-97-000004
CON_GENER_WASTE_DESCR	LEAD BRICK
CON_PKG_STATUS	R
CON_PKG_ID	OTP6-97-000005
CON_GENER_WASTE_DESCR	BOTTLE OF SOLVENT AND BOTTLE OF OIL
CON_PKG_STATUS	R
CON_PKG_ID	OTP6-97-000006
CON_GENER_WASTE_DESCR	BOTTLE OF ACID
CON_PKG_ID	OTP6-97-000007
CON_GENER_WASTE_DESCR	BOTTLE OF ABSORBED SALINE SOLUTION
CON_PKG_DT	19-JUL-27
CON_PKG_STATUS	G
CON_PKG_ID	OTP6-97-000008
CON_GENER_WASTE_DESCR	BOTTLE OF UNKNOWN LIQUID
CON_PKG_DT	19-JUL-27
CON_PKG_STATUS	G
CON_PKG_ID	OTP6-97-000009
CON_GENER_WASTE_DESCR	LEAD BRICK
CON_PKG_DT	22-JUL-27
CON_PKG_STATUS	G
CON_PKG_ID	OTP6-97-000010
CON_GENER_WASTE_DESCR	UNKNOWN SOLVENT
CON_PKG_DT	22-JUL-27
CON_PKG_STATUS	G
CON_PKG_ID	OTP6-97-000011
CON_GENER_WASTE_DESCR	OIL
CON_PKG_DT	22-JUL-27
CON_PKG_STATUS	G
CON_PKG_ID	OTP6-97-300001
CON_PKG_ID	OTP6-97-300002
CON_PKG_ID	OTP6-97-400001
CONEXT_PKG_ID	OTP-TRUR-PD-01
CONEXT_USE_CD	EC
CONEXT_WRAP_STAT_CD	I
CONEXT_PKG_ID	OTP-TRUR-PD-11
CONEXT_PROF_FLAG	Y
CONEXT_PROF_ID	TRU-10
CONEXT_USE_CD	PD
CONEXT_WRAP_STAT_CD	I
CONEXT_PKG_ID	OTP-TRUR-TD-01
CONEXT_CNTR_STATUS	P
CONEXT_USE_CD	TD
CONEXT_WRAP_STAT_CD	I
CONEXT_PKG_ID	OTP-TRUR-TD-02
CONEXT_CNTR_STATUS	P
CONEXT_USE_CD	TD
CONEXT_WRAP_STAT_CD	I
CONEXT_PKG_ID	OTP6-97-000001
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000002
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000003
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000004
CONEXT_MAT_GRP_CD	PB
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000005
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000006
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000007
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	CC
CONEXT_PKG_ID	OTP6-97-000008
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	CC
CONEXT_PKG_ID	OTP6-97-000009
CONEXT_MAT_GRP_CD	PB
CONEXT_USE_CD	PK

CONEXT_PKG_ID	OTP6-97-000010
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000011
CONEXT_MAT_GRP_CD	OL
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-300001
CONEXT_USE_CD	PP
CONEXT_PKG_ID	OTP6-97-300002
CONEXT_USE_CD	PP
CONEXT_PKG_ID	OTP6-97-400001
CONEXT_USE_CD	TP
CONLOC_PKG_ID	OTP-TRUR-PD-01
CONLOC_DT	05-FEB-97
CONLOC_LOCN_ID	RWM_CRSL
CONLOC_PKG_ID	OTP-TRUR-PD-11
CONLOC_DT	19-JUL-27
CONLOC_LOCN_ID	TRURWCMPLT
CONLOC_PKG_ID	OTP-TRUR-TD-01
CONLOC_DT	19-JUL-27
CONLOC_LOCN_ID	TRURWENTRY
CONLOC_PKG_ID	OTP-TRUR-TD-02
CONLOC_DT	22-JUL-27
CONLOC_LOCN_ID	TRURWENTRY
CONLOC_PKG_ID	OTP6-97-000008
CONLOC_DT	22-JUL-27
CONLOC_LOCN_ID	TRURWSAMPL
CONLOC_PKG_ID	OTP6-97-300001
CONLOC_DT	19-JUL-27
CONLOC_LOCN_ID	TRURW_PP
CONLOC_PKG_ID	OTP6-97-300002
CONLOC_DT	22-JUL-27
CONLOC_LOCN_ID	TRURW_PP
CONLOC_PKG_ID	OTP6-97-400001
CONLOC_DT	04-FEB-97
CONLOC_LOCN_ID	SAMPLE_MGT
CONR_FROM_PKG_ID	OTP6-97-000001
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	18-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000001
CONR_TO_PKG_ID	OTP6-97-000007
CONR_DT	19-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000002
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	18-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000002
CONR_TO_PKG_ID	OTP6-97-000007
CONR_DT	19-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000003
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	18-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000003
CONR_TO_PKG_ID	OTP6-97-000008
CONR_DT	19-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000004
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	21-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000004
CONR_TO_PKG_ID	OTP6-97-000009
CONR_DT	22-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000005
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	21-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000005
CONR_TO_PKG_ID	OTP6-97-000010
CONR_DT	22-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000005
CONR_TO_PKG_ID	OTP6-97-000011
CONR_DT	22-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000006
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	22-JUL-27
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000007
CONR_TO_PKG_ID	OTP-TRUR-TD-01
CONR_DT	19-JUL-27
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000009
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	22-JUL-27
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000010
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	22-JUL-27
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000011
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	22-JUL-27
CONR_REL_CD	O
PHYS_PKG_ID	OTP-TRUR-PD-11
PHYS_COMP_DESCR	CLOTH/RAGS/NYLON
PHYS_COMP_VOL_PCT	60
PHYS_COMP_WGT	4
PHYS_PKG_ID	OTP-TRUR-PD-11
PHYS_COMP_DESCR	METAL/IRON/GALVANIZED/SHEET
PHYS_COMP_VOL_PCT	10
PHYS_COMP_WGT	1
PHYS_PKG_ID	OTP-TRUR-PD-11
PHYS_COMP_DESCR	PLASTIC/POLYURATHANE
PHYS_COMP_VOL_PCT	30
PHYS_COMP_WGT	3
SAM_SAMPLE_ID	97-00001
SAM_CLOSED_FLAG	N
SAM_COMMENTS	unknown liquid
SAM_LOCN_ID	TRURWSAMPL
SAM_MATRIX_CD	L
SAM_TAKEN_BY	62264
SAM_TAKEN_DT	18-JUL-97

SAM_TEMP	22
SAM_PKG_ID	OTP6-97-000008
SAM_SAMPLE_ID	97-00002
SAM_CLOSED_FLAG	N
SAM_COMMENTS	unkown solvents
SAM_LOCN_ID	TRURWSAMPL
SAM_MATRIX_CD	L
SAM_TAKEN_BY	62264
SAM_TAKEN_DT	21-JUL-97
SAM_TEMP	22
SAM_PKG_ID	OTP6-97-000010
SAM_SAMPLE_ID	97-00003
SAM_CLOSED_FLAG	N
SAM_COMMENTS	unknown solvent
SAM_LOCN_ID	TRURWSAMPL
SAM_MATRIX_CD	L
SAM_TAKEN_BY	62264
SAM_TAKEN_DT	21-JUL-97
SAM_TEMP	22
SAM_PKG_ID	OTP6-97-000010
SAM_SAMPLE_ID	97-00004
SAM_CLOSED_FLAG	N
SAM_COMMENTS	oil
SAM_LOCN_ID	TRURWSAMPL
SAM_MATRIX_CD	L
SAM_TAKEN_BY	62264
SAM_TAKEN_DT	21-JUL-97
SAM_TEMP	22
SAM_PKG_ID	OTP6-97-000011
SAR_SAMPLE_ID	97-00001
SAR_ANAL_CD	AQLIQ
SAR_SAMPLE_ID	97-00001
SAR_ANAL_CD	COND
SAR_SAMPLE_ID	97-00002
SAR_ANAL_CD	SOLVENTS
SAR_SAMPLE_ID	97-00003
SAR_ANAL_CD	SOLVENTS
SAR_SAMPLE_ID	97-00004
SAR_ANAL_CD	OILS
BOT_BOTTLE_ID	97-00001-01L
BOT_SAMPLE_ID	97-00001
BOT_ANAL_CD	AQLIQ
BOT_BOTTLE_ID	97-00001-02L
BOT_SAMPLE_ID	97-00001
BOT_ANAL_CD	COND
BOT_BOTTLE_ID	97-00002-01L
BOT_SAMPLE_ID	97-00002
BOT_ANAL_CD	SOLVENTS
BOT_BOTTLE_ID	97-00003-01L
BOT_SAMPLE_ID	97-00003
BOT_ANAL_CD	SOLVENTS
BOT_BOTTLE_ID	97-00004-01L
BOT_SAMPLE_ID	97-00004
BOT_ANAL_CD	OILS
SAMREL_BOTTLE_ID	97-00001-01L
SAMREL_PKG_ID	OTP6-97-000008
SAMREL_DT	18-JUL-97
SAMREL_USE_CD	CC
SAMREL_BOTTLE_ID	97-00001-01L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-000008
SAMREL_DT	18-JUL-97
SAMREL_USE_CD	CC
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00002-01L
SAMREL_PKG_ID	OTP6-97-000010
SAMREL_DT	21-JUL-97
SAMREL_USE_CD	PK
SAMREL_BOTTLE_ID	97-00002-01L
SAMREL_PKG_ID	OTP6-97-300002
SAMREL_DT	22-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00003-01L
SAMREL_PKG_ID	OTP6-97-000010
SAMREL_DT	21-JUL-97
SAMREL_USE_CD	PK
SAMREL_BOTTLE_ID	97-00003-01L
SAMREL_PKG_ID	OTP6-97-300002
SAMREL_DT	22-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00004-01L
SAMREL_PKG_ID	OTP6-97-000011
SAMREL_DT	21-JUL-97
SAMREL_USE_CD	PK
SAMREL_BOTTLE_ID	97-00004-01L
SAMREL_PKG_ID	OTP6-97-300002
SAMREL_DT	22-JUL-27
SAMREL_USE_CD	PP
SCRN_SCRN_ID	97-00003-01F
SCRN_PKG_ID	OTP6-97-000009
SCRN_DT	21-JUL-97
SCRN_LOCN_ID	TRURWSAMPL
SCRN_PERS_ID	62264
SCRN_SAMPLING_METHOD_CD	INS
SCRN_SCRN_ID	97-00004-01F
SCRN_PKG_ID	OTP6-97-000010
SCRN_DT	21-JUL-97
SCRN_LOCN_ID	TRURWSAMPL
SCRN_PERS_ID	62264
SCRN_SAMPLING_METHOD_CD	INS
SCRN_SCRN_ID	97-00005-01F
SCRN_PKG_ID	OTP6-97-000011
SCRN_DT	21-JUL-97
SCRN_LOCN_ID	TRURWSAMPL
SCRN_PERS_ID	62264
SCRN_SAMPLING_METHOD_CD	INS
SCRN_SCRN_ID	97-00006-01F
SCRN_PKG_ID	OTP6-97-000006
SCRN_DT	21-JUL-97

SCRN_LOCN_ID	TRURWSAMPL
SCRN_PERS_ID	62264
SCRN_SAMPLING_METHOD_CD	INS
FIELD_SCRN_ID	97-00003-01F
FIELD_FAT_CD	LEAD
field_res	FIELD ENTRY
FIELD_SCRN_ID	97-00004-01F
FIELD_FAT_CD	CLOR
field_res	FIELD ENTRY
FIELD_SCRN_ID	97-00005-01F
FIELD_FAT_CD	PCBO
field_res	FIELD ENTRY
FIELD_SCRN_ID	97-00006-01F
FIELD_FAT_CD	PHDP
field_res	FIELD ENTRY
RADMAT_ID	F
RADMAT_DESCR	WRAP 1 FACILITY
RADMAT_LIMIT	100
RADMAT_RAD_TOT	10
RADMAT_UNITS	CI
RADMAT_ALARM	N
RADMAT_ID	R
RADMAT_DESCR	TRU RWM GLOVEBOX
RADMAT_LIMIT	200
RADMAT_RAD_TOT	150
RADMAT_UNITS	FGE
RADMAT_ALARM	N
RADMAT_ID	T
RADMAT_DESCR	TRU GLOVEBOX
RADMAT_LIMIT	200
RADMAT_RAD_TOT	110
RADMAT_UNITS	FGE
RADMAT_ALARM	N

otp_tr2.sql 7/15/97

SCRIPT TO UPDATE THE DMS DATABASE PRIOR TO THE START OF THE TRU RWM GLOVEBOX OTP CASE 3

```
spool otp_tr2.out;

UPDATE CONLOC
      SET CONLOC_DT = sysdate, CONLOC_LOCN_ID = 'RWM_CRSL'
      WHERE CONLOC_PKG_ID = 'OTP-TRUR-TD-01';

UPDATE CONLOC
      SET CONLOC_DT = sysdate, CONLOC_LOCN_ID = 'RWM_CRSL'
      WHERE CONLOC_PKG_ID = 'OTP-TRUR-TD-02';

UPDATE CONLOC
      SET CONLOC_DT = sysdate,
      CONLOC_LOCN_ID = 'SAMPLE_MGT'
      WHERE CONLOC_PKG_ID = 'OTP6-97-300001';

UPDATE CONLOC
      SET CONLOC_DT = sysdate,
      CONLOC_LOCN_ID = 'SAMPLE_MGT'
      WHERE CONLOC_PKG_ID = 'OTP6-97-400001';

UPDATE BOTTLE
      SET BOT_RETURN_DT = sysdate
      WHERE BOT_BOTTLE_ID = '97-00002-01L';

UPDATE BOTTLE
      SET BOT_RETURN_DT = sysdate
      WHERE BOT_BOTTLE_ID = '97-00003-01L';

UPDATE BOTTLE
      SET BOT_RETURN_DT = sysdate
      WHERE BOT_BOTTLE_ID = '97-00004-01L';

INSERT INTO WORKSHEET(WORKSHEET_ID)
      VALUES('OTPWRK01');

INSERT INTO WORKSHEET(WORKSHEET_ID)
      VALUES('OTPWRK02');

insert into worksheet(worksheet_id)
   values('OTPWRK03');

insert into worksheet(worksheet_id)
   values('OTPWRK04');

insert into worksheet(worksheet_id)
   values('OTPWRK05');

update worksheet
      set worksheet_name = 'Packet 7',
```

```
      worksheet_proc_num = 'OP-0711-ABS',
      worksheet_proc_rev_num = 'A',
      worksheet_proc_instr = 'Treat Saline Solution Items:   OTP6-97-000007
    Instructions:
    Treat in collection container
    Add _________ Chemsorb'
    where worksheet_id = 'OTPWRK01';

update worksheet
    set worksheet_name = 'Packet 8',
    worksheet_proc_num = 'OP-0711-NEUT',
    worksheet_proc_rev_num = 'A',
     worksheet_proc_instr = 'Treat Acetic Acid Solution Items:
OTP6-97-000008
     Instructions:
     Treat in collection container
    Add _______Bicarbonate of soda
     Add _________ Chemsorb'
   where worksheet_id = 'OTPWRK02';

update worksheet
     set worksheet_name = 'Packet 10',
   worksheet_proc_num = 'OP-0711-ABS',
   worksheet_proc_rev_num = 'A',
    worksheet_proc_instr = 'Treat Solvent :   OTP6-97-000010
                            OTP00002-01L
                            OTP00003-01L
    Instructions:
    Use treatment container
   Add _______Embiber beads'
    where worksheet_id = 'OTPWRK03';

update worksheet
     set worksheet_name = 'Packet 11',
     worksheet_proc_num = 'OP-0711-ABS',
    worksheet_proc_rev_num = 'A',
      worksheet_proc_instr = 'Treat oil Items:   OTP6-97-000011
                                                 97-00004-01L
   OTP00004-01L
      Instructions:
      Use treatment container
     Add _______chemsorb'
   where worksheet_id = 'OTPWRK04';


update worksheet
    set worksheet_name = 'Packet 6',
    worksheet_proc_num = 'OP-0711-NEUT',
    worksheet_proc_rev_num = 'A',
     worksheet_proc_instr = 'Treat Acid solution Items:   OTP6-97-000006
                                                          OTP00004-011
     Instructions:
     Treat in packet container
   Add _______bicarbonate of soda
```

```
    Add _______chemsorb'
    where worksheet_id = 'OTPWRK05';

insert into workitem
    values('OTPWRK01','OTP6-97-000007');

 insert into workitem
    values('OTPWRK02','OTP6-97-000008');


 insert into workitem
     values('OTPWRK03','OTP6-97-000010');

 insert into workitem
     values('OTPWRK03','97-00002-01L');

 insert into workitem
    values('OTPWRK03','97-00003-01L');

 insert into workitem
    values('OTPWRK04','97-00004-01L');

 insert into workitem
     values('OTPWRK04','OTP6-97-000011');

  insert into workitem
     values('OTPWRK05','OTP6-97-000006');
 commit;

spool off;
```

CASE3B.722 DMS DATABASE AT THE START OF TRU/RWM GLOVEBOX OTP CASE 3 7/22/97

CON_PKG_ID	OTP-TRUR-PD-01
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	U
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31
CON_PKG_ID	OTP-TRUR-PD-11
CON_CNTYP_CD	DM
CON_GENER_WASTE_DESCR	2 EMPTY SALINE SOLUTION AEROSOL CAN
1 EMPTY UNMARK	
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	I
CON_SIZE_DESCR	55 GALLON
CON_TARE_WGT	27
CON_PKG_ID	OTP-TRUR-TD-01
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	G
CON_SCAT_CD	ANY
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31
CON_PKG_ID	OTP-TRUR-TD-02
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	G
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31
CON_PKG_ID	OTP6-97-000001
CON_GENER_WASTE_DESCR	AEROSOL CAN OF SALINE SOLUTION
CON_PKG_STATUS	R
CON_PKG_ID	OTP6-97-000002
CON_GENER_WASTE_DESCR	AEROSOL CAN OF SALINE SOLUTION
CON_PKG_STATUS	R
CON_PKG_ID	OTP6-97-000003
CON_GENER_WASTE_DESCR	UNLABELED AEROSOL CAN
CON_PKG_STATUS	R
CON_PKG_ID	OTP6-97-000004
CON_GENER_WASTE_DESCR	LEAD BRICK
CON_PKG_STATUS	R
CON_PKG_ID	OTP6-97-000005
CON_GENER_WASTE_DESCR	BOTTLE OF SOLVENT AND BOTTLE OF OIL
CON_PKG_STATUS	R
CON_PKG_ID	OTP6-97-000006
CON_GENER_WASTE_DESCR	BOTTLE OF ACID
CON_PKG_ID	OTP6-97-000007
CON_GENER_WASTE_DESCR	BOTTLE OF ABSORBED SALINE SOLUTION
CON_PKG_DT	19-JUL-27
CON_PKG_STATUS	G
CON_PKG_ID	OTP6-97-000008
CON_GENER_WASTE_DESCR	BOTTLE OF UNKNOWN LIQUID
CON_PKG_DT	19-JUL-27
CON_PKG_STATUS	G
CON_PKG_ID	OTP6-97-000009
CON_GENER_WASTE_DESCR	LEAD BRICK
CON_PKG_DT	22-JUL-27
CON_PKG_STATUS	G

CON_PKG_ID	OTP6-97-000010
CON_GENER_WASTE_DESCR	UNKNOWN SOLVENT
CON_PKG_DT	22-JUL-27
CON_PKG_STATUS	G
CON_PKG_ID	OTP6-97-000011
CON_GENER_WASTE_DESCR	OIL
CON_PKG_DT	22-JUL-27
CON_PKG_STATUS	G
CON_PKG_ID	OTP6-97-300001
CON_PKG_ID	OTP6-97-300002
CON_PKG_ID	OTP6-97-400001
CONEXT_PKG_ID	OTP-TRUR-PD-01
CONEXT_USE_CD	EC
CONEXT_WRAP_STAT_CD	I
CONEXT_PKG_ID	OTP-TRUR-PD-11
CONEXT_PROF_FLAG	Y
CONEXT_PROF_ID	TRU-10
CONEXT_USE_CD	PD
CONEXT_WRAP_STAT_CD	I
CONEXT_PKG_ID	OTP-TRUR-TD-01
CONEXT_CNTR_STATUS	P
CONEXT_USE_CD	TD
CONEXT_WRAP_STAT_CD	I
CONEXT_PKG_ID	OTP-TRUR-TD-02
CONEXT_CNTR_STATUS	P
CONEXT_USE_CD	TD
CONEXT_WRAP_STAT_CD	I
CONEXT_PKG_ID	OTP6-97-000001
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000002
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000003
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000004
CONEXT_MAT_GRP_CD	PB
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000005
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000006
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000007
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	CC
CONEXT_PKG_ID	OTP6-97-000008
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	CC
CONEXT_PKG_ID	OTP6-97-000009
CONEXT_MAT_GRP_CD	PB
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000010

CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000011
CONEXT_MAT_GRP_CD	OL
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-300001
CONEXT_USE_CD	PP
CONEXT_PKG_ID	OTP6-97-300002
CONEXT_USE_CD	PP
CONEXT_PKG_ID	OTP6-97-400001
CONEXT_USE_CD	TP
CONLOC_PKG_ID	OTP-TRUR-PD-01
CONLOC_DT	05-FEB-97
CONLOC_LOCN_ID	RWM_CRSL
CONLOC_PKG_ID	OTP-TRUR-PD-11
CONLOC_DT	19-JUL-27
CONLOC_LOCN_ID	TRURWCMPLT
CONLOC_PKG_ID	OTP-TRUR-TD-01
CONLOC_DT	21-JUL-97
CONLOC_LOCN_ID	RWM_CRSL
CONLOC_PKG_ID	OTP-TRUR-TD-02
CONLOC_DT	21-JUL-97
CONLOC_LOCN_ID	RWM_CRSL
CONLOC_PKG_ID	OTP6-97-000008
CONLOC_DT	22-JUL-27
CONLOC_LOCN_ID	TRURWSAMPL
CONLOC_PKG_ID	OTP6-97-300001
CONLOC_DT	21-JUL-97
CONLOC_LOCN_ID	SAMPLE_MGT
CONLOC_PKG_ID	OTP6-97-300002
CONLOC_DT	22-JUL-27
CONLOC_LOCN_ID	TRURW_PP
CONLOC_PKG_ID	OTP6-97-400001
CONLOC_DT	21-JUL-97
CONLOC_LOCN_ID	SAMPLE_MGT
CONR_FROM_PKG_ID	OTP6-97-000001
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	18-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000001
CONR_TO_PKG_ID	OTP6-97-000007
CONR_DT	19-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000002
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	18-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000002
CONR_TO_PKG_ID	OTP6-97-000007
CONR_DT	19-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000003
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	18-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000003
CONR_TO_PKG_ID	OTP6-97-000008
CONR_DT	19-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000004
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	21-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000004
CONR_TO_PKG_ID	OTP6-97-000009
CONR_DT	22-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000005
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	21-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000005
CONR_TO_PKG_ID	OTP6-97-000010
CONR_DT	22-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000005
CONR_TO_PKG_ID	OTP6-97-000011
CONR_DT	22-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000006
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	22-JUL-27
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000007
CONR_TO_PKG_ID	OTP-TRUR-TD-01
CONR_DT	19-JUL-27
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000009
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	22-JUL-27
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000010
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	22-JUL-27
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000011
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	22-JUL-27
CONR_REL_CD	O
PHYS_PKG_ID	OTP-TRUR-PD-11
PHYS_COMP_DESCR	CLOTH/RAGS/NYLON
PHYS_COMP_VOL_PCT	60
PHYS_COMP_WGT	4
PHYS_PKG_ID	OTP-TRUR-PD-11
PHYS_COMP_DESCR	METAL/IRON/GALVANIZED/SHEET
PHYS_COMP_VOL_PCT	10
PHYS_COMP_WGT	1
PHYS_PKG_ID	OTP-TRUR-PD-11
PHYS_COMP_DESCR	PLASTIC/POLYURATHANE
PHYS_COMP_VOL_PCT	30
PHYS_COMP_WGT	3
SAM_SAMPLE_ID	97-00001
SAM_CLOSED_FLAG	N
SAM_COMMENTS	unknown liquid
SAM_LOCN_ID	TRURWSAMPL
SAM_MATRIX_CD	L
SAM_TAKEN_BY	62264
SAM_TAKEN_DT	18-JUL-97
SAM_TEMP	22

SAM_PKG_ID	OTP6-97-000008
SAM_SAMPLE_ID	97-00002
SAM_CLOSED_FLAG	N
SAM_COMMENTS	unkown solvents
SAM_LOCN_ID	TRURWSAMPL
SAM_MATRIX_CD	L
SAM_TAKEN_BY	62264
SAM_TAKEN_DT	21-JUL-97
SAM_TEMP	22
SAM_PKG_ID	OTP6-97-000010
SAM_SAMPLE_ID	97-00003
SAM_CLOSED_FLAG	N
SAM_COMMENTS	unknown solvent
SAM_LOCN_ID	TRURWSAMPL
SAM_MATRIX_CD	L
SAM_TAKEN_BY	62264
SAM_TAKEN_DT	21-JUL-97
SAM_TEMP	22
SAM_PKG_ID	OTP6-97-000010
SAM_SAMPLE_ID	97-00004
SAM_CLOSED_FLAG	N
SAM_COMMENTS	oil
SAM_LOCN_ID	TRURWSAMPL
SAM_MATRIX_CD	L
SAM_TAKEN_BY	62264
SAM_TAKEN_DT	21-JUL-97
SAM_TEMP	22
SAM_PKG_ID	OTP6-97-000011
SAR_SAMPLE_ID	97-00001
SAR_ANAL_CD	AQLIQ
SAR_SAMPLE_ID	97-00001
SAR_ANAL_CD	COND
SAR_SAMPLE_ID	97-00002
SAR_ANAL_CD	SOLVENTS
SAR_SAMPLE_ID	97-00003
SAR_ANAL_CD	SOLVENTS
SAR_SAMPLE_ID	97-00004
SAR_ANAL_CD	OILS
BOT_BOTTLE_ID	97-00001-01L
BOT_SAMPLE_ID	97-00001
BOT_ANAL_CD	AQLIQ
BOT_BOTTLE_ID	97-00001-02L
BOT_SAMPLE_ID	97-00001
BOT_ANAL_CD	COND
BOT_BOTTLE_ID	97-00002-01L
BOT_SAMPLE_ID	97-00002
BOT_RETURN_DT	21-JUL-97
BOT_ANAL_CD	SOLVENTS
BOT_BOTTLE_ID	97-00003-01L
BOT_SAMPLE_ID	97-00003
BOT_RETURN_DT	21-JUL-97
BOT_ANAL_CD	SOLVENTS
BOT_BOTTLE_ID	97-00004-01L
BOT_SAMPLE_ID	97-00004
BOT_RETURN_DT	21-JUL-97
BOT_ANAL_CD	OILS
SAMREL_BOTTLE_ID	97-00001-01L
SAMREL_PKG_ID	OTP6-97-000008
SAMREL_DT	18-JUL-97
SAMREL_USE_CD	CC
SAMREL_BOTTLE_ID	97-00001-01L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-000008
SAMREL_DT	18-JUL-97
SAMREL_USE_CD	CC
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00002-01L
SAMREL_PKG_ID	OTP6-97-000010
SAMREL_DT	21-JUL-97
SAMREL_USE_CD	PK
SAMREL_BOTTLE_ID	97-00002-01L
SAMREL_PKG_ID	OTP6-97-300002
SAMREL_DT	22-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00003-01L
SAMREL_PKG_ID	OTP6-97-000010
SAMREL_DT	21-JUL-97
SAMREL_USE_CD	PK
SAMREL_BOTTLE_ID	97-00003-01L
SAMREL_PKG_ID	OTP6-97-300002
SAMREL_DT	22-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00004-01L
SAMREL_PKG_ID	OTP6-97-000011
SAMREL_DT	21-JUL-97
SAMREL_USE_CD	PK
SAMREL_BOTTLE_ID	97-00004-01L
SAMREL_PKG_ID	OTP6-97-300002
SAMREL_DT	22-JUL-27
SAMREL_USE_CD	PP
SCRN_SCRN_ID	97-00003-01F
SCRN_PKG_ID	OTP6-97-000009
SCRN_DT	21-JUL-97
SCRN_LOCN_ID	TRURWSAMPL
SCRN_PERS_ID	62264
SCRN_SAMPLING_METHOD_CD	INS
SCRN_SCRN_ID	97-00004-01F
SCRN_PKG_ID	OTP6-97-000010
SCRN_DT	21-JUL-97
SCRN_LOCN_ID	TRURWSAMPL
SCRN_PERS_ID	62264
SCRN_SAMPLING_METHOD_CD	INS
SCRN_SCRN_ID	97-00005-01F
SCRN_PKG_ID	OTP6-97-000011
SCRN_DT	21-JUL-97
SCRN_LOCN_ID	TRURWSAMPL
SCRN_PERS_ID	62264
SCRN_SAMPLING_METHOD_CD	INS
SCRN_SCRN_ID	97-00006-01F

SCRN_PKG_ID	OTP6-97-000006
SCRN_DT	21-JUL-97
SCRN_LOCN_ID	TRURWSAMPL
SCRN_PERS_ID	62264
SCRN_SAMPLING_METHOD_CD	INS
FIELD_SCRN_ID	97-00003-01F
FIELD_FAT_CD	LEAD
field_res	FIELD ENTRY
FIELD_SCRN_ID	97-00004-01F
FIELD_FAT_CD	CLOR
field_res	FIELD ENTRY
FIELD_SCRN_ID	97-00005-01F
FIELD_FAT_CD	PCBO
field_res	FIELD ENTRY
FIELD_SCRN_ID	97-00006-01F
FIELD_FAT_CD	PHDP
field_res	FIELD ENTRY
WORKSHEET_ID	OTPWRK01
WORKSHEET_NAME	PACKET 7
WORKSHEET_PROC_NUM	OP-0711-ABS
WORKSHEET_PROC_REV_NUM	A
WORKSHEET_PROC_INSTR	TREAT SALINE SOLUTION ITEMS
	OTP6-97-000007
WORKSHEET_ID	OTPWRK02
WORKSHEET_NAME	PACKET 8
WORKSHEET_PROC_NUM	OP-0711-NEUT
WORKSHEET_PROC_REV_NUM	A
WORKSHEET_PROC_INSTR	TREAT ACETIC ACID SOLUTION ITEMS
	OTP6-97-000008
WORKSHEET_ID	OTPWRK03
WORKSHEET_NAME	PACKET 10
WORKSHEET_PROC_NUM	OP-0711-ABS
WORKSHEET_PROC_REV_NUM	A
WORKSHEET_PROC_INSTR	TREAT SOLVENT
	OTP6-97-000010
WORKSHEET_ID	OTPWRK04
WORKSHEET_NAME	PACKET 11
WORKSHEET_PROC_NUM	OP-0711-ABS
WORKSHEET_PROC_REV_NUM	A
WORKSHEET_PROC_INSTR	TREAT OIL ITEMS
	OTP6-97-000011
WORKSHEET_ID	OTPWRK05
WORKSHEET_NAME	PACKET 6
WORKSHEET_PROC_NUM	OP-0711-NEUT
WORKSHEET_PROC_REV_NUM	A
WORKSHEET_PROC_INSTR	TREAT ACID SOLUTION ITEMS
	OTP6-97-000006
WORKITEM_ID	OTPWRK01
WORKITEM_PKG_ID	OTP6-97-000007
WORKITEM_ID	OTPWRK02
WORKITEM_PKG_ID	OTP6-97-000008
WORKITEM_ID	OTPWRK03
WORKITEM_PKG_ID	97-00002-01L
WORKITEM_ID	OTPWRK03
WORKITEM_PKG_ID	97-00003-01L
WORKITEM_ID	OTPWRK03
WORKITEM_PKG_ID	OTP6-97-000010
WORKITEM_ID	OTPWRK04
WORKITEM_PKG_ID	97-00004-01L
WORKITEM_ID	OTPWRK04
WORKITEM_PKG_ID	OTP6-97-000011
WORKITEM_ID	OTPWRK05
WORKITEM_PKG_ID	OTP6-97-000006
RADMAT_ID	F
RADMAT_DESCR	WRAP 1 FACILITY
RADMAT_LIMIT	100
RADMAT_RAD_TOT	10
RADMAT_UNITS	CI
RADMAT_ALARM	N
RADMAT_ID	R
RADMAT_DESCR	TRU RWM GLOVEBOX
RADMAT_LIMIT	200
RADMAT_RAD_TOT	150
RADMAT_UNITS	FGE
RADMAT_ALARM	N
RADMAT_ID	T
RADMAT_DESCR	TRU GLOVEBOX
RADMAT_LIMIT	200
RADMAT_RAD_TOT	110
RADMAT_UNITS	FGE
RADMAT_ALARM	N

CASE3A.722 DMS DATABASE AT THE END OF TRU/RWM GLOVEBOX OTP CASE 3 7/22/97

CON_PKG_ID	OTP-TRUR-PD-01
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	U
CON_PWTYP_CD	R
CON_SCAT_CD	TRU
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31

CON_PKG_ID	OTP-TRUR-PD-11
CON_CNTYP_CD	DM
CON_GENER_WASTE_DESCR	2 EMPTY SALINE SOLUTION AEROSOL CAN
1 EMPTY UNMARK	
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	I
CON_SIZE_DESCR	55 GALLON
CON_TARE_WGT	27

CON_PKG_ID	OTP-TRUR-TD-01
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	G
CON_SCAT_CD	ANY
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31

CON_PKG_ID	OTP-TRUR-TD-02
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	G
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31

CON_PKG_ID	OTP1-OTP100001

CON_PKG_ID	OTP6-97-000001
CON_GENER_WASTE_DESCR	AEROSOL CAN OF SALINE SOLUTION
CON_PKG_STATUS	R

CON_PKG_ID	OTP6-97-000002
CON_GENER_WASTE_DESCR	AEROSOL CAN OF SALINE SOLUTION
CON_PKG_STATUS	R

CON_PKG_ID	OTP6-97-000003
CON_GENER_WASTE_DESCR	UNLABELED AEROSOL CAN
CON_PKG_STATUS	R

CON_PKG_ID	OTP6-97-000004
CON_GENER_WASTE_DESCR	LEAD BRICK
CON_PKG_STATUS	R

CON_PKG_ID	OTP6-97-000005
CON_GENER_WASTE_DESCR	BOTTLE OF SOLVENT AND BOTTLE OF OIL
CON_PKG_STATUS	R

CON_PKG_ID	OTP6-97-000006
CON_GENER_WASTE_DESCR	BOTTLE OF ACID

CON_PKG_ID	OTP6-97-000007
CON_GENER_WASTE_DESCR	BOTTLE OF ABSORBED SALINE SOLUTION
CON_PKG_DT	19-JUL-27
CON_PKG_STATUS	G

CON_PKG_ID	OTP6-97-000008
CON_GENER_WASTE_DESCR	BOTTLE OF UNKNOWN LIQUID
CON_PKG_DT	19-JUL-27
CON_PKG_STATUS	G

CON_PKG_ID	OTP6-97-000009
CON_GENER_WASTE_DESCR	LEAD BRICK
CON_PKG_DT	22-JUL-27
CON_PKG_STATUS	G

CON_PKG_ID	OTP6-97-000010
CON_GENER_WASTE_DESCR	UNKNOWN SOLVENT
CON_PKG_DT	22-JUL-27
CON_PKG_STATUS	G

CON_PKG_ID	OTP6-97-000011
CON_GENER_WASTE_DESCR	OIL
CON_PKG_DT	22-JUL-27
CON_PKG_STATUS	G

CON_PKG_ID	OTP6-97-300001

CON_PKG_ID	OTP6-97-300002

CON_PKG_ID	OTP6-97-400001

CON_PKG_ID	OTP6-97-900001
CON_GENER_WASTE_DESCR	1L BOTTLE OF SALINE

CON_PKG_ID	OTP6-97-900002
CON_GENER_WASTE_DESCR	1L BOTTLE OF ACETIC ACID

CONEXT_PKG_ID	OTP-TRUR-PD-01
CONEXT_PROF_FLAG	Y
CONEXT_PROF_ID	TRU-10
CONEXT_USE_CD	PD
CONEXT_WRAP_STAT_CD	I

CONEXT_PKG_ID	OTP-TRUR-PD-11
CONEXT_PROF_FLAG	Y
CONEXT_PROF_ID	TRU-10
CONEXT_USE_CD	PD
CONEXT_WRAP_STAT_CD	I

CONEXT_PKG_ID	OTP-TRUR-TD-01
CONEXT_CNTR_STATUS	P
CONEXT_USE_CD	TD
CONEXT_WRAP_STAT_CD	I

CONEXT_PKG_ID	OTP-TRUR-TD-02
CONEXT_CNTR_STATUS	P
CONEXT_USE_CD	TD
CONEXT_WRAP_STAT_CD	I

CONEXT_PKG_ID	OTP1-OTP100001
CONEXT_USE_CD	PP

CONEXT_PKG_ID	OTP6-97-000001
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK

CONEXT_PKG_ID	OTP6-97-000002
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK

CONEXT_PKG_ID	OTP6-97-000003
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK

CONEXT_PKG_ID	OTP6-97-000004
CONEXT_MAT_GRP_CD	PB
CONEXT_USE_CD	PK

CONEXT_PKG_ID	OTP6-97-000005
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	PK

CONEXT_PKG_ID OTP6-97-000006

CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000007
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	CC
CONEXT_PKG_ID	OTP6-97-000008
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	CC
CONEXT_PKG_ID	OTP6-97-000009
CONEXT_MAT_GRP_CD	PB
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000010
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-000011
CONEXT_MAT_GRP_CD	OL
CONEXT_USE_CD	PK
CONEXT_PKG_ID	OTP6-97-300001
CONEXT_USE_CD	PP
CONEXT_PKG_ID	OTP6-97-300002
CONEXT_USE_CD	PP
CONEXT_PKG_ID	OTP6-97-400001
CONEXT_USE_CD	TP
CONEXT_PKG_ID	OTP6-97-900001
CONEXT_TREATMENT_FLAG	Y
CONEXT_USE_CD	TC
CONEXT_PKG_ID	OTP6-97-900002
CONEXT_TREATMENT_FLAG	Y
CONEXT_USE_CD	TC
CONLOC_PKG_ID	OTP-TRUR-PD-01
CONLOC_DT	23-JUL-27
CONLOC_LOCN_ID	TRURWEXIT
CONLOC_PKG_ID	OTP-TRUR-PD-11
CONLOC_DT	19-JUL-27
CONLOC_LOCN_ID	TRURWCMPLT
CONLOC_PKG_ID	OTP-TRUR-TD-01
CONLOC_DT	23-JUL-27
CONLOC_LOCN_ID	TRURWENTRY
CONLOC_PKG_ID	OTP-TRUR-TD-02
CONLOC_DT	21-JUL-97
CONLOC_LOCN_ID	RWM_CRSL
CONLOC_PKG_ID	OTP1-OTP100001
CONLOC_DT	23-JUL-27
CONLOC_LOCN_ID	LLW_PP
CONLOC_PKG_ID	OTP6-97-300001
CONLOC_DT	21-JUL-97
CONLOC_LOCN_ID	SAMPLE_MGT
CONLOC_PKG_ID	OTP6-97-300002
CONLOC_DT	22-JUL-27
CONLOC_LOCN_ID	TRURW_PP
CONLOC_PKG_ID	OTP6-97-400001
CONLOC_DT	21-JUL-97
CONLOC_LOCN_ID	SAMPLE_MGT
CONR_FROM_PKG_ID	OTP6-97-000001
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	18-JUL-97
CONR_REL_CD	C

CONR_FROM_PKG_ID	OTP6-97-000001
CONR_TO_PKG_ID	OTP6-97-000007
CONR_DT	19-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000002
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	18-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000002
CONR_TO_PKG_ID	OTP6-97-000007
CONR_DT	19-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000003
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	18-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000003
CONR_TO_PKG_ID	OTP6-97-000008
CONR_DT	19-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000004
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	21-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000004
CONR_TO_PKG_ID	OTP6-97-000009
CONR_DT	22-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000005
CONR_TO_PKG_ID	OTP-TRUR-PD-11
CONR_DT	21-JUL-97
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000005
CONR_TO_PKG_ID	OTP6-97-000010
CONR_DT	22-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000005
CONR_TO_PKG_ID	OTP6-97-000011
CONR_DT	22-JUL-27
CONR_REL_CD	S
CONR_FROM_PKG_ID	OTP6-97-000006
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	22-JUL-27
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000007
CONR_TO_PKG_ID	OTP6-97-900001
CONR_DT	23-JUL-27
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000008
CONR_TO_PKG_ID	OTP6-97-900002
CONR_DT	23-JUL-27
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-000009
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	22-JUL-27
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000010
CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	22-JUL-27
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-000011

CONR_TO_PKG_ID	OTP-TRUR-TD-02
CONR_DT	22-JUL-27
CONR_REL_CD	O
CONR_FROM_PKG_ID	OTP6-97-900001
CONR_TO_PKG_ID	OTP-TRUR-PD-01
CONR_DT	23-JUL-27
CONR_REL_CD	C
CONR_FROM_PKG_ID	OTP6-97-900002
CONR_TO_PKG_ID	OTP-TRUR-PD-01
CONR_DT	23-JUL-27
CONR_REL_CD	C
CONTREAT_PKG_ID	OTP6-97-900001
CONTREAT_DT	22-JUL-97
CONTREAT_COMMENT	XXX
CONTREAT_USER_ID	USER1
CONTREAT_WS_ID	OTPWRK01
CONTREAT_PKG_ID	OTP6-97-900002
CONTREAT_DT	22-JUL-97
CONTREAT_COMMENT	XXX
CONTREAT_USER_ID	USER1
CONTREAT_WS_ID	OTPWRK02
PHYS_PKG_ID	OTP-TRUR-PD-01
PHYS_COMP_DESCR	ABSORBED AQUEOUS SOLUTION
PHYS_COMP_VOL_PCT	95
PHYS_COMP_WGT	4
PHYS_PKG_ID	OTP-TRUR-PD-01
PHYS_COMP_DESCR	PLASTIC/POLYURATHANE
PHYS_COMP_VOL_PCT	5
PHYS_COMP_WGT	1
PHYS_PKG_ID	OTP-TRUR-PD-11
PHYS_COMP_DESCR	CLOTH/RAGS/NYLON
PHYS_COMP_VOL_PCT	60
PHYS_COMP_WGT	4
PHYS_PKG_ID	OTP-TRUR-PD-11
PHYS_COMP_DESCR	METAL/IRON/GALVANIZED/SHEET
PHYS_COMP_VOL_PCT	10
PHYS_COMP_WGT	1
PHYS_PKG_ID	OTP-TRUR-PD-11
PHYS_COMP_DESCR	PLASTIC/POLYURATHANE
PHYS_COMP_VOL_PCT	30
PHYS_COMP_WGT	3
SAM_SAMPLE_ID	97-00001
SAM_CLOSED_FLAG	N
SAM_COMMENTS	unknown liquid
SAM_LOCN_ID	TRURWSAMPL
SAM_MATRIX_CD	L
SAM_TAKEN_BY	62264
SAM_TAKEN_DT	18-JUL-97
SAM_TEMP	22
SAM_PKG_ID	OTP6-97-000008
SAM_SAMPLE_ID	97-00002
SAM_CLOSED_FLAG	N
SAM_COMMENTS	unkown solvents
SAM_LOCN_ID	TRURWSAMPL
SAM_MATRIX_CD	L
SAM_TAKEN_BY	62264
SAM_TAKEN_DT	21-JUL-97
SAM_TEMP	22
SAM_PKG_ID	OTP6-97-000010
SAM_SAMPLE_ID	97-00003
SAM_CLOSED_FLAG	N
SAM_COMMENTS	unknown solvent
SAM_LOCN_ID	TRURWSAMPL
SAM_MATRIX_CD	L
SAM_TAKEN_BY	62264
SAM_TAKEN_DT	21-JUL-97
SAM_TEMP	22
SAM_PKG_ID	OTP6-97-000010
SAM_SAMPLE_ID	97-00004
SAM_CLOSED_FLAG	N
SAM_COMMENTS	oil
SAM_LOCN_ID	TRURWSAMPL
SAM_MATRIX_CD	L
SAM_TAKEN_BY	62264
SAM_TAKEN_DT	21-JUL-97
SAM_TEMP	22
SAM_PKG_ID	OTP6-97-000011
SAR_SAMPLE_ID	97-00001
SAR_ANAL_CD	AQLIQ
SAR_SAMPLE_ID	97-00001
SAR_ANAL_CD	COND
SAR_SAMPLE_ID	97-00002
SAR_ANAL_CD	SOLVENTS
SAR_SAMPLE_ID	97-00003
SAR_ANAL_CD	SOLVENTS
SAR_SAMPLE_ID	97-00004
SAR_ANAL_CD	OILS
BOT_BOTTLE_ID	97-00001-01L
BOT_SAMPLE_ID	97-00001
BOT_ANAL_CD	AQLIQ
BOT_BOTTLE_ID	97-00001-02L
BOT_SAMPLE_ID	97-00001
BOT_ANAL_CD	COND
BOT_BOTTLE_ID	97-00002-01L
BOT_SAMPLE_ID	97-00002
BOT_RETURN_DT	21-JUL-97
BOT_ANAL_CD	SOLVENTS
BOT_BOTTLE_ID	97-00003-01L
BOT_SAMPLE_ID	97-00003
BOT_RETURN_DT	21-JUL-97
BOT_ANAL_CD	SOLVENTS
BOT_BOTTLE_ID	97-00004-01L
BOT_SAMPLE_ID	97-00004
BOT_RETURN_DT	21-JUL-97
BOT_ANAL_CD	OILS
SAMREL_BOTTLE_ID	97-00001-01L
SAMREL_PKG_ID	OTP6-97-000008
SAMREL_DT	18-JUL-97
SAMREL_USE_CD	CC
SAMREL_BOTTLE_ID	97-00001-01L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-000008
SAMREL_DT	18-JUL-97
SAMREL_USE_CD	CC
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-300001

SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00001-02L
SAMREL_PKG_ID	OTP6-97-300001
SAMREL_DT	19-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00002-01L
SAMREL_PKG_ID	OTP6-97-000010
SAMREL_DT	21-JUL-97
SAMREL_USE_CD	PK
SAMREL_BOTTLE_ID	97-00002-01L
SAMREL_PKG_ID	OTP6-97-300002
SAMREL_DT	22-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00003-01L
SAMREL_PKG_ID	OTP6-97-000010
SAMREL_DT	21-JUL-97
SAMREL_USE_CD	PK
SAMREL_BOTTLE_ID	97-00003-01L
SAMREL_PKG_ID	OTP6-97-300002
SAMREL_DT	22-JUL-27
SAMREL_USE_CD	PP
SAMREL_BOTTLE_ID	97-00004-01L
SAMREL_PKG_ID	OTP6-97-000011
SAMREL_DT	21-JUL-97
SAMREL_USE_CD	PK
SAMREL_BOTTLE_ID	97-00004-01L
SAMREL_PKG_ID	OTP6-97-300002
SAMREL_DT	22-JUL-27
SAMREL_USE_CD	PP
SCRN_SCRN_ID	97-00003-01F
SCRN_PKG_ID	OTP6-97-000009
SCRN_DT	21-JUL-97
SCRN_LOCN_ID	TRURWSAMPL
SCRN_PERS_ID	62264
SCRN_SAMPLING_METHOD_CD	INS
SCRN_SCRN_ID	97-00004-01F
SCRN_PKG_ID	OTP6-97-000010
SCRN_DT	21-JUL-97
SCRN_LOCN_ID	TRURWSAMPL
SCRN_PERS_ID	62264
SCRN_SAMPLING_METHOD_CD	INS
SCRN_SCRN_ID	97-00005-01F
SCRN_PKG_ID	OTP6-97-000011
SCRN_DT	21-JUL-97
SCRN_LOCN_ID	TRURWSAMPL
SCRN_PERS_ID	62264
SCRN_SAMPLING_METHOD_CD	INS
SCRN_SCRN_ID	97-00006-01F
SCRN_PKG_ID	OTP6-97-000006
SCRN_DT	21-JUL-97
SCRN_LOCN_ID	TRURWSAMPL
SCRN_PERS_ID	62264
SCRN_SAMPLING_METHOD_CD	INS
FIELD_SCRN_ID	97-00003-01F
FIELD_FAT_CD	LEAD
field_res	FIELD ENTRY
FIELD_SCRN_ID	97-00004-01F
FIELD_FAT_CD	CLOR
field_res	FIELD ENTRY
FIELD_SCRN_ID	97-00005-01F
FIELD_FAT_CD	PCBO
field_res	FIELD ENTRY
FIELD_SCRN_ID	97-00006-01F
FIELD_FAT_CD	PHDP
field_res	FIELD ENTRY
WORKSHEET_ID	OTPWRK01
WORKSHEET_NAME	PACKET 7
WORKSHEET_PROC_NUM	OP-0711-ABS
WORKSHEET_PROC_REV_NUM	A
WORKSHEET_PROC_INSTR	TREAT SALINE SOLUTION
ITEMS	OTP6-97-000007
WORKSHEET_ID	OTPWRK02
WORKSHEET_NAME	PACKET 8
WORKSHEET_PROC_NUM	OP-0711-NEUT
WORKSHEET_PROC_REV_NUM	A
WORKSHEET_PROC_INSTR	TREAT ACETIC ACID SOLUTION ITEMS OTP6-97-000008
WORKSHEET_ID	OTPWRK03
WORKSHEET_NAME	PACKET 10
WORKSHEET_PROC_NUM	OP-0711-ABS
WORKSHEET_PROC_REV_NUM	A
WORKSHEET_PROC_INSTR	TREAT SOLVENT OTP6-97-000010
WORKSHEET_ID	OTPWRK04
WORKSHEET_NAME	PACKET 11
WORKSHEET_PROC_NUM	OP-0711-ABS
WORKSHEET_PROC_REV_NUM	A
WORKSHEET_PROC_INSTR	TREAT OIL ITEMS OTP6-97-000011
WORKSHEET_ID	OTPWRK05
WORKSHEET_NAME	PACKET 6
WORKSHEET_PROC_NUM	OP-0711-NEUT
WORKSHEET_PROC_REV_NUM	A
WORKSHEET_PROC_INSTR	TREAT ACID SOLUTION
ITEMS	OTP6-97-000006
WORKITEM_ID	OTPWRK01
WORKITEM_PKG_ID	OTP6-97-000007
WORKITEM_ID	OTPWRK02
WORKITEM_PKG_ID	OTP6-97-000008
WORKITEM_ID	OTPWRK03
WORKITEM_PKG_ID	97-00002-01L
WORKITEM_ID	OTPWRK03
WORKITEM_PKG_ID	97-00003-01L
WORKITEM_ID	OTPWRK03
WORKITEM_PKG_ID	OTP6-97-000010
WORKITEM_ID	OTPWRK04
WORKITEM_PKG_ID	97-00004-01L
WORKITEM_ID	OTPWRK04
WORKITEM_PKG_ID	OTP6-97-000011
WORKITEM_ID	OTPWRK05
WORKITEM_PKG_ID	OTP6-97-000006
RADMAT_ID	F
RADMAT_DESCR	WRAP 1 FACILITY
RADMAT_LIMIT	100
RADMAT_RAD_TOT	10
RADMAT_UNITS	CI
RADMAT_ALARM	N

RADMAT_ID	R
RADMAT_DESCR	TRU RWM GLOVEBOX
RADMAT_LIMIT	200
RADMAT_RAD_TOT	150
RADMAT_UNITS	FGE
RADMAT_ALARM	N

RADMAT_ID	T
RADMAT_DESCR	TRU GLOVEBOX
RADMAT_LIMIT	200
RADMAT_RAD_TOT	110
RADMAT_UNITS	FGE
RADMAT_ALARM	N

CASE4A.723 DMS DATABASE AT THE END OF TRU/RWM GLOVEBOX OTP CASE 4 7/23/97

CON_PKG_ID OTP-TRUR-PD-01
CON_ACCUM_DT 23-JUL-97
CON_CNTYP_CD DM
CON_LOCN_FACIL_ID 2336W
CON_PKG_DT 23-JUL-97
CON_PKG_STATUS U
CON_PWTYP_CD M
CON_SCAT_CD ANY
CON_SIZE_DESCR 85 GALLON
CON_TARE_WGT 31

CON_PKG_ID OTP-TRUR-PD-11
CON_CNTYP_CD DM
CON_GENER_WASTE_DESCR 2 EMPTY SALINE SOLUTION AEROSOL CAN
1 EMPTY UNMARK
CON_LOCN_FACIL_ID 2336W
CON_PKG_STATUS I
CON_PWTYP_CD R
CON_SCAT_CD ANY
CON_SIZE_DESCR 55 GALLON
CON_TARE_WGT 27

CON_PKG_ID OTP-TRUR-TD-01
CON_CNTYP_CD DM
CON_LOCN_FACIL_ID 2336W
CON_PKG_STATUS G
CON_SCAT_CD ANY
CON_SIZE_DESCR 85 GALLON
CON_TARE_WGT 31

CON_PKG_ID OTP-TRUR-TD-02
CON_CNTYP_CD DM
CON_LOCN_FACIL_ID 2336W
CON_PKG_STATUS G
CON_SIZE_DESCR 85 GALLON
CON_TARE_WGT 31

CON_PKG_ID OTP1-OTP100001

CON_PKG_ID OTP6-97-000001
CON_GENER_WASTE_DESCR AEROSOL CAN OF SALINE SOLUTION
CON_PKG_STATUS R

CON_PKG_ID OTP6-97-000002
CON_GENER_WASTE_DESCR AEROSOL CAN OF SALINE SOLUTION
CON_PKG_STATUS R

CON_PKG_ID OTP6-97-000003
CON_GENER_WASTE_DESCR UNLABELED AEROSOL CAN
CON_PKG_STATUS R

CON_PKG_ID OTP6-97-000004
CON_GENER_WASTE_DESCR LEAD BRICK
CON_PKG_STATUS R

CON_PKG_ID OTP6-97-000005
CON_GENER_WASTE_DESCR BOTTLE OF SOLVENT AND BOTTLE OF OIL
CON_PKG_STATUS R

CON_PKG_ID OTP6-97-000006
CON_GENER_WASTE_DESCR BOTTLE OF ACID

CON_PKG_ID OTP6-97-000007
CON_GENER_WASTE_DESCR BOTTLE OF ABSORBED SALINE SOLUTION
CON_PKG_DT 19-JUL-27
CON_PKG_STATUS G

CON_PKG_ID OTP6-97-000008
CON_GENER_WASTE_DESCR BOTTLE OF UNKNOWN LIQUID
CON_PKG_DT 19-JUL-27
CON_PKG_STATUS G

CON_PKG_ID OTP6-97-000009
CON_GENER_WASTE_DESCR LEAD BRICK
CON_PKG_DT 22-JUL-27
CON_PKG_STATUS G

CON_PKG_ID OTP6-97-000010
CON_GENER_WASTE_DESCR UNKNOWN SOLVENT
CON_PKG_DT 22-JUL-27
CON_PKG_STATUS G

CON_PKG_ID OTP6-97-000011
CON_GENER_WASTE_DESCR OIL
CON_PKG_DT 22-JUL-27
CON_PKG_STATUS G

CON_PKG_ID OTP6-97-300001

CON_PKG_ID OTP6-97-300002

CON_PKG_ID OTP6-97-400001

CON_PKG_ID OTP6-97-900001
CON_GENER_WASTE_DESCR 1L BOTTLE OF SALINE

CON_PKG_ID OTP6-97-900002
CON_GENER_WASTE_DESCR 1L BOTTLE OF ACETIC ACID

CON_PKG_ID OTP6-97-900003
CON_GENER_WASTE_DESCR 1L BOTTLE OF SOLVENT TREATED WITH EMBIBER BEADS

CON_PKG_ID OTP6-97-900004
CON_GENER_WASTE_DESCR 1L BOTTLE OF OIL TREATED WITH CHEMSORB.

CON_PKG_ID OTP6-97-900005
CON_GENER_WASTE_DESCR 1LBOTTLE OF ACID TREATED WITH SODA

CONEXT_PKG_ID OTP-TRUR-PD-01
CONEXT_PROF_FLAG N
CONEXT_PROF_ID TRU-10
CONEXT_USE_CD PD
CONEXT_WRAP_STAT_CD I

CONEXT_PKG_ID OTP-TRUR-PD-11
CONEXT_PROF_FLAG N
CONEXT_PROF_ID TRU-10
CONEXT_USE_CD PD
CONEXT_WRAP_STAT_CD I

CONEXT_PKG_ID OTP-TRUR-TD-01
CONEXT_CNTR_STATUS P
CONEXT_USE_CD TD
CONEXT_WRAP_STAT_CD I

CONEXT_PKG_ID OTP-TRUR-TD-02
CONEXT_CNTR_STATUS P
CONEXT_USE_CD TD
CONEXT_WRAP_STAT_CD I

CONEXT_PKG_ID OTP1-OTP100001
CONEXT_USE_CD PP

CONEXT_PKG_ID OTP6-97-000001
CONEXT_MAT_GRP_CD AC
CONEXT_USE_CD PK

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CONEXT_PKG_ID    OTP6-97-000002
CONEXT_MAT_GRP_CD        AC
CONEXT_USE_CD    PK

CONEXT_PKG_ID    OTP6-97-000003
CONEXT_MAT_GRP_CD        AC
CONEXT_USE_CD    PK

CONEXT_PKG_ID    OTP6-97-000004
CONEXT_MAT_GRP_CD        PB
CONEXT_USE_CD    PK

CONEXT_PKG_ID    OTP6-97-000005
CONEXT_MAT_GRP_CD        LQ
CONEXT_USE_CD    PK

CONEXT_PKG_ID    OTP6-97-000006
CONEXT_MAT_GRP_CD        LQ
CONEXT_USE_CD    PK

CONEXT_PKG_ID    OTP6-97-000007
CONEXT_MAT_GRP_CD        LQ
CONEXT_USE_CD    CC

CONEXT_PKG_ID    OTP6-97-000008
CONEXT_MAT_GRP_CD        LQ
CONEXT_USE_CD    CC

CONEXT_PKG_ID    OTP6-97-000009
CONEXT_MAT_GRP_CD        PB
CONEXT_USE_CD    PK

CONEXT_PKG_ID    OTP6-97-000010
CONEXT_MAT_GRP_CD        LQ
CONEXT_USE_CD    PK

CONEXT_PKG_ID    OTP6-97-000011
CONEXT_MAT_GRP_CD        OL
CONEXT_USE_CD    PK

CONEXT_PKG_ID    OTP6-97-300001
CONEXT_USE_CD    PP

CONEXT_PKG_ID    OTP6-97-300002
CONEXT_USE_CD    PP

CONEXT_PKG_ID    OTP6-97-400001
CONEXT_USE_CD    TP

CONEXT_PKG_ID    OTP6-97-900001
CONEXT_TREATMENT_FLAG    Y
CONEXT_USE_CD    TC

CONEXT_PKG_ID    OTP6-97-900002
CONEXT_TREATMENT_FLAG    Y
CONEXT_USE_CD    TC

CONEXT_PKG_ID    OTP6-97-900003
CONEXT_TREATMENT_FLAG    Y
CONEXT_USE_CD    TC

CONEXT_PKG_ID    OTP6-97-900004
CONEXT_TREATMENT_FLAG    Y
CONEXT_USE_CD    TC

CONEXT_PKG_ID    OTP6-97-900005
CONEXT_TREATMENT_FLAG    Y
CONEXT_USE_CD    TC

CONLOC_PKG_ID    OTP-TRUR-PD-01
CONLOC_DT        23-JUL-27
CONLOC_LOCN_ID   TRURWEXIT

CONLOC_PKG_ID    OTP-TRUR-PD-11
CONLOC_DT        19-JUL-27
CONLOC_LOCN_ID   TRURWCMPLT

CONLOC_PKG_ID    OTP-TRUR-TD-01
CONLOC_DT        23-JUL-27
CONLOC_LOCN_ID   TRURWENTRY

CONLOC_PKG_ID    OTP-TRUR-TD-02
CONLOC_DT        23-JUL-27
CONLOC_LOCN_ID   TRURWENTRY

CONLOC_PKG_ID    OTP1-OTP100001
CONLOC_DT        23-JUL-27
CONLOC_LOCN_ID   LLW_PP

CONLOC_PKG_ID    OTP6-97-300001
CONLOC_DT        21-JUL-97
CONLOC_LOCN_ID   SAMPLE_MGT

CONLOC_PKG_ID    OTP6-97-300002
CONLOC_DT        22-JUL-27
CONLOC_LOCN_ID   TRURW_PP

CONLOC_PKG_ID    OTP6-97-400001
CONLOC_DT        21-JUL-97
CONLOC_LOCN_ID   SAMPLE_MGT

CONLOC_PKG_ID    OTP6-97-900005
CONLOC_DT        23-JUL-27
CONLOC_LOCN_ID   TRURWTREAT

CONR_FROM_PKG_ID         OTP6-97-000001
CONR_TO_PKG_ID   OTP-TRUR-PD-11
CONR_DT 18-JUL-97
CONR_REL_CD      C

CONR_FROM_PKG_ID         OTP6-97-000001
CONR_TO_PKG_ID   OTP6-97-000007
CONR_DT 19-JUL-27
CONR_REL_CD      S

CONR_FROM_PKG_ID         OTP6-97-000002
CONR_TO_PKG_ID   OTP-TRUR-PD-11
CONR_DT 18-JUL-97
CONR_REL_CD      C

CONR_FROM_PKG_ID         OTP6-97-000002
CONR_TO_PKG_ID   OTP6-97-000007
CONR_DT 19-JUL-27
CONR_REL_CD      S

CONR_FROM_PKG_ID         OTP6-97-000003
CONR_TO_PKG_ID   OTP-TRUR-PD-11
CONR_DT 18-JUL-97
CONR_REL_CD      C

CONR_FROM_PKG_ID         OTP6-97-000003
CONR_TO_PKG_ID   OTP6-97-000008
CONR_DT 19-JUL-27
CONR_REL_CD      S

CONR_FROM_PKG_ID         OTP6-97-000004
CONR_TO_PKG_ID   OTP-TRUR-PD-11
CONR_DT 21-JUL-97
CONR_REL_CD      C

CONR_FROM_PKG_ID         OTP6-97-000004
CONR_TO_PKG_ID   OTP6-97-000009
CONR_DT 22-JUL-27
CONR_REL_CD      S

CONR_FROM_PKG_ID         OTP6-97-000005
CONR_TO_PKG_ID   OTP-TRUR-PD-11
CONR_DT 21-JUL-97
CONR_REL_CD      C

CONR_FROM_PKG_ID         OTP6-97-000005
CONR_TO_PKG_ID   OTP6-97-000010
CONR_DT 22-JUL-27
```

```
CONR_REL_CD      S

CONR_FROM_PKG_ID          OTP6-97-000005
CONR_TO_PKG_ID   OTP6-97-000011
CONR_DT 22-JUL-27
CONR_REL_CD      S

CONR_FROM_PKG_ID          OTP6-97-000006
CONR_TO_PKG_ID   OTP-TRUR-PD-01
CONR_DT 23-JUL-27
CONR_REL_CD      C

CONR_FROM_PKG_ID          OTP6-97-000006
CONR_TO_PKG_ID   OTP6-97-900005
CONR_DT 23-JUL-27
CONR_REL_CD      C

CONR_FROM_PKG_ID          OTP6-97-000007
CONR_TO_PKG_ID   OTP6-97-900001
CONR_DT 23-JUL-27
CONR_REL_CD      C

CONR_FROM_PKG_ID          OTP6-97-000008
CONR_TO_PKG_ID   OTP6-97-900002
CONR_DT 23-JUL-27
CONR_REL_CD      C

CONR_FROM_PKG_ID          OTP6-97-000009
CONR_TO_PKG_ID   OTP-TRUR-TD-02
CONR_DT 22-JUL-27
CONR_REL_CD      O

CONR_FROM_PKG_ID          OTP6-97-000010
CONR_TO_PKG_ID   OTP-TRUR-PD-11
CONR_DT 22-JUL-97
CONR_REL_CD      C

CONR_FROM_PKG_ID          OTP6-97-000010
CONR_TO_PKG_ID   OTP6-97-900003
CONR_DT 23-JUL-27
CONR_REL_CD      C

CONR_FROM_PKG_ID          OTP6-97-000011
CONR_TO_PKG_ID   OTP-TRUR-PD-11
CONR_DT 22-JUL-97
CONR_REL_CD      C

CONR_FROM_PKG_ID          OTP6-97-000011
CONR_TO_PKG_ID   OTP6-97-900004
CONR_DT 23-JUL-27
CONR_REL_CD      C

CONR_FROM_PKG_ID          OTP6-97-900001
CONR_TO_PKG_ID   OTP-TRUR-PD-01
CONR_DT 23-JUL-27
CONR_REL_CD      C

CONR_FROM_PKG_ID          OTP6-97-900002
CONR_TO_PKG_ID   OTP-TRUR-PD-01
CONR_DT 23-JUL-27
CONR_REL_CD      C

CONR_FROM_PKG_ID          OTP6-97-900003
CONR_TO_PKG_ID   OTP-TRUR-PD-01
CONR_DT 23-JUL-27
CONR_REL_CD      C

CONR_FROM_PKG_ID          OTP6-97-900004
CONR_TO_PKG_ID   OTP-TRUR-PD-01
CONR_DT 23-JUL-27
CONR_REL_CD      C

CONTREAT_PKG_ID  OTP6-97-900001
CONTREAT_DT      22-JUL-97
CONTREAT_COMMENT          XXX
CONTREAT_USER_ID          USER1

CONTREAT_WS_ID   OTPWRK01

CONTREAT_PKG_ID  OTP6-97-900002
CONTREAT_DT      22-JUL-97
CONTREAT_COMMENT          XXX
CONTREAT_USER_ID          USER1
CONTREAT_WS_ID   OTPWRK02

CONTREAT_PKG_ID  OTP6-97-900003
CONTREAT_DT      22-JUL-97
CONTREAT_COMMENT          FIELD ENTRY
CONTREAT_USER_ID          USER1
CONTREAT_WS_ID   OTPWRK03

CONTREAT_PKG_ID  OTP6-97-900004
CONTREAT_DT      22-JUL-97
CONTREAT_USER_ID          USER1
CONTREAT_WS_ID   OTPWRK04

CONTREAT_PKG_ID  OTP6-97-900005
CONTREAT_DT      22-JUL-97
CONTREAT_COMMENT          XXX
CONTREAT_USER_ID          USER1
CONTREAT_WS_ID   OTPWRK05

RDET_PKG_ID      OTP-TRUR-PD-01
RDET_BG_DOSE_RATE         5

PHYS_PKG_ID      OTP-TRUR-PD-01
PHYS_COMP_DESCR  ABSORBED AQUEOUS SOLUTION
PHYS_COMP_VOL_PCT         50
PHYS_COMP_WGT    6

PHYS_PKG_ID      OTP-TRUR-PD-01
PHYS_COMP_DESCR  HAZARDOUS CONSTITUENTS
PHYS_COMP_VOL_PCT         45
PHYS_COMP_WGT    4

PHYS_PKG_ID      OTP-TRUR-PD-01
PHYS_COMP_DESCR  PLASTIC/POLYURATHANE
PHYS_COMP_VOL_PCT         5
PHYS_COMP_WGT    2

PHYS_PKG_ID      OTP-TRUR-PD-11
PHYS_COMP_DESCR  CLOTH/RAGS/NYLON
PHYS_COMP_VOL_PCT         40
PHYS_COMP_WGT    4

PHYS_PKG_ID      OTP-TRUR-PD-11
PHYS_COMP_DESCR  METAL/IRON/GALVANIZED/SHEET
PHYS_COMP_VOL_PCT         10
PHYS_COMP_WGT    1

PHYS_PKG_ID      OTP-TRUR-PD-11
PHYS_COMP_DESCR  PLASTIC/POLYURATHANE
PHYS_COMP_VOL_PCT         50
PHYS_COMP_WGT    4

HAZ_PKG_ID       OTP-TRUR-PD-01
HAZ_COMP_ID      TEMP0429
HAZ_COMP_TEXT    ACETONE
HAZ_COMP_WGT     2
HAZ_COMP_WGT_PCT          50
HAZ_EPCRA_FLAG   N

HAZ_PKG_ID       OTP-TRUR-PD-01
HAZ_COMP_ID      TEMP3526
HAZ_COMP_TEXT    SOLVENT REFINED PETROLEUM
                 DISTILLATES
HAZ_COMP_WGT     2
HAZ_COMP_WGT_PCT          50
HAZ_EPCRA_FLAG   N

SAM_SAMPLE_ID    97-00001
SAM_CLOSED_FLAG  N
SAM_COMMENTS     unknown liquid
```

```
SAM_LOCN_ID       TRURWSAMPL
SAM_MATRIX_CD     L
SAM_TAKEN_BY      62264
SAM_TAKEN_DT      18-JUL-97
SAM_TEMP          22
SAM_PKG_ID        OTP6-97-000008

SAM_SAMPLE_ID     97-00002
SAM_CLOSED_FLAG   N
SAM_COMMENTS      unkown solvents
SAM_LOCN_ID       TRURWSAMPL
SAM_MATRIX_CD     L
SAM_TAKEN_BY      62264
SAM_TAKEN_DT      21-JUL-97
SAM_TEMP          22
SAM_PKG_ID        OTP6-97-000010

SAM_SAMPLE_ID     97-00003
SAM_CLOSED_FLAG   N
SAM_COMMENTS      unknown solvent
SAM_LOCN_ID       TRURWSAMPL
SAM_MATRIX_CD     L
SAM_TAKEN_BY      62264
SAM_TAKEN_DT      21-JUL-97
SAM_TEMP          22
SAM_PKG_ID        OTP6-97-000010

SAM_SAMPLE_ID     97-00004
SAM_CLOSED_FLAG   N
SAM_COMMENTS      oil
SAM_LOCN_ID       TRURWSAMPL
SAM_MATRIX_CD     L
SAM_TAKEN_BY      62264
SAM_TAKEN_DT      21-JUL-97
SAM_TEMP          22
SAM_PKG_ID        OTP6-97-000011

SAR_SAMPLE_ID     97-00001
SAR_ANAL_CD       AQLIQ

SAR_SAMPLE_ID     97-00001
SAR_ANAL_CD       COND

SAR_SAMPLE_ID     97-00002
SAR_ANAL_CD       SOLVENTS

SAR_SAMPLE_ID     97-00003
SAR_ANAL_CD       SOLVENTS

SAR_SAMPLE_ID     97-00004
SAR_ANAL_CD       OILS

BOT_BOTTLE_ID     97-00001-01L
BOT_SAMPLE_ID     97-00001
BOT_ANAL_CD       AQLIQ

BOT_BOTTLE_ID     97-00001-02L
BOT_SAMPLE_ID     97-00001
BOT_ANAL_CD       COND

BOT_BOTTLE_ID     97-00002-01L
BOT_SAMPLE_ID     97-00002
BOT_DISP_BY       USER1
BOT_DISP_DT       22-JUL-97
BOT_RETURN_DT     21-JUL-97
BOT_ANAL_CD       SOLVENTS

BOT_BOTTLE_ID     97-00003-01L
BOT_SAMPLE_ID     97-00003
BOT_DISP_BY       USER1
BOT_DISP_DT       22-JUL-97
BOT_RETURN_DT     21-JUL-97
BOT_ANAL_CD       SOLVENTS

BOT_BOTTLE_ID     97-00004-01L
BOT_SAMPLE_ID     97-00004
BOT_DISP_BY       USER1
BOT_DISP_DT       22-JUL-97
BOT_RETURN_DT     21-JUL-97
BOT_ANAL_CD       OILS

SAMREL_BOTTLE_ID          97-00001-01L
SAMREL_PKG_ID     OTP6-97-000008
SAMREL_DT         18-JUL-97
SAMREL_USE_CD     CC

SAMREL_BOTTLE_ID          97-00001-01L
SAMREL_PKG_ID     OTP6-97-300001
SAMREL_DT         19-JUL-27
SAMREL_USE_CD     PP

SAMREL_BOTTLE_ID          97-00001-02L
SAMREL_PKG_ID     OTP6-97-000008
SAMREL_DT         18-JUL-97
SAMREL_USE_CD     CC

SAMREL_BOTTLE_ID          97-00001-02L
SAMREL_PKG_ID     OTP6-97-300001
SAMREL_DT         19-JUL-27
SAMREL_USE_CD     PP

SAMREL_BOTTLE_ID          97-00001-02L
SAMREL_PKG_ID     OTP6-97-300001
SAMREL_DT         19-JUL-27
SAMREL_USE_CD     PP

SAMREL_BOTTLE_ID          97-00001-02L
SAMREL_PKG_ID     OTP6-97-300001
SAMREL_DT         19-JUL-27
SAMREL_USE_CD     PP

SAMREL_BOTTLE_ID          97-00002-01L
SAMREL_PKG_ID     OTP6-97-000010
SAMREL_DT         21-JUL-97
SAMREL_USE_CD     PK

SAMREL_BOTTLE_ID          97-00002-01L
SAMREL_PKG_ID     OTP6-97-900003
SAMREL_DT         23-JUL-27
SAMREL_USE_CD     TC

SAMREL_BOTTLE_ID          97-00002-01L
SAMREL_PKG_ID     OTP-TRUR-PD-11
SAMREL_DT         22-JUL-97
SAMREL_USE_CD     PD

SAMREL_BOTTLE_ID          97-00003-01L
SAMREL_PKG_ID     OTP6-97-000010
SAMREL_DT         21-JUL-97
SAMREL_USE_CD     PK

SAMREL_BOTTLE_ID          97-00003-01L
SAMREL_PKG_ID     OTP-TRUR-PD-11
SAMREL_DT         22-JUL-97
SAMREL_USE_CD     PD

SAMREL_BOTTLE_ID          97-00003-01L
SAMREL_PKG_ID     OTP6-97-900003
SAMREL_DT         23-JUL-27
SAMREL_USE_CD     TC

SAMREL_BOTTLE_ID          97-00004-01L
SAMREL_PKG_ID     OTP6-97-000011
SAMREL_DT         21-JUL-97
SAMREL_USE_CD     PK

SAMREL_BOTTLE_ID          97-00004-01L
SAMREL_PKG_ID     OTP6-97-900004
SAMREL_DT         23-JUL-27
SAMREL_USE_CD     TC

SAMREL_BOTTLE_ID          97-00004-01L
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SAMREL_PKG_ID     OTP-TRUR-PD-11
SAMREL_DT         22-JUL-97
SAMREL_USE_CD     PD

SCRN_SCRN_ID      97-00003-01F
SCRN_PKG_ID       OTP6-97-000009
SCRN_DT 21-JUL-97
SCRN_LOCN_ID      TRURWSAMPL
SCRN_PERS_ID      62264
SCRN_SAMPLING_METHOD_CD  INS

SCRN_SCRN_ID      97-00004-01F
SCRN_PKG_ID       OTP6-97-000010
SCRN_DT 21-JUL-97
SCRN_LOCN_ID      TRURWSAMPL
SCRN_PERS_ID      62264
SCRN_SAMPLING_METHOD_CD  INS

SCRN_SCRN_ID      97-00005-01F
SCRN_PKG_ID       OTP6-97-000011
SCRN_DT 21-JUL-97
SCRN_LOCN_ID      TRURWSAMPL
SCRN_PERS_ID      62264
SCRN_SAMPLING_METHOD_CD  INS

SCRN_SCRN_ID      97-00006-01F
SCRN_PKG_ID       OTP6-97-000006
SCRN_DT 21-JUL-97
SCRN_LOCN_ID      TRURWSAMPL
SCRN_PERS_ID      62264
SCRN_SAMPLING_METHOD_CD  INS

FIELD_SCRN_ID     97-00003-01F
FIELD_FAT_CD      LEAD
field_res         FIELD ENTRY

FIELD_SCRN_ID     97-00004-01F
FIELD_FAT_CD      CLOR
field_res         FIELD ENTRY

FIELD_SCRN_ID     97-00005-01F
FIELD_FAT_CD      PCBO
field_res         FIELD ENTRY

FIELD_SCRN_ID     97-00006-01F
FIELD_FAT_CD      PHDP
field_res         FIELD ENTRY

WORKSHEET_ID      OTPWRK01
WORKSHEET_NAME    PACKET 7
WORKSHEET_PROC_NUM        OP-0711-ABS
WORKSHEET_PROC_REV_NUM    A
WORKSHEET_PROC_INSTR      TREAT SALINE SOLUTION
                          ITEMS   OTP6-97-000007

WORKSHEET_ID      OTPWRK02
WORKSHEET_NAME    PACKET 8
WORKSHEET_PROC_NUM        OP-0711-NEUT
WORKSHEET_PROC_REV_NUM    A
WORKSHEET_PROC_INSTR      TREAT ACETIC ACID
                          SOLUTION ITEMS   OTP6-97-000008

WORKSHEET_ID      OTPWRK03
WORKSHEET_NAME    PACKET 10
WORKSHEET_PROC_NUM        OP-0711-ABS
WORKSHEET_PROC_REV_NUM    A
WORKSHEET_PROC_INSTR      TREAT SOLVENT    OTP6-97-
                                           000010

WORKSHEET_ID      OTPWRK04
WORKSHEET_NAME    PACKET 11
WORKSHEET_PROC_NUM        OP-0711-ABS
WORKSHEET_PROC_REV_NUM    A
WORKSHEET_PROC_INSTR      TREAT OIL ITEMS  OTP6-97-
                                           000011

WORKSHEET_ID      OTPWRK05
WORKSHEET_NAME    PACKET 6
WORKSHEET_PROC_NUM        OP-0711-NEUT
WORKSHEET_PROC_REV_NUM    A
WORKSHEET_PROC_INSTR      TREAT ACID SOLUTION
                          ITEMS   OTP6-97-000006

WORKITEM_ID       OTPWRK01
WORKITEM_PKG_ID   OTP6-97-000007

WORKITEM_ID       OTPWRK02
WORKITEM_PKG_ID   OTP6-97-000008

WORKITEM_ID       OTPWRK03
WORKITEM_PKG_ID   97-00002-01L

WORKITEM_ID       OTPWRK03
WORKITEM_PKG_ID   97-00003-01L

WORKITEM_ID       OTPWRK03
WORKITEM_PKG_ID   OTP6-97-000010

WORKITEM_ID       OTPWRK04
WORKITEM_PKG_ID   97-00004-01L

WORKITEM_ID       OTPWRK04
WORKITEM_PKG_ID   OTP6-97-000011

WORKITEM_ID       OTPWRK05
WORKITEM_PKG_ID   OTP6-97-000006

RADMAT_ID         F
RADMAT_DESCR      WRAP 1 FACILITY
RADMAT_LIMIT      100
RADMAT_RAD_TOT    10
RADMAT_UNITS      CI
RADMAT_ALARM      N

RADMAT_ID         R
RADMAT_DESCR      TRU RWM GLOVEBOX
RADMAT_LIMIT      200
RADMAT_RAD_TOT    150
RADMAT_UNITS      FGE
RADMAT_ALARM      N

RADMAT_ID         T
RADMAT_DESCR              TRU GLOVEBOX
RADMAT_LIMIT              200
RADMAT_RAD_TOT            110
RADMAT_UNITS              FGE
RADMAT_ALARM              N
```

CASE-RRA TRURWM GLOVEBOX OTP DATA FOLLOWING RERUN TO CLEAR ETRS 9/12/97

CON_PKG_ID:2 OTP-TRUR-PD-01	
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	U
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31

CON_PKG_ID:2 OTP-TRUR-PD-11	
CON_CNTYP_CD	DM
CON_GENER_WASTE_DESCR	TWO EMPTY SALINE SOLUTION AEROSOL CANS.PLASTIC S
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	I
CON_SIZE_DESCR	55 GALLON
CON_TARE_WGT	27

CON_PKG_ID:2 OTP-TRUR-TD-01	
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	G
CON_SCAT_CD	ANY
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31

CON_PKG_ID:2 OTP-TRUR-TD-02	
CON_CNTYP_CD	DM
CON_LOCN_FACIL_ID	2336W
CON_PKG_STATUS	G
CON_SCAT_CD	ANY
CON_SIZE_DESCR	85 GALLON
CON_TARE_WGT	31

CON_PKG_ID:2 OTP6-97-000001	
CON_GENER_WASTE_DESCR	AEROSOL CAN OF SALINE SOLUTION
CON_PKG_STATUS	R

CON_PKG_ID:2 OTP6-97-000002	
CON_GENER_WASTE_DESCR	AEROSOL CAN OF SALINE SOLUTION
CON_PKG_STATUS	R

CON_PKG_ID:2 OTP6-97-000003	
CON_GENER_WASTE_DESCR	UNLABELED AEROSOL CAN
CON_PKG_STATUS	R

CON_PKG_ID:2 OTP6-97-000004	
CON_GENER_WASTE_DESCR	LEAD BRICK
CON_PKG_STATUS	R

CON_PKG_ID:2 OTP6-97-000005	
CON_GENER_WASTE_DESCR	BOTTLE OF SOLVENT AND BOTTLE OF OIL
CON_PKG_STATUS	R

CON_PKG_ID:2 OTP6-97-000006	
CON_GENER_WASTE_DESCR	BOTTLE OF ACID

CON_PKG_ID:2 OTP6-97-000007	
CON_GENER_WASTE_DESCR	BOTTLE OF SALINE SOLUTION
CON_PKG_DT	09-11-97 14:25:20
CON_PKG_STATUS	G

CON_PKG_ID:2 OTP6-97-000008	
CON_GENER_WASTE_DESCR	BOTTLE OF UNKNOWN LIQUID
CON_PKG_DT	09-11-97 14:25:22
CON_PKG_STATUS	G

CON_PKG_ID:2 OTP6-97-000009	
CON_GENER_WASTE_DESCR	LEAD BRICK
CON_PKG_DT	09-11-97 14:33:49
CON_PKG_STATUS	G

CON_PKG_ID:2 OTP6-97-000010	
CON_GENER_WASTE_DESCR	UNKNOWN SOLVENT
CON_PKG_DT	09-11-97 14:33:50
CON_PKG_STATUS	G

CON_PKG_ID:2 OTP6-97-000011	
CON_GENER_WASTE_DESCR	OIL
CON_PKG_DT	09-11-97 14:33:56
CON_PKG_STATUS	G

CON_PKG_ID:2 OTP6-97-300001

CON_PKG_ID:2 OTP6-97-300002

CON_PKG_ID:2 OTP6-97-400001	
CON_PKG_DT	09-11-97 14:48:07
CON_PKG_STATUS	G

CON_PKG_ID:2 OTP6-97-900002

CONEXT_PKG_ID:2OTP-TRUR-PD-01	
CONEXT_USE_CD	EC
CONEXT_WRAP_STAT_CD	I

CONEXT_PKG_ID:2OTP-TRUR-PD-11	
CONEXT_USE_CD	PD
CONEXT_WRAP_STAT_CD	I

CONEXT_PKG_ID:2OTP-TRUR-TD-01	
CONEXT_CNTR_STATUS	E
CONEXT_USE_CD	TD
CONEXT_WRAP_STAT_CD	I

CONEXT_PKG_ID:2OTP-TRUR-TD-02	
CONEXT_CNTR_STATUS	P
CONEXT_USE_CD	TD
CONEXT_WRAP_STAT_CD	I

CONEXT_PKG_ID:2OTP6-97-000001	
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK

CONEXT_PKG_ID:2OTP6-97-000002	
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK

CONEXT_PKG_ID:2OTP6-97-000003	
CONEXT_MAT_GRP_CD	AC
CONEXT_USE_CD	PK

CONEXT_PKG_ID:2OTP6-97-000004	
CONEXT_MAT_GRP_CD	PB
CONEXT_USE_CD	PK

CONEXT_PKG_ID:2OTP6-97-000005	
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	PK

CONEXT_PKG_ID:2OTP6-97-000006	
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	PK

CONEXT_PKG_ID:2OTP6-97-000007	
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	CC

CONEXT_PKG_ID:2OTP6-97-000008	
CONEXT_MAT_GRP_CD	LQ
CONEXT_USE_CD	CC

CONEXT_PKG_ID:2OTP6-97-000009	
CONEXT_MAT_GRP_CD	PB
CONEXT_USE_CD	PK

```
CONEXT_PKG_ID:2OTP6-97-000010
CONEXT_MAT_GRP_CD          LQ
CONEXT_USE_CD              PK

CONEXT_PKG_ID:2OTP6-97-000011
CONEXT_MAT_GRP_CD          OL
CONEXT_USE_CD              PK

CONEXT_PKG_ID:2OTP6-97-300001
CONEXT_USE_CD              PP

CONEXT_PKG_ID:2OTP6-97-300002
CONEXT_USE_CD              PP

CONEXT_PKG_ID:2OTP6-97-400001
CONEXT_USE_CD              TP

CONEXT_PKG_ID:2OTP6-97-900002
CONEXT_USE_CD              TC

RDET_PKG_ID:2OTP-TRUR-PD-11
RDET_SWTYP_GROUP           TRU

SAM_SAMPLE_ID:297-00001
SAM_CLOSED_FLAG            N
SAM_LOCN_ID                TRURWSAMPL
SAM_TAKEN_BY               62264
SAM_TAKEN_DT               09-12-97 10:05:33
SAM_PKG_ID                 OTP6-97-000008

SAM_SAMPLE_ID:297-00003
SAM_CLOSED_FLAG            N
SAM_LOCN_ID                TRURWSAMPL
SAM_TAKEN_BY               62264
SAM_TAKEN_DT               09-12-97 10:14:12
SAM_PKG_ID                 OTP6-97-000007

SAR_SAMPLE_ID:297-00001
SAR_ANAL_CD                AQLIQ

SAR_SAMPLE_ID:297-00001
SAR_ANAL_CD                COND

SAR_SAMPLE_ID:297-00003
SAR_ANAL_CD                AQLIQ

BOT_BOTTLE_ID:297-00001-01L
BOT_SAMPLE_ID              97-00001
BOT_ANAL_CD                AQLIQ

BOT_BOTTLE_ID:297-00001-02L
BOT_SAMPLE_ID              97-00001
BOT_ANAL_CD                COND

BOT_BOTTLE_ID:297-00003-01L
BOT_SAMPLE_ID              97-00003
BOT_ANAL_CD                AQLIQ

SAMREL_BOTTLE_ID:2 97-00001-01L
SAMREL_PKG_ID              OTP6-97-300001
SAMREL_DT                  09-11-97 14:31:14
SAMREL_USE_CD              PP

SAMREL_BOTTLE_ID:2 97-00001-01L
SAMREL_PKG_ID              OTP6-97-000008
SAMREL_DT                  09-12-97 00:00:00
SAMREL_USE_CD              CC

SAMREL_BOTTLE_ID:2 97-00001-02L
SAMREL_PKG_ID              OTP6-97-300001
SAMREL_DT                  09-11-97 14:31:18
SAMREL_USE_CD              PP

SAMREL_BOTTLE_ID:2 97-00001-02L
SAMREL_PKG_ID              OTP6-97-000008
SAMREL_DT                  09-12-97 00:00:00
SAMREL_USE_CD              CC

SAMREL_BOTTLE_ID:2 97-00003-01L
SAMREL_PKG_ID              OTP6-97-000007
SAMREL_DT                  09-12-97 00:00:00
SAMREL_USE_CD              CC

WORKSHEET_ID:2 OTPWRK01
WORKSHEET_NAME             Packet 7
WORKSHEET_PROC_NUM         OP-0711-ABS
WORKSHEET_PROC_REV_NUM     A
WORKSHEET_PROC_INSTR       Treat Saline Solution
Items                      OTP6-97-000007

WORKSHEET_ID:2 OTPWRK02
WORKSHEET_NAME             Packet 8
WORKSHEET_PROC_NUM         OP-0711-NEUT
WORKSHEET_PROC_REV_NUM     A
WORKSHEET_PROC_INSTR       Treat Acetic Acid
                           Solution Items
                           OTP6-97-000008

WORKSHEET_ID:2 OTPWRK03
WORKSHEET_NAME             Packet 10
WORKSHEET_PROC_NUM         OP-0711-ABS
WORKSHEET_PROC_REV_NUM     A
WORKSHEET_PROC_INSTR       Treat Solvent
                           OTP6-97-000010

WORKSHEET_ID:2 OTPWRK04
WORKSHEET_NAME             Packet 11
WORKSHEET_PROC_NUM         OP-0711-ABS
WORKSHEET_PROC_REV_NUM     A
WORKSHEET_PROC_INSTR       Treat oil Items
                           OTP6-97-000011

WORKSHEET_ID:2 OTPWRK05
WORKSHEET_NAME             Packet 6
WORKSHEET_PROC_NUM         OP-0711-NEUT
WORKSHEET_PROC_REV_NUM     A
WORKSHEET_PROC_INSTR       Treat Acid solution Items
                           OTP6-97-000006

WORKITEM_ID:2OTPWRK01
WORKITEM_PKG_ID            OTP6-97-000007

WORKITEM_ID:2OTPWRK02
WORKITEM_PKG_ID            97-00001-01L

WORKITEM_ID:2OTPWRK02
WORKITEM_PKG_ID            97-00001-02L

WORKITEM_ID:2OTPWRK02
WORKITEM_PKG_ID            OTP6-97-000008

WORKITEM_ID:2OTPWRK03
WORKITEM_PKG_ID            97-00002-01L

WORKITEM_ID:2OTPWRK03
WORKITEM_PKG_ID            97-00003-01L

WORKITEM_ID:2OTPWRK03
WORKITEM_PKG_ID            OTP6-97-000010

WORKITEM_ID:2OTPWRK04
WORKITEM_PKG_ID            97-00004-01L

WORKITEM_ID:2OTPWRK04
WORKITEM_PKG_ID            OTP6-97-000011

WORKITEM_ID:2OTPWRK05
WORKITEM_PKG_ID            OTP6-97-000006

CONLOC_PKG_ID:2OTP-TRUR-PD-01
CONLOC_DT                  02-05-97 13:00:00
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CONLOC_LOCN_ID              RWM_CRSL

CONLOC_PKG_ID:2OTP-TRUR-PD-11
CONLOC_DT                   09-11-97 14:25:16
CONLOC_LOCN_ID              TRURWCMPLT

CONLOC_PKG_ID:2OTP-TRUR-TD-01
CONLOC_DT                   09-11-97 15:41:16
CONLOC_LOCN_ID              TRURWENTRY

CONLOC_PKG_ID:2OTP-TRUR-TD-02
CONLOC_DT                   09-11-97 15:41:16
CONLOC_LOCN_ID              RWM_CRSL

CONLOC_PKG_ID:2OTP6-97-000007
CONLOC_DT                   09-13-27 16:21:39
CONLOC_LOCN_ID              TRURWSAMPL

CONLOC_PKG_ID:2OTP6-97-300001
CONLOC_DT                   09-11-97 15:41:16
CONLOC_LOCN_ID              TRURW_PP

CONLOC_PKG_ID:2OTP6-97-400001
CONLOC_DT                   09-11-97 15:41:16
CONLOC_LOCN_ID              SAMPLE_MGT

CONLOC_PKG_ID:2OTP6-97-900002
CONLOC_DT                   09-13-27 17:16:22
CONLOC_LOCN_ID              TRURWTREAT

CONR_FROM_PKG_ID:2 OTP6-97-000001
CONR_TO_PKG_ID              OTP-TRUR-PD-11
CONR_DT                     09-11-97 14:27:40
CONR_REL_CD                 C

CONR_FROM_PKG_ID:2 OTP6-97-000001
CONR_TO_PKG_ID              OTP6-97-000007
CONR_DT                     09-11-97 14:25:20
CONR_REL_CD                 S

CONR_FROM_PKG_ID:2 OTP6-97-000002
CONR_TO_PKG_ID              OTP-TRUR-PD-11
CONR_DT                     09-11-97 14:27:57
CONR_REL_CD                 C

CONR_FROM_PKG_ID:2 OTP6-97-000002
CONR_TO_PKG_ID              OTP6-97-000007
CONR_DT                     09-11-97 14:25:22
CONR_REL_CD                 S

CONR_FROM_PKG_ID:2 OTP6-97-000003
CONR_TO_PKG_ID              OTP-TRUR-PD-11
CONR_DT                     09-11-97 14:28:40
CONR_REL_CD                 C

CONR_FROM_PKG_ID:2 OTP6-97-000003
CONR_TO_PKG_ID              OTP6-97-000008
CONR_DT                     09-11-97 14:25:22
CONR_REL_CD                 S

CONR_FROM_PKG_ID:2 OTP6-97-000004
CONR_TO_PKG_ID              OTP-TRUR-PD-11
CONR_DT                     09-11-97 14:45:35
CONR_REL_CD                 C

CONR_FROM_PKG_ID:2 OTP6-97-000004
CONR_TO_PKG_ID              OTP6-97-000009
CONR_DT                     09-11-97 14:33:49
CONR_REL_CD                 S

CONR_FROM_PKG_ID:2 OTP6-97-000005
CONR_TO_PKG_ID              OTP-TRUR-PD-11
CONR_DT                     09-11-97 14:46:46
CONR_REL_CD                 C

CONR_FROM_PKG_ID:2 OTP6-97-000005
CONR_TO_PKG_ID              OTP6-97-000010
CONR_DT                     09-11-97 14:33:50
CONR_REL_CD                 S

CONR_FROM_PKG_ID:2 OTP6-97-000005
CONR_TO_PKG_ID              OTP6-97-000011
CONR_DT                     09-11-97 14:33:56
CONR_REL_CD                 S

CONR_FROM_PKG_ID:2 OTP6-97-000006
CONR_TO_PKG_ID              OTP-TRUR-TD-02
CONR_DT                     09-11-97 14:48:14
CONR_REL_CD                 O

CONR_FROM_PKG_ID:2 OTP6-97-000008
CONR_TO_PKG_ID              OTP6-97-900002
CONR_DT                     09-13-27 17:16:22
CONR_REL_CD                 C

CONR_FROM_PKG_ID:2 OTP6-97-000009
CONR_TO_PKG_ID              OTP-TRUR-TD-02
CONR_DT                     09-11-97 14:48:22
CONR_REL_CD                 O

CONR_FROM_PKG_ID:2 OTP6-97-000010
CONR_TO_PKG_ID              OTP-TRUR-TD-02
CONR_DT                     09-11-97 14:48:23
CONR_REL_CD                 O

CONR_FROM_PKG_ID:2 OTP6-97-000011
CONR_TO_PKG_ID              OTP-TRUR-TD-02
CONR_DT                     09-11-97 14:48:35
CONR_REL_CD                 O

CONR_FROM_PKG_ID:2 OTP6-97-300002
CONR_TO_PKG_ID              OTP6-97-400001
CONR_DT                     09-11-97 14:48:07
CONR_REL_CD                 O

RADMAT_ID:2F
RADMAT_DESCR                WRAP 1 FACILITY
RADMAT_LIMIT                100
RADMAT_RAD_TOT              10
RADMAT_UNITS                CI
RADMAT_ALARM                N

RADMAT_ID:2R
RADMAT_DESCR                TRU RWM GLOVEBOX
RADMAT_LIMIT                200
RADMAT_RAD_TOT              150
RADMAT_UNITS                FGE
RADMAT_ALARM                N

RADMAT_ID:2T
RADMAT_DESCR                TRU GLOVEBOX
RADMAT_LIMIT                200
RADMAT_RAD_TOT              110
RADMAT_UNITS                FGE
RADMAT_ALARM                N

MSGLOG_DT:209-12-97 09:31:54
MSGLOG_ERROR_FLAG           N
MSGLOG_GEN_TYPE             PCSDMS
MSGLOG_SEQ_NUM              108310
MSGLOG_SPEC_TYPE            REMT
MSGLOG_STRING1              PCSDMS~REMT~874081299~TRU
                            RWSAMPL~OTP-TRUR-TD-01~OT


MSGLOG_DT:209-12-97 09:32:00
MSGLOG_ERROR_FLAG           N
MSGLOG_GEN_TYPE             PCSRDMS
MSGLOG_SEQ_NUM              108311
MSGLOG_SPEC_TYPE            RDMS
MSGLOG_STRING1              PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 09:32:01
MSGLOG_ERROR_FLAG           N
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MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108312
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:32:45
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108313
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:32:46
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108314
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:33:30
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108315
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:33:31
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108316
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:34:15
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108317
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:34:16
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108318
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:35:00
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108319
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:35:01
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108320
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:35:45
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108321
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:35:46
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108322
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:36:30
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108323
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:36:31
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108324
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:37:15
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108325
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:37:16
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108326
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:38:00
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108327
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:38:01
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108328
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:38:45
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108329
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:38:46
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108330
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:39:30
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108331
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:39:31
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108332
MSGLOG_SPEC_TYPE         SDMS
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MSGLOG_STRING1          DMSPCS^SDMS^00000000^1000
                        FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:40:15
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108333
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:40:16
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108334
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS^SDMS^00000000^1000
                        ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:41:01
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108335
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:41:02
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108336
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS^SDMS^00000000^1000
                        ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:41:46
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108337
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:41:47
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108338
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS^SDMS^00000000^1000
                        ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:42:31
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108339
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:42:32
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108340
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS^SDMS^00000000^1000
                        ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:43:16
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108341
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:43:17
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108342
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS^SDMS^00000000^1000
                        ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:44:01
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108343
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:44:02
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108344
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS^SDMS^00000000^1000
                        ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:44:46
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108345
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:44:47
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108346
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS^SDMS^00000000^1000
                        ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:45:31
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108347
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:45:32
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108348
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS^SDMS^00000000^1000
                        ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:46:16
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108349
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:46:17
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108350
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS^SDMS^00000000^1000
                        ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:47:01
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108351
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:47:02
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108352
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS^SDMS^00000000^1000
                        ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:47:46
MSGLOG_ERROR_FLAG       N
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MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108353
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:47:47
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108354
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:48:31
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108355
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:48:32
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108356
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:48:58
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSDMS
MSGLOG_SEQ_NUM           108357
MSGLOG_SPEC_TYPE         SPDP
MSGLOG_STRING1           PCSDMS^SPDP^874082323^TRU
                         RWSAMPL^97-00003-01L^OTP6


MSGLOG_DT:209-12-97 09:49:16
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108358
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:49:17
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108359
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:50:01
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108360
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:50:02
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108361
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:50:46
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108362
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:50:47
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108363
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:51:31
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108364
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:51:32
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108365
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:52:16
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108366
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:52:17
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108367
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:53:01
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108368
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:53:02
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108369
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:53:46
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108370
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:53:47
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108371
MSGLOG_SPEC_TYPE         SDMS
MSGLOG_STRING1           DMSPCS^SDMS^00000000^1000
                         ^FUNCTIONING PROPERLY^

MSGLOG_DT:209-12-97 09:54:31
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          PCSRDMS
MSGLOG_SEQ_NUM           108372
MSGLOG_SPEC_TYPE         RDMS
MSGLOG_STRING1           PCSRDMS^RDMS^

MSGLOG_DT:209-12-97 09:54:32
MSGLOG_ERROR_FLAG        N
MSGLOG_GEN_TYPE          DMSPCS
MSGLOG_SEQ_NUM           108373
MSGLOG_SPEC_TYPE         SDMS
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MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 09:55:16
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108374
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 09:55:17
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108375
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 09:56:01
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108376
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 09:56:02
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108377
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 09:56:29
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSDMS
MSGLOG_SEQ_NUM          108378
MSGLOG_SPEC_TYPE        SPDP
MSGLOG_STRING1          PCSDMS~SPDP~874082774~TRU
                        RWSAMPL~97-00003-01L~OTP6


MSGLOG_DT:209-12-97 09:56:46
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108379
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 09:56:47
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108380
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 09:57:31
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108381
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 09:57:32
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108382
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 09:58:16
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108383
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 09:58:17
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108384
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 09:59:01
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108385
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 09:59:02
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108386
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 09:59:46
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108387
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 09:59:47
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108388
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:00:31
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108389
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:00:32
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108390
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:01:16
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108391
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:01:17
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108392
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:02:01
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108393
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~
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MSGLOG_DT:209-12-97 10:02:02
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108394
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:02:46
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108395
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:02:47
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108396
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:03:31
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108397
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:03:32
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108398
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:04:16
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108399
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:04:17
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108400
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:05:01
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108401
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:05:02
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108402
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:05:46
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108403
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:05:47
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108404
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:06:31
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108405
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:06:32
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108406
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:07:16
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108407
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:07:17
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108408
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:08:01
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108409
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:08:02
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108410
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:08:46
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108411
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:08:47
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108412
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:09:31
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108413
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:09:32
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108414
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MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:10:16
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108415
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:10:17
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108416
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:11:01
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108417
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:11:02
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108418
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:11:46
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108419
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:11:47
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108420
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:12:31
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108421
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:12:32
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108422
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:13:16
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108423
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:13:17
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108424
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:14:01
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108425
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:14:02
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108426
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:14:46
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108427
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:14:47
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108428
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:15:31
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108429
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:15:32
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108430
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:16:16
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108431
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:16:17
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108432
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:17:01
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108433
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:17:02
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108434
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~
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MSGLOG_DT:209-12-97 10:17:46
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108435
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:17:47
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108436
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:18:31
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108437
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:18:32
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108438
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:19:16
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108439
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:19:17
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108440
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:20:01
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108441
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:20:02
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108442
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:20:46
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108443
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:20:47
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108444
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:21:31
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108445
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:21:32
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108446
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:22:16
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108447
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:22:17
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108448
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:23:01
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108449
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:23:02
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108450
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:23:46
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108451
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:23:47
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108452
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:24:25
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108453
MSGLOG_SPEC_TYPE        NCIT
MSGLOG_STRING1          PCSRDMS~NCIT~874084450~TR
                        URWTREAT~OTP6-97-000008~

MSGLOG_DT:209-12-97 10:24:31
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108454
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:24:32
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108455
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```
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:25:16
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108456
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:25:17
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108457
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:26:01
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108458
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:26:02
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108459
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:26:37
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSDMS
MSGLOG_SEQ_NUM          108460
MSGLOG_SPEC_TYPE        TCIC
MSGLOG_STRING1          PCSDMS~TCIC~874084582~TRU
                        RWTREAT~OTP6-97-900002~OT


MSGLOG_DT:209-12-97 10:26:46
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108461
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:26:47
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108462
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:27:31
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108463
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:27:32
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108464
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:28:16
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108465

MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:28:17
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108466
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:28:18
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSDMS
MSGLOG_SEQ_NUM          108467
MSGLOG_SPEC_TYPE        TCIC
MSGLOG_STRING1          PCSDMS~TCIC~874084683~TRU
                        RWTREAT~OTP6-97-900002~OT


MSGLOG_DT:209-12-97 10:29:01
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108468
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:29:02
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108469
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:29:46
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108470
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:29:47
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108471
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:30:31
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108472
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:30:32
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108473
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:31:16
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108474
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:31:17
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108475
MSGLOG_SPEC_TYPE        SDMS
```

```
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~

MSGLOG_DT:209-12-97 10:32:01
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         PCSRDMS
MSGLOG_SEQ_NUM          108476
MSGLOG_SPEC_TYPE        RDMS
MSGLOG_STRING1          PCSRDMS~RDMS~

MSGLOG_DT:209-12-97 10:32:02
MSGLOG_ERROR_FLAG       N
MSGLOG_GEN_TYPE         DMSPCS
MSGLOG_SEQ_NUM          108477
MSGLOG_SPEC_TYPE        SDMS
MSGLOG_STRING1          DMSPCS~SDMS~00000000~1000
                        ~FUNCTIONING PROPERLY~
```

WRAP 1 ALARM RESPONSE PROCEDURE

WRP1-AR-0700

PROCESS AREA/GLOVEBOXES

Alarm Designator	PCS Panel Tag #s in Alphanumeric Order	Associated Alarms	Page Number
0700/1	07-HS-305	TRU PROCESS GLOVEBOX SUITE EMERGENCY STOP	3
0700/1	07-HS-315	LLW PROCESS GLOVEBOX SUITE EMERGENCY STOP	3
0700/2	09-XS-215A/B	DRUM TRANSFER CONVEYOR A ROPE SWITCH PULLED	4
0700/2	09-XS-216A/B	DRUM TRANSFER CONVEYOR B ROPE SWITCH PULLED	4
0700/3	09-XS-221A/B	DRUM LIFT TABLE LT-09-201A ROPE SWITCH PULLED	5
0700/2	09-XS-222A/B	EMPTY DRUM CONVEYOR CV-09-203 ROPE SWITCH PULLED	4
0700/3	09-XS-223A/B	DRUM LIFT TABLE LT-09-201B ROPE SWITCH PULLED	5
0700/2	09-XS-224A/B	EMPTY DRUM CONVEYOR CV-09-204 ROPE SWITCH PULLED	4
0700/3	09-XS-225A/B	DRUM LIFT TABLE LT-09-201C ROPE SWITCH PULLED	5
0700/3	09-XS-227A/B	DRUM LIFT TABLE LT-09-201D ROPE SWITCH PULLED	5
0700/3	09-XS-229A/B	DRUM LIFT TABLE LT-09-201E ROPE SWITCH PULLED	5
0700/3	09-XS-231A/B	DRUM LIFT TABLE LT-09-201F ROPE SWITCH PULLED	5

Alarm Designator	PCS Panel Tag #s in Alphanumeric Order	Associated Alarms	Page Number
0700/3	09-XS-233A/B	DRUM LIFT TABLE LT-09-202A ROPE SWITCH PULLED	5
0700/3	09-XS-235A/B	DRUM LIFT TABLE LT-09-202B ROPE SWITCH PULLED	5
0700/3	09-XS-237A/B	DRUM LIFT TABLE LT-09-202C ROPE SWITCH PULLED	5
0700/3	09-XS-239A/B	DRUM LIFT TABLE LT-09-202D ROPE SWITCH PULLED	5
0700/3	09-XS-241A/B	DRUM LIFT TABLE LT-09-203A ROPE SWITCH PULLED	5
0700/3	09-XS-243A/B	DRUM LIFT TABLE LT-09-203B ROPE SWITCH PULLED	5
0700/3	09-XS-245A/B	DRUM LIFT TABLE LT-09-203C ROPE SWITCH PULLED	5
0700/3	09-XS-247A/B	DRUM LIFT TABLE LT-09-202E ROPE SWITCH PULLED	5
0700/4	DO-07-105	LLW SORTING GLOVEBOX BAGLESS TRANSFER PORT TROUBLE	7
0700/4	DO-07-201	LLW RWM BAGLESS TRANSFER PORT TROUBLE	7
0700/4	DO-07-305	TRU SORTING GLOVEBOX BAGLESS TRANSFER PORT TROUBLE	7
0700/4	DO-07-308	TRU EMPTY DRUM LOADOUT BAGLESS TRANSFER PORT TROUBLE	7
0700/4	DO-07-401	TRU RWM GLOVEBOX BAGLESS TRANSFER PORT TROUBLE	7
0700/5	HU-07-304T/A	COMPACTOR TROUBLE	9

EQUIPMENT STATUS		0700/1
Alarm Description	PCS Panel Tag #	Setpoint/Source
TRU PROCESS GLOVEBOX SUITE EMERGENCY STOP	07-HS-305	Operator at local DMS Control Pedestal pushes the Emergency Stop Pushbutton
LLW PROCESS GLOVEBOX SUITE EMERGENCY STOP	07-HS-315	

I. ALARM DESCRIPTION

The Operator at the local DMS Control Pedestal pushes the Emergency Stop Pushbutton if a visually perceived potential problem exists. The associated glovebox equipment stops, and an alarm signal is sent to PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   A. All associated glovebox equipment stops.

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **COORDINATE** with the Process Area Operator(s) to determine why the Emergency Stop Pushbutton was pushed.
   D. **WHEN** condition requiring the Emergency Stop is rectified, **RESET** the associated glovebox per WRP1-OP-0702, Restart Glovebox Operation.

3. Indications:
   A. Associated glovebox equipment stops.

4. Possible Causes:
   A. Operator pushed the Emergency Stop Pushbutton at the local DMS Control Pedestal.

IV. REFERENCES

1. H-2-131922, Sheet 1
2. H-2-131924, Sheet 1

EQUIPMENT STATUS		0700/2
Alarm Description	PCS Panel Tag #	Setpoint/Source
DRUM TRANSFER CONVEYOR A ROPE SWITCH PULLED	09-XS-215A/B	Manual actuation of Rope Switch
DRUM TRANSFER CONVEYOR B ROPE SWITCH PULLED	09-XS-216A/B	
EMPTY DRUM CONVEYOR CV-09-203 ROPE SWITCH PULLED	09-XS-222A/B	
EMPTY DRUM CONVEYOR CV-09-204 ROPE SWITCH PULLED	09-XS-224A/B	

V. ALARM DESCRIPTION

There are pullcords run parallel to each Conveyor. When a pullcord is actuated, it opens a switch, instantly deenergizing the Conveyor. An alarm is sent to PCS.

VI. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

VII. ALARM RESPONSES

1. Automatic Actions:
   A. Affected Conveyor deenergizes.

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **DISPATCH** an Operator to **DETERMINE** the reason the rope switch was pulled.

3. Indications:
   A. Affected Conveyor stops.

4. Possible Causes:
   A. Operator pulled rope switch.
   B. Faulty switch.

VIII. REFERENCES

H-2-131854, Sheet 1

EQUIPMENT STATUS		0700/3
Alarm Description	PCS Panel Tag #	Setpoint/Source
DRUM LIFT TABLE LT-09-201A ROPE SWITCH PULLED	09-XS-221A/B	
DRUM LIFT TABLE LT-09-201B ROPE SWITCH PULLED	09-XS-223A/B	
DRUM LIFT TABLE LT-09-201C ROPE SWITCH PULLED	09-XS-225A/B	
DRUM LIFT TABLE LT-09-201D ROPE SWITCH PULLED	09-XS-227A/B	
DRUM LIFT TABLE LT-09-201E ROPE SWITCH PULLED	09-XS-229A/B	
DRUM LIFT TABLE LT-09-201F ROPE SWITCH PULLED	09-XS-231A/B	
DRUM LIFT TABLE LT-09-202A ROPE SWITCH PULLED	09-XS-233A/B	
DRUM LIFT TABLE LT-09-202B ROPE SWITCH PULLED	09-XS-235A/B	Manual actuation of Rope Switch
DRUM LIFT TABLE LT-09-202C ROPE SWITCH PULLED	09-XS-237A/B	
DRUM LIFT TABLE LT-09-202D ROPE SWITCH PULLED	09-XS-239A/B	
DRUM LIFT TABLE LT-09-203A ROPE SWITCH PULLED	09-XS-241A/B	
DRUM LIFT TABLE LT-09-203B ROPE SWITCH PULLED	09-XS-243A/B	
DRUM LIFT TABLE LT-09-203C ROPE SWITCH PULLED	09-XS-245A/B	
DRUM LIFT TABLE LT-09-202E ROPE SWITCH PULLED	09-XS-247A/B	

IX. ALARM DESCRIPTION

There are pullcords associated with each lift table. When a pullcord is actuated, it opens a switch, instantly deenergizing the lift table motor. An alarm is sent to PCS.

X. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

XI. ALARM RESPONSES

1. Automatic Actions:
   A. Affected lift table deenergizes.

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **DISPATCH** an Operator to **DETERMINE** the reason the rope switch was pulled.

3. Indications:
   A. Affected lift table stops.

4. Possible Causes:
   A. Operator pulled rope switch.
   B. Faulty switch.

XII. REFERENCES

1. H-2-131853, Sheets 3 and 4
2. H-2-131854, Sheet 1

EQUIPMENT STATUS		0700/4
Alarm Description	PCS Panel Tag #	Setpoint/Source
LLW SORTING GLOVEBOX BAGLESS TRANSFER PORT TROUBLE	D0-07-105	Bagless Transfer Port Controller does not return OPEN/CLOSED signal to PCS within specified time.
LLW RWM BAGLESS TRANSFER PORT TROUBLE	D0-07-201	
TRU SORTING GLOVEBOX BAGLESS TRANSFER PORT TROUBLE	D0-07-305	
TRU EMPTY DRUM LOADOUT BAGLESS TRANSFER PORT TROUBLE	D0-07-308	
TRU RWM GLOVEBOX BAGLESS TRANSFER PORT TROUBLE	D0-07-401	

I. ALARM DESCRIPTION

When the Operator selects "OPEN PORT" ("CLOSE PORT") from the Operator Interface Unit (OIU), PCS sends a signal to the associated Bagless Transfer Port Controller commanding the port to open (close). If confirmation that the command has been carried out is not received by PCS, a trouble alarm is generated.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **COORDINATE** with the Process Area Operator(s) to locally investigate/resolve the alarm at the Bagless Transfer Port Controller.

3. Indications:

A. Local observation only.

4. Possible Causes:
   A. Obstruction in port.
   B. Bagless Transfer Port Controller problem.
   C. Port position sensor problem.
   D. Port mechanically bound.

IV. REFERENCES

1. H-2-131922, Sheets 2, 5
2. H-2-131926, Sheet 1

EQUIPMENT STATUS		0700/5
Alarm Description	PCS Panel Tag #	Setpoint/Source
COMPACTOR TROUBLE	HU-07-304	PCS receives HU-07-304/T, Compaction Trouble, signal from Hydraulic Power Unit (HPU) Controller.

I. ALARM DESCRIPTION

PCS receives HU-07-304/T Compaction Trouble signal from Hydraulic Power Unit (HPU) Controller. The cause of the HU-07-304/T Compaction Trouble signal is one of thirty-one fault messages generated by the OIU-12-104C HPU Controller, and the cause must be determined at the local message display.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **COORDINATE** with the Process Area Operator(s) to locally determine the cause of the alarm and resolve any problem that the HPU Controller message display may indicate per WRP1-AR-0701, Supercompactor Alarm Response Procedure.

3. Indications:
   A. Local observation only.

4. Possible Causes:
   A. Multiple causes (31 fault messages) as addressed by WRP1-AR-0701, Supercompactor Alarm Response Procedure.

IV. REFERENCES

H-2-131922, Sheet 3

WRAP 1 ALARM RESPONSE PROCEDURE

WRP1-AR-1106
PROCESS AREA (ZONE II)
HVAC

Alarm Designator	PCS Panel Tag #s in Alphanumeric Order	Associated Alarms	Page Number
1106/1	11-FI-618A	PROCESS EXHAUST FILTER TRAIN A LOW AIRFLOW 425 CMM (15,000 CFM)	3
1106/2	11-FI-618A	PROCESS EXHAUST FILTER TRAIN A HIGH AIRFLOW 450 CMM (16,000 CFM)	4
1106/1	11-FI-618B	PROCESS EXHAUST FILTER TRAIN B LOW AIRFLOW 425 CMM (15,000 CFM)	3
1106/2	11-FI-618B	PROCESS EXHAUST FILTER TRAIN B HIGH AIRFLOW 450 CMM (16,000 CFM)	4
1106/3	11-PDISH-601A	PROCESS AHU A PRE-FILTER HIGH DIFF PRESS	5
1106/4	11-PDISH-602A	PROCESS AHU A FINAL FILTER HIGH DIFF PRESS	6
1106/3	11-PDISH-601B	PROCESS AHU B PRE-FILTER HIGH DIFF PRESS	5
1106/4	11-PDISH-602B	PROCESS AHU B FINAL FILTER HIGH DIFF PRESS	6
1106/5	11-PDISH-612A	PROCESS EXHAUST A PRE-FILTER HIGH DIFF PRESS	7
1106/5	11-PDISH-612B	PROCESS EXHAUST B PRE-FILTER HIGH DIFF PRESS	7
1106/6	11-PDISH-614A	PROCESS EXHAUST A FIRST HEPA FILTER HIGH DIFF PRESS	8
1106/6	11-PDISH-614B	PROCESS EXHAUST B FIRST HEPA FILTER HIGH DIFF PRESS	8
1106/7	11-PDISH-616A	PROCESS EXHAUST A SECOND HEPA FILTER HIGH DIFF PRESSURE	9
1106/7	11-PDISH-616B	PROCESS EXHAUST B SECOND HEPA FILTER HIGH DIFF PRESSURE	9

Alarm Designator	PCS Panel Tag #s in Alphanumeric Order	Associated Alarms	Page Number
1106/8	11-TI-609A	PROCESS AREA HIGH TEMPERATURE 32°C (90°F)	10
1106/9	11-TI-609A	PROCESS AREA LOW TEMPERATURE 16°C (60°F)	11
1106/8	11-TI-609B	PROCESS AREA HIGH TEMPERATURE 32°C (90°F)	10
1106/9	11-TI-609B	PROCESS AREA LOW TEMPERATURE 16°C (60°F)	11
1106/10	11-TI-618A	PROCESS EXHAUST FILTER TRAIN A LOW TEMPERATURE	12
1106/10	11-TI-618B	PROCESS EXHAUST FILTER TRAIN B LOW TEMPERATURE	12
1106/11	11-XA-601A	PROCESS SUPPLY AHU CONTROLLER C-11-201A TROUBLE	13
1106/11	11-XA-601B	PROCESS SUPPLY AHU CONTROLLER C-11-201B TROUBLE	13
1106/12	11-XA-612A	PROCESS EXHAUST SYSTEM CONTROLLER C-11-202A TROUBLE	14
1106/12	11-XA-612B	PROCESS EXHAUST SYSTEM CONTROLLER C-11-202B TROUBLE	14
1106/13	EF-11-202A	PROCESS EXHAUST FILTER TRAIN A FAN FAILED	15
1106/13	EF-11-202B	PROCESS EXHAUST FILTER TRAIN B FAN FAILED	15
1106/14	SF-11-201A	PROCESS AHU A SUPPLY FAN FAILED	17
1106/14	SF-11-201B	PROCESS AHU B SUPPLY FAN FAILED	17

EQUIPMENT STATUS		1106/1
Alarm Description	PCS Panel Tag #	Setpoint/Source
PROCESS EXHAUST FILTER TRAIN A/B LOW AIRFLOW 425 CMM (15,000 CFM)	11-FI-618A/B	425 CMM (15,000 CFM)

I. ALARM DESCRIPTION

Zone II Process Exhaust Filter Train Fan flow is sensed by a flow element at the discharge of the fan. This alarm alerts the operator if the flow from the fan is below the expected range.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **CHECK** other HVAC parameters.
   D. **SHIFT** to the standby Process Exhaust Filter Train as necessary per WRP1-OP-1101, Operation of the HVAC System.

3. Indications:
   A. Low airflow in the Process Area.

4. Possible Causes:
   A. Faulty control circuit.
   B. Instrument error
   C. Clogged HEPA Filter.

IV. REFERENCES

H-2-131893 Sheet 1

EQUIPMENT STATUS		1106/2
Alarm Description	PCS Panel Tag #	Setpoint/Source
PROCESS EXHAUST FILTER TRAIN A/B HIGH AIRFLOW 450 CMM (16,000 CFM)	11-FI-618A/B	450 CMM (16,000 CFM)

I. ALARM DESCRIPTION

Zone II Process Exhaust Filter Train Fan flow is sensed by a flow element at the discharge of the fan. This alarm alerts the operator if the flow from the fan is above the expected range.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **CHECK** other HVAC parameters.

3. Indications:
   A. High airflow in the Process Area.

4. Possible Causes:
   A. Faulty control circuit.
   B. Instrument error.
   C. Punctured HEPA Filter.

IV. REFERENCES

H-2-131893 Sheet 1

EQUIPMENT STATUS		1106/3
Alarm Description	PCS Panel Tag #	Setpoint/Source
PROCESS AHU A/B PRE-FILTER HIGH DIFF PRESS	11-PDISH-601A/B	0.60" W.C.

I. ALARM DESCRIPTION

Particulate/moisture has built up on the Process Area Supply AHU Pre-Filter to the point where the differential pressure has exceeded the setpoint. An alarm signal is sent to the PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **ENSURE** Process Room 117 is being maintained at - 0.15" W.C. as indicated on the associated RTAP screen.
   D. **DISPATCH** an operator to locally investigate and observe the local indications of alarming Pre-Filter.
   E. **IF** alarm is due to particulate buildup (clogged filter), **SHIFT** to the standby Process Area Supply AHU per WRP1-OP-1101, Operation of the HVAC System.

3. Indications:
   A. Local differential pressure indication.

4. Possible Causes:
   A. Particulate or moisture buildup.
   B. Instrument error.

IV. REFERENCES

H-2-131892

EQUIPMENT STATUS		1106/4
Alarm Description	PCS Panel Tag #	Setpoint/Source
PROCESS AHU A/B FINAL FILTER HIGH DIFF PRESS	11-PDISH-602A/B	1.00" W.C.

I. ALARM DESCRIPTION

Particulate/moisture has built up on the Process Area Supply AHU Final Filter to the point where the differential pressure has exceeded the setpoint. An alarm signal is sent to the PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **ENSURE** Process Room 117 is being maintained at - 0.15" W.C. as indicated on the associated RTAP screen.
   D. **DISPATCH** an operator to locally investigate and observe the local indications of alarming Final Filter.

3. Indications:
   A. Local differential pressure indication.

4. Possible Causes:
   A. Particulate or moisture buildup.
   B. Instrument error.

IV. REFERENCES

H-2-131892

EQUIPMENT STATUS		1106/5
Alarm Description	PCS Panel Tag #	Setpoint/Source
PROCESS EXHAUST A/B PRE-FILTER HIGH DIFF PRESS	11-PDISH-612A/B	225 Pa (0.9" W.C.)

I. ALARM DESCRIPTION

Particulate/moisture has built up on the affected Zone II Process Exhaust Pre-Filter to the point where differential pressure has reached the setpoint. An alarm signal is sent to the PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **CHECK** related system parameters.
   D. **DISPATCH** an operator to locally investigate and observe the local indications of alarming Pre-Filter.
   E. **IF** alarm is due to particulate buildup (clogged filter), **SHIFT** to the standby Process Exhaust Filter Train per WRP1-OP-1101, Operation of the HVAC System.

3. Indications:
   A. Local pressure differential indication.

4. Possible Causes:
   A. Particulate/moisture buildup.
   B. Instrument error.

IV. REFERENCES

H-2-131893 Sheet 1

EQUIPMENT STATUS		1106/6
Alarm Description	PCS Panel Tag #	Setpoint/Source
PROCESS EXHAUST A/B FIRST HEPA FILTER HIGH DIFF PRESS	11-PDISH-614A/B	750 Pa (3.0" W.C.)

I. ALARM DESCRIPTION

Particulate/moisture has built up on the affected Zone II Process Exhaust First HEPA Filter to the point where differential pressure has reached the setpoint. An alarm signal is sent to the PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **CHECK** related system parameters.
   D. **DISPATCH** an operator to locally investigate and observe the local indications of alarming First HEPA Filter.

3. Indications:
   A. Local pressure differential indication.

4. Possible Causes:
   A. Particulate/moisture buildup.
   B. Instrument error.

IV. REFERENCES

H-2-131893 Sheet 1

EQUIPMENT STATUS		1106/7
Alarm Description	PCS Panel Tag #	Setpoint/Source
PROCESS EXHAUST A/B SECOND HEPA FILTER HIGH DIFF PRESSURE	11-PDISH-616A/B	500 Pa (2.0" W.C.)

I. ALARM DESCRIPTION

Particulate/moisture has built up on the affected Zone II Process Exhaust Second HEPA Filter to the point where differential pressure has reached the setpoint. An alarm signal is sent to the PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **CHECK** related system parameters.
   D. **DISPATCH** an operator to locally investigate and observe the local indications of alarming Second HEPA Filter.

3. Indications:
   A. Local pressure differential indication.

4. Possible Causes:
   A. Particulate/moisture buildup.
   B. Instrument error.

IV. REFERENCES

H-2-131893 Sheet 1

EQUIPMENT STATUS		1106/8
Alarm Description	PCS Panel Tag #	Setpoint/Source
PROCESS AREA HIGH TEMPERATURE 32°C (90°F)	11-TI-609A/B	32°C (90°F)

I. ALARM DESCRIPTION

When Process Area temperature exceeds the setpoint, an alarm is sent to the PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **VERIFY** proper operation of the in-service Process Area Air Handling Unit, 203-AH-11-201A/B per WRP1-OP-1101, Operation of the HVAC System.
   D. **SHIFT** to the standby Process Area Air Handling Unit per WRP1-OP-1101, if necessary.

3. Indications:
   A. Uncomfortably hot in the Process Area.

4. Possible Causes:
   A. Faulty Process Area Air Handling Unit or associated Control Circuit.
   B. Faulty sensor/alarm circuit.

IV. REFERENCES

H-2-131892

EQUIPMENT STATUS		1106/9
Alarm Description	PCS Panel Tag #	Setpoint/Source
PROCESS AREA LOW TEMPERATURE 16°C (60°F)	11-TI-609A/B	16°C (60°F)

I. ALARM DESCRIPTION

When Process Area temperature falls below the setpoint, an alarm is sent to the PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **VERIFY** proper operation of the in-service Process Area Air Handling Unit, 203-AH-11-201A/B per WRP1-OP-1101, Operation of the HVAC System.
   D. **SHIFT** to the standby Process Area Air Handling Unit per WRP1-OP-1101, if PCS control cannot be re-established.

3. Indications:
   A. Uncomfortably cold in the Process Area.

4. Possible Causes:
   A. Faulty Process Area Air Handling Unit or associated Control Circuit.
   B. Faulty sensor/alarm circuit.
   C. During extremely cold weather, the heating system may not have sufficient capacity to maintain setpoint.
   D. Heat Recovery System failure.

IV. REFERENCES

H-2-131892

EQUIPMENT STATUS		1106/10
Alarm Description	PCS Panel Tag #	Setpoint/Source
PROCESS EXHAUST FILTER TRAIN A/B LOW TEMPERATURE	11-TI-618A/B	6°C (43°F)

I. ALARM DESCRIPTION

When the Heat Recovery System has cooled the exhaust air to less than 6°C (43°F), an alarm is sent to the PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **VERIFY** proper operation of the Process HVAC Heating Units/Heat Recovery Control System per WRP1-OP-1101, Operation of the HVAC System.

3. Indications:
   None

4. Possible Causes:
   A. Failed Heat Recovery Control System.
   B. Faulty sensor.

IV. REFERENCES

H-2-131893 Sheet 1

EQUIPMENT STATUS		1106/11
Alarm Description	PCS Panel Tag #	Setpoint/Source
PROCESS SUPPLY AHU CONTROLLER C-11-201A/B TROUBLE	11-XA-601A/B	Digital input from DCS to PCS

I. ALARM DESCRIPTION

The Process Supply AHU Controller self monitors for indication of proper operation. When an abnormal condition is detected, it is displayed locally on the controller and an alarm is sent to the PCS. This alarm may also indicate a problem when a communicator link or NCU (Network Control Unit) needs maintenance and digital communication is not possible.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **CHECK** related HVAC parameters.
   D. **DISPATCH** an operator to the alarming Process Supply AHU to investigate the trouble alarm.

3. Indications:
   A. Local indication on the Controller.

4. Possible Causes:
   A. Internal AHU Controller problem.
   B. Internal NCU (Network Control Unit) problem.
   C. Circuit communication problem.

IV. REFERENCES

H-2-131893 Sheet 1

EQUIPMENT STATUS		1106/12
Alarm Description	PCS Panel Tag #	Setpoint/Source
PROCESS EXHAUST SYSTEM CONTROLLER C-11-202A/B TROUBLE	11-XA-612A/B	Digital input from DCS to PCS

I. ALARM DESCRIPTION

The Process Exhaust System Controller self monitors for indication of proper operation. When an abnormal condition is detected, it is displayed locally on the controller and an alarm is sent to the PCS. This alarm may also indicate a problem when a communicator link or NCU (Network Control Unit) needs maintenance and digital communication is not possible.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **CHECK** related HVAC parameters.
   D. **DISPATCH** an operator to the alarming Process Exhaust System Controller to investigate the trouble alarm.

3. Indications:
   A. Local indication on the Controller.

4. Possible Causes:
   A. Internal Controller problem.
   B. Internal NCU (Network Control Unit) problem.
   C. Circuit communication problem.

IV. REFERENCES

H-2-131893 Sheet 1

EQUIPMENT STATUS		1106/13
Alarm Description	PCS Panel Tag #	Setpoint/Source
PROCESS EXHAUST FILTER TRAIN A/B FAN FAILED	EF-11-202 A/B	PDISL-618 A/B senses low differential pressure across Zone II Process Exhaust Filter Train Fan EF-11-202 A/B

I. ALARM DESCRIPTION

Zone II Process Exhaust Filter Train Fan operation is sensed by a differential pressure sensor. It measures the pressure drop across the fan. When the differential pressure (airflow) between the two points drops below the setpoint (indicating a loss of the fan) an alarm is sent to the PCS. Another signal places the standby unit online.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   A. System shifts to the Standby Exhaust Filter Train Fan/AHU when there is a loss of airflow on the running Exhaust Filter Train Fan/AHU.

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **VERIFY** the Standby Zone II Process Exhaust Filter Train Fan has started and system parameters have stabilized.

3. Indications:
   A. Duct smoke detector alarm (fire dampers shut).
   B. Smoke and burning odor at the motor feeder breaker.
   C. Low airflow.
   D. System has shifted to the Standby Exhaust Filter Train Fan/AHU due to the loss of airflow on the running Exhaust Filter Train Fan/AHU.
   E. Fire alarm.

4. Possible Causes:
   A. Failed motor.
   B. Loss of electrical power.
   C. Feeder breaker trip:
      - MCC-11-102 for EF-11-202A
      - MCC-11-103 for EF-11-202B
   D. Broken drive belt.
   E. Loss of control power.
   F. Loss of instrument air.

IV. REFERENCES

H-2-131893 Sheet 1

EQUIPMENT STATUS		1106/14
Alarm Description	PCS Panel Tag #	Setpoint/Source
PROCESS AHU A/B SUPPLY FAN FAILED	SF-11-201A/B	PDISL-603 A/B senses low differential pressure across Supply Fan

I. ALARM DESCRIPTION

Process Air Handling Unit Supply Fan operation is sensed by a differential pressure sensor across the fan. When the differential pressure (airflow) between the two points drops below the setpoint (indicating a loss of the fan) an alarm is sent to the PCS. Another signal places the standby unit online.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station

III. ALARM RESPONSES

1. Automatic Actions:
   A. System shifts to the Standby Supply Fan/AHU when there is a loss of airflow on the running Supply Fan/AHU.

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **VERIFY** the Standby Process Air Handling Unit Supply Fan has started and system parameters have stabilized.

3. Indications:
   A. Duct smoke detector alarm (fire dampers shut).
   B. Loss of glovebox HVAC.
   C. Smoke and burning odor at the motor feeder breaker.
   D. Low Process Area airflow.
   E. System has shifted to the standby Supply Fan/AHU due to the loss of airflow on the running Supply Fan/AHU.
   F. Fire alarm.

4. Possible Causes:
   A. Failed motor.
   B. Loss of electrical power.
   C. Feeder breaker trip:
      - MCC-11-102 for SF-11-201A
      - MCC-11-103 for SF-11-201B
   D. Broken drive belt.
   E. Loss of control power.
   F. Loss of instrument air.

IV. REFERENCES

H-2-131892

WRAP 1 ALARM RESPONSE PROCEDURE

WRP1-AR-1107

GLOVEBOX (ZONE I) HVAC

Alarm Designator	PCS Panel Tag #s in Alphanumeric Order	Associated Alarms	Page Number
1107/1	11-FI-314	TRU GLOVEBOX LOW AIRFLOW	2
1107/2	11-FI-316	LLW GLOVEBOX LOW AIRFLOW	4
1107/3	11-FI-371	TRU RESTRICTED WASTE GLOVEBOX LOW AIRFLOW	6
1107/4	11-FI-391	LLW RESTRICTED WASTE GLOVEBOX LOW AIRFLOW	8
1107/5	11-PDI-611A	GLOVEBOX EXHAUST FILTER TRAIN A HIGH DIFF PRESS	10
1107/5	11-PDI-611A	GLOVEBOX EXHAUST FILTER TRAIN A LOW DIFF PRESS	10
1107/6	11-PDI-611B	GLOVEBOX EXHAUST FILTER TRAIN B HIGH DIFF PRESS	11
1107/6	11-PDI-611B	GLOVEBOX EXHAUST FILTER TRAIN B LOW DIFF PRESS	11
1107/7	11-PDISH-613A	GLOVEBOX EXHAUST A FIRST HEPA FILTER HIGH DIFF PRESSURE	12
1107/7	11-PDISH-613B	GLOVEBOX EXHAUST B FIRST HEPA FILTER HIGH DIFF PRESSURE	12
1107/8	11-PDISH-615A	GLOVEBOX EXHAUST A SECOND HEPA FILTER HIGH DIFF PRESSURE	13
1107/8	11-PDISH-615B	GLOVEBOX EXHAUST B SECOND HEPA FILTER HIGH DIFF PRESSURE	13
1107/9	EF-11-201A	GLOVEBOX EXHAUST FILTER TRAIN A FAN FAILED	14
1107/9	EF-11-201B	GLOVEBOX EXHAUST FILTER TRAIN B FAN FAILED	14

EQUIPMENT STATUS		1107/1
Alarm Description	PCS Panel Tag #	Setpoint/Source
TRU GLOVEBOX LOW AIRFLOW	11-FI-314	9.8 CMM (345 CFM)

I. ALARM DESCRIPTION

A single point thermal anemometer (FT-314) located in the TRU Glovebox (107-GB-09-301, 302, 306, 307, 308 and 309) exhaust duct measures glovebox exhaust airflow. If flow from the glovebox is below the alarm setpoint, an alarm is sent to the PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **SUSPEND** TRU Glovebox (107-GB-09-301, 302, 306, 307, 308, and 309) operations until TRU Glovebox airflow is returned to normal and this alarm clears.
   D. **CHECK** the TRU Glovebox and associated TRU Glovebox HVAC parameters for off-normal conditions.
   E. **COORDINATE** with the process area operators to investigate and identify corrective action(s) required to remediate the alarm condition.
   F. **RECORD** the following in the Control Room Log:
      (1) Corrective action(s) taken.
      (2) Proposed corrective action(s) required if initial attempts to rectify the problem are unsuccessful.

3. Indications:
   A. Low airflow through the TRU Glovebox HEPA Filters.

4. <u>Possible Causes</u>:
   - A. Instrument error.
   - B. Faulty Glovebox Controller, 107-C-11-200B.
   - C. Loss of process HVAC.
   - D. Faulty damper and/or faulty damper actuator (107-DP-11-204B).
   - E. Loss of instrument air.

IV. REFERENCES

1. H-2-131893, Sheet 2
2. H-2-131898

EQUIPMENT STATUS		1107/2
Alarm Description	PCS Panel Tag #	Setpoint/Source
LLW GLOVEBOX LOW AIRFLOW	11-FI-316	9.2 CMM (325 CFM)

I. ALARM DESCRIPTION

A single point thermal anemometer (FT-316) located in the LLW Glovebox (107-GB-07-101, 102, 104, and 105) exhaust duct measures glovebox exhaust airflow. If flow from the glovebox is below the alarm setpoint, an alarm is sent to the PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **SUSPEND** LLW Glovebox (107-GB-07-101, 102, 104, and 105) operations until LLW Glovebox airflow is returned to normal and this alarm clears.
   D. **CHECK** the LLW Glovebox and associated LLW Glovebox HVAC parameters for off-normal conditions.
   E. **COORDINATE** with the process area operators to investigate and identify corrective action(s) required to remediate the alarm condition.
   F. **RECORD** the following in the Control Room Log:
      (1) Corrective action(s) taken.
      (2) Proposed corrective action(s) required if initial attempts to rectify the problem are unsuccessful.

3. Indications:
   A. Low airflow through the LLW Glovebox HEPA Filters.

4. **Possible Causes:**
   A. Instrument error.
   B. Faulty Glovebox Controller, 107-C-11-200A.
   C. Loss of process HVAC.
   D. Faulty damper and/or faulty damper actuator (107-DP-11-204A).
   E. Loss of instrument air.

IV. REFERENCES

1. H-2-131893 Sheet 2
2. H-2-131898

EQUIPMENT STATUS		1107/3
Alarm Description	PCS Panel Tag #	Setpoint/Source
TRU RESTRICTED WASTE GLOVEBOX LOW AIRFLOW	11-FI-371	2.8 CMM (100 CFM)

I. ALARM DESCRIPTION

A single point thermal anemometer (FT-371) located in the TRU Restricted Waste Glovebox (107-GB-07-401) exhaust duct measures glovebox exhaust airflow. If flow from the glovebox is outside the expected range, an alarm is sent to the PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **SUSPEND** TRU Restricted Waste Glovebox (107-GB-07-401) operations until TRU Restricted Waste Glovebox airflow is returned to normal and this alarm is clear.
   D. **CHECK** the TRU Restricted Waste Glovebox and associated TRU Restricted Waste Glovebox HVAC parameters for off-normal conditions.
   E. **COORDINATE** with the process area operators to investigate and identify corrective action(s) required to remediate the alarm condition.
   F. **RECORD** the following in the Control Room Log:
      (1) Corrective action(s) taken.
      (2) Proposed corrective action(s) required if initial attempts to rectify the problem are unsuccessful.

3. Indications:
   A. Low airflow through the TRU Restricted Waste Glovebox HEPA Filters.

4. Possible Causes:
   A. Instrument error.
   B. Faulty Glovebox Controller, 107-C-11-200D.
   C. Loss of process HVAC.
   D. Faulty damper and/or faulty damper actuator (107-DP-11-203B).
   E. Loss of instrument air.

IV. REFERENCES

1. H-2-131893 Sheet 2
2. H-2-131898

EQUIPMENT STATUS		1107/4
Alarm Description	PCS Panel Tag #	Setpoint/Source
LLW RESTRICTED WASTE GLOVEBOX LOW AIRFLOW	11-FI-391	2.8 CMM (100 CFM)

I. ALARM DESCRIPTION

A single point thermal anemometer (FT-391) located in the LLW Restricted Waste Glovebox (107-GB-07-201) exhaust duct measures glovebox exhaust airflow. If flow from the glovebox is below the alarm setpoint, an alarm is sent to the PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **SUSPEND** LLW Restricted Waste Glovebox (107-GB-07-201) operations until LLW Restricted Waste Glovebox airflow is returned to normal and this alarm is clear.
   D. **CHECK** the LLW Restricted Waste Glovebox and associated LLW Restricted Waste Glovebox HVAC parameters for off-normal conditions.
   E. **RECORD** the following in the Control Room Log:
      (1) Corrective action(s) taken.
      (2) Proposed corrective action(s) required if initial attempts to rectify the problem are unsuccessful.

3. Indications:
   A. Low airflow through the LLW Restricted Waste Glovebox HEPA Filters.

4. Possible Causes:
   A. Instrument error.
   B. Faulty Glovebox Controller, 107-C-11-200C.
   C. Loss of process HVAC.
   D. Faulty damper and/or faulty damper actuator (107-DP-11-203A).
   E. Loss of instrument air.

IV. REFERENCES

1. H-2-131893 Sheet 2
2. H-2-131898

EQUIPMENT STATUS		1107/5
Alarm Description	PCS Panel Tag #	Setpoint/Source
GLOVEBOX EXHAUST FILTER TRAIN A/B HIGH DIFF PRESS	11-PDI-611A/B	2740 Pa (11.0" W.C.)

I. ALARM DESCRIPTION

Differential pressure is outside the expected range for the Glovebox Exhaust Filter Train (113-FT-11-201 A/B). An alarm signal is sent to the PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **DISPATCH** an operator to investigate/confirm the alarm condition.
   D. **SHIFT** to the standby Glovebox Exhaust Filter Train (113-FT-11-201 A/B) per WRP1-OP-1101, Operation of the HVAC System, if the on-line filter train condition cannot be cleared.

3. Indications:
   A. Loss of, or reduced, glovebox airflow.

4. Possible Causes:
   A. Faulty instrument.
   B. Faulty control circuit.
   C. Clogged filters.

IV. REFERENCES

H-2-131893 Sheet 1

EQUIPMENT STATUS		1107/6
Alarm Description	PCS Panel Tag #	Setpoint/Source
GLOVEBOX EXHAUST FILTER TRAIN A/B LOW DIFF PRESS	11-PDI-611A/B	1870 Pa (7.5" W.C.)

I. ALARM DESCRIPTION

Differential pressure is outside the expected range for the Glovebox Exhaust Filter Train (113-FT-11-201 A/B). An alarm signal is sent to the PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **DISPATCH** an operator to investigate/confirm the alarm condition.
   D. **SHIFT** to the standby Glovebox Exhaust Filter Train (113-FT-11-201 A/B) per WRP1-OP-1101, Operation of the HVAC System, if the on-line filter train condition cannot be cleared.

3. Indications:
   A. Loss of glovebox airflow.

4. Possible Causes:
   A. Leak in filter housing.
   B. Punctured HEPA Filter.
   C. Faulty instrument.
   D. Faulty control circuit.

IV. REFERENCES

H-2-131893 Sheet 1

EQUIPMENT STATUS		1107/7
Alarm Description	PCS Panel Tag #	Setpoint/Source
GLOVEBOX EXHAUST A/B 1ST HEPA FILTER HIGH DIFF PRESSURE	11-PDISH-613A/B	750 Pa (3.0" W.C.)

I. ALARM DESCRIPTION

Particulate/moisture has built up on the affected Zone I Process (Glovebox) Exhaust (113-FT-11-201 A/B) 1st HEPA Filter to the point where differential pressure has reached the setpoint. An alarm signal is sent to the PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **CHECK** related system parameters.
   D. **DISPATCH** an operator to locally investigate and observe the local indications of alarming 1st HEPA Filter (113-FT-11-201 A/B).

3. Indications:
   A. Local pressure differential indication.

4. Possible Causes:
   A. Particulate/moisture buildup.
   B. Instrument error.

IV. REFERENCES

H-2-131893 Sheet 1

EQUIPMENT STATUS		1107/8
Alarm Description	PCS Panel Tag #	Setpoint/Source
GLOVEBOX EXHAUST A/B 2ND HEPA FILTER HIGH DIFF PRESSURE	11-PDISH-615A/B	500 Pa (2.0" W.C.)

I. ALARM DESCRIPTION

Particulate/moisture has built up on the affected Zone I Process (Glovebox) Exhaust (113-FT-11-201 A/B) 2nd HEPA Filter to the point where differential pressure has reached the setpoint. An alarm signal is sent to the PCS.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **CHECK** related system parameters.
   D. **DISPATCH** an operator to locally investigate and observe the local indications of alarming 2nd HEPA Filter (113-FT-11-201 A/B).

3. Indications:
   A. Local differential pressure indication.

4. Possible Causes:
   A. Particulate/moisture buildup.
   B. Instrument error.

IV. REFERENCES

H-2-131893 Sheet 1

EQUIPMENT STATUS		1107/9
Alarm Description	PCS Panel Tag #	Setpoint/Source
GLOVEBOX EXHAUST FILTER TRAIN A/B FAN FAILED	EF-11-201A/B	PDISL-617A/B - senses low dp across Zone I Process Exhaust Filter Train Fan EF-11-201 A/B

I. ALARM DESCRIPTION

Zone I Process (Glovebox) Exhaust Filter Train Fan (113-EF-11-201 A/B) operation is sensed by a differential pressure sensor. It measures the pressure drop across the fan. When the differential pressure between the two points drops below the setpoint (indicating a loss of the fan) an alarm is sent to the PCS. Another signal places the standby unit online.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   - A. System shifts to the Standby Zone I (Glovebox) Exhaust Filter Train Fan (113-EF-11-201 A/B).
   - B. MCC-07-101, glovebox equipment circuit trips if glovebox ventilation is lost.

2. Operator Actions:
   - A. **ACKNOWLEDGE** the alarm.
   - B. **INFORM** the Duty Operations Supervisor.
   - C. **VERIFY** the Standby Zone I Process (Glovebox) Exhaust Filter Train Fan (113-EF-11-201 A/B) has started and system parameters have stabilized.

NOTE - Upon failure of the operating Zone I Process Exhaust Filter Train Fan, if the Standby Zone I Process Exhaust Filter Train Fan fails to start, the Zone II Process Exhaust Filter Train Fans should stop on interlock.

D. **IF** the Standby Zone I Process Exhaust Filter Train Fan has not started, **PERFORM** the following:

(1) **SUSPEND** associated Glovebox operations until Zone I HVAC is returned to operating status.
(2) **ENSURE** the ZONE II Process Exhaust Filter Train Fans/AHUs have stopped on interlock.

3. Indications:
   A. Duct smoke detector alarm (fire dampers shut).
   B. Smoke and burning odor at the motor feeder breaker.
   C. Low airflow.
   D. System has shifted to the Standby Zone I (Glovebox) Exhaust Filter Train Fan/AHU due to the loss of airflow on the running Zone I Exhaust Filter Train Fan/AHU.

4. Possible Causes:
   A. Failed motor.
   B. Loss of electrical power.
   C. Feeder breaker trip:
      - MCC-11-102 for EF-11-201A
      - MCC-11-103 for EF-11-201B
   D. Broken drive belt.
   E. Loss of control power.
   F. Loss of instrument air.

IV. REFERENCES

1. H-2-131819
2. H-2-131820, Sheet 2
3. H-2-131834, Sheet 11
4. H-2-131893, Sheet 1

WRAP 1 ALARM RESPONSE PROCEDURE

WRP1-AR-1108

ZONE DIFFERENTIAL PRESSURE

Alarm Designator	PCS Panel Tag #s in Alphanumeric Order	Associated Alarms	Page Number
1108/1	11-PDI-315	TRU GLOVEBOX LOW DIFF PRESSURE	2
1108/2	11-PDI-317	LLW GLOVEBOX LOW DIFF PRESSURE	4
1108/3	11-PDI-372	TRU RESTRICTED WASTE GLOVEBOX LOW DIFF PRESS	6
1108/4	11-PDI-392	LLW RESTRICTED WASTE GLOVEBOX LOW DIFF PRESS	8
1108/5	11-PDIT-601	NON-CONFINEMENT/ZONE II PROCESS HVAC LOW DIFF PRESS	10
1108/6	11-PDIT-602	NON-CONFINEMENT/ZONE II PROCESS LOW DIFF PRESS	12
1108/7	11-PDIT-603	ZONE II PROCESS HVAC/ZONE II PROCESS LOW DIFF PRESS	14
1108/8	11-PDIT-606	NON-CONFINEMENT/ATMOSPHERE LOW DIFF PRESS	16
1108/9	11-PDIT-607	ATMOSPHERE/ZONE II PROCESS LOW DIFF PRESS	18

EQUIPMENT STATUS		1108/1
Alarm Description	PCS Panel Tag #	Setpoint/Source
TRU GLOVEBOX LOW DIFF PRESSURE	11-PDI-315	175 Pa (0.7" W.C.)

I. ALARM DESCRIPTION

When a lower than expected differential pressure exists between the TRU Glovebox (107-GB-07-301, 302, 306, 307, 308 and 309) and the Process Area (Rm 107), an alarm is sent to the PCS by PDT-315.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **SUSPEND** TRU Glovebox operations until differential pressure between TRU Glovebox and Process Area is restored to normal.
   D. **CHECK** TRU Glovebox and TRU Glovebox HVAC for off-normal conditions.
   E. **COORDINATE** with the process area operators to investigate, identify, and correct the alarm condition.
   F. **RECORD** the following in the Control Room Log:
      (1) Corrective action(s) taken.
      (2) Proposed corrective action(s) required if initial attempts to rectify the problem are unsuccessful.

3. Indications:
   A. Low airflow through TRU Glovebox HEPA filters.

4. Possible Causes:
   A. Instrument error/failure.
   B. Duct blockage.
   C. Glovebox Controller (107-C-11-200B) failure.
   D. Loss of process HVAC exhaust fan (13-EF-11-201A/B).
   E. Faulty damper/damper actuator (107-DP-11-204B).
   F. Loss of Instrument Air.

IV. REFERENCES

1. H-2-131893
2. H-2-131898

EQUIPMENT STATUS		1108/2
Alarm Description	PCS Panel Tag #	Setpoint/Source
LLW GLOVEBOX LOW DIFF PRESSURE	11-PDI-317	175 Pa (0.7" W.C.)

I. ALARM DESCRIPTION

When a lower than expected differential pressure exists between the LLW Glovebox (107-GB-07-101, 102, 104, and 105) and the Process Area (Rm 107), an alarm is sent to the PCS by PDT-317.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **SUSPEND** LLW Glovebox operations until differential pressure between LLW Glovebox and Process Area is restored to normal.
   D. **CHECK** LLW Glovebox and LLW Glovebox HVAC for off-normal conditions.
   E. **COORDINATE** with the process area operators to investigate, identify, and correct the alarm condition.
   F. **RECORD** the following in the Control Room Log:
      (1) Corrective action(s) taken.
      (2) Proposed corrective action(s) required if initial attempts to rectify the problem are unsuccessful.

3. Indications:
   A. Low airflow through Glovebox HEPA filters.

4. Possible Causes:
   A. Instrument error/failure.
   B. Duct blockage.
   C. Glovebox Controller (107-C-11-200A) failure.
   D. Loss of process HVAC exhaust fan (113-EF-11-201A/B)
   E. Faulty damper/damper actuator (113-EF-11-204A)
   F. Loss of Instrument Air.

IV. REFERENCES

1. H-2-131893
2. H-2-131898

EQUIPMENT STATUS		1108/3
Alarm Description	PCS Panel Tag #	Setpoint/Source
TRU RESTRICTED WASTE GLOVEBOX LOW DIFF PRESS	11-PDI-372	175 Pa (0.7" W.C.)

I. ALARM DESCRIPTION

When a lower than expected differential pressure exists between the TRU Restricted Waste Management (RWM) Glovebox (107-GB-07-401) and the Process Area (Rm 107), an alarm is sent to the PCS by PDT-372.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **SUSPEND** TRU RWM Glovebox operations until differential pressure between TRU RWM Glovebox and Process Area is restored to normal.
   D. **CHECK** TRU RWM Glovebox and TRU RWM HVAC for off-normal conditions.
   E. **COORDINATE** with process area operators to investigate, identify, and correct the alarm condition.
   F. **RECORD** the following in the Control Room Log:
      (1) Corrective action(s) taken.
      (2) Proposed corrective action(s) required if initial attempts to rectify the problem are unsuccessful.

3. Indications:
   A. Low airflow through TRU RWM Glovebox HEPA filters.

4. Possible Causes:
   A. Instrument error/failure.
   B. Duct blockage.
   C. TRU RWM Glovebox Controller (107-C-11-200D) failure.
   D. Loss of Zone I HVAC exhaust fan (113-EF-201A/B).
   E. Faulty damper/damper actuator (107-DP-11-203B).

IV. REFERENCES

1. H-2-131893
2. H-2-131898

EQUIPMENT STATUS		1108/4
Alarm Description	PCS Panel Tag #	Setpoint/Source
LLW RESTRICTED WASTE GLOVEBOX LOW DIFF PRESS	11-PDI-392	175 Pa (0.7" W.C.)

I. ALARM DESCRIPTION

When a lower than expected differential pressure exists between the LLW Restricted Waste Management (RWM) Glovebox (107-GB-07-201) and the Process Area (Rm 107), an alarm is sent to the PCS by PDT-392.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **SUSPEND** LLW RWM Glovebox operations until differential pressure between LLW RWM Glovebox and Process Area is restored to normal.
   D. **CHECK** LLW RWM and LLW RWM HVAC for off-normal conditions.
   E. **COORDINATE** with process area operators to investigate, identify, and correct the alarm condition.
   F. **RECORD** the following in the Control Room Log:
      (1) Corrective action(s) taken.
      (2) Proposed corrective action(s) required if initial attempts to rectify the problem are unsuccessful.

3. Indications:
   A. Low airflow through LLW RWM Glovebox HEPA filters.

4. Possible Causes:
   A. Instrument error/failure.
   B. Duct blockage.
   C. LLW RWM Glovebox Controller (107-C-11-200C) failure.
   D. Loss of Zone I HVAC exhaust fan (113-EF-11-201A/B).
   E. Faulty damper/damper actuator (107-DP-11-203A, 202-DP-11-201A/B, 203-DP-11-202A/B).

IV. REFERENCES

1. H-2-131893
2. H-2-131898

EQUIPMENT STATUS		1108/5
Alarm Description	PCS Panel Tag #	Setpoint/Source
NON-CONFINEMENT/ZONE II PROCESS HVAC LOW DIFF PRESS	11-PDIT-601	25 Pa (0.10" W.C.)

I. ALARM DESCRIPTION

When a lower than expected differential pressure exists between the Non-Confinement Area (sensed in Corridor 117) and the Zone II Process HVAC Area (Room 113), an alarm is sent to the PCS by PDIT-601.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **SUSPEND** all Glovebox/Process Area operations until differential pressure between Process HVAC Area and Non-Confinement Area is restored to normal.
   D. **CHECK** Zone II Exhaust Fan (113-EF-11-202A/B) for off-normal conditions.
   E. **CHECK** Zone II Air Handling Unit (203-AH-11-201A/B) for off-normal conditions.
   F. **COORDINATE** with process area operators to investigate, identify, and correct alarm condition.
   G. **RECORD** the following in the Control Room Log:
      (1) Corrective action(s) taken.
      (2) Proposed corrective action(s) required if initial attempts to rectify the problem are unsuccessful.

3. Indications:
   A. Low airflow through Zone II Exhaust Fan train (113-AH-11-202A/B).
   B. Low airflow through Zone II Air Handling Unit (203-AH-11-201A/B).

4. Possible Causes:
   A. Instrument error/failure.
   B. Duct blockage.
   C. Exhaust System Controller (113-C-11-202A/B) failure.
   D. Boundary between zones penetrated.
   E. Faulty damper/damper actuator (113-DP-11-206A/B/C/D).

IV. REFERENCES

1. H-2-131892
2. H-2-131898

EQUIPMENT STATUS		1108/6
Alarm Description	PCS Panel Tag #	Setpoint/Source
NON-CONFINEMENT/ZONE II PROCESS LOW DIFF PRESS	11-PDIT-602	37 Pa (0.15" W.C.)

I. ALARM DESCRIPTION

When a lower than expected differential pressure exists between the Non-Confinement Area (sensed in Corridor 117) and the Zone II Process Area (Room 107), an alarm is sent to the PCS by PDIT-602.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **SUSPEND** all Glovebox/Process Area operations until differential pressure between Process Area and Non-Confinement Area is restored to normal.
   D. **CHECK** Zone II Exhaust Fan (113-EF-11-202A/B) for off-normal conditions.
   E. **CHECK** Zone II Air Handling Unit (203-AH-11-201A/B) for off-normal conditions.
   F. **COORDINATE** with process area operators to investigate, identify, and correct alarm condition.
   G. **RECORD** the following in the Control Room Log:
      (1) Corrective action(s) taken.
      (2) Proposed corrective action(s) required if initial attempts to rectify the problem are unsuccessful.

3. Indications:
   A. Low airflow through Zone II Exhaust Fan train (113-AH-11-202A/B).
   B. Low airflow through Zone II Air Handling Unit (203-AH-11-201A/B).

4. Possible Causes:
   A. Instrument error/failure.
   B. Duct blockage.
   C. Supply Damper (203-DP-11-203C) failed open or controlling too far in the open position.
   D. Boundary between zones penetrated.
   E. Faulty damper/damper actuator (113-DP-11-206A/B/C/D).

IV. REFERENCES

1. H-2-131892
2. H-2-131898

EQUIPMENT STATUS		1108/7
Alarm Description	PCS Panel Tag #	Setpoint/Source
ZONE II PROCESS HVAC/ ZONE II PROCESS LOW DIFF PRESS	11-PDIT-603	12 Pa (0.05" W.C.)

I. ALARM DESCRIPTION

When a lower than expected differential pressure exists between the Zone II Process Area (Room 107) and the Zone II Process HVAC Area (Room 113), an alarm is sent to the PCS by PDIT-603.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **CHECK** Zone II Exhaust Fan (113-EF-11-201A/B) for off-normal conditions.
   D. **CHECK** Zone II Air Handling Unit (203-AH-11-201A/B) for off-normal conditions.
   E. **COORDINATE** with process area operators to investigate, identify, and correct alarm condition.
   F. **RECORD** the following in the Control Room Log:
      (1) Corrective action(s) taken.
      (2) Proposed corrective action(s) required if initial attempts to rectify the problem are unsuccessful.

3. Indications:
   A. High airflow from Room 113 to Room 107.

4. Possible Causes:
   A. Instrument error/failure.
   B. Loss of HVAC.
   C. Boundary between zones penetrated.
   D. Exhaust system controller (113-C-11-202A/B) failure.
   E. Faulty damper/damper actuator (113-DP-11-206A/B/C/D).

IV. REFERENCES

1. H-2-131892
2. H-2-131898

EQUIPMENT STATUS		1108/8
Alarm Description	PCS Panel Tag #	Setpoint/Source
NON-CONFINEMENT/ATMOSPHERE LOW DIFF PRESS	11-PDIT-606	5 Pa (0.02" W.C.)

I. ALARM DESCRIPTION

When a lower than expected differential pressure exists between the Non-Confinement Area (sensed in Corridor 117) and atmospheric pressure (sensed by a probe (PE-601) mounted on the exhaust stack), an alarm is sent to the PCS by PDAL-606.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **CHECK** Administration Area Air Handling Unit (203-AH-11-401) for off-normal conditions.
   D. **COORDINATE** with the process area operators to investigate, identify, and correct the alarm condition.
   E. **RECORD** the following in the Control Room Log:
      (1) Corrective action(s) taken.
      (2) Proposed corrective action(s) required if initial attempts to rectify the problem are unsuccessful.

3. Indications:
   A. Local pressure differential indication (PDI-606).

4. Possible Causes:
   A. Instrument error/failure.
   B. Loss of Administration Area Air Handler (203-AH-11-401).
   C. Air Handler Controller (203-C-11-401) failure.

IV. REFERENCES

1. H-2-131892
2. H-2-131893
3. H-2-131896

EQUIPMENT STATUS		1108/9
Alarm Description	PCS Panel Tag #	Setpoint/Source
ATMOSPHERE/ZONE II PROCESS LOW DIFF PRESS	11-PDIT-607	30 Pa (0.12" W.C.)

I. ALARM DESCRIPTION

When a lower than expected differential pressure exists between the Zone II Process Area (Rm 107) and atmospheric pressure (sensed by a probe (PE-601) mounted on the exhaust stack), an alarm is sent to PCS by PDAL-607.

II. ALARM PANEL LOCATION

WRAP 1 Control Room, Central Control Station, 201-CNS-12-105

III. ALARM RESPONSES

1. Automatic Actions:
   None

2. Operator Actions:
   A. **ACKNOWLEDGE** the alarm.
   B. **INFORM** the Duty Operations Supervisor.
   C. **SUSPEND** all Glovebox/Process Area operations until differential pressure between Process Area and atmospheric pressure is restored to normal.
   D. **CHECK** Zone II Exhaust Train (113-EF-11-202A/B) for off-normal conditions.
   E. **COORDINATE** with process area operators to investigate, identify, and correct alarm condition.
   F. **RECORD** the following in the Control Room Log:
      (1) Corrective action(s) taken.
      (2) Proposed corrective action(s) required if initial attempts to rectify the problem are unsuccessful.

3. Indications:
   A. Local pressure differential indication (PDI-607).

4. Possible Causes:
   A. Instrument error/failure.
   B. Loss of Zone II exhaust train.
   C. Boundary between zones penetrated.
   D. Zone II exhaust system controller (113-C-11-202A/B) failure.
   E. Faulty damper/damper actuator (113-DP-206A/B/C/D).

IV. REFERENCES

1. H-2-131892
2. H-2-131893

WRAP 1 PLANT OPERATING PROCEDURE

SYSTEM: PROCESS

GLOVEBOX HOUSEKEEPING

I. SYSTEM DESCRIPTION

This procedure provides instructions for cleanup of spills, debris and general housekeeping in WRAP-1 gloveboxes.

Glovebox housekeeping shall be performed after processing of each waste stream batch is completed, and as needed during glovebox operations for spills or other debris buildup. This will ensure adequate, current, process knowledge to help determine possible sampling requirements & environmental compliance when disposing of cleanup residue.

II. REFERENCE DOCUMENTS

WRP1-OP-0704, Glovebox Manipulator Operation.
WRP1-OP-0713, LLW Entry Glovebox Operation.
WRP1-OP-0714, LLW Sorting Glovebox Operation.
WRP1-OP-0716, LLW Exit Glovebox Operation.
WRP1-OP-0717, LLW/RWM Process Glovebox Operation.
WRP1-OP-0705, Bagless Transfer Manual Operation
WRP1-OP-0710, Waste Sampling
HSRCM-1, Hanford Site Radiological Control Manual.

III. PRESTART CONDITIONS

All personnel performing this procedure shall be qualified in accordance with WHC-CM-5-34, Section 1.8, "Training and Qualification," and on-the-job training.

IV. SAFETY

All potential hazards, such as lifting heavy containers or handling sharp objects present in waste containers, must be mitigated by protective equipment, procedures, and administrative controls to ensure acceptable-risk operating conditions.

Radiological Safety

All work in gloveports must be performed per applicable Radiation Work Permits (RWPs).

V. TOOLS AND SUPPLIES

Approved cleaning agents and supplies as required.

VI. TABLE OF CONTENTS

ATTACHMENTS

None

VII. PROCEDURE

CAUTION

INTRODUCTION OF UNAPPROVED CLEANING AGENTS INTO GLOVEBOXES MAY RESULT IN ENVIRONMENTAL NON-COMPLIANCE, UNWANTED CHEMICAL REACTIONS OR OTHER UNDESIRABLE EFFECTS. USE ONLY FACILITY APPROVED CLEANING AGENTS.

Note - Administrative hold steps are identified by letters in parentheses at the left margin of the procedure step. The direction given in the procedure step must be satisfied before work continues.

(M) - Operations management shall approve operation.

(R) - Radiological Control (RC) shall complete surveys or agree to permit continued operation.

A. GLOVEBOX INSPECTION

1. **CHECK**, visually throughout glovebox for:

   a. Loose items, spills, droppings or tailings from waste handling process.

   b. Improperly stored glovebox tools and equipment.

   c. Leaks from glovebox hydraulic systems.

   d. Left-over agents introduced for cleaning or other purposes.

   e. Foreign matter on glovebox walls, windows and/or equipment.

2. **CHECK** glovebox equipment (manipulators, ports, lift tables, etc) for damage, leaks, etc.

3. **PERFORM** glovebox cleanup as required, per the following:

   a. **VERIFY** Volatile Organic Compound (VOC) in glovebox is less than (TBD)%.

   b. **CLEANUP** solid debris and materials per Section VII.B.

   c. **CLEANUP** liquid and spills per Section VII.C.

   d. **WIPEDOWN** glovebox per Section VII.D.

   NOTE - Radiological survey is required upon exiting gloveports after each use.

   e. **UPON** exiting gloveports at any point in this procedure, **PERFORM** a self-survey.

      (1) **IF** self-survey limits are exceeded, **THEN, CONTACT** Radiological Control Technician.

B. CLEANUP SOLID DEBRIS AND MATERIALS

NOTE 1 - Glovebox manipulators are operated per WRP1-OP-0704, Glovebox Manipulator Operation.

1. **USING** manipulators to the extent possible, **PERFORM** the following:

   a. **PICKUP** waste and debris items and **PLACE** on glovebox sorting table.

      (1) **USE** (with manipulators) broom, dustpan, and shovel located inside glovebox, as needed to aid cleanup.

   b. **MOVE** glovebox tools and equipment to proper glovebox storage location.

2. **IF** any items cannot be accessed with manipulators, **THEN:**

   a. **ENSURE** all moving equipment in glovebox is SHUTDOWN.

   b. **LOCATE** gloveport(s) which provide best access to item(s) and **PROCESS** items per Steps VII.B.1.a and VII.B.1.b.

3. **IF** other cleanup work is to be performed, **THEN, GO TO** applicable section(s), **OTHERWISE, GO TO** Section VII.E, Sampling and Loadout.

C. CLEANUP LIQUID AND SPILLS

NOTE - Spill kits will normally be pre-packaged in marked sample transfer canisters and stored in the Warm Maintenance Area, Room 108.

1. **TRANSFER** required Spill Cleanup Kit into glovebox through bagless transfer port, sample transfer port or consumable entry port, as required, per applicable operating procedure(s):

   - WRP1-OP-0705, Bagless Transfer Manual Operation.
   - WRP1-OP-0710, Waste Sampling.

2. **IF** work is to be performed through gloveports,
   THEN, ENSURE all moving equipment in glovebox is SHUTDOWN.

3. **WORKING** with manipulators and/or through gloveport(s), as required, **PERFORM** the following:

   NOTE - Cleanup is accomplished by best suited method. The following steps are used as a guideline.

   a. **PLACE** dam, dike, or absorbent containment from spill kit around spill.

   b. **ABSORB**, using Rad-Pads and absorbent, as required, all spilled material.

   c. **PLACE** used absorbent and Rad-Pads into plastic bag(s).

   d. **PLACE** bagged items on glovebox sorting table.

4. **IF** necessary,
   THEN, WIPEDOWN spill area per Section VII.D.

5. **IF** other cleanup work is to be performed,
   THEN, GO TO applicable section(s),
   OTHERWISE, GO TO Section VII.E, Sampling and Loadout.

D. WIPEDOWN GLOVEBOX

1. **TRANSFER** required materials (approved cleaning agents, rags, Rad-Pads) into glovebox through bagless transfer port, sample transfer port or consumable entry port, as required, per applicable operating procedure(s):

   - WRP1-OP-0705, Bagless Transfer Manual Operation.
   - WRP1-OP-0710, Waste Sampling.

2. **IF** work is to be performed through gloveports,
   THEN, ENSURE all moving equipment in glovebox is SHUTDOWN.

3. **WORKING** with manipulators and/or through gloveport(s), as required, **PERFORM** the following:

   NOTE - Cleanup is accomplished by best suited method (i.e, cleaning agents may be poured directly on area or applied to rags or pads, then wiped over area). The following steps are used as a guideline.

   a. **APPLY** cleaning agent to affected area(s).

   b. **SCRUB or BRUSH** affected area(s).

   c. **WIPE**, affected area(s) and equipment with clean, dry, Rad-Pads or rags.

   d. **PLACE** used Rad-Pads, rags and other items to be disposed, into plastic bag(s).

   e. **PLACE** bagged items on glovebox sorting table.

4. **IF** other cleanup work is to be performed,
   THEN, GO TO applicable section(s),
   OTHERWISE, GO TO Section VII.E, Sampling and Loadout.

E. SAMPLING AND LOADOUT

NOTE 1 - Once cleaned up and placed on sorting table, cleanup items are treated as if processing ordinary waste for applicable glovebox (i.e. passed to RWM glovebox for sorting, sampling & disposal per applicable procedures).

NOTE 2 - Sampling requirements are determined by review of process history for waste stream preceding cleanup activities.

(M) 1. **DETERMINE** sampling requirements for items placed on glovebox sorting table during cleanup activities.

2. **PERFORM** sampling per WRP1-OP-0710, Glovebox Waste Sampling, as directed.

3. **PROCESS** remaining cleanup items as directed, per applicable glovebox operating procedures:

- WRP1-OP-0713, LLW Entry Glovebox Operation.
- WRP1-OP-0714, LLW Sorting Glovebox Operation.
- WRP1-OP-0716, LLW Exit Glovebox Operation.
- WRP1-OP-0717, LLW/RWM Process Glovebox Operation.

WRAP 1 PLANT OPERATING PROCEDURE

SYSTEM: PROCESS

GLOVEBOX LIFT TABLE MANUAL OPERATION

I. SYSTEM DESCRIPTION

This procedure provides instructions for manual operation of drum lift tables at various locations throughout the facility. Automatic operation of lift tables is described in applicable glovebox operating procedures.

II. REFERENCE DOCUMENTS

WRP1-OP-0704, Glovebox Manipulator Operation.
WRP1-OP-0713, LLW Entry Glovebox Operation.
WRP1-OP-0714, LLW Sorting Glovebox Operation.
WRP1-OP-0716, LLW Exit Glovebox Operation.
WRP1-OP-0717, LLW/RWM Process Glovebox Operation.

III. PRESTART CONDITIONS

All personnel performing this procedure shall be qualified in accordance with WHC-CM-5-34, Section 1.8, "Training and Qualification," and on-the-job training.

IV. SAFETY

All potential hazards, such as lifting heavy containers or handling sharp objects present in waste containers, must be mitigated by protective equipment, procedures, and administrative controls to ensure acceptable-risk operating conditions.

CAUTION - In manual control (maintenance) mode there is no interlock to prevent drum over-travel. If the reverse switch is held in after the drum reaches the Automatic Guided Vehicle (AGV) end of the table and the AGV is not in place, the drum will fall to the floor. There is also no interlock to stop up-travel based on weight setpoint and no indication that lift table is at drum centering height.

WARNING - Lift tables LT-09-201C, LT-09-202D, and LT-09-202E, when lowered, interfere with AGV travel near the LLW and TRU RWM glovebox lines. Before lowering these tables below AGV height (27 +/- 1/8 inches from floor to top of rollers), the operator must ensure that the AGV will not travel into the area by disabling the AGV.

V. TOOLS AND SUPPLIES

None

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VII. PROCEDURE

NOTE 1 - This procedure covers manual operation of all WRAP lift tables, therefore equipment tag numbers are not referenced in the individual steps. Tag numbers for referenced equipment are located in Table 1. When equipment is called out by name, reference to applicable equipment number is understood.

NOTE 2 - Unless otherwise stated, switches and indicators are located on the applicable Lift Table Control Panel.

A. LIFT TABLE MANUAL OPERATION

1. Place Lift Table In Manual Control (Maintenance) Mode

   a. **ENSURE** glovebox manipulator is PARKED (Reference WRP1-OP-0704, Glovebox Manipulator Operation).

   b. **PLACE** "MODE" (MAINT/OFF/NORMAL) switch to "MAINT".

2. Lower Drum From AGV Load Height

NOTE - Only those Lift Tables indicated by (*) in Table 1, need to be lowered from AGV Load Height for drum to clear port. Port clearance height is checked visually or with a tape measure when visual inspection is not possible.

   a. **ENSURE** Lift Table is in manual control mode.

   b. **PRESS** and **HOLD** "DOWN" switch until drum is at port clearance height. **REFERENCE** Table 2, Drum Clearance Height for required clearance between port bottom and drum top.

   c. **IF** "DOWN OVERTRAVEL" light comes ON, **THEN, PRESS** "UP" switch until light goes OFF.

3. **REMOVE** clamp and lid, as needed, from drum per applicable procedure:

   - WRP1-OP-0713, LLW Entry Glovebox Operation.
   - WRP1-OP-0714, LLW Sorting Glovebox Operation.
   - WRP1-OP-0716, LLW Exit Glovebox Operation.
   - WRP1-OP-0717, LLW/RWM Process Glovebox Operation.
   - WRP1-OP-0728, TRU/RWM GLOVEBOX OPERATION

4. Position Drum Under Port

   a. **VERIFY** the following heights of the listed items as applicable:

      (1) 55 gallon drum with lid and clamp band attached: 34 5/8 +/- 1/8 in.

      (2) 85 gallon overpack drum with lid and clamp band attached: 39 1/16 +/- 1/8 in.

   b. **ENSURE** Lift Table is in manual control mode.

   NOTE - Only those Lift Tables indicated by (*) on Attachment 1, Table 1, need lowered from AGV Load Height for drum to clear port. Port clearance height is checked visually.

   c. **IF** necessary,
   THEN, ENSURE Lift Table is lowered to port clearance height.

   d. **PRESS** and **HOLD** "FORWARD" switch until drum is centered beneath port and "DRUM UNDER PORT" light is STEADY ON.

   e. **IF** necessary,
   THEN, jog drum into position as follows:

      (1) **CHECK** drum position visually in relation to port.

      (2) **PRESS** "FORWARD" and/or "REVERSE" buttons as necessary to properly position drum under port.

5. Lift Drum To Port

   a. **ENSURE** Lift Table is in manual control mode.

   b. **ENSURE** drum is properly positioned under port.

   c. **ENSURE** drum port is CLOSED, per applicable procedure.

   d. **VERIFY** the following for Entry/Exit ports:

      (1) Centering devices are retracted.

      (2) HVAC seal is deflated, if present.

      (3) Lid Detach rod is RETRACTED.

e. **VERIFY** correct drum pin, as per applicable procedure:

- WRP1-OP-0713, LLW Entry Glovebox Operation.
- WRP1-OP-0714, LLW Sorting Glovebox Operation.
- WRP1-OP-0716, LLW Exit Glovebox Operation.
- WRP1-OP-0717, LLW/RWM Process Glovebox Operation.

NOTE - Proper drum to port mating is determined by drum to port mating pressure or drum height, depending on port type.

f. **DETERMINE** correct drum to port mating pressure or drum centering height per Table 2.

g. **RAISE** drum to correct height, non-ENTRY/EXIT Port:

CAUTION

DO NOT EXCEED LIFT TABLE WEIGHT SETPOINT BY MORE THAN 50 KILOGRAMS.

(1) **ENSURE** that lift table weight scale (on top of table control pedestal) units are "kg" for kilograms.

(2) **PRESS** and **HOLD** "UP" switch until drum mates to port.

(3) **VERIFY** correct weight setpoint is reached.

h. **RAISE** drum to correct height, ENTRY/EXIT Port:

(1) **PRESS** and **HOLD** "UP" switch until lift table is at "Drum Centering Height".

(2) **VERIFY** lift table at "Drum Centering Height" using measuring tape and values from Table 2.

(3) **EXTEND** centering clamps.

(4) **VERIFY** centering clamps extended.

NOTE: All entry/exit port maintenance menus have a pilot light that indicates when the port "lid in position" sensor is activated by the drum lid.

(5) **PRESS** and **HOLD** "UP" switch until lift table is at "Lid in Position Height".

(6) **VERIFY** lift table at "Lid in Position Height".

(7) **TURN ON** port vacuum.

(8) **VERIFY** vacuum generated.

(9) **IF** HVAC Seal Present:

(a) **INFLATE** HVAC seal.

(b) **VERIFY** HVAC seal inflated.

(10) **UNLOCK** port.

(11) **VERIFY** port unlocked.

NOTE: All entry/exit port maintenance menus have a pilot light that indicates when the port "DRUM in position" sensor is activated by raising the port door approximately 1/2 inch above the glovebox floor.

(12) **PRESS** and **HOLD** "UP" switch until lift table raises to "DRUM IN POSITION" height.

(13) **VERIFY** Lift Table at "DRUM IN POSITION" height.

CAUTION

TABLE RESPONDS QUICKLY TO PRESSURE ON CONTROL SWITCHES. A "LIGHT TOUCH" MUST BE USED ON SWITCHES WHEN JOGGING DRUM INTO POSITION. OVER-DRIVING DRUM INTO PORT COULD RESULT IN EQUIPMENT DAMAGE.

i. **JOG** drum with "UP/DOWN" switches to adjust position/mating pressure as required.

j. **OPERATE** drum port per applicable procedure.

6. Lower Drum From Port

a. **ENSURE** Lift Table is in manual control mode.

b. **ENSURE** drum port is CLOSED, per applicable procedure.

c. **PERFORM** the following steps for Entry/Exit Ports:

(1) **PRESS** and **HOLD** "DOWN" switch AS NEEDED until lift table is at "Lid in Position Height".

(2) **VERIFY** lift table at "Lid in Position Height".

(3) **VERIFY** Port Door Lowered.

(4) **LOCK** Port Door.

(5) **VERIFY** Port Door Locked.

(6) **EXTEND** lid detach cylinder

(7) **PRESS** and **HOLD** "DOWN" switch until lift table is at "Drum Centering Height".

(8) **VERIFY** lift table at "Drum Centering Height".

(9) **RETRACT** lid detach cylinder.

(10) **RETRACT** centering clamps.

(11) **VERIFY** centering clamps are retracted.

(12) **IF** HVAC seal present:

(a) **DEFLATE** HVAC seal.

(b) **VERIFY** HVAC seal is deflated.

NOTE - Only those Lift Tables indicated by (*) in Table 1, need lowered from AGV Load Height for drum to clear port. Port clearance height is checked visually.

d. **PRESS** and **HOLD** "DOWN" switch until drum is at AGV Load Height ("AGV LOAD HEIGHT" light STEADY ON), or port clearance height, as applicable.

e. **IF** "DOWN OVERTRAVEL" light comes ON, **THEN, PRESS** "UP" switch until light goes OFF.

7. MOVE Drum To AGV End Of Lift Table

CAUTION

IN MANUAL CONTROL (MAINTENANCE) MODE THERE IS NO INTERLOCK TO PREVENT DRUM OVER-TRAVEL. IF THE REVERSE SWITCH IS HELD IN AFTER THE DRUM REACHES THE AUTOMATIC GUIDED VEHICLE (AGV) END OF THE TABLE AND THE AGV IS NOT IN PLACE, THE DRUM WILL FALL TO THE FLOOR. THERE IS ALSO NO INTERLOCK TO STOP UP-TRAVEL BASED ON WEIGHT SETPOINT AND NO INDICATION THAT LIFT TABLE IS AT DRUM CENTERING HEIGHT.

a. **ENSURE** Lift Table is in manual control mode.

NOTE - Only those Lift Tables indicated by (*) in Table 1, need lowered from AGV Load Height for drum to clear port. Port clearance height is checked visually.

b. **IF** necessary,
THEN, ENSURE Lift Table is lowered to port clearance height.

WARNING

LIFT TABLE REVERSE WILL NOT AUTOMATICALLY STOP WHEN DRUM REACHES END OF LIFT TABLE. ENSURE THAT DRUM DOES NOT EXTEND PAST END OF LIFT TABLE BY RELEASING "REVERSE" SWITCH AS NEEDED.

c. **PRESS** and **HOLD** "REVERSE" switch until drum is near end of lift table and "DRUM AT AGV END" light is STEADY ON.

d. **VERIFY** drum not past end of lift table.

e. **IF** drum moves past desired position,
THEN, PRESS "FORWARD" switch until drum moves back to desired position.

B. RETURN LIFT TABLE TO NORMAL OPERATION

1. **PLACE** "MODE" (MAINT/OFF/NORMAL) switch to "NORMAL".

NOTE - Only Lift Tables 107-LT-09-201A through 201F are equipped with Table Control switch.

2. **IF** equipped with "TABLE CONTROL" (AGV/PANEL) switch,
THEN, PLACE "TABLE CONTROL" switch to "AGV".

C. **REHOME LIFT TABLE**

NOTE - Lift tables must be rehomed:

1. *After every power outage.*
2. *After use in manual mode.*
3. *After a lift table rope switch is activated.*

1. **PLACE** glovebox in Maintenance Mode.

2. **VERIFY** drum is NOT present on the lift table.

3. **POSITION** Lift Tables 201D, 202C, 202D, and 202E below AGV height.

4. **POSITION** all other Lift Tables ABOVE AGV height.

5. **SELECT** Miscellaneous Equipment Maintenance Menu.

6. **PRESS** "REHOME LIFT TABLE LT-09-20XX" button.

NOTE - XX refers to the last two digits in the lift table tag number.

7. **VERIFY** Lift Table at AGV height (AGV indicator illuminated, and/or lift table rollers at 27 +/_ 1/8 inch above floor).

FIGURE 1: LIFT TABLE LOCAL CONTROL PANEL

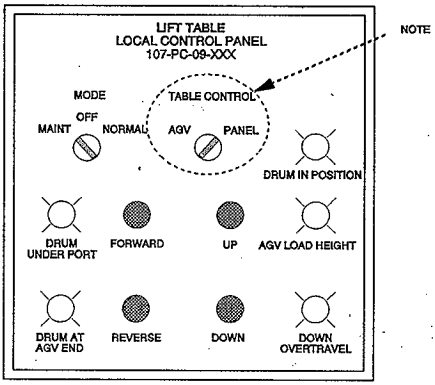


TABLE 1: LIFT TABLE/CONTROL PANEL DESCRIPTIONS

LOCAL CONTROL PANEL NUMBER	LIFT TABLE NUMBER	DESCRIPTION
107-PC-09-201A	107-LT-09-201A	TRU RWM TREATED WASTE LOADOUT PORT/LIFT TABLE
107-PC-09-201B	107-LT-09-201B	TRU RWM COMPLIANT WASTE LOADOUT PORT/LIFT TABLE
107-PC-09-201C	107-LT-09-201C	TRU RWM TRANSFER DRUM PORT/LIFT TABLE
107-PC-09-201D	* 107-LT-09-201D	LLW RWM TREATED WASTE LOADOUT PORT/LIFT TABLE
107-PC-09-201E	107-LT-09-201E	LLW RWM COMPLIANT WASTE LOADOUT PORT/LIFT TABLE
107-PC-09-201F	107-LT-09-201F	LLW RWM TRANSFER DRUM PORT/LIFT TABLE
107-PC-09-202A	107-LT-09-202A	LLW ENTRY GLOVEBOX PORT/LIFT TABLE
107-PC-09-202B	107-LT-09-202B	TRU ENTRY GLOVEBOX PORT/LIFT TABLE
107-PC-09-202C	* 107-LT-09-202C	LLW EXIT GLOVEBOX LOADOUT POSITION/LIFT TABLE
107-PC-09-202D	* 107-LT-09-202D	TRU EXIT GLOVEBOX LOADOUT POSITION #1/LIFT TABLE
107-PC-09-202E	* 107-LT-09-202E	TRU EXIT GLOVEBOX LOADOUT POSITION #2/LIFT TABLE
107-PC-09-203A	107-LT-09-203A	LLW TRANSFER PORT/LIFT TABLE FOR RWM TRANSFER DRUMS
107-PC-09-203B	107-LT-09-203B	TRU TRANSFER PORT/LIFT TABLE FOR RWM TRANSFER DRUMS
107-PC-09-203C	107-LT-09-203C	TRU EMPTY DRUM COMPACTION LOADOUT PORT/LIFT TABLE

NOTE: TABLE CONTROL switch is used on panels 107-PC-09-201A through 201F only.
NOTE: Marked tables (*) must be lowered from AGV Load Height to move drum under (clear) port.

TABLE 2: DRUM MATING PRESSURE/CENTERING HEIGHT

NOTE: All linear measurements +/- 1/32 inch unless otherwise stated.
MATING PRESSURES DO NOT INCLUDE WEIGHT OF DRUM.

LIFT TABLE	MATING PRESSURE (KG)	DRUM CLEARANCE HEIGHT (inches *)	DRUM CENTERING HEIGHT (inches *)	LID IN POSITION HEIGHT (inches *)
107-LT-09-201A	300 (250 to 350)	N/A	N/A	N/A
107-LT-09-201B	300 (250 to 350)			
107-LT-09-201C	600 (550 to 650)			
107-LT-09-201D	N/A	18.5 +/- 0.5	35-1/8	35-5/8
107-LT-09-201E		N/A	39-3/16	39-3/8
107-LT-09-201F	600 (550 to 650)	N/A	N/A	N/A
107-LT-09-202A	N/A	N/A	33-3/16	33-1/4
107-LT-09-202B		N/A	37 1/16	37 7/16
107-LT-09-202C	N/A	13 +/- 0.5	24 7/8	25 3/8
107-LT-09-202D	300 (250 to 350)	19 +/- 0.5	N/A	N/A
107-LT-09-202E	300 (250 to 350)	19 +/- 0.5		
107-LT-09-203A	600 (550 to 650)	N/A		
107-LT-09-203B				
107-LT-09-203C				

NOTE *: Measured from floor to top of rollers on lift table.

WRAP 1 PLANT OPERATING PROCEDURE

SYSTEM: PROCESS

GLOVEBOX MANIPULATOR

I. SYSTEM DESCRIPTION

This procedure provides instructions for operation of Schilling Robotic Systems, Glovebox Manipulators.

Glovebox Manipulators are used for moving materials and equipment, and performing tasks inside the gloveboxes.

II. REFERENCE DOCUMENTS

None.

III. PRESTART CONDITIONS

All personnel performing this procedure shall be qualified in accordance with WHC-CM-5-34, Section 1.8, "Training Plan," and on-the-job training.

IV. SAFETY

Potential hazards, such as lifting heavy containers or handling sharp objects present in waste containers, must be mitigated by protective equipment, procedures, and administrative controls to ensure acceptable-risk operating conditions.

V. TOOLS AND SUPPLIES

None.

VI. TABLE OF CONTENTS

VII. PROCEDURE

A. SYSTEM STARTUP

CAUTION

ERRATIC, UNCONTROLLED MOVEMENT OF SLAVE ARMS MAY DAMAGE EQUIPMENT.

1. IF at any time during startup or operation, slave arms move erratically or uncontrolled,
   THEN immediately:

   a. **PRESS** EMERGENCY STOP button on either side of carriage controller (Figure 1) IN.

   b. **TURN** master control panel (Figure 2) POWER switch OFF.

   NOTE - Problem which caused erratic movement must be corrected prior to restart of system.

   c. **CONTACT** Duty Operation Supervisor (DOS).

2. **PERFORM** pre-start checks:

   a. **INSPECT**, visually, fasteners and fittings are properly connected and in good condition.

   b. **INSPECT**, visually, hoses are free of cuts, nicks, kinks, and excessive sagging.

   c. **INSPECT**, visually, slave arms are free of hydraulic leaks.

3. **SET** disconnect switch on Control & Instrumentation (C&I) enclosure to ONE.

4. **ENSURE** EMERGENCY STOP buttons on carriage controller are OUT.

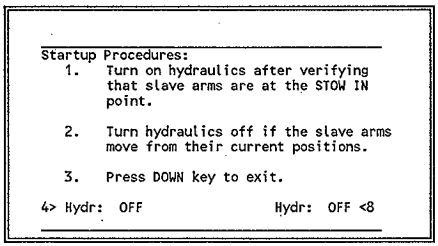
5. **TURN** master control panel POWER switch ON.

NOTE - Screen briefly displays "Establishing communication with slave unit" when power is first applied.

6. IF screen displays no readable text,
   THEN, TOGGLE master control POWER switch (OFF and back ON).

   a. IF screen remains blank,
      THEN, NOTIFY DOS.

7. **IF** NORMAL STARTUP screen displays,
THEN, PROCEED as follows:



NOTE - HPU 107-HU-07-302 is common to all manipulators and will be running already if another manipulator is operating HPU Control Panel is located at HPU on overhead walkway.

a. **IF** Hydraulic Power Unit (HPU), 107-HU-07-302 is OFF,
THEN, PRESS "START" button on HPU Control Panel.

NOTE - Pressing indicated function keys toggles hydraulic power to slave arms by opening and closing isolation valves. Corresponding screen flag will change to indicate state OFF/ON.

b. **PRESS** the following STARTUP screen keys to enable slave arm hydraulic power:

- "4> HYDR" - enable left slave arm
- "8> HYDR" - enable right slave arm

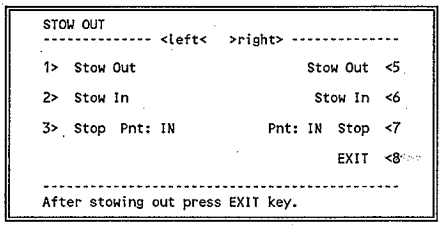
c. **CHECK**, HYDR indicators on display:

- 4> HYDR: ON
- 8> HYDR: ON

d. **PRESS** DN (down) function key on master control panel.

(Step VII.A.7 Cont.)

e. **VERIFY** STOW OUT menu displayed.



f. **PRESS** "1> STOW OUT" (left arm).

g. **VERIFY** left arm display (PNT), indicates OUT.

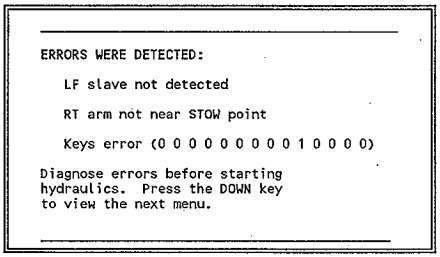
h. **PRESS** "5> STOW OUT" (right arm).

i. **VERIFY** right arm display (PNT), indicates OUT.

j. **PRESS** "8> EXIT" (to MAIN menu).

k. **GO TO** Section VII.B, NORMAL SYSTEM OPERATION.

8. **IF** STARTUP WITH ERRORS screen displays,
THEN, GO TO Section VII.C, STARTUP WITH SYSTEM ERRORS.



B. NORMAL SYSTEM OPERATION

NOTE - This section assumes dual-arm system operation. If one slave arm controller is disabled, menus and choices for only the active arm will be available.

Normal operation of the manipulator, with exception of setting different system characteristics is gained primarily from on-the-job training and experience.

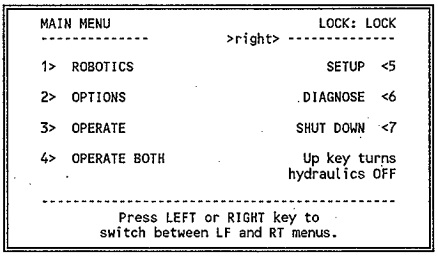
The user manipulates the system via master arms on the master control panel, and arm carriages, and selects or changes desired operating characteristics as needed.

This section describes basic master arm operating functions, carriage movement, and OPERATE menu selections. The user is referenced to applicable sections for setting specific characteristics.

The master control panel display is normally left on the OPERATE menu, which provides easy access to the most common functions.

1. **VERIFY** MAIN menu displayed.

NOTE - User returns to MAIN menu as needed by pressing EXIT from other menus until MAIN menu displays.



NOTE - OPERATE selects left/right OPERATE menu depending on flag when selection is made. To select opposite OPERATE menu, Operator must return to MAIN menu. OPERATE BOTH allows operator to toggle left/right OPERATE menus using LF/RT function keys, without returning to MAIN menu.

2. **IF** access to only one OPERATE menu is desired, **THEN:**

   a. **PRESS** LF (left) OR RT (right) function key until desired choice is flagged on MAIN menu.

   b. **PRESS** "3> OPERATE".

3. **IF** access to both LEFT and RIGHT OPERATE menus is desired, **THEN, PRESS** "4> OPERATE BOTH".

4. **VERIFY** OPERATE menu displayed.

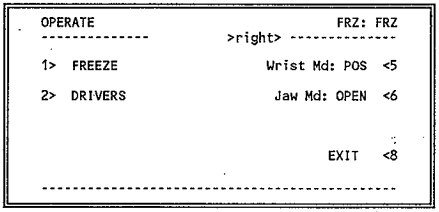


TABLE 1 - OPERATE MENU FUNCTIONS	
SELECTION	DESCRIPTION
FREEZE	Displays menu to freeze/unfreeze individual slave arm joints.
DRIVERS	Controls slave arm hydraulics through hydraulic isolation valves.
WRIST MODE	Toggles wrist operating mode.
JAW MODE	Toggles jaw operating mode.

5. Master Arm Operation

NOTE - Master arms (Figure 3) are miniature replicas of left and right slave arms, with the same relative range of motion. Each slave arm joint or function has a corresponding master arm action.

a. **ACTUATE** master arm action(s) (TABLE 2), as required, to manipulate corresponding slave arm:

TABLE 2 - MASTER ARM CONTROL ACTIONS	
DESIRED SLAVE ARM FUNCTION	OPERATOR ACTION ON MASTER ARM
MOVE SLAVE ARM JOINT	MOVE master arm joint corresponding to slave arm joint.
FREEZE SLAVE ARM IN PRESENT POSITION	PRESS FREEZE button on end of master arm (toggles arm freeze).
ROTATE WRIST	ROTATE master arm wrist collar.
OPEN/CLOSE JAW	SQUEEZE applicable textured jaw band on master arm.
NOTE - Changing from one menu to another automatically freezes both slave arms.	

6. Changing Slave Arm To Master Arm Correspondence

NOTE - When a slave arm is frozen, its master arm can be repositioned to a more comfortable operating position without moving the slave arm. This is useful when a task results in an awkward position for the master arm.

a. **FREEZE** slave arm.

b. **REPOSITION** master arm as desired.

c. **UNFREEZE** slave arm.

d. **RESUME** normal operation.

7. Jaw Operation

NOTE - Slave arm must be unfrozen to change jaw mode.

a. **SET** jaws to desired mode as follows:

(1) **PRESS** "3> OPERATE", from MAIN menu.

(2) **VERIFY** OPERATE menu displayed.

```
OPERATE                               FRZ: FRZ
-------------          >right> -------------

1>  FREEZE                  Wrist Md: POS  <5

2>  DRIVERS                   Jaw Md: OPEN  <6


                                     EXIT   <8

-------------------------------------------
```

(3) **PRESS** "6> JAW MD" to toggle modes (TABLE 3).

TABLE 3 - JAW MODES	
MODE	JAW OPERATING CHARACTERISTICS
OPEN	SQUEEZE forward band to fully CLOSE jaws. SQUEEZE aft band to fully OPEN jaws.
TOGGLE	SQUEEZE forward band to toggle jaws between OPENED and CLOSED (aft band has no effect).
LOCK	FREEZE jaws in current position until another mode is selected.
POSITION	SQUEEZE forward band to incrementally CLOSE jaws. SQUEEZE aft band to fully OPEN jaws.

8. Controlling Wrist Rotation

NOTE - The wrist has two modes of operation: In POSITION mode the slave arm wrist follows (direction and speed) rotation of the master arm wrist collar. Rotation is limited by master arm wrist collar to 270°.

In RATE mode, rotating the master arm wrist collar in either direction from null position causes the slave arm wrist to rotate continuously in the corresponding direction. Rate of rotation is proportional to degree of rotation of the master collar from null position. Freezing the slave arm or rotating the wrist slightly in the opposite direction will stop rotation.

a. **CHANGE** wrist mode as follows:

(1) **ENSURE** OPERATE menu displayed.

(2) **ENSURE** slave arm unfrozen.

(3) **PRESS** "5> WRS MD" (toggles setting).

NOTE - Null position applies to RATE mode only. Null position is the position of the master arm wrist collar at the point where either: (1) wrist mode was changed from POSITION to RATE, or (2) slave arm was unfrozen. This means the null position could be close to one of the wrist collar mechanical stops.

b. **ESTABLISH** new wrist null position as follows:

(1) **FREEZE** slave arm.

NOTE - NULL is normally set close to center of wrist collar mechanical range.

(2) **MOVE** wrist collar to desired null position.

(3) **UNFREEZE** slave arm.

CAUTION

- CARRIAGES MAY RUN INTO OBSTRUCTIONS (CABLES, HOSES, PROCESS ITEMS OR PROCESS EQUIPMENT) INSIDE GLOVEBOX.
- CARRIAGE WILL STOP MOVING WHEN MECHANICAL STOP IS REACHED. DO NOT HOLD MOVEMENT BUTTONS AFTER CARRIAGE REACHES MECHANICAL STOP OR EQUIPMENT MAY BE DAMAGED.
- CARRIAGE MUST COME TO A COMPLETE STOP BEFORE REVERSING DIRECTIONS.
- OPERATING HORIZONTAL CARRIAGE WITH LOW HYDRAULIC PRESSURE CAN DAMAGE EQUIPMENT.

9. Moving Carriages

   a. **PRESS** and **HOLD** movement button(s) on carriage controller until carriage reaches desired position,
   THEN, RELEASE.

10. Vertical Carriage Obstructions

   a. **IF** vertical carriage encounters an obstruction too heavy to push aside,
   THEN:

      (1) **RELEASE** activated movement button.

      (2) **CHECK** for obstruction(s).

      (3) **MOVE** obstructions as necessary.

      (4) **RESUME** normal operations.

11. Horizontal Carriage Obstructions

NOTE - Horizontal carriage is equipped with a torque limiter which may be tripped by any of the following; horizontal carriage hits obstacle too heavy to push aside, foreign obstacle in carriage pulley or sprocket, slave arm grasping fixed object during carriage movement, carriage at end of travel, carriage rail is bent or damaged.

HORIZ SLIP light is ON only when torque limiter trips and movement button is pressed.

a. **IF** HORIZ SLIP light illuminates,
THEN:

(1) **RELEASE** activated movement button.

(2) **CHECK** for obstructions or other cause.

NOTE - Torque limiter may self reset when fault is cleared.

(3) **CORRECT** obstructions or fault as necessary.

(4) **RESUME** normal operations.

b. **IF** cause of fault is not readily apparent,

OR

IF torque limiter remains tripped after fault is cleared,
THEN, RESET torque limiter as follows:

NOTE - HORIZ SLIP light will be ON when moving carriage.

(1) **MOVE** carriage in opposite direction of fault until mechanical stop is encountered.

(2) **JOG** (repeatedly press and release) button used to move carriage to mechanical stop, until torque limiter resets (listen for reset).

(3) **VERIFY** HORIZ SLIP light remains OFF when carriage is moved in either direction.

(4) **REPEAT** actions until reset.

(5) **RESUME** normal operations.

12. Changing Individual System Operating Characteristics

a. **CHANGE** characteristics as follows:

(1) **GO TO** Section indicated in TABLE 4.

(2) **MAKE** changes as required.

(3) **RESUME** normal operation.

TABLE 4 - OPERATING CHARACTERISTICS ATTACHMENTS

SECTION	TITLE / CHARACTERISTICS
VII.D	SET SLAVE ARM CHARACTERISTICS: 1. Stowing Slave Arms 2. Set Stow Sequence 3. Freezing Entire Slave Arm 4. Freezing Individual Slave Arm Joints 5. Controlling Slave Arm Speed 6. Enabling And Disabling Slave Arm Hydraulics 7. Set Slave Arm Movement Limits
VII.E	SET JAW OPERATING CHARACTERISTICS: 1. Set Jaw Closing Speed 2. Set Jaw Offset Values
VII.F	SET DISPLAY ATTRIBUTES

C. **STARTUP WITH SYSTEM ERRORS**

1. **DETERMINE** cause of error(s) (TABLE 5).

2. **TAKE** applicable corrective action per TABLE 5.

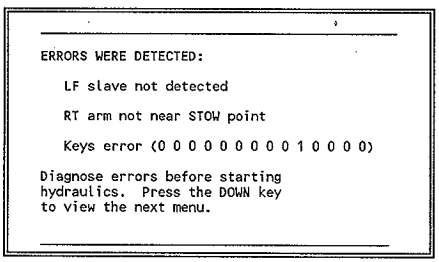


TABLE 5 - STARTUP WITH ERRORS		
ERROR MESSAGE	CAUSE	ACTION
(XX*) slave not detected	Master controller failed to establish communication with one of the slave controllers	Notify Supervision
(XX*) arm not near STOW point	Left or right slave arm not in stowed position	GO TO Step VII.C.4
Keys error (0 0 0 0 0 0 0 0 0 1 0 0 0 0)	Master controller keys and/or master arm freeze button are currently being pressed or need maintenance	GO TO Step VII.C.3
Note *: XX indicates failed channel: LF (left) or RT (right)		

3. **IF** a key error message is displayed,
   THEN, PROCEED as follows:

   a. **IF** a key or FREEZE button is actually being pressed,
      THEN:

      (1) **REMOVE** pressure from key or **REPOSITION** master arm so freeze button is released.

      (2) **SKIP** to Step VII.C.4.

   b. **IF** a key or freeze button is <u>not</u> being pressed,
      THEN:

      (1) **DO NOT** enable hydraulics or deploy slave arms.

      (2) **PRESS** DN function key on master control panel.

      (3) **VERIFY** MAIN menu displayed.

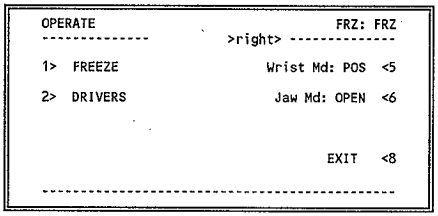
      (4) **NOTIFY** DOS.

4. **PRESS** DN function key on master control panel.

5. **VERIFY** MAIN menu for right slave arm displayed.

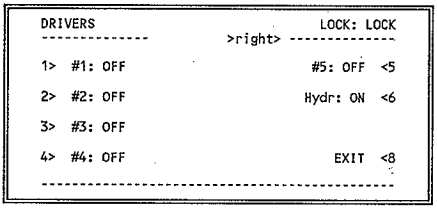
6. **PRESS** "3> OPERATE".

7. **VERIFY** OPERATE menu displayed.



8. **PRESS** "2> DRIVERS".

9. **VERIFY** DRIVERS menu displayed.



10. **PRESS** "6> HYDR" (enable right slave arm hydraulics).

11. **EXIT** to MAIN menu,
THEN, DISPLAY OPERATE menu for left slave arm.

12. **REPEAT** Steps VII.C.8 through VII.C.10 (enable left slave arm hydraulics).

13. **GO TO** Section VII.B, NORMAL SYSTEM OPERATION.

D. **SET SLAVE ARM CHARACTERISTICS**

1. Stowing Slave Arms

NOTE - Slave arms are moved to their STOWED IN, (protected) position for transport by carriages inside glovebox and to their STOWED OUT (deployed) position for working.

CAUTION

IF A SLAVE ARM IS NOT STOWED OUT WHEN A STOW COMMAND IS ISSUED, THE MESSAGE "ARM NOT NEAR STOW POINT" DISPLAYS. THE ARM THEN MOVES FIRST, TO THE STOW OUT POSITION, THEN TO THE COMMANDED POINT. BE PREPARED FOR ARM TO MOVE TO STOW OUT POSITION BEFORE IT MOVES THROUGH THE STOW/DEPLOY SEQUENCE.

ONCE STOW IN IS SELECTED, ARM MUST BE ALLOWED TO MOVE TO FULL STOW IN POSITION BEFORE EXITING APPLICABLE MENU.

a. **ENSURE** stow paths are clear of obstructions which could damage or be damaged by slave arms.

b. **PRESS** function keys (TABLE 6), as required, to STOW slave arm(s) to desired position:

(1) **PRESS** STOP to halt slave arm at next point in sequence.

(2) **IF** slave arm is being STOWED IN, **THEN, PRESS** STOW OUT at any point to reverse sequence.

(3) **IF** slave arm is being STOWED OUT, **THEN, PRESS** STOW IN at any point to reverse sequence.

TABLE 6 - STOW FUNCTION KEYS

FUNCTION KEY		FUNCTION	ACTION
LEFT ARM	RIGHT ARM		
1	5	STOW OUT	Deploys arm to Stow Out position.
2	6	STOW IN	Retracts arm to Stow In position.
3	7	STOP	Stops arm travel at next point in Stow Out/In sequence

PNT: Indicates each Stow sequence point as arm passes through it.

2. Set Stow Sequence

NOTE - Stow sequence is a series of arm movements that positions the slave arm between the protected (STOW IN) position and the deployed (STOW OUT) position. The sequence may consist of 2 to 16 slave arm positions (points).

a. **PRESS** "5> SETUP" from MAIN menu.

b. **VERIFY** SETUP menu displayed.

```
SETUP                                    LOCK: LOCK
--------------                 >right> --------------

1>  SET LIMITS                    SET JAW SPEED  <5

2>  SET STOW

3>  DISPLAY

4>  SET JAW OFFSET                       EXIT    <8

-------------------------------------------------
```

c. **PRESS** "2> SET STOW".

d. **VERIFY** SET STOW menu displayed.

```
SET STOW                                 LOCK: FRZ
--------------                 >right> --------------

Point: 01                                  Last  <5

                                           Next  <6

                                          Teach  <7
    LAST STOW
<4  Point: 16                              EXIT  <8

-------------------------------------------------
```

e. **DETERMINE** desired number of points in stow path sequence.

f. **PRESS** "4> POINT", repeatedly, until determined number is displayed.

g. **UNFREEZE** slave arm.

(Step VII.D.2 Cont.)

NOTE - Point 01 is first point in stow path, (STOW IN position).

h. **VERIFY** point counter indicates 01.

i. **MOVE** arm to desired position (point).

CAUTION

WHEN THE LAST POINT SPECIFIED IN SEQUENCE IS TAUGHT, POINT COUNTER DOES NOT INCREMENT. IF "7> TEACH" IS NOT PRESSED THE LAST POINT ACTUALLY TAUGHT PRIOR TO PRESSING "8> EXIT" BECOMES THE STOW OUT POINT. IT IS IMPORTANT TO TEACH DESIRED STOW OUT POINT BEFORE EXITING SET STOW MENU.

ALL POINTS MUST BE CLEAR OF GLOVEBOX WALLS & EQUIPMENT OR DAMAGE MAY OCCUR.

NOTE - Pressing "5> LAST", instead of "7> TEACH" returns to previous point. Pressing "6> NEXT", instead of "7> TEACH" skips point & increments point counter.

j. **PRESS** "7> TEACH".

k. **VERIFY** point counter increments to next number.

l. **REPEAT** Steps VII.D.2.i through VII.D.2.k until all desired points have been programmed.

m. **PRESS** "8> EXIT" (to SETUP menu).

3. Freezing Entire Slave Arm

NOTE - Changing from one menu to another automatically freezes both slave arms.

a. **CHECK** slave arm status in upper right corner of menu:

- **REIN** - normal unfrozen operation.
- **FRZ** - arm frozen (can be unfrozen with master arm freeze button).
- **LOCK** - arm frozen (cannot be unfrozen with freeze button from current menu).

b. **PRESS** freeze button (toggles FRZ/REIN) on master arm.

4. Freezing Individual Slave Arm Joints

NOTE - Freezing individual joints not required for a given task, provides a more stable platform for the task.

a. **FREEZE** slave arm.

b. **PRESS** "3> OPERATE" from MAIN menu.

c. **VERIFY** OPERATE menu displayed.

```
OPERATE                                  FRZ: FRZ
--------------                >right> --------------
1>  FREEZE                        Wrist Md: POS  <5
2>  DRIVERS                        Jaw Md: OPEN  <6


                                          EXIT   <8
-----------------------------------------------
```

d. **PRESS** "1> FREEZE".

e. **VERIFY** FREEZE menu displayed.

```
FREEZE                                   LOCK: LOCK
--------------                >right> --------------
1>  Rol: FRZ                          Wrs: REIN  <5
2>  Sho: REIN
3>  Elb: FRZ                        REIN all  <7
4>  Yaw: REIN                           EXIT   <8
-----------------------------------------------
```

f. **CHECK** status of individual joints on menu.

g. **PRESS** indicated function to toggle status (FRZ/REIN) of each joint as desired ("7> REIN ALL", unfreezes all).

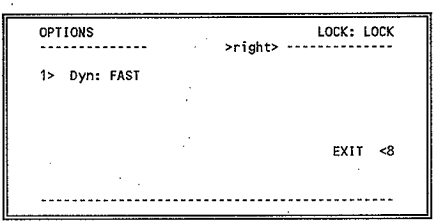
h. **PRESS** "8> EXIT" (to OPERATE menu).

5. Controlling Slave Arm Speed

NOTE - In general, speed of master arm movement controls speed of slave arm movement. System starts in FAST mode, however SLOW mode may be selected when more precise control is needed.

a. **PRESS** "2> OPTIONS", from MAIN menu.

b. **VERIFY** OPTIONS menu displayed.



c. **PRESS** "1> DYNAMICS" (toggles FAST/SLOW modes).

d. **PRESS** "8> EXIT" (to MAIN menu).

6. Enabling And Disabling Slave Arm Hydraulics

CAUTION

IF COMMANDED SLAVE ARM POSITION CHANGES WHILE HYDRAULICS ARE DISABLED, SLAVE ARM MAY ABRUPTLY MOVE TO THE NEW COMMANDED POSITION WHEN HYDRAULICS ARE RE-ENABLED. (THIS CAN HAPPEN IF OPERATOR DISABLES HYDRAULICS, FREEZES A SLAVE ARM IS FROZEN, MOVES THE MASTER ARM, UNFREEZES THE SLAVE ARM, AND THEN RE-ENABLES HYDRAULICS). IT IS IMPERATIVE THAT SLAVE ARM BE FROZEN BEFORE DISABLING SLAVE ARM HYDRAULICS. HYDRAULICS MUST BE RE-ENABLED AGAIN BEFORE UNFREEZING SLAVE ARM.

NOTE - Each slave arm has a hydraulic isolation valve that is either OPEN (enable hydraulic flow to slave arm actuators), or CLOSED (disable arm movement). Hydraulics are enabled as part of the startup process, but may be toggled for operation as desired.

a. **IF** hydraulics are to be immediately disabled, **THEN:**

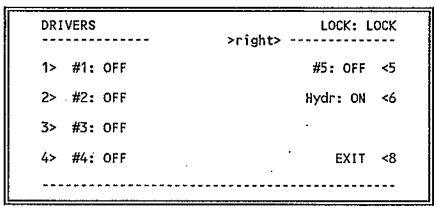
(1) **FREEZE** slave arm.

(2) **PRESS** UP function key on master control panel.

b. **IF** hydraulics are to be re-enabled or toggled, **THEN:**

(1) **PRESS** "2> DRIVERS" from OPERATE menu.

(2) **VERIFY** DRIVERS menu displayed.



(3) **CHECK** "6> HYDR" display (ON = hyd enabled, OFF = disabled).

(4) **PRESS** "6> HYDR", to toggle hydraulics as desired.

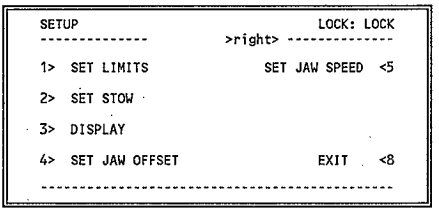
(5) **PRESS** "8> EXIT" (to OPERATE menu).

7. Set Slave Arm Movement Limits

NOTE - Range of motion of each slave arm joint (except wrist) can be limited by specifying left/right or up/down position limit.

a. **PRESS** "5> SETUP" from MAIN menu.

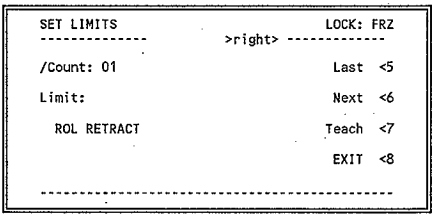
b. **VERIFY** SETUP menu displayed.



c. **PRESS** "1> SET LIMITS".

NOTE - Limits are inactive when menu is displayed.

d. **VERIFY** SET LIMITS menu displayed.



e. **UNFREEZE** slave arm.

f. **VERIFY** count indicates 01.

(Step VII.D.7 Cont.)

g. **PRESS** "6> NEXT" OR "5> LAST" to scroll through list, until desired limit (TABLE 7), indicates on display.

TABLE 7 - SLAVE ARM JOINT LIMITS		
LIMIT NUMBER	JOINT	ACTUATOR DIRECTION
01	Shoulder Roll	RETRACT
02		EXTEND
03	Shoulder Pitch	RETRACT
04		EXTEND
05	Elbow	RETRACT
06		EXTEND
07	Yaw	RETRACT
08		EXTEND

h. **MOVE** joint indicated on display to desired limit.

i. **PRESS** "7> TEACH".

j. **VERIFY** counter increments to next position number.

k. **REPEAT** Steps VII.D.7.g through VII.D.7.j until all desired limits have been set.

NOTE - Any joints remaining outside new limits will move to position inside limits when arm is unfrozen.

l. **MOVE** arm inside new set limits.

m. **PRESS** "8> EXIT" (to SETUP menu).

E. SET JAW OPERATING CHARACTERISTICS

1. Set Jaw Closing Speed

NOTE - Jaw speed controls speed at which jaws incrementally OPEN with JAW MODE set to POSITION. Closing speed is not affected.

a. **SET** jaw mode to POSITION.

b. **PRESS** "8> EXIT" (to MAIN menu).

c. **PRESS** "5> SETUP", from MAIN menu.

d. **VERIFY** SETUP menu displayed.

```
SETUP                                LOCK: LOCK
--------------              >right> --------------
1>  SET LIMITS                    SET JAW SPEED  <5
2>  SET STOW
3>  DISPLAY
4>  SET JAW OFFSET                       EXIT    <8
-----------------------------------------------
```

e. **PRESS** "5> SET JAW SPEED".

f. **VERIFY** SET JAW SPEED menu displayed.

```
SET JAW SPEED                        LOCK: FRZ
--------------              >right> --------------
1>  INCREMENT
2>  DECREMENT
    Value: 512
                                         EXIT    <8
-----------------------------------------------
```

NOTE - Jaw speed is incremented in arbitrary units (counts), ranging from 128 to 2048. Higher count setting equals faster jaw closure. Each switch press changes setting by 128.

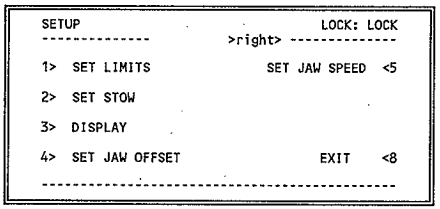
g. **PRESS** "1> INCREMENT" OR "2> DECREMENT", until desired setting is displayed.

2. Set Jaw Offset Values

NOTE - Jaw offset compensates for differences in servo valves to prevent jaws from drifting from a command position during operation. Once set, jaw offset should not need to be changed, unless jaw servo valve is replaced.

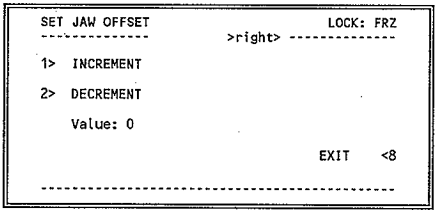
a. **PRESS** "5> SETUP", from MAIN menu.

b. **VERIFY** SETUP menu displayed.



c. **PRESS** "4> SET JAW OFFSET".

d. **VERIFY** SET JAW OFFSET menu displayed.



NOTE - Jaw offset is incremented in arbitrary units (counts), ranging from -512 to +512. Each switch press changes setting by 32.

e. **PRESS** "1> INCREMENT" OR "2> DECREMENT", until desired setting is displayed.

f. **PRESS** "8> EXIT" (to OPERATE menu).

g. **RESUME** normal operation.

F. SET DISPLAY ATTRIBUTES

NOTE - Allows for change of screen viewing angle and/or reversing dark and light portions of the screen.

1. **PRESS** "5> SETUP", from MAIN menu.

2. **VERIFY** SETUP menu displayed.

```
SETUP                                    LOCK: LOCK
--------------                 >right> --------------

1>  SET LIMITS                    SET JAW SPEED  <5

2>  SET STOW

3>  DISPLAY

4>  SET JAW OFFSET                      EXIT    <8

 ------------------------------------------------
```

3. **PRESS** "3> DISPLAY".

4. **VERIFY** DISPLAY menu displayed.

```
DISPLAY                                  LOCK: LOCK
--------------                 >right> --------------

1>  View Angle - UP               Save to Default  <5

2>  View Angle - DOWN

3>  Invert background

4>  Default                             EXIT    <8

 ------------------------------------------------
```

5. **PRESS** function key(s) (TABLE 8), for desired screen attributes.

TABLE 8 - SCREEN ATTRIBUTES

FUNCTION	SCREEN EFFECT
1> VIEW ANGLE-UP	Repeated pressing rotates viewing angle up to desired position.
2> VIEW ANGLE-DOWN	Repeated pressing rotates viewing angle down to desired position.
3> INVERT BACKGROUND	Reverses (toggle) screen contrast.
4> DEFAULT	Revert to startup screen configuration.
5> SAVE TO DEFAULT	save current screen attributes to default.

6. **PRESS** "8> EXIT" (to MAIN menu).

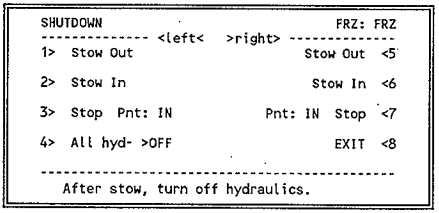
G. SYSTEM SHUTDOWN

CAUTION

SHUTTING DOWN MANIPULATOR WILL CAUSE SLAVE ARMS TO SAG UNTIL MECHANICAL STOPS ARE REACHED. HYDRAULIC OR CONTROL POWER SHOULD NOT BE TURNED OFF UNTIL ARMS ARE POSITIONED IN GLOVEBOX SO THEY WILL NOT HARM, OR BE HARMED BY OTHER OBJECTS WHEN THEY SAG.

1. **PRESS** "7> SHUTDOWN" from MAIN menu.

2. **VERIFY** SHUTDOWN menu displayed.



3. **MOVE** each slave arm to a position near its STOW OUT point.

4. **PRESS** "2> STOW IN" (left slave arm).

5. **VERIFY** left slave arm STOWS IN.

6. **PRESS** "5> STOW IN" (right slave arm).

7. **VERIFY** right slave arm STOWS IN.

8. **PRESS** "4> ALL HYDR OFF".

9. **TURN** master control power switch OFF.

10. **PUSH** EMERGENCY STOP button on either side of carriage controller IN.

11. **IF** manipulator is to be electrically isolated,
THEN, SET disconnect switch on C&I enclosure to ZERO.

12. **IF** HPU is to be SHUT DOWN,
THEN:

    a. **REPEAT** Steps VII.G.1 through VII.G.11 for each manipulator.

CAUTION

ALL MANIPULATORS MUST BE NEAR STOW OUT POINT BEFORE SHUTTING OFF HPU. SHUTTING OFF HPU WILL DISABLE ALL MANIPULATORS.

NOTE - HPU 107-HU-07-302 is common to all manipulators. HPU Control Panel is located at HPU on overhead walkway.

    b. **PRESS** "STOP" button on HPU Control Panel.

H. EMERGENCY SHUTDOWN

NOTE - Emergency Stop immediately shuts down manipulator by turning off all manipulator components that receive power from C&I enclosure (master controller, carriage controller, slave controllers, slave arms, and horiz and vertical carriages).

Hydraulic power unit (HPU) remains ON but hydraulically powered manipulator components cannot be used without electrical power as hydraulic control valves are disabled.

CAUTION

SHUTTING DOWN MANIPULATOR WILL CAUSE SLAVE ARMS TO SAG UNTIL MECHANICAL STOPS ARE REACHED. HYDRAULIC OR CONTROL POWER SHOULD NOT BE TURNED OFF UNTIL ARMS ARE POSITIONED IN GLOVEBOX SO THEY WILL NOT HARM, OR BE HARMED BY OTHER OBJECTS WHEN THEY SAG.

1. **PUSH** EMERGENCY STOP button on either side of carriage controller IN.

FIGURE 1 - CARRIAGE CONTROLLER

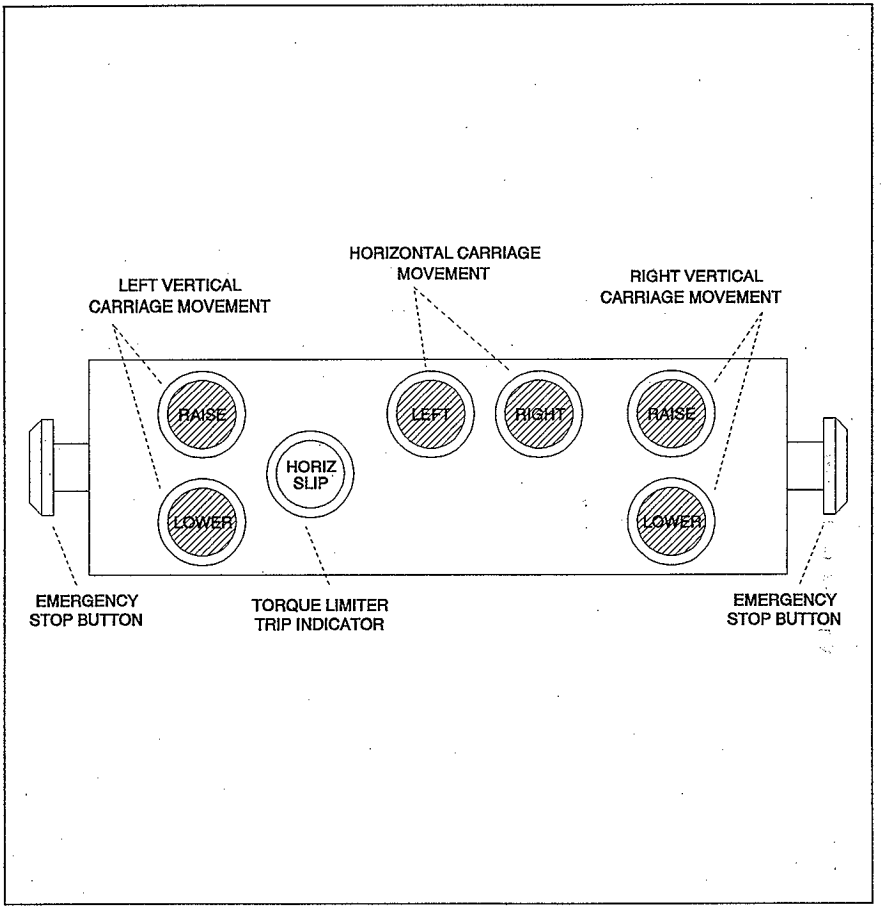
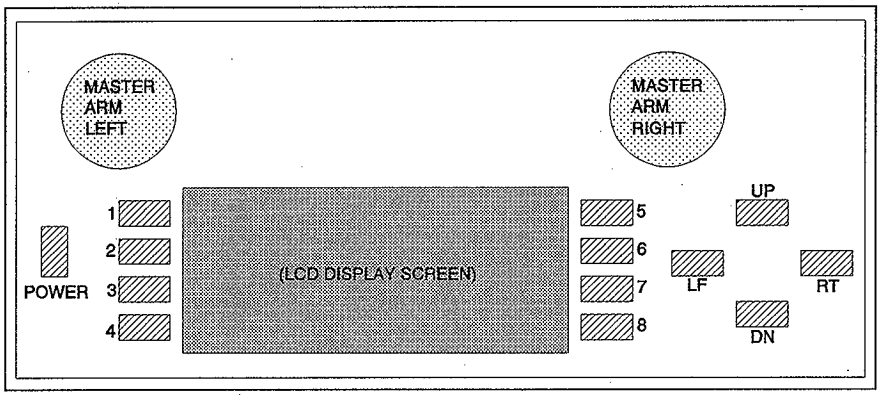


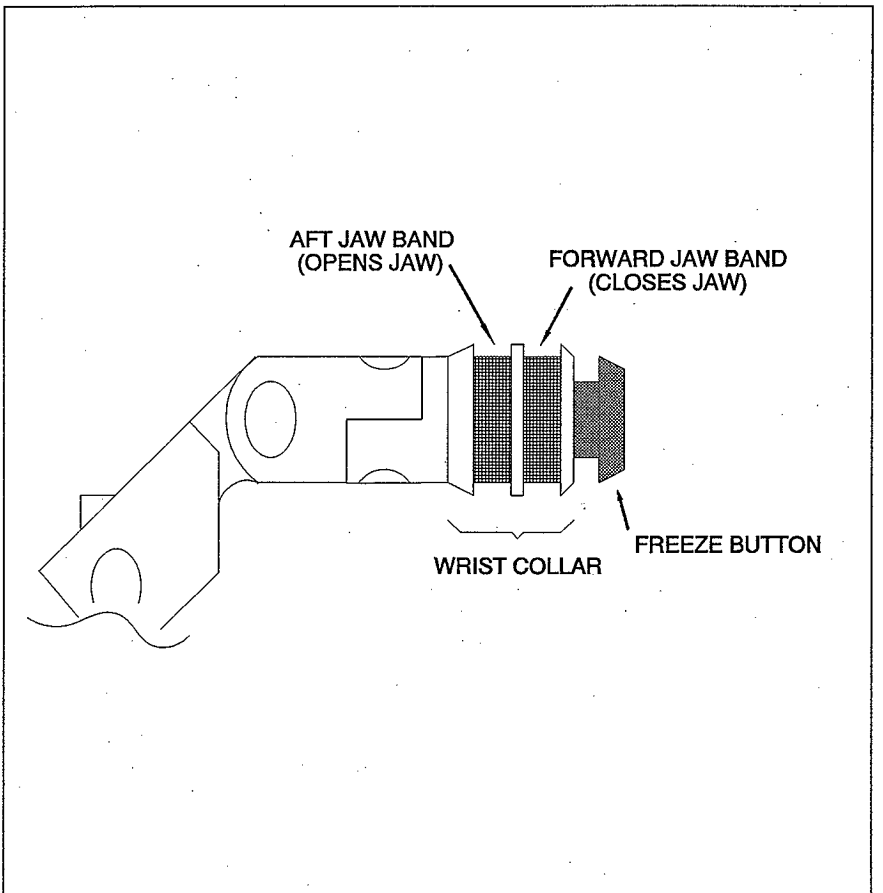
FIGURE 2 - MASTER CONTROL PANEL



MANIPULATOR EQUIPMENT NUMBERS	
MANIPULATOR LOCATION	MANIPULATOR EQUIPMENT NUMBER
LLW SORTING GLOVEBOX	107-EM-07-101
LLW RWM GLOVEBOX	107-EM-07-201
TRU SORTING GLOVEBOX	107-EM-07-301
TRU RWM GLOVEBOX	107-EM-07-401

NOTE: Hydraulic Power Unit 107-HU-07-302 supplies all manipulators.

FIGURE 3 - MASTER ARM



WRAP 1 PLANT OPERATING PROCEDURE

SYSTEM: PROCESS

BAGLESS TRANSFER SYSTEM MANUAL OPERATION

I. SYSTEM DESCRIPTION

NOTE - The bagless transfer system may also be referred to as the Drath & Schrader system in some plant documentation.

This procedure provides instructions for manual operation of the Deutsche Babcock, Bagless Transfer System (200/300 liter Drum Loading Ports).

The drum loading port is normally operated in automatic mode. However, if automatic operation is interrupted (inadvertently or otherwise), it may be necessary to enter manual mode to perform drum transfers or to return unit to proper sequencing. The drum loading port should be operated in manual only if absolutely necessary because the PLC ignores all limit switch signals. Major equipment damage is possible if improper operating sequence is used.

II. REFERENCE DOCUMENTS

ICF Kaiser Hanford Submittal No. 0676.A, Deutsche Babcock Technical and Operational Description, Double Lid Ports DF 674/560 and DF 742/660.

HSRCM-1, Hanford Site Radiological Control Manual.

III. PRESTART CONDITIONS

All personnel performing this procedure shall be qualified in accordance with WHC-CM-5-34, Section 1.8, "Training and Qualification", and on-the-job training.

All personnel performing this procedure shall have reviewed the applicable Radiation Work Permits (RWPs) and work under cognizance of Operations Management.

IV. SAFETY

All potential hazards, such as lifting heavy containers or handling sharp objects present in waste containers, must be mitigated by protective equipment, procedures, and administrative controls to ensure acceptable-risk operating conditions.

Radiological

Failure to follow proper port sequencing as described in this procedure may result in contamination of drum port and surrounding area.

V. TOOLS AND SUPPLIES

None.

VI. TABLE OF CONTENTS

VII. PROCEDURE

CAUTION

THE DRUM LOADING PORT SHOULD BE OPERATED IN MANUAL, ONLY IF ABSOLUTELY NECESSARY, BECAUSE THE PLC IGNORES ALL LIMIT SWITCH SIGNALS. MAJOR EQUIPMENT DAMAGE OR CONTAMINATION IS POSSIBLE IF IMPROPER OPERATING SEQUENCE IS USED.

NOTE - Administrative hold steps are identified by letters in parentheses at the left margin of the procedure step. The direction given in the procedure step must be satisfied before work continues.

(M) - Operations management shall approve continued operation

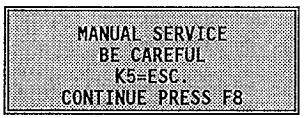
(R) - Radiological Control (RC) shall complete surveys or agree to permit continued operation.

A. ENTER OPERATION MODE

1. **OBTAIN** Operations Supervisor permission to enter MANUAL mode.
2. **VERIFY** Hoist chain is RAISED and will not interfere with port operation.
3. **VERIFY** manipulator arms will not interfere with port operation.
4. **VERIFY** other items will not interfere with port operation.
5. **ACCESS**, on operator panel keyboard (Attachment 1), MANUAL mode, as follows:
   a. **PRESS** STOP button (not EMERGENCY STOP).
   b. **VERIFY** K5 key pilot light illuminated.
   c. **PRESS** K5 key.
   d. **VERIFY** MAIN menu displayed.

e. **PRESS** K3 key.

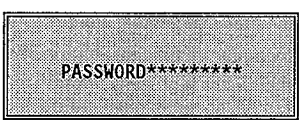
f. **VERIFY** display.



g. **PRESS** F8 key.

h. **VERIFY** display.

NOTE - Pressing ESC key at this point will cancel entry to manual.



(M) i. **KEY IN** password (Operations Supervisor).

j. **PRESS** ENTER key.

k. **PRESS** ESC key.

l. **PRESS** F8 key.

m. **VERIFY** display.

B. DETERMINE PORT STATUS

1. **DETERMINE** port status as follows:

a. **PRESS** UP/DOWN arrow keys, as required, to select each function listed in Table 1.

NOTE - Either K13 or K14 will be STEADY ON, while the other will be FLASHING. Option listed above FLASHING indicator is present position/status of selected function.

b. **OBSERVE** K13 / K14 key at each function to determine position of corresponding actuator.

TABLE 1

FUNCTION	DISPLAY MESSAGE
GRIP LID	01 MANU: Service LID GRIPPER Hold Release K13 K14
LIFT/LOWER DOUBLE LID VERTICALLY	02 MANU: SERVICE DOUBLE LID VERTC Down Up K13 K14
UNLOCK/LOCK DOUBLE LID	03 MANU: Service DOUBLE LID LOCK Close Open K13 K14
OPEN/CLOSE (swivel) DOUBLE LID SYSTEM	04 MANU: Service DOUBLE LID SYSTEM Close Open K13 K14

C. MANUAL OPERATION

CAUTION

FAILURE TO FOLLOW PROPER SEQUENCE MAY RESULT IN MAJOR EQUIPMENT DAMAGE OR CONTAMINATION OF EQUIPMENT AND SURROUNDING AREA.

1. **ENSURE** port in manual per Section VII.A.
2. **VERIFY** port travel path clear of obstructions.
3. **VERIFY** port closed and locked as per port close sequence below.
4. **VERIFY** Lid Gripper in "Release" position.
5. **ENSURE** drum properly positioned under port.
6. **OPEN** port as follows:

   a. **GRIP** lid:

      (1) **IF** the following LID GRIPPER menu with title is displayed,

```
      Manual Service
01    MANU: Servic@
       LID GRIPPER
      Hold  Release
       K13     K14
```

      PRESS the DOWN arrow key to display the LID GRIPPER Menu without title.

      (2) **PRESS** UP/DOWN arrow keys, as required, to access LID GRIPPER menu:

```
01    MANU: Service
       LID GRIPPER
      Hold  Release
       K13     K14
```

      (3) **PRESS** K13 key.

      (4) **VERIFY** K13 FLASHING, K14 STEADY ON.

b. **LIFT** double lid:

(1) **PRESS** DOWN arrow key.

(2) **VERIFY** DOUBLE LID VERTC menu displayed.

```
02    MANU: Service
     DOUBLE LID VERTC
       Down     Up
       K13      K14
```

(3) **PRESS** K14 key.

(4) **VERIFY** K14 FLASHING, K13 STEADY ON.

(5) **VERIFY** lid retained against raised port door.

c. **OPEN** double lid lock:

(1) **PRESS** DOWN arrow key.

(2) **VERIFY** DOUBLE LID LOCK menu displayed.

```
03    MANU: Service
     DOUBLE LID LOCK
       Close    Open
       K13      K14
```

(3) **PRESS** K14 key.

(4) **VERIFY** K14 FLASHING, K13 STEADY ON.

NOTE - Upon completion of the following step, port will be rotated open and drum completely exposed to glovebox.

d. **OPEN** double lid system:

(1) **PRESS** DOWN arrow key.

(2) **VERIFY** DOUBLE LID SYSTEM menu displayed.

```
04    MANU: Service
     DOUBLE LID SYSTEM
       Close    Open
       K13      K14
```

(3) **PRESS** and **HOLD** K14 key.

NOTE - K14 key must be held until door reaches full OPEN position.

(4) **VERIFY** K14 FLASHING, K13 STEADY ON.

(5) **RELEASE** K14 key.

7. **CLOSE** port as follows:

a. **VERIFY** no debris present on port.

b. **CLOSE** double lid system:

(1) **PRESS** UP/DOWN arrow keys, as required, to access DOUBLE LID SYSTEM menu.

```
04   MANU: Service
   DOUBLE LID SYSTEM
     Close    Open
      K13      K14
```

(2) **PRESS** and **HOLD** K13 key.

NOTE - K13 key must be held until door reaches full CLOSED position.

(3) **VERIFY** K13 FLASHING, K14 STEADY ON.

(4) **RELEASE** K13 key.

c. **CLOSE** double lid lock:

(1) **PRESS** UP arrow key.

(2) **VERIFY** DOUBLE LID LOCK menu displayed.

```
03   MANU: Service
   DOUBLE LID LOCK
     Close    Open
      K13      K14
```

(3) **PRESS** K13 key.

(4) **VERIFY** K13 FLASHING, K14 STEADY ON.

d. **LOWER** double lid:

(1) **PRESS** UP arrow key.

(2) **VERIFY** DOUBLE LID VERTC menu displayed.

```
02    MANU: Service
     DOUBLE LID VERTC
       Down     Up
       K13      K14
```

(3) **PRESS** K13 key.

(4) **VERIFY** K13 FLASHING, K14 STEADY ON.

e. **RELEASE** lid:

(1) **PRESS** UP arrow key.

(2) **VERIFY** LID GRIPPER menu displayed.

```
01    MANU: Service
      LID GRIPPER
     Hold  Release
      K13     K14
```

(3) **PRESS** K14 key.

(4) **VERIFY** K14 FLASHING, K13 STEADY ON.

8. **WHEN** desired,
THEN, RETURN to automatic operation as follows:

a. **ENSURE** port CLOSED per Step VII.C.7.

b. **PRESS** K5 key.

c. **VERIFY** MAIN menu displayed.

```
        DRUM PORT
      -Press button-
  Auto  Manu  Op. mode
   K2     K3     K4
```

d. **PRESS** K2 key.

NOTE - Port will not go into Automatic with low pressure or with emergency stop depressed.

9. IF AUTOMATIC mode cannot be accessed, **THEN**

   a. **VERIFY** Bagless Transfer Port regulator adjusted for 7 (6 to 8) bar.

   b. **VERIFY** glovebox emergency stops NOT ACTIVATED.

D. FAULT RECOVERY OPERATION

NOTE - The typical fault would involve an emergency stop, a loss of power, or a loss of air pressure, stopping the port during the OPENING/CLOSING sequence. In MANUAL mode, the operator determines at what stage in the sequence the port stopped, manually operates the actuators to return to proper sequence, then CLOSES the port and returns to AUTOMATIC mode.

1. **PLACE** port in MANUAL mode, per Section VII.A.

2. **DETERMINE** port status per Section VII.B.

3. **EVALUATE** port for fault condition relative to proper OPENING/CLOSING sequence per Tables 2 and 3.

NOTE - Manual operating sequence must follow automatic sequences shown in Tables 2 and 3 (sequences assume design drum properly positioned).

TABLE 2 - OPENING SEQUENCE

SEQUENCE	FUNCTION
1	LID GRIPPER - HOLD
2	DOUBLE LID VERTC - UP
3	DOUBLE LID LOCK - OPEN
4	DOUBLE LID SYSTEM - OPEN

TABLE 3 - CLOSING SEQUENCE	
SEQUENCE	FUNCTION
1	DOUBLE LID SYSTEM - CLOSE
2	DOUBLE LID LOCK - CLOSE
3	DOUBLE LID VERTC - DOWN
4	LID GRIPPER - RELEASE

4. **DETERMINE**, based on observations, corrections required to return port to normal sequencing.

   a. **IF** in doubt as to proper corrective actions, **THEN:**

      (1) **STOP** work immediately.

      (2) **CONTACT** Duty Operations Supervisor and COG Engineer for assistance.

5. **CORRECT** port sequencing fault using Section VII.C, as follows:

   a. **PRESS** UP/DOWN arrow key, as applicable, to select desired function.

   b. **PRESS** K13 / K14 key as applicable, to return corresponding actuator to proper position.

   c. **REPEAT** Steps VII.D.5.a and VII.D.5.b, as required, to properly position each port actuator.

NOTE - Once port sequence has been interrupted, the port must be completely CLOSED before it can be returned to automatic.

6. **WHEN** port has been returned to correct sequencing, **THEN:**

   a. **DETERMINE** port condition relative to CLOSING sequence per Step VII.C.7. **AND** continue sequence to full CLOSED position.

   b. **RETURN** to automatic mode per Step VII.C.8.

E. **FAULT ACKNOWLEDGEMENT SEQUENCE**

NOTE - All faults must be acknowledged and cleared before operation can commence.

NOTE - An unacknowledged fault exists when either the "ACK" button pilot light is illuminated, or the Control Panel screen is flashing.

1. **READ** Fault message.

2. **RECORD** Fault message.

3. **PRESS** "ACK" button.

4. **IF** "ACK" button pilot light is illuminated AND screen is flashing, **REPEAT** steps VII.E.1 through VII.E.3.

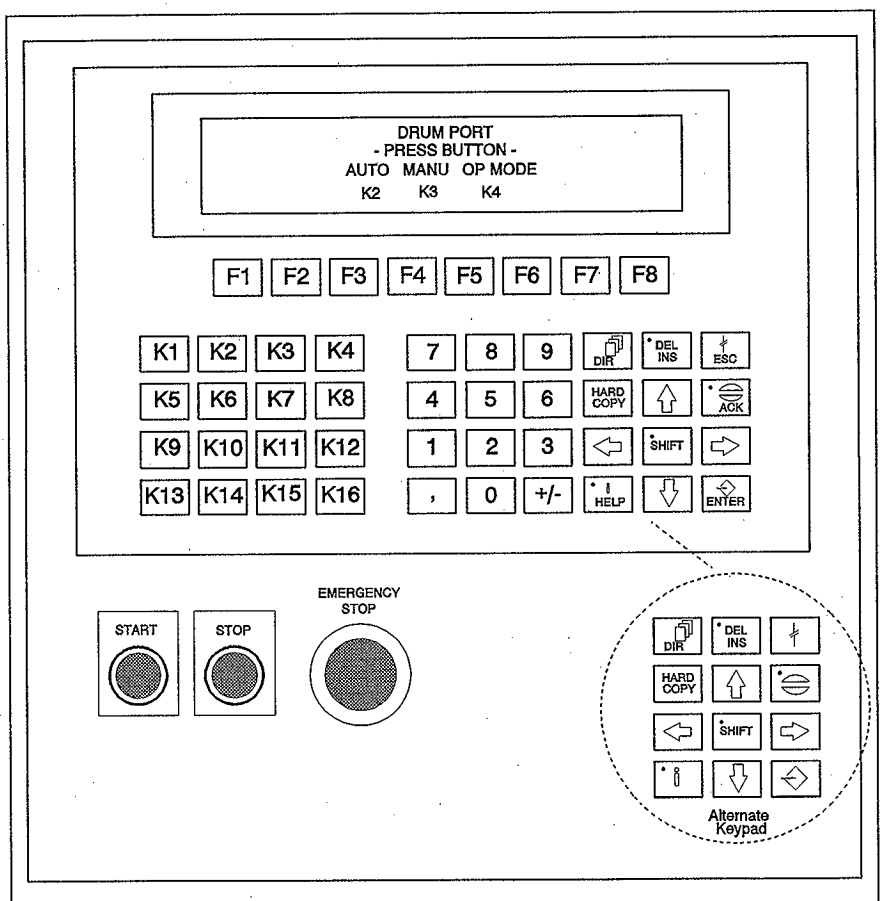
5. **VERIFY** "ACK" button pilot light is NOT illuminated.

F. **RESET PORT CONTROL PANEL EMERGENCY STOP**

1. **TWIST** emergency stop button clockwise.

2. **ACKNOWLEDGE** all faults.

ATTACHMENT 1 - OPERATOR PANEL



WRAP 1 PLANT OPERATING PROCEDURE

SYSTEM: ENVIRONMENTAL

VENT AND DRAIN AEROSOL CANS

I. SYSTEM DESCRIPTION

This procedure details the steps required to properly vent and drain aerosol cans within each of the Restricted Waste Management (RWM) gloveboxes.

The device consists of a punch assembly, a coalescing filter, an activated carbon filter, one and two liter poly bottles, a pressure relief valve, and a frame bolted to the floor of the glovebox.

The punch assembly holds the can in an inverted position, locks it in place with a lock knob, punctures the can with a puncture pin, and drains the liquid contents into a one liter poly bottle.

Gasses leaving the can pass through coalescing and activated carbon filters and any foam or overflow liquids are collected in the two liter poly bottle. The coalescing filter collects 99.9% of liquid particulate from the propellant released when an aerosol can is vented. Once through the coalescing filter, the gasses pass through the activated carbon filter where absorption of organic compounds takes place.

The relief valve is set at 10 psi to limit the pressure generated during the venting process.

Aerosol can contents will be treated using one of two processing methods. If incoming waste streams contain several cans with similar known contents, they will be batched, punctured, and packaged as a compatible waste stream. Collection containers containing Dry Zorb absorbent will be staged inside the glovebox for this purpose. After treatment completion of the batch, the collected compatible liquids will be packaged according to WRP1-OP-0717, LLW/RWM Process Glovebox Operation. Punctured cans and collected liquid bottles will only be staged long enough to complete processing of the batch. For unique, unknown, or incompatible aerosol can contents, the can will be punctured and packaged on a case-by-case basis in order to prevent reaction between incompatible wastes. These wastes will be packaged immediately or returned to the storage carousel until more similar wastes can be collected and efficiently packaged or until sample results are available.

II. REFERENCE DOCUMENTS

WRP1-OP-0710, Waste Sampling

HSRCM-1, Hanford Site Radiological Control Manual

HNF-CM-5-34, Solid Waste Disposal Operations Administration

HNF-CM-5-36, SWD Internal Requirements

HNF-EP-0063, Hanford Site Solid Waste Acceptance Criteria

III. PRESTART CONDITIONS

Personnel performing this procedure shall be qualified in accordance with WHC-CM-5-34, Section 1.8, Training Plan, and on-the-job training.

Prior to operation, a pre-job safety meeting will be conducted to discuss safety issues.

IV. SAFETY

Consult with Operations Management, Industrial Hygiene, and refer to Job Hazard Analysis (JHA) and Radiological Work Permit (RWP) to determine required PPE for handling hazardous wastes and the hazards of the can being vented and drained.

V. TOOLS AND SUPPLIES

Aerosol Container Puncture Unit
1 Liter, Narrow Mouth, Poly Bottles with 38-430 Threads
2 Liter, Narrow Mouth, Poly Bottles with 38-430 Threads
Dry Zorb Absorbent in convenient container(s)

VI. TABLE OF CONTENTS

VII. PROCEDURE

NOTE - (PCS) in the left margin indicates an action performed by the Plant Control System.

A. STAGING COLLECTION CONTAINERS AND ABSORBENT

1. **STAGE** 1 liter poly bottles inside the RWM glovebox as directed by the Sample/Treatment Director.

   a. **STAGE** empty 1 liter poly bottles.
   b. **STAGE** 1 liter poly bottles, each containing 150 grams Dry Zorb absorbent.

2. **STAGE** convenient container(s) of bulk Dry Zorb absorbent inside the RWM glovebox as directed by the Sample/Treatment Director.

B. VENT AND DRAIN SINGLE AEROSOL CAN

1. **ENSURE** Aerosol Container Puncture Unit is securely bolted to the glovebox floor.

2. **ENSURE** an empty two liter poly overflow bottle is securely attached to the bottom of the filter assembly.

   NOTE - The #2 in parentheses, (#2), refers to the second Collection Container which becomes necessary if Collection Container #1 is of insufficient volume to hold the contents of the two liter overflow bottle.

3. **INSERT** Collection Container #1 (#2) into glovebox according to instructions in WRP1-OP-0710, Waste Sampling, **OR** **RETRIEVE** a staged 1 liter poly bottle from inside the RWM glovebox to serve as Collection Container #1 (#2). This retrieved container may be either of the following:

   a. Empty 1 liter poly bottle if the contents of the can are:
      (1) Unknown and require sampling **OR**,
      (2) Not compatible with Dry Zorb **OR**,
      (3) In need of some other treatment prior to absorption.
   b. 1 liter poly bottle containing 150 grams Dry Zorb absorbent if:
      (1) The contents are known to be compatible with Dry Zorb absorbent **AND**
      (2) No other treatment is required prior to absorption.

A7.5/5.2.6

4. **ATTACH** a pre-printed barcode label to Collection Container #1 (#2).

5. **IF** the contents of the aerosol can and the type and amount of absorbent material required are known to be other than Dry Zorb,
THEN PLACE the appropriate amount and type of absorbent material into Collection Container #1 (#2), as determined by the Sample/Treatment Director.

6. **IF** the contents of the aerosol can are NOT known,
THEN the contents of Collection Container #1 (#2), after collection of the contents of the aerosol can, will have to be sampled per WRP1-OP-0710, GLOVEBOX WASTE SAMPLING.

7. **SCAN** to associate Collection Container #1 (#2) with the packet that the aerosol can came from (refer to Table 1 below) as follows:

   a. Location bar code on glovebox wall.
   b. Bar code of packet that aerosol can came from.
   c. Collection Container #1 (#2) bar code.
   d. Termination bar code on glovebox wall.

Table 1

GLOVEBOX	PORTABLE SCANNER I.D.	LOCATION
TRU RWM	12-NE-303	TRURWSAMPL ✓
LLW RWM	12-NE-313	LLWRWSAMPL

PCS PCS sends message to DMS associating the original packet with Collection Container #1 (#2).

8. **THREAD** Collection Container #1 onto bottom of aerosol can punch assembly until tight.

9. **LOOSEN** lock knob and **LIFT** sliding top plate to open housing sleeve.

10. **REMOVE** cap and from top of aerosol can.

NOTE - Large diameter cans may require removal of the plastic housing sleeve from inside the Puncture Unit housing.

11. **INSERT** aerosol can, NOZZLE END DOWN, into housing sleeve (or housing in the case of a large diameter can) so that shoulder of can rests on gasket.

CAUTION

FAILURE TO ENGAGE SLIDING TOP PLATE AGAINST CAN BEING PUNCTURED AND SECURELY TIGHTEN LOCK KNOB, MAY CAUSE BREAKAGE OF THE PUNCTURE PIN.

12. **LOWER** sliding top plate and FIRMLY engage against can.

13. **TIGHTEN** lock knob.

NOTE - When puncturing full and half-full cans, best results are obtained by pumping the handle several times when puncturing, to moderate evacuation pressure.

14. **PUSH** handle down firmly and release.

15. **WAIT** 20 seconds before removing punctured aerosol can to allow residual liquids to drain.

CAUTION

FAILURE TO LIMIT LIQUID VOLUME OF A COLLECTION CONTAINER TO ONE HALF TO TWO THIRDS FULL, MAY LEAVE INSUFFICIENT SPACE IN THE COLLECTION CONTAINER FOR LATER TREATMENT (ABSORPTION, NEUTRALIZATION, ETC.) OF THE CONTENTS.

16. **IF** the volume of liquid drained from the aerosol can exceeds one half to two thirds the capacity of Collection Container #1, **THEN REPEAT** Steps VII.B.3 through VII.B.7 to prepare Collection Container #2 to accept the excessive fluid.

17. **REMOVE** empty can from punch assembly and **LOADOUT** in accordance with Procedure WRP1-OP-0717, LLW/RWM Glovebox Operation.

18. **REMOVE** Collection Container #1 from bottom of aerosol can punch assembly.

19. **IF** there was any overflow of foam or liquid into the two liter bottle,
THEN PERFORM the following:
    a. **REMOVE** the two liter bottle from the bottom of the filter assembly.
    b. **POUR** the liquid from the two liter bottle back into Collection Container #1 if there is room for it without exceeding one half to two thirds level, **OR** into a Collection Container #2 if there is not.
    c. **RETURN** the two liter bottle to its normal position under the bottom of the filter assembly.

20. **PLACE** cap(s) on Collection Container #1 and any other one liter bottle used to contain the overflow.

DELETE

~~21. **SEAL** container lid(s) with tape, IF NEEDED~~

22. **ENSURE** barcode label is intact and **PLACE** any other required labels on container(s).

23. **PLACE** Collection Container #1 (and Collection Container #2, if used) on Transfer Stand and **LOADOUT** in accordance with Procedure WRP1-OP-0717, LLW/RWM Glovebox Operation.

C. **VENT AND DRAIN BATCHED, COMPATIBLE AEROSOL CANS**

1. **ENSURE** Aerosol Container Puncture Unit is securely bolted to the glovebox floor.

2. **ENSURE** an empty two liter poly overflow bottle is securely attached to the bottom of the filter assembly.

3. **INSERT** Collection Container #1 (#2) into glovebox according to instructions in WRP1-OP-0710, Waste Sampling, **OR**
RETRIEVE a staged 1 liter poly bottle from inside the RWM glovebox to serve as Collection Container #1 (#2). This retrieved container may be either of the following:

   a. Empty 1 liter poly bottle if the contents of the can are:
      (1) Not compatible with Dry Zorb **OR**,
      (2) In need of some other treatment prior to absorption.
   b. 1 liter poly bottle containing 150 grams Dry Zorb absorbent if:
      (1) The contents are known to be compatible with Dry Zorb absorbent **AND**
      (2) No other treatment is required prior to absorption.

4. **ATTACH** a pre-printed barcode label to Collection Container #1 (#2).

5. **IF** the contents of the aerosol cans require absorbent material other than Dry Zorb,
THEN PLACE the appropriate amount and type of absorbent material into Collection Container #1 (#2), as determined by the Sample/Treatment Director.

6. **SCAN** to associate Collection Container #1 (#2) with the packet that EACH aerosol can came from (refer to Table 1 below) as follows:

   a. Location bar code on glovebox wall.
   b. Bar code of packet that aerosol can came from.
   c. Collection Container #1 (#2) bar code.
   d. Termination bar code on glovebox wall.

Table 1

GLOVEBOX	PORTABLE SCANNER I.D.	LOCATION
TRU RWM	12-NE-303	TRURWSAMPL
LLW RWM	12-NE-313	LLWRWSAMPL

PCS — PCS sends message to DMS associating each original packet with Collection Container #1.

7. **LOOSEN** lock knob and **LIFT** sliding top plate to open housing sleeve.

8. **REMOVE** cap from top of aerosol can.

NOTE - Large diameter cans may require removal of the plastic housing sleeve from inside the Puncture Unit housing.

9. **INSERT** aerosol can, NOZZLE END DOWN, into housing sleeve (or housing in the case of a large diameter can) so that shoulder of can rests on gasket.

CAUTION

FAILURE TO ENGAGE SLIDING TOP PLATE AGAINST CAN BEING PUNCTURED AND SECURELY TIGHTEN LOCK KNOB, MAY CAUSE BREAKAGE OF THE PUNCTURE PIN.

10. **LOWER** sliding top plate and FIRMLY engage against end of can.

11. **TIGHTEN** lock knob.

NOTE - When puncturing full and half-full cans, best results are obtained by pumping the handle several times when puncturing, to moderate evacuation pressure.

12. **PUSH** handle down firmly and release.

13. **WAIT** 20 seconds before removing punctured aerosol can to allow residual liquids to drain.

CAUTION
FAILURE TO LIMIT LIQUID VOLUME OF A COLLECTION CONTAINER TO ONE HALF TO TWO THIRDS FULL, MAY LEAVE INSUFFICIENT SPACE IN THE COLLECTION CONTAINER FOR LATER TREATMENT (ABSORPTION, NEUTRALIZATION, ETC.) OF THE CONTENTS.

14. **IF** the volume of liquid drained from the aerosol can exceeds one half to two thirds the capacity of Collection Container #1, **THEN REPEAT** Steps VII.C.3 through VII.C.6 to prepare Collection Container #2 to accept the excessive fluid.

15. **REMOVE** empty can from punch assembly and **STAGE** in glovebox.

16. **REPEAT** steps VII.C.7 through VII.C.15 for each remaining batched, compatible aerosol can until Collection Container #1 is one half to two thirds full.

17. **IF** Collection Container #1 is one half to two thirds full, and there are more batched, compatible aerosol cans to drain, **THEN REPLACE** Collection Container #1 with Collection Container #2, and so on until all aerosol cans are vented and drained.

18. **REMOVE** Collection Container #1 from bottom of aerosol can punch assembly.

19. **IF** there was any overflow of foam or liquid into the two liter bottle,
    THEN PERFORM the following:
    a. **REMOVE** the two liter bottle from the bottom of the filter assembly.
    b. **POUR** the liquid from the two liter bottle back into Collection Container #1 if there is room for it without exceeding two thirds level, **OR** into a Collection Container #2 (or #3, #4, etc.) if there is not.
    c. **RETURN** the two liter bottle to its normal position under the bottom of the filter assembly.

20. **ENSURE** all Collection Containers have their lids tightly in place.

21. **SEAL** all Collection Container lids with tape.

22. **ENSURE** barcode labels are intact and **PLACE** any other required labels on Collection Containers.

23. **LOADOUT** empty cans in accordance with WRP1-OP-0717, LLW/RWM Glovebox Operation.

24. **LOADOUT** all Collection Containers in accordance with WRP1-OP-0717, LLW/RWM Glovebox Operation.

WRAP 1 PLANT OPERATING PROCEDURE

SYSTEM: PROCESS

GLOVEBOX WASTE SAMPLING

I. SYSTEM DESCRIPTION

This procedure defines the approach that is used to sample WRAP 1 process area glovebox waste under RCRA protocol sampling requirements.

WRAP Operation's responsibility is to sample for laboratory analysis in accordance with this procedure. Sample data shall be recorded using either the Data Management System, DMS Screen DMSS0501, which is the primary method of recording data, or on Attachment 2, Lab Sample Acquisition which is available as a backup method.

The Sample/Treatment Director shall provide recommendations on the specific method to be used, primarily via Attachment 1, Laboratory Sample Analysis Request, as appropriate. The Sample/Treatment Director shall also be responsible for ensuring that the data collected by Operations personnel either in DMS or on Attachment 2, Lab Sample Acquisition, is transferred to the Facility Sample Log as required.

Additionally, this procedure may also be used to collect samples that may undergo field screening within the glovebox prior to sampling for laboratory analysis.

This procedure will also provide guidance for transferring samples and other various items in and out of the gloveboxes through the use of the Sample Transfer Container (STC). This will include mounting and unmounting the container, item transfer, and all associated DMS interface requirements.

II. REFERENCE DOCUMENTS

HSRCM-1, Hanford Site Radiological Control Manual

WHC-CM-5-34, Solid Waste Division Operations Administration

WHC-CM-5-36, SWD Internal Requirements, Chapter 7-5, Environmental Compliance

III. PRESTART CONDITIONS

Personnel performing this procedure shall be qualified in accordance with WHC-CM-5-34, Section 1.8, "Training Plan", and on-the-job training.

IV. SAFETY

Appropriate protective clothing will be worn depending on the sampling activity involved. The clothing required will be identified on the RWP and/or during the pre-job evaluation by the Operations personnel, Operations Management, or Industrial Safety and Hygiene, as appropriate.

Anticipated radiological conditions shall be evaluated prior to starting work through the RWP and ALARA Management Worksheet (AMW), if applicable.

V. TOOLS AND SUPPLIES (As Needed)

Sampling equipment (i.e., glass tube or pipet sampler, scoop, hand auger, etc.)
Sample container(s)
Evidence tape
Tape
Cooler
Plastic sheets
Plastic bags
Camera
Other tools, supplies, or protective clothing as defined by the pre-job evaluation.

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VII. PROCEDURE

NOTE - Administrative hold steps are identified by initials in parenthesis at the left margin of the procedure step. The direction given in the procedure step must be satisfied before work continues.

(M) - Operations management shall approve continued operation.

(R) - Radiological Control shall complete surveys or agree to permit continued operation.

NOTE - The Sample/Treatment Director has the authority to decide whether any given quantity of waste should be Field Screened or Sampled.

A. FIELD SCREENING IN RWM GLOVEBOXES

NOTE - A supply of bottles, dishes, and other supplies to be used in field screening will be kept in, or loaded into the RWM Glovebox as needed.

NOTE - DMS Screen DMSS0508 (Sample Labels) is accessed from Screen DMSS0504 (Laboratory Sample Analysis Request) which can be accessed from DMSS0503 (Field Screening).

NOTE - DMS records the sample/packet relationship.

NOTE - This Section is used when material from a packet or collection container located at an RWM Glovebox sorting location requires field screening.

1. **DISPLAY** screen DMSS0503, Field Screening, by selecting the "Field Screening" button on the RWM Waste Repackaging DMS Screen (DMSS0322 for LLW RWM and DMSS0342 for TRU RWM).

   NOTE - Screen DMSS0503 displays a list of all packets and collection containers located at the RWM Sorting Location.

2. **SELECT** the PIN of the item to be sampled from the list.

3. **SELECT** "Next Sample".

   NOTE - DMS, at this point assigns a Screening ID.

4. **CONDUCT** field screening in accordance with the information provided on DMS Screen DMSS0503 and any additional guidance provided by the Sample Treatment Director.

5. **ENTER** the results of the field screening on screen DMSS0503, including the following parameters as a minimum:

   - Sampling Method
   - Sample Volume
   - General Comments
   - Analysis performed
   - Results

6. **ENTER** a signature password and commit the data.

7. **IF** the Sample/Treatment Director determines a sample is required based on the results of the field screening, **THEN** the Sampling/Treatment Director shall perform the following:

   a. **PREPARE** a sample analysis request using screen DMSS0504, Laboratory Sample Analysis Request, or Attachment 1, Laboratory Sample Analysis Request.

   b. **PRINT** (in the Sample Management Office) the sample bottle labels using screen DMSS0508, Sample Bottle Labels.

8. **IF** another screening sample is required, **THEN SELECT** the NEXT SAMPLE button on the DMSS0503 screen to re-display the list of packets and collection containers at the RWM sampling location.

9. **IF** no other screening sample is required, **THEN** return to screen DMSS0322.

10. **WHEN** the field screening analyses are complete, **PACKAGE** the field screened material with the original material if possible.

    NOTE: If it is necessary to package a sample separately, a new packet will be created and labeled.

11. **IF** sample cannot be combined with original material, **THEN** perform the following:
    a. **SCAN** the barcode for the location.
    b. **SCAN** the barcode for the original packet.
    c. **LABEL** the new packet.
    d. **SCAN** the barcode for the new packet(s).
    e. **SCAN** the end barcode.
    f. **SCAN** the yes barcode.
    g. **ENTER** descriptions of the new packets on the DMSS0322 Screen.

B. PREPARING TO SAMPLE

WARNING

APPROPRIATE EYE, HAND, AND PROTECTION CLOTHING AS SPECIFIED BY THE RWP, JHA OR PRE-JOB EVALUATION SHALL BE WORN DURING SAMPLING.

NOTE 1 - The appropriate methods for sample collection, required volumes, and sample containers are determined prior to sampling and recorded in DMS or on Attachment 1, Laboratory Sample Analysis Request. Sampling is performed on the following waste matrices:

- *Sludges*
- *Soils, sand, silt, other particulates*
- *Free liquids*
- *Sorbents (stained or saturated only).*

Other matrices can be sampled if they fall under matrices identified in SW-846, specific sampling and analysis plan, waste analysis plan, or work package.

If discrepant articles or conditions are encountered that cannot be identified and resolved with resources available, contact the Operations Management for assistance.

NOTE 2 - Sampling documentation (including photographs) is collected throughout the sampling activity, as appropriate.

1. **ENSURE** the Sample/Treatment Director has performed <u>one</u> of the following:

   - **PREPARE** Attachment 1, Laboratory Sample Analysis Request.
   - **UPDATE** DMS Screen DMSS0504 Laboratory Sample Analysis Request.

2. **OBTAIN** appropriate sampling equipment, sample container(s), camera, etc.

CAUTION

SAMPLE CONTAINERS MAY NOT BE OPENED PRIOR TO THEIR INTENDED USE. DOING SO MAY NEGATE THE PEDIGREE OF THE CONTAINER. DO NOT USE PREVIOUSLY OPENED CONTAINERS FOR RCRA PROTOCOL SAMPLING ACTIVITIES.

3. **ENSURE** empty sample containers have been maintained in a compliant manner as follows:

   - Kept under lock and key (e.g., locked storage cabinet, locked storeroom, etc.), with limited access. A custodian and alternate(s) shall be designated by Operations.

   - The outside of each case must be legibly initialed and dated by the individual opening that case. Pedigree papers for each case should be checked against the contents and any anomalies noted at that time in the logbook. Pedigree papers are kept on file.

4. **ENSURE** the following information is recorded in the Empty Sample Container Logbook for each sample container:

   - Custodian of container(s) being removed from secured area
   - Date removed
   - Lot number
   - Container ID number
   - Size and Type
   - Sampling location
   - Used/Not used
   - Comments (as required)

5. **PRINT** the sample bottle barcode labels using screen DMSS0508.

6. **LABEL** the empty sample bottle(s) with the barcode label(s).

C. **LOAD EMPTY SAMPLE BOTTLES INTO GLOVEBOX**

1. **ENSURE** the sample bottle is properly labeled.

2. **OPEN** the door on the Consumable Materials Port.

3. **INSERT** a properly sized bottle into the Consumable Materials Port, pushing the bottle already in the Port all the way through to the interior of the glovebox.

4. **INSERT** another properly sized bottle into the Consumable Materials Port, pushing the desired sample bottle(s) into the interior of the glovebox.

D. **STC OPERATIONS**

1. Attach STC to Glovebox

a. **REMOVE** STC from transfer pig (if applicable).

b. **ENSURE** port door is CLOSED and LOCKED:

(1) Door latch CLOSED (down).

(2) Port door latch locking pin dropped into locking hole.

NOTE - During rotation, the STC is locked and sealed to the port flange, and the STC cover is unlocked from the STC and locked and sealed to the cell port.

c. **MATE** STC flange to cell flange, with locking bayonets aligned to cell flange openings and **ROTATE** STC clockwise, 30°.

d. **ENSURE** STC fully engages port as follows:

(1) Visually **CHECK** mounting flanges are fully engaged.

(2) **TIGHTEN** STC with STC Tool as necessary.

e. **SCAN** STC to glovebox location with the appropriate portable scanner (refer to Table 1 below) as follows:

(1) Location barcode on glovebox wall.

(2) STC barcode.

(3) End barcode on glovebox wall.

(4) Yes barcode on glovebox wall.

Table 1

GLOVEBOX	PORTABLE SCANNER I.D.	LOCATION
TRU SORTING	12-NE-300	TRU_PP
TRU RWM	12-NE-303	TRURW_PP
LLW SORTING	12-NE-310	LLW_PP
LLW RWM	12-NE-313	LLWRW_PP

f. **VERIFY** OIU display on Sample Menu, "Purge Port Canister Present".

2. Open STC

NOTE - This Section Assumes that the STC is already properly mated to the Glovebox per Section VII.D.

a. **PULL** port door latch locking pin and **TURN** counter-clockwise, 30°.

b. **MOVE** port door latch to OPEN (UP).

c. **OPEN** port door.

3. Unload STC

a. **INSPECT** glovebox sampling area for objects or conditions that could puncture, rip, cut, or could otherwise injure or harm sampling personnel.

b. **REQUEST** Radiological Control (RC) coverage to the extent indicated on Attachment 1, Laboratory Sample Analysis Request.

c. **UNLOAD** sample container, or applicable item, into the glovebox, using gloves.

(1) **IF** sample containers needing treatment are being unloaded,
THEN REFER to WRP1-OP-0717, LLW/RWM GLOVEBOX OPERATION, Section titled, "REMOVE SAMPLE BOTTLES FROM STC FOR TREATMENT".

4. Load Sample in STC

a. **SELECT** "Loadout Samples" on OIU.

b. **SCAN** barcodes (refer to Table 2 below) as follows:

(1) Location barcode on glovebox wall.

(2) Sample Bottle barcode.

(3) End barcode on glovebox wall.

(4) Yes barcode on glovebox wall.

Table 2

GLOVEBOX	PORTABLE SCANNER I.D.	LOCATION
TRU SORTING	12-NE-300	TRU_SORT
TRU RWM	12-NE-303	TRURWSAMPL
LLW SORTING	12-NE-310	LLW_SORT
LLW RWM	12-NE-313	LLWRWSAMPL

E. SAMPLING LIQUIDS

NOTE 1 - Liquids may be sampled using several methods - pipet, glass tube, etc. The determination of which method and sample containers to use is made prior to sampling and is defined on Attachment 2, Laboratory Sample Analysis Request OR in the DMS.

NOTE 2 - The sample container should be placed over the waste container to minimize potential contamination spread as much as practical.

1. **SCAN** barcodes (refer to Table 2 below) as follows:

   a. Location barcode on glovebox wall.

   b. Sample Bottle barcode.

   c. **IF** and only if, sampling in an RWM Glovebox, **THEN SCAN** the packet or collection container being sampled.

   d. End barcode on glovebox wall.

   e. Yes barcode on glovebox wall.

Table 2

GLOVEBOX	PORTABLE SCANNER I.D.	LOCATION
TRU SORTING	12-NE-300	TRU_SORT
TRU RWM	12-NE-303	TRURWSAMPL
LLW SORTING	12-NE-310	LLW_SORT
LLW RWM	12-NE-313	LLWRWSAMPL

2. **OBTAIN** sampling information from DMS Screen DMSS0501 or from Attachment 2, Lab Sample Acquisition.

3. **ENTER** Room Temperature, Sample Matrix, and Comments as appropriate per Attachment 2, Lab Sample Acquisition.

4. **ENTER** Signature Password.

5. **SELECT** Commit.

6. **LOWER** the designated sampler into the selected waste container and obtain the sample.

7. CAREFULLY **WITHDRAW** the waste sample material and **FILL** the sample container(s), as appropriate. If there are phases, **FILL** a sample container(s) for each phase.

   a. **NOTE** the order of each phase and **NUMBER** the vials appropriately, (e.g., 1 of 3, 2 of 3, 3 of 3).

8. **SECURE** cap on each container(s)

9. **SEAL** around cap/container with tape.

10. **RETURN** unused waste sample material to original container.

11. **CLOSE** and **SECURE** the lid on the waste container that was sampled.

12. **GO TO** Section VII.G, for instructions on completing sample preparation.

F. **SAMPLING SEMI-SOLID/SOLID WASTE MATRICES**

1. **SCAN** barcodes (refer to Table 2 below) as follows:

   a. Location barcode on glovebox wall.

   b. Sample Bottle barcode.

   c. **IF** and only if, sampling in an RWM Glovebox, **THEN SCAN** the packet or collection container being sampled.

   d. End barcode on glovebox wall.

   e. Yes barcode on glovebox wall.

Table 2

GLOVEBOX	PORTABLE SCANNER I.D.	LOCATION
TRU SORTING	12-NE-300	TRU_SORT
TRU RWM	12-NE-303	TRURWSAMPL
LLW SORTING	12-NE-310	LLW_SORT
LLW RWM	12-NE-313	LLWRWSAMPL

2. **OBTAIN** sampling information from DMS Screen DMSS0501 or from Attachment 2, Lab Sample Acquisition.

3. **ENTER** Room Temperature, Sample Matrix, and Comments as appropriate per Attachment 2, Lab Sample Acquisition.

4. **ENTER** Signature Password.

5. **SELECT** Commit.

6. **DIVIDE** the waste surface into a sampling grid, as appropriate.

7. **SAMPLE** each distinguishable matrix using one of the following methods:

   a. Scoop Sampler

   NOTE - This sampling technique should only be used when the material is homogenous throughout the container and a representative sample can be taken from a portion of the container.

   (1) Using a scoop or shovel, thoroughly **MIX** the material to be sampled then **SCOOP** enough material for a representative sample.

   (2) **FILL** the sample container(s).

   (3) **SECURE** cap on each container(s).

   (4) **SEAL** around cap/container with tape.

   (5) **RETURN** unused sample material to original waste container, if appropriate.

   (6) **CLOSE** and **SECURE** the lid on sampled waste container, if applicable.

   (7) **GO TO** Section VII.G for instruction on completing sample preparation.

b. Hand Auger Sampler

NOTE - There are a wide variety of hand augers available in varying sizes for different materials. If the material will not stay in the auger, or if the sample hole will not stay open for reentry, an alternate sampling method should be chosen.

(1) **PLACE** the auger end at the selected sampling location.

(2) **AUGER** into the sample material.

(3) When the auger becomes full of material, **REMOVE** the auger by **PULLING** and **TURNING** the auger counterclockwise. Power equipment may be used as appropriate.

(4) **PLACE** a bowl underneath the auger. Using a spoon or other suitable tool **PUSH** the material from either the top or bottom of the auger into the bowl and **TAP** the auger with a hammer or other suitable tool, as needed to encourage material flow.

(5) **REPEAT** Steps VII.F.7.b.(1) through VII.F.7.b.(4) above, the appropriate number of times in the same sampling hole to obtain sample material from the entire depth of the matrix.

(6) **IF** more than one bowl is needed, **SUB-SAMPLE** from each bowl into a single composite bowl and **MIX** thoroughly.

(7) Using a scoop or shovel, thoroughly **MIX** the material to be sampled then **SCOOP** enough material for a representative sample.

(8) **FILL** the sample container(s).

(9) **SECURE** cap on each container(s).

(10) **SEAL** around cap/container with tape.

(11) **RETURN** unused sample material to original waste container, if appropriate.

(12) **CLOSE** and **SECURE** the lid on sampled waste container, if applicable.

(13) **GO TO** Section VII.G for instruction on completing sample preparation.

c. Snip and Wipe Method

(1) **IF** the solid item being sampled is hard, **USE** an approved filter paper or other media and **WIPE** item in such a way as to obtain a representative sample of the whole.

(2) **IF** the solid item being sampled is soft, **USE** scissors and **SNIP** sections of the soft item in such a way as to obtain a representative sample of the whole.

(3) **Prepare** the sample per instructions obtained from the laboratory that will be performing the analysis and identified on Attachment 1, Laboratory Sample Analysis Request or DMS Screen DMSS0504.

(4) **FILL** the container as appropriate.

(5) **SECURE** cap on each container(s).

(6) **SEAL** around cap/container with tape.

(7) **RETURN** unused sample material to original waste container, if appropriate.

(8) **CLOSE** and **SECURE** the lid on sampled waste container, if applicable.

(9) **GO TO** Section VII.G for information on completion of sample preparation.

G. FINAL SAMPLE PREPARATION AND LOAD OUT

1. Sample custodian must **ENSURE** sample containers are sealed with evidence tape and appropriately labeled as follows:

- Sample number
- Date and Time
- Requested analyses
- Container type
- Container number(ie. #1 of 4), as appropriate
- Collector's initials

2. **LOAD** the sample containers into the STC for transfer.

NOTE - If "LOADOUT SAMPLES" is selected without a sample canister in place, OIU responds with "NO PURGE PORT PRESENT".

a. **SELECT** "LOADOUT SAMPLES" on Operator Interface Unit (OIU) (refer to Table 3 below).

Table 3

GLOVEBOX	OIU I.D.
TRU SORTING	OIU-12-104B
TRU RWM	OIU-12-106B
LLW SORTING	OIU-12-103B
LLW RWM	OIU-12-105B

(PCS) b. **DISPLAY** "SAMPLE LOADOUT IN PROGRESS" at OIU-12-105B.

c. **SCAN** sample container barcode with portable scanner as follows (refer to Table 2 below):

(1) Location barcode on glovebox wall.

(2) Sample Bottle barcode.

(3) End barcode on glovebox wall.

(4) Yes barcode on glovebox wall.

Table 2

GLOVEBOX	PORTABLE SCANNER I.D.	LOCATION
TRU SORTING	12-NE-300	TRU_SORT
TRU RWM	12-NE-303	TRURWSAMPL
LLW SORTING	12-NE-310	LLW_SORT
LLW RWM	12-NE-313	LLWRWSAMPL

d. **LOAD** sample container into port canister.

e. **REPEAT** Steps VII.G.2.c and VII.G.2.d for each sample container to be transferred.

f. **ENSURE** all sample bottles in the Sample Transfer Container are displayed on DMSS0501.

g. **SELECT** "END SAMPLE LOADOUT" on OIU.

(PCS) h. CONFIRM "SAMPLE LOADOUT COMPLETE" is displayed at OIU-12-105B.

3. **CLOSE** and **DETACH** the STC from the glovebox.

a. **CLOSE** port door.

b. **MOVE** port door latch to CLOSED position (down).

c. TURN port door latch locking pin clockwise, 30° and **RELEASE**.

d. **ENSURE** port door latch locking pin drops into locking hole.

NOTE - During rotation, the STC cover is locked and sealed to the STC.

CAUTION

FAILURE TO SURVEY STC AND CELL FLANGE MAY RESULT IN EQUIPMENT AND/OR PERSONNEL CONTAMINATION.

e. **REQUEST** RCT coverage for STC removal.

f. **ROTATE** STC counter-clockwise, 60° and **REMOVE** from port flange.

g. **SCAN** STC out of glovebox location with portable scanner (refer to Table 1 below), as follows:

(1) Location barcode on glovebox wall.

(2) STC barcode.

(3) Transport PIG (if used).

(4) End barcode on glovebox wall.

(5) Yes barcode on glovebox wall.

Table 1

GLOVEBOX	PORTABLE SCANNER I.D.
TRU SORTING	12-NE-300
TRU RWM	12-NE-303
LLW SORTING	12-NE-310
LLW RWM	12-NE-313

4. **VERIFY** OIU displays, "NO PURGE PORT CANISTER PRESENT".

(R) 5. **REQUEST** RCT to survey and appropriately release the sealed STC.

6. **IF** surface contamination is found, **DECONTAMINATE** the container.

7. **IF/WHEN** no surface contamination is detected, **PLACE** the STC in transport PIG or cooler as required.

8. **ENSURE** the COC/SAR information is entered into screen DMSS0502 or the hard copy is attached.

9. **IF** the COC of the STC is transferred between operations personnel prior to removal from the Process Area, **ENSURE** the COC/SAR, DMSS502 "Relinquished By" and the "Relinquished To" information is entered into screen DMSS0502 on the DMS or on the hard copy.

10. **TRANSFER** the STC to the Sample Management Area, **OR**

a. **SECURE** in a locked cabinet until such time that the containers will be transported to the Sample Management Area.

b. **RECORD** time, date, and person placing the sample into storage in the cabinet log sheet.

11. **RELINQUISH** sample(s) to the sample custodian

12. **ENSURE** the COC/SAR "Relinquished By" and the "Relinquished To" information is entered into Screen DMSS0502 or on the hard copy form.

H. SAMPLE ACTIVITY LOGBOOKS AND DMS

NOTE - DMS or Attachment 2, Lab Sample Acquisition, shall be used for data collection. The Sample/Treatment Director shall transfer the information to the Sample Logbook, in a timely manner as required for compliant record keeping.

1. Sample/Treatment Director **ENSURE** and/or **RECORD** the following information applicable to the samples taken, in the Sample Log book and in the DMS:
   - Container Identification Number (CIN)
   - Manifest Number or other tracking number (e.g., Radioactive Shipping Record)
   - Sampling Location
   - Date
   - Time
   - Volume
   - Container size and type
   - Sampler's name
   - Recorder's signature
   - Physical Characteristics (Color, Texture, Viscosity)
   - Anomalies and prohibited items
   - Description of overall sampling event/Comments
   - Requested Analysis

2. **NOTE** any discrepancies in the Comments Section of the Sample Log Book.

I. SAMPLING ACTIVITIES PHOTO ALBUM

1. **RECORD** the following information for each photo taken and **ENTER** in the Sampling Activities Photo Album:

   - Title of activity
   - Roll number
   - Picture number
   - Negative number
   - CIN of waste container sampled
   - Date taken

ATTACHMENT 1 - LABORATORY SAMPLE ANALYSIS REQUEST

NOTE

The data recorded in this attachment corresponds to the data recorded on DMSS0504 - Laboratory Sample Analysis Request.

Requested by: **Date:**

(Corresponds to Signature Password on DMSS0504)

Drum/Packet PIN:	Sample Number:	Sample Location:

Analyses Selected: (Using codes from Attachment 3, Sample and Treatment Lookup Tables, each selected Laboratory Analysis will be associated with the following predetermined parameters: Description, Preservative, Container Type, No. of Containers, and required volume. Enter codes below for each requested analysis.)

____ ____ ____ ____ ____ ____ ____

Description of each Analysis: _____

_____

Total number, type, and volume of sample containers required: _____

_____

_____

Preservative required: _____

Special Instructions/Graphics:

Additional sheet(s) attached: __YES __NO

ATTACHMENT 2 - LAB SAMPLE ACQUISITION

NOTE

The data recorded in this attachment corresponds to the data recorded on DMSS0501 - Lab Sample Acquisition.

Requested by: Date:

(Corresponds to Signature Password on DMSS0501)

Drum/Packet PIN:	Location:	STC PIN:
Room Temperature: (°C)	Sample Matrix: (from Attachment 3)	

Bottles in STC by Bottle PIN and Analysis Description Code for each from Attachment 3, Sample and Treatment Lookup Tables:

Bottle PIN	Analysis Code	Bottle PIN	Analysis Code
	/		/
	/		/
	/		/
	/		/

Comments:

Additional sheet(s) attached: ___YES ___NO

ATTACHMENT 3 - SAMPLE AND TREATMENT LOOKUP TABLES
(Page 1 of 2)

Laboratory Analysis Table (LABANAL) DMSS0462					
*LABANAL_CD VCHAR2(8)	LABANAL_CNTR_COUNT NUMBER(1)	•LABANAL_CNTYP_CD VCHAR2(3)	LABANAL_DESCR VCHAR2(20)	LABANAL_PRESERV VCHAR2(12)	LABANAL_REQD_VOL NUMBER(4)
AQLIQ	1	P	Aqueous liquid	None	250
OILS	1	P	Oils	None	250
SOLVENTS	1	G	Solvents	None	250
TCLP	1	P	TCLP	None	250
SOLIDS	1	MC	Solids	None	250
COND	1	P	Conductivity	None	250

Sample Container Type (SAMPCONTYP) DMSS0463	
*SAMP_CNTYP_CD VCHAR2(3)	SAMP_CNTR_DESCR VCHAR2(30)
P	Polyethylene Bottle
G	Glass
AG	Amber glass
AGS	Amber glass septa
GS	Glass septa
MC	Metal can

ATTACHMENT 3 - SAMPLE AND TREATMENT LOOKUP TABLES
(Page 2 of 2)

Sample Matrix Table (SAMPMATX) DMSS0464	
*SAMPMATX_CD VCHAR2(3)	SAMPMATX_DESCR VCHAR2(12)
S	Soil
SE	Sediment
SO	Solid
SG	Solid - Gran
SM	Solid - Metal
SS	Solid - Sludge
SL	Sludge
W	Water
O	Oil
A	Air
DS	Drum Solids
DL	Drum Liquids
T	Tissue
WI	Wipe
L	Liquid
X	Other

Sampling Method (SAMPMETH) DMSS0465	
*SAMPLING_METHOD_CD VCHAR2(4)	SAMPLING_METHOD_DESCR VCHAR2(30)
PIPE	Pipet sampler
SCOP	Scoop sampler
TRIR	Trier sampler
AUGR	Hand auger sampler
SNIP	Solid snip sample
SWIP	Swipe sample
CLWS	Colowasa sampler
INS	Insitu

Field Analysis Type Table (FLDANALTYP) DMSS0459		
*FAT_CD VCHAR2(4)	FAT_DESCR VCHAR2(70)	FAT_UNITS VCHAR2(6)
LEAD	Lead stick test	red/no
PHDP	pH dip strip	pH
PHMR	pH meter	pH
PCBO	CLOR-N-OIL	ppm
PCBS	CLOR-N-SOIL	ppm
CLOR	CLOR-D-TECT	ppm

WASTE RECEIVING AND PROCESSING (WRAP) PLANT OPERATING PROCEDURE

SYSTEM: PROCESS

WASTE TREATMENT

I. SYSTEM DESCRIPTION

This procedure provides instructions for the treatment of hazardous components of the WRAP 1 Mixed Waste stream or waste that is not in compliance with disposal criteria for the Waste Isolation Pilot Plant (WIPP) or the Hanford Site. The treatment processes will take place in the Restricted Waste Management (RWM) gloveboxes and include:

- Deactivation (neutralization, cementing, absorption, and controlled reaction with water)
- Stabilization (cementing, absorption, and sealing)
- Amalgamation (liquid, elemental mercury is treated with inorganic reagent such as copper, zinc, nickel, gold, or sulfur, to produce a non-liquid semi-solid amalgam)

The waste to be treated can be grouped into four general categories:

• Liquid Organic	Solutions with a variety of dissolved organic constituents, oils, solvents, fuel
• Solid Organic	Soil, resins, paper, rags, wood
• Liquid Inorganic	Acid, base, and salt solutions, solutions containing heavy metals
• Solid Inorganic	pipe, fluorescent tubes (elemental mercury), machinery, shielding lead, sheet metal

II. REFERENCE DOCUMENTS

HSRCM-1, Hanford Site Radiological Control Manual

WHC-CM-5-34, Solid Waste Disposal Operations Administration

WHC-CM-5-36, SWD Internal Requirements

WHC-EP-0063, Hanford Site Solid Waste Acceptance Criteria

WRP1-OP-0710, Glovebox Waste Sampling

III. PRESTART CONDITIONS

A pre-job briefing will be held to review the completed Treatment Work Sheet (Attachment 1) and/or DMS Screen DMSS0325, LLW RWM Processing Instructions, provided by the Sampling/Treatment Director, to ensure all information to complete the job is provided.

An ALARA Management Work Sheet, Job Hazards Analysis (JHA), and a Radiological Work Permit (RWP) will be reviewed in the pre-job briefing as required.

Prior to treatment operation, ensure the fire protection system is operable.

OBTAIN completed copy of Attachment 1, Treatment Work Sheet **OR, ENSURE** the worksheet data has been entered in the DMS on Screen DMSS0506.

OBTAIN tools and materials specified on Attachment 1, Treatment Work Sheet or DMS Screen DMSS0325, LLW RWM Processing Instructions.

IV. SAFETY

Potential hazards, such as lifting heavy containers or handling sharp objects, must be mitigated by protective equipment, procedures, and administrative controls to ensure acceptable-risk operating conditions.

Consult with Operations Management and Industrial Hygiene, and refer to the Job Hazards Analysis (JHA), Radiological Work Permit (RWP) and Material Safety Data Sheets (MSDS) to determine required Personal Protective Equipment (PPE).

Check glovebox contents prior to startup/restart for any materials which might require special handling precautions (i.e. flammable, reactive, etc.). If problems exist, or if unsure that glovebox operation may be safely conducted, then notify Duty Operations Supervisor (DOS).

This procedure requires accessing gloveboxes through gloveports on a regular basis. Operators shall perform self survey upon exiting gloveport after each use. Radiological Control Technician (RCT) shall be contacted anytime self survey limits are exceeded.

Spills inside the glovebox shall be cleaned up per WRP1-OP-0701, Glovebox Housekeeping.

Warning - Use care to prevent injury. Possible safety hazards include:

- Tripping/Slipping
- Injuries to the hands at glovebox ports
- Radiological Contamination
- Interference with the Automatic Guided Vehicle (AGV)

If during performance of this procedure, any of the following conditions are found, **immediately** STOP WORK, place equipment in a safe condition, and notify Operations management:

- Any equipment malfunction which could prevent fulfillment of its functional requirements

- Personnel error

When treating reactive material, only one container of reactive material sized up to 1 gallon will be located in the glovebox at any one time unless reviewed and covered under a separate Job Hazards Analysis.

Containers of flammable or reactive materials shall not be stored in the gloveboxes for extended periods of time or overnight. Open containers of flammable or reactive material shall not be left unattended in the gloveboxes.

WARNING:

Caution must be used to avoid spills when handling acids or caustics.

Extreme caution must be used when handling reactive materials due to potential flammability or explosion.

Do not handle bottles with bulging or other signs of pressurization.

Do not handle any containers with crystalline material formation until it is determined they are not shock sensitive.

V. TOOLS AND SUPPLIES

As specified on specific Attachment 1, Waste Treatment Work Sheet or DMS Screen DMSS0325, LLW RWM Processing Instructions, for each job.

VI. TABLE OF CONTENTS PAGE

VII. PROCEDURE

WARNING

CAUTION MUST BE USED TO AVOID SPILLS WHEN HANDLING ACIDS OR CAUSTICS.

EXTREME CAUTION MUST BE USED WHEN HANDLING REACTIVE MATERIALS DUE TO POTENTIAL FLAMMABILITY OR EXPLOSION.

NOTE 1 - Administrative hold steps are identified by letters in parentheses at the left margin. Direction given in the procedure step must be satisfied before work continues.

(M) - Operations management shall approve operation.

(R) - Radiological Control (RC) shall complete surveys or agree to permit continued operation.

NOTE 2 - UNLESS OTHERWISE SPECIFIED, selections and displays throughout this procedure are on applicable Glovebox Operator Interface Unit (OIU, RWM Glovebox):
- *OIU-12-105B, LLW/RWM glovebox*
- *OIU-12-106B, TRU/RWM glovebox*

NOTE 3 DMS Screen DMSS0506, Worksheet Data Entry, is used to select items for treatment and prepare the worksheet on DMS.

NOTE 4 - All Data Management System (DMS) data entry, is performed on DMS Terminal (107-TE-12-103).

NOTE 5 - Treatment information is displayed inside glovebox on applicable OIU:
- *OIU-12-105A, LLW/RWM glovebox*
- *OIU-12-106A, TRU/RWM glovebox*

NOTE 6 - All scanning is performed with applicable portable scanner:
- *12-NE-313, LLW/RWM glovebox*
- *12-NE-303, TRU/RWM glovebox*

(M) A. **IF** at any time during performance of this procedure, any unique or unusual event occurs,
THEN:

1. **STOP** work immediately.
2. **NOTIFY** Duty Operations Supervisor (DOS).
3. **PROCEED** when and as directed by DOS.
4. **RECORD** description of event and actions taken in Treatment Logbook and in appropriate comment space of DMSS0326 screen.

WARNING

DO NOT HANDLE BOTTLES WITH BULGING OR OTHER SIGNS OF PRESSURIZATION.

DO NOT HANDLE ANY CONTAINERS WITH CRYSTALLINE MATERIAL FORMATION UNTIL IT IS DETERMINED THEY ARE NOT SHOCK SENSITIVE.

(M) B. **IF** at any time during performance of this procedure, any bottles or other waste/sample containers show either of the following:

- Signs of pressurization (bulging, etc.)
- Crystalline material formation

THEN:

1. **STOP** work immediately.
2. **NOTIFY** Duty Operations Supervisor (DOS).
3. **PROCEED** when and as directed by DOS.
4. **RECORD** description of event and actions taken in Treatment Logbook and in appropriate comment space of DMSS0326 screen.

C. **OBTAIN** the completed copy of Attachment 1, Treatment Worksheet, **OR SELECT** Worksheet from List of Values on DMS Screen DMSS0324/3409

D. **VERIFY** all items on the worksheet are at the treatment station by performing one of the following:

1. **CHECK** the items against the worksheet.
2. **CHECK** Screen DMSS0324, LLW RWM Treatment Item Assembly, shows zero "Item Containers to be Retrieved" for both packets and samples.

NOTE - The PCS Barcode System does not support splitting of packets at the RWM Treatment Location. Splitting of packets must be done at the sorting location.

NOTE - When a collection container bar code is scanned, any packets scanned afterwards are associated with this collection container.

NOTE - For DMS item tracking, all treated items must be associated with a treatment container ID. If a separate treatment container is not used, a treatment container barcode label must be attached to the container used for treatment and the barcode labels scanned to associate the original container with new treatment container ID.

E. **SCAN** the following bar codes for EACH item to be treated:

1. Location bar code.
2. Treatment container bar code.
3. Bar code label of each item to be treated.
4. "YEND" bar code.
5. "YYES" bar code.

F. **TREAT** item(s) per the Processing Instructions found either on Attachment 1, Treatment Work Sheet, or DMS Screen DMSS0325, Processing Instructions.

1. **USE** Attachments 2 through 6 for conducting specific treatment procedures as follows:
   a. Attachment 2, Neutralization
   b. Attachment 3, Absorption
   c. Attachment 4, Controlled Reaction With Water
   d. Attachment 5, Grouting
   e. Attachment 6, Amalgamation

2. On DMS Screen DMSS0326, LLW RWM Treatment, **ENTER** the following information as appropriate:
   a. Material group code.
   b. Waste description.
   c. Treatment comments for the treatment container.

3. **IF** compliant waste from an item is added to the compliant waste loadout drum:
   a. **CHECK** the COMPLIANT box for the item.
   b. **UPDATE** the waste description for the Compliant Loadout Drum.

G. **ENSURE** Attachment 1, Treatment Work Sheet has been completed, signed and dated **OR** the Operator's signature password has been entered on Screen DMSS0326 and the data has been committed.

H. **RETURN** completed Attachment 1, Treatment Work Sheet to **DOS OR ENSURE** DMS Screen DMSS0506 is updated.

ATTACHMENT 1 – TREATMENT WORK SHEET

WORK SHEET NUMBER:	RWP #:	AMW #:
TREATMENT TYPE:	CHEMIST SIGNATURE:	

WASTE/SAMPLE PINs TO BE TREATED

TOOLS AND MATERIALS:

PROCESSING INSTRUCTIONS:

NEW TREATED WASTE CONTAINER PINs:

WASTE PACKAGING AND HANDLING INSTRUCTIONS:

JOB COMPLETION COMMENTS:

OPERATOR SIGNATURE:_____ DATE:_____

OPERATION MANAGEMENT SIGNATURE: DATE:

ATTACHMENT 2 - NEUTRALIZATION
Page 1 of 3

WARNING

FAILURE TO EXERCISE EXTREME CAUTION AND ATTENTION TO DETAIL WHEN WORKING AROUND STRONG ACIDS AND BASES CAN CAUSE SEVERE INJURY DUE TO CHEMICAL BURNS.

I. GENERAL NEUTRALIZATION INFORMATION

NOTE - Corrosive waste with a pH ≤2.0 and ≥ 12.5 will be deactivated by neutralization.

NOTE - The target as an endpoint to treatment shall be a neutral pH with a range between 5.0 and 9.0 considered acceptable.

A. Generally, if waste has a pH ≤2.0 or ≥ 12.5, neutralization will be the first step in the overall treatment. Once neutralized, the waste may require other treatment such as absorption or stabilization.

B. It shall be the responsibility of the Sample/Treatment Director to:

- Decide, based on chemical properties of the waste and desired chemical end products, which reagent(s) to use in the neutralization process.
- Perform any and all necessary stoichiometric calculations and/or produce titration curves to determine accurate quantities of neutralizing agent to be introduced to the waste ensuring minimal end waste volume.
- Perform all necessary and required safety analyses related to the actual chemical processes needed for neutralization (e.g., generation of poisonous gasses, heat production, potential for explosion, etc.) and make personnel safety recommendations as needed.

ATTACHMENT 2 - NEUTRALIZATION

I. GENERAL NEUTRALIZATION INFORMATION (continued)

C. Typical bases used to neutralize acids include:

- Calcium Carbonate, ($CaCO_3$) - Generally desirable neutralizing agent due to its tendency to produce non-soluble salts. Has the advantage of producing many insoluble carbonate metal salts and the fact that these carbonates are compatible with portland cement. It should be anticipated when neutralizing with calcium carbonate, that the reaction may produce frothing due to the evolution of carbon dioxide.
- Calcium Hydroxide, (CaOH) - Generally desirable neutralizing agent due to its tendency to produce non-soluble salts.
- Sodium Hydroxide (NaOH) - Less desirable neutralizing agent due to its tendency to produce soluble salts.

D. Typical acids used as to neutralize bases include:

- Hydrochloric Acid (Hcl) - Appropriate caution must be taken to avoid injury due to potential generation of chlorine gas.
- Sulfuric Acid (H_2SO_4)
- Nitric Acid (HNO_3)

II. NEUTRALIZATION PROCEDURE

WARNING

FAILURE TO NOTE ANY SPECIAL SAFETY PRECAUTIONS ON THE FOLLOWING DMS SCREENS, PRIOR TO INITIATING ANY TREATMENT ACTIVITY COULD CAUSE PERSONNEL INJURY AND/OR EQUIPMENT DAMAGE:

- **DMSS0326, LLW RWM TREATMENT**
- **DMSS0325, LLW RWM PROCESSING INSTRUCTIONS**

A. **ENSURE** the PIN of the item to be treated matches the PIN of the selected DMS Screen DMSS0326, LLW RWM Treatment.

ATTACHMENT 2 - NEUTRALIZATION

II. NEUTRALIZATION PROCEDURE (Continued)

B. **TEST** the contents of the selected Treatment Container for pH, using a pH dip test.

C. **IF** the pH is between 2.0 and 12.5,
THEN EXIT this Attachment.

D. **IF** the reading is lower than 2.0 or greater than 12.5,
THEN CONTINUE with this pH neutralization process.

E. **IF** the pH cannot be accurately determined using a dip strip,
THEN use a pH meter according to WRP1-OP-0707, Operation and Setpoint Check of the Orion pH Meter.

F. **ADD** the designated amount of the neutralizing agent as indicated on DMS Screen DMSS0325, LLW RWM Processing Instructions.

G. **SECURE** the lid on the treatment container.

H. **PLACE** the treatment container on the jar mill for the amount of time indicated on DMS Screen DMSS0325, LLW RWM Processing Instructions.

I. **WHEN** mixing is complete,
THEN REMOVE the treatment container from the jar mill.

J. **TEST** the treated solution with pH paper.

K. **IF** pH is at, or between 5.0 and 9.0,
THEN PROCEED with the remainder of this Attachment.

L. **IF** pH is NOT at, or between 5.0 and 9.0,
THEN CONSULT the Sample/Treatment Director for further neutralization instructions.

M. **RECORD** the results of the pH dip test on DMS Screen DMSS0326, LLW RWM Treatment.

N. **PROCEED** with other treatment activities or treated item load out procedures as required.

ATTACHMENT 3 - ABSORPTION

I. GENERAL ABSORPTION PROCESS INFORMATION

A. The absorption of liquid waste material is conducted to render the waste non-fluid.

B. Sufficient absorbent must be added to the waste to ensure there is no free liquid remaining after the addition of the absorbent material, while not adding so much absorbent that it unnecessarily increases the volume of waste.

C. Absorbent material approved for use on the Hanford Site is listed in the Hanford Site Solid Waste Acceptance Criteria, WHC-EP-0063, and in the TRU Waste Acceptance Criteria for the Waste Isolation Pilot Plant, WIPP-DOE-069, and includes but is not limited to:

- Polyacrylates
- Polypropylene
- Superabsorbent Polymer
- Cellulose

D. The absorption process is judged effective by conducting a visual inspection.

E. If the overall treatment process is completed after the addition of the absorbent and is ready for disposal, a paint filter test may be performed to verify that the waste no longer contains free liquids.

II. ABSORPTION PROCEDURE

WARNING

FAILURE TO NOTE ANY SPECIAL SAFETY PRECAUTIONS ON THE FOLLOWING DMS SCREENS, PRIOR TO INITIATING ANY TREATMENT ACTIVITY COULD CAUSE PERSONNEL INJURY AND/OR EQUIPMENT DAMAGE:

- **DMSS0326, LLW RWM TREATMENT**
- **DMSS0325, LLW RWM PROCESSING INSTRUCTIONS**

A. **ENSURE** the PIN of the item to be treated matches the PIN of the selected DMS Screen DMSS0326, LLW RWM Treatment.

ATTACHMENT 3 - ABSORPTION

B. **TEST** the contents of the selected Treatment Container for pH, using a pH dip test.

C. **IF** the pH cannot be accurately determined using a dip strip, **THEN** use a pH meter according to WRP1-OP-0707, Operation and Setpoint Check of the Orion pH Meter.

D. **IF** the pH is at, or between 2.0 and 12.5, **THEN PROCEED** with the remainder of this Attachment.

E. **IF** the reading is lower than 2.0 or greater than 12.5, **THEN NEUTRALIZE** the liquid prior to absorption per Attachment 2, NEUTRALIZATION.

F. **DETERMINE** the correct type and amount of absorbent material to use from DMS Screen DMSS0325, LLW RWM Processing Instructions.

G. **SECURE** the lid on the treatment container.

H. **PLACE** the treatment container on the jar mill for the amount of time indicated on DMS Screen DMSS0325, LLW RWM Processing Instructions.

I. **WHEN** mixing is complete, **THEN REMOVE** the treatment container from the jar mill.

J. **TEST** the treated solution by visual inspection:

1. **IF** there is any visible free liquid in the Treatment Container, **THEN** add 25% of the original amount of absorbent to the container and repeat Steps II.G through II.J.

2. **IF** there is no visible free liquid in the container, **THEN RECORD** the test results on DMS Screen DMSS0326, LLW RWM Treatment.

K. **PROCEED** with other treatment activities or treated item load out procedures as required.

ATTACHMENT 4 - CONTROLLED REACTION WITH WATER

I. CONTROLLED REACTION WITH WATER - GENERAL INFORMATION

WARNING

FAILURE TO EXERCISE EXTREME CAUTION IN HANDLING METALLIC SODIUM AROUND WATER, CAN CAUSE A VIOLENT EXOTHERMIC REACTION RESULTING IN A RAPID HYDROGEN BURN RESEMBLING AN EXPLOSION.

A. A very slow, controlled reaction with water (usually vapor or mist) is used to deactivate some reactive material such as sodium metal.

B. To ensure complete deactivation, the geometry of the metal object may have to be altered (cut or shaved into small thin particles).

C. Upon completion of the controlled reaction, a visual inspection of the reactive material is necessary.

D. The treated metal should no longer appear shiny and silvery gray. It should appear dull and dark or completely dissolved.

II. PROCEDURE FOR CONTROLLED REACTION WITH WATER

WARNING

FAILURE TO NOTE ANY SPECIAL SAFETY PRECAUTIONS ON THE FOLLOWING DMS SCREENS, PRIOR TO INITIATING ANY TREATMENT ACTIVITY COULD CAUSE PERSONNEL INJURY AND/OR EQUIPMENT DAMAGE:

- **DMSS0326, LLW RWM TREATMENT**
- **DMSS0325, LLW RWM PROCESSING INSTRUCTIONS**

A. **ENSURE** the PIN of the item to be treated matches the PIN of the selected DMS Screen DMSS0326, LLW RWM Treatment.

ATTACHMENT 4 - CONTROLLED REACTION WITH WATER

B. **DETERMINE** the following from DMS Screen DMMS0325, LLW RWM Processing Instructions:

1. Geometric configuration of waste (e.g., shaved, granulated, chipped, etc.).
2. Quantity of water to be introduced.
3. Method by which the water is to introduced.
4. Rate at which the water is to introduced.

C. **ENSURE** the geometric configuration of the material to be deactivated by reaction with water is as specified on DMS Screen DMSS0325, LLW RWM Processing Instructions.

D. **ADD** specified quantity of water, at the specified rate, using the specified method, to the Treatment Container.

E. **WHEN** the entire amount of water specified on DMS Screen DMSS0325 has been added to the Treatment Container,
THEN VERIFY the following:

1. There is no free liquid in the Treatment Container.
2. The metal being treated no longer displays a shiny, silver-grey appearance.
3. The metal being treated displays a dark, dull appearance.

F. **IF** there is any free liquid,
THEN CHECK pH and neutralize as necessary per Attachment 2, Neutralization.

G. **RECORD** the results of the reaction with water on DMS Screen DSS0326, LLW RWM Treatment.

H. **PROCEED** with other treatment activities or treated item load out procedures as required.

ATTACHMENT 5 - GROUTING

I. GENERAL GROUTING PROCESS INFORMATION

A. Grouting is used to deactivate reactive ignitables consisting of metal fines and radioactive or corrosive material.

B. The mechanism of this deactivation technique is to mix and bind the active elements of the waste with an inert material. This inert material is typically portland cement.

C. The optimum water to cement ratio for portland cement is 0.7 meaning 7 parts water to ten parts cement, with a 3% by weight bentonite content.

D. The waste is thoroughly mixed in with the cement as soon as the water is added.

E. The resultant matrix is allowed to cure for a minimum of 24 hours before handling.

NOTE: Stability is defined as the resistance of waste to degrade into smaller particles as a function of time. Durability is defined as the resistance of waste particles to abrade into smaller particles during anticipated handling and transportation.

F. Following curing, the matrix is visually inspected for signs of free liquid, stability, and durability.

G. Since grouting is a treatment technology and there are no other hazardous constituents, no additional testing is required to meet RCRA Requirements.

II. GROUTING PROCEDURE

WARNING

FAILURE TO NOTE ANY SPECIAL SAFETY PRECAUTIONS ON THE FOLLOWING DMS SCREENS, PRIOR TO INITIATING ANY TREATMENT ACTIVITY COULD CAUSE PERSONNEL INJURY AND/OR EQUIPMENT DAMAGE:

- **DMSS0326, LLW RWM TREATMENT**
- **DMSS0325, LLW RWM PROCESSING INSTRUCTIONS**

A. **ENSURE** the PIN of the item to be treated matches the PIN of the selected DMS Screen DMSS0326, LLW RWM Treatment.

B. **DETERMINE** the following from DMS Screen DMMS0325, LLW RWM Processing Instructions:

1. Type of grout (cement) to use.
2. Quantity of grout to use.
3. Amount of water to be mixed with the grout.
4. Any special additives to be mixed with the grout.

CAUTION

FAILURE TO ACT QUICKLY AFTER THE DRY GROUT HAS BEEN ADDED TO THE LIQUID WASTE, CAN CAUSE INCOMPLETE STABILIZATION.

C. **ADD** the designated amount of dry grout to the Treatment Container.

D. **IMMEDIATELY ADD** any water, or additives, as required by DMS Screen DMMS0325, LLW RWM Processing Instructions.

E. **IMMEDIATELY SECURE** the lid on the treatment container.

F. **IMMEDIATELY PLACE** the treatment container on the jar mill for the amount of time indicated on DMS Screen DMSS0325, LLW RWM Processing Instructions.

G. **WHEN** mixing is complete,
THEN REMOVE the treatment container from the jar mill.

H. **PLACE** the treatment container in a location where it can remain undisturbed for a minimum of twenty four hours.

ATTACHMENT 5 - GROUTING

I. **INSPECT** the contents of the Treatment Container after the twenty four hour curing time to determine if there is any free liquid remaining:

1. **IF** there is any detectable free liquid in the Treatment Container,
THEN CONSULT the Sample/Treatment Director for further instructions.

2. **IF** there is no visible free liquid in the container,
THEN RECORD the test results on DMS Screen DMSS0326, LLW RWM Treatment.

J. **PROCEED** with treated item load out procedures as required.

ATTACHMENT 6 - AMALGAMATION

I. GENERAL AMALGAMATION PROCESS INFORMATION

A. Amalgamation is a technique used to treat liquid, elemental mercury, that results in a non-liquid semi-solid amalgam , thereby reducing potential emissions of elemental mercury vapors to the air.

B. Amalgamation treatment uses inorganic reagents including the following:

- Copper
- Zinc
- Nickel
- Gold
- Sulphur

C. The Sampling/Treatment Director is responsible for determining which reagents, what amount, and method of introduction, based on the chemical constituents of the waste other than the mercury.

D. The resultant matrix is a non-liquid, semi-solid amalgam.

E. The amalgam is visually inspected to verify compliance.

F. Since Amalgamation is a technology based treatment standard, additional testing or laboratory analysis to show compliance to RCRA requirements is not required.

II. AMALGAMATION PROCEDURE

WARNING

FAILURE TO NOTE ANY SPECIAL SAFETY PRECAUTIONS ON THE FOLLOWING DMS SCREENS, PRIOR TO INITIATING ANY TREATMENT ACTIVITY COULD CAUSE PERSONNEL INJURY AND/OR EQUIPMENT DAMAGE:

- **DMSS0326, LLW RWM TREATMENT**
- **DMSS0325, LLW RWM PROCESSING INSTRUCTIONS**

A. **ENSURE** the PIN of the item to be treated matches the PIN of the selected DMS Screen DMSS0326, LLW RWM Treatment.

ATTACHMENT 6 - AMALGAMATION

II. AMALGAMATION PROCEDURE (Continued)

B. **DETERMINE** the following from DMS Screen DMMS0325, LLW RWM Processing Instructions:

1. Which reagent to use.
2. Proper concentration for the reagent.
3. Quantity of reagent to be introduced.
4. Method of reagent introduction.

C. **ADD** the designated amount of amalgamation reagent to the Treatment Container, using the method described on DMS Screen DMMS0325, LLW RWM Processing Instructions.

D. **SECURE** the lid on the Treatment Container.

E. **PLACE** the Treatment Container on the jar mill for the amount of time indicated on DMS Screen DMSS0325, LLW RWM Processing Instructions.

F. **WHEN** mixing is complete,
THEN REMOVE the treatment container from the jar mill.

G. **VISUALLY INSPECT** the contents of the Treatment Container to **ENSURE** no liquid, elemental mercury remains:

1. **IF** there is any liquid, elemental, mercury visible,
CONSULT the Sample/Treatment Director for further treatment instructions.

2. **IF** there is no visible liquid, elemental mercury visible in the container,
THEN RECORD the test results on DMS Screen DMSS0326, LLW RWM Treatment.

H. **PROCEED** with treated item load out procedures as required.

(Good for Mtg) HNF-SD-W026-OTR-014 REV.0

WASTE RECEIVING AND PROCESSING (WRAP) PLANT OPERATING PROCEDURE

SYSTEM: PROCESS

RWM GLOVEBOXES MANUAL OPERATION

I. SYSTEM DESCRIPTION

This procedure provides instructions for manual (Operator Interface Unit (OIU) Maintenance Menu) operation of the Transuranic (TRU) and Low Level Waste (LLW), Restricted Waste Management (RWM) Gloveboxes.

In Manual (Maintenance) mode automatic operations normally performed by the Plant Control System (PCS) may be individually actuated. This allows correction of interlock conflicts, time-outs or other out-of-sequence conditions which prevent the normal sequence of events from proceeding. Once prohibiting conditions are corrected, automatic operation is resumed.

Maintenance Menus of the OIU are password protected and Duty Operation Supervisor (DOS) permission is required for activation. Depending on the situation, the DOS may simply correct a single prohibiting condition and return the system to normal, or in cases of numerous problems such as might occur after an Emergency Stop or power loss, the DOS may activate the maintenance mode and request additional assistance for the Operator (i.e., Cognizant Engineer).

This procedure addresses each OIU function individually and is not intended to govern sequence of operations. Sequence of operations, hold points and non-OIU related activities are governed by applicable glovebox operating procedures. Attachment 2, Tables 1 through 2, define interlock and permissive signals in each glovebox and reference procedure sections or other procedures which manipulate the indicated source switch for the interlock or permissive. When a function will not actuate, applicable interlocks should be verified to the proper state, then the function rechecked. If all interlocks are properly verified and a function will still not actuate, maintenance is required.

If there is a need to review initiation times and/or sequences of specific OIU messages, they are all recorded on the RTAP Printer.

II. REFERENCE DOCUMENTATION/DOCUMENTED BASIS

HSRCM-1, Hanford Site Radiological Control Manual.
WRP1-OP-0703, Glovebox Lift Table Operation.
WRP1-OP-0701, Glovebox Housekeeping.
WRP1-OP-0704, Waste Manipulator Operation.
WRP1-OP-0705, Bagless Transfer Manual Operation.
WRP1-OP-0717, LLW/RWM Process Glovebox Operation.
WRP1-OP-0728, TRU/RWM Process Glovebox Operation.

III. PRESTART CONDITIONS

All personnel performing this procedure shall be qualified in accordance with WHC-CM-5-34, Section 1.8, "Training Plan," and on-the-job training.

Process area Heating, Ventilation, Air Conditioning (HVAC) in OPERATION.

IV. SAFETY

Potential hazards, such as lifting heavy containers or handling sharp objects present in waste containers, must be mitigated by protective equipment, procedures, and administrative controls to ensure acceptable-risk operating conditions.

Consult with Operations Management and Industrial Hygiene, and refer to the Job Hazards Analysis (JHA), Radiological Work Permit (RWP) and Material Safety Data Sheets (MSDS) to determine required Personal Protective Equipment (PPE).

Check glovebox contents prior to startup/restart for any materials which might require special handling precautions (i.e. flammable, reactive, etc.). If problems exist, or if unsure that glovebox operation may be safely conducted, then notify Duty Operations Supervisor (DOS).

This procedure requires accessing gloveboxes through gloveports on a regular basis. Operators shall perform self survey upon exiting gloveport after each use. Radiological Control Technician (RCT) shall be contacted anytime self survey limits are exceeded.

Spills inside gloveboxes shall be cleaned up per WRP1-OP-0701, Glovebox Housekeeping.

CAUTION - When an OIU is in maintenance mode, most interlocks and safety features are bypassed. It is possible to damage equipment, and/or bypass safety restrictions such as glovebox containment. Caution must be exercised to prevent unwanted violation of operational safety requirements or equipment damage.

WARNING - Use care to prevent injury. Possible safety hazards include:

- Tripping/Slipping
- Radiological Contamination
- Interference with Automatic Guided Vehicle (AGV)

WARNING - Improper operation of glovebox equipment including hoist, manipulators, etc. may cause injury. Caution must be exercised if reaching through gloveports while equipment is in operation.

V. TOOLS AND SUPPLIES

None.

VI. TABLE OF CONTENTS

VII. PROCEDURE (LLW/RWM GLOVEBOX)

WARNING

IMPROPER OPERATION OF GLOVEBOX EQUIPMENT INCLUDING HOIST, MANIPULATORS, ETC. MAY CAUSE INJURY. CAUTION MUST BE EXERCISED IF REACHING THROUGH GLOVEPORTS WHILE EQUIPMENT IS IN OPERATION.

CAUTION

WHEN AN OIU IS IN MAINTENANCE MODE, MOST INTERLOCKS AND SAFETY FEATURES ARE BYPASSED. IT IS POSSIBLE TO DAMAGE EQUIPMENT, AND/OR BYPASS SAFETY RESTRICTIONS SUCH AS GLOVEBOX CONTAINMENT. CAUTION MUST BE EXERCISED TO PREVENT VIOLATION OF OPERATIONAL SAFETY REQUIREMENTS OR EQUIPMENT DAMAGE.

NOTE 1 - Administrative hold steps are identified by letters in parentheses at the left margin of the procedure step. The direction given in the procedure step must be satisfied before work continues.

(M) - Operations management shall approve operation.

(R) - Radiological Control (RC) shall complete surveys or agree to permit continued operation.

NOTE 2 - Actions performed by the Plant Control System (PCS) or Data Management System (DMS) are identified by (PCS) or (DMS) in the left margin.

NOTE 3 - In Maintenance mode, OIU selections must be selected (screen touched) until the actuated device is visually verified to have reached the desired state.

NOTE 4 - Gloveports and manipulators are used as needed to perform tasks throughout this procedure. Manipulator Operation is performed per WRP1-OP-0704, Glovebox Manipulator Operation.

NOTE 5 - Manual operation of Bagless Transfer Ports 107-DO-07-201 and 107-DO-07-401 is performed per WRP1-OP-0705, Bagless Transfer Manual Operation.

NOTE 6 - Data Management System (DMS) actions in Section VII are performed on DMS Monitor (107-OIU-12-105A).

NOTE 7 - UNLESS OTHERWISE SPECIFIED, selections and displays in Section VII are on LLW/RWM Operator Interface Unit (OIU-12-105B).

NOTE 8 - Lift Table controls in Section VII are located as follows:

Lift Table	*Lift Table Control Pedestal*
107-LT-09-201D	*107-PC-09-201D*
107-LT-09-201E	*107-PC-09-201E*
107-LT-09-201F	*107-PC-09-201F*

Manual lift table operation is performed per WRP1-OP-0703, Glovebox Lift Table Operation.

NOTE 9 - Hoist activities in Section VII are performed on Hoist Control (107-PC-07-009A & 009B). Functions must be activated until associated indicator illuminates. Reference Attachment 1.

A. RESET DIAGNOSTIC FLAGS ON LLW/RWM GLOVEBOX (107-GB-07-201)

1. **SELECT** "DIAGNOSTICS MENU" from "LLW RWM GLOVEBOX MAIN MENU".

NOTE - Parameters flagged with red displays on the DIAGNOSTICS MENU indicate that associated equipment is in other than the most stable default mode, indicated in green.

(PCS) Displays flagged parameters in red, with negative messages and default parameters in green with positive messages.

2. **OBSERVE** diagnostic menu messages (Reference Table VII-1 on the following page).

3. **ACCESS** MAINTENANCE MENU screens per applicable sections of this procedure, to reset diagnostic flags as required.

4. **VERIFY** desired diagnostic flags are reset by performing the following:

   a. **RETURN** to "MAINTENANCE MAIN MENU".
   b. **SELECT** "DIAGNOSTICS MENU".
   c. **ENSURE** messages associated with the particular equipment in question are displayed in green.

5. **WHEN** all required red flags have been reset (to green):

   a. **RETURN** to "MAINTENANCE MAIN MENU".
   b. **SELECT** "MAIN MENU".
   c. **GO TO** desired section(s).

TABLE VII-1: LLW/RWM GLOVEBOX DIAGNOSTICS MENU MESSAGES

DIAGNOSTIC MESSAGE (negative state)	SIGNAL SOURCE
LT-09-201F M/O/N NOT IN NORMAL	09-HS-231A
LT-09-201F LIFT TABLE NOT AT AGV HEIGHT	09-ZS-231G
DO-07-202 DOOR NOT CLOSED AND LOCKED	07-ZS-900A 07-ZSC-908B
DO-07-202 VACUUM NOT RELEASED	07-PS-900
DO-07-202 CENTERING CLAMPS NOT RETRACTED	07-ZSO-914A 07-ZSO-914B
DO-07-202 HVAC SEAL NOT DEFLATED	07-PS-916
LT-09-201E M/O/N NOT IN NORMAL	09-HS-229A
LT-09-201E LIFT TABLE NOT AT AGV HEIGHT	09-ZS-229G
DO-07-203 DOOR NOT CLOSED AND LOCKED	07-ZS-912A 07-ZSC-910B
DO-07-203 VACUUM NOT RELEASED	07-PS-901
DO-07-203 CENTERING CLAMPS NOT RETRACTED	07-ZSO-915A 07-ZSO-915B
DO-07-203 HVAC SEAL NOT DEFLATED	07-PS-917
LT-09-201D M/O/N NOT IN NORMAL	09-HS-227A
LT-09-201D LIFT TABLE NOT AT AGV HEIGHT	09-ZS-227G
EM-07-201 MANIPULATOR NOT PARKED	07-ZS-920A
EM-07-201 LEFT ARM NOT PARKED	07-ZS-920C
EM-07-201 RIGHT ARM NOT PARKED	07-ZS-920D
Messages indicate positive or opposite state if criteria passed	

NOTE - Sections VII.C through VII.F assume Maintenance Main Menu has been accessed per Section VII.B.

B. ACCESS LLW/RWM GLOVEBOX MAINTENANCE MENUS

1. **SELECT** "MAINT ACCESS MENU" from OIU-12-105B, LLW RWM GLOVEBOX MAIN MENU.

2. **VERIFY** display "ENTER ACCESS CODE".

3. **KEY** in maintenance password,
   THEN, SELECT "ENTER".

4. **VERIFY** display "MAINTENANCE MAIN MENU".

5. **SELECT** desired maintenance submenu(s).

6. **WHEN** desired,
   RETURN to Operating Menus as follows:
   a. **IF** at any maintenance submenu,
      THEN, SELECT "MAINT MAIN MENU".
   b. **SELECT** "MAIN MENU".

C. LLW/RWM GLOVEBOX HOIST (107-CR-07-201) MANUAL OPERATIONS

NOTE - Manual hoist operation is performed the same as in Automatic Mode, except hoist control is continuously enabled.

1. **OPERATE** hoist as required for glovebox tasks or maintenance.

D. BAGLESS TRANSFER PORT (107-DO-07-201) MANUAL OPERATIONS

NOTE - Lift Table controls and indicators referred to in this Section are located on Lift Table Control Pedestal 107-PC-09-201F.

1. **MATE DRUM TO BAGLESS TRANSFER PORT (107-DO-07-201)**

   a. **ENSURE** Glovebox Manipulator is PARKED (Reference WRP1-OP-0704, Glovebox Manipulator Operation).

   b. **ENSURE** lift table MAINT/OFF/NORMAL switch (09-HS-231A) set to "MAINT".

   c. **SELECT** "PORT DO-07-201 MENU" from MAIN MENU.

   d. **VERIFY** display "DRUM AT LIFT TABLE" on OIU-12-105B.

e. **SCAN** in order:

(1) Location (2Y) barcode on side of glovebox.

(2) Drum (S) barcode.

(PCS) Verifies drum PIN and location match that input by AGV delivery. Halts process if mismatched.

(M) f. **IF** scanner displays "PIN MIS-MATCH", **THEN:**

(1) **RECORD** PIN displayed on barcode scanner on PIN Change Form.

(2) **SCAN** Cancellation barcode.

(PCS) Clears pin mis-match message.

(3) **NOTIFY** DOS.

(4) **CORRECT** PIN information in PCS.

g. **SCAN** End (Y) barcode.

h. **SCAN** Yes (Y) barcode.

(PCS) PCS transmits drum location update message to the DMS.

(DMS) DMS Screen DMSS0321 displays Transfer Drum PIN and associated packets.

NOTE - Operator cannot control the lift table with AGV/PANEL switch in "AGV" position.

i. **PLACE** lift table AGV/PANEL switch (09-HS-231D) to "PANEL".

j. **IF** drum is fitted with outer lid, **THEN, REMOVE** outer lid as follows:

(1) **LOWER** lift table as required.

(2) **REMOVE** outer lid bolts.

(3) **REMOVE** outer lid.

(4) **POSITION** lift table to "AGV LOAD HEIGHT".

k. **FORWARD** lift table to "DRUM UNDER PORT" position, using FORWARD push button at Control Pedestal PC-07-201F until drum is under port.

l. **ENSURE** drum centered under port DO-07-201.

m. **VERIFY** "DRUM UNDER PORT" light illuminated.

NOTE - Lift table cannot be raised unless the drum is located under the port. Drum under port is indicated by sensor illumination.

n. **PRESS AND HOLD** "UP" push button at control pedestal PC-07-201F until drum is approximately 2 inches below port.

CAUTION

DO NOT EXCEED WEIGHT SETPOINT BY MORE THAN 50 KILOGRAMS. FAILURE TO CAREFULLY JOG "UP" BUTTON TO REACH WEIGHT SETPOINT WILL CAUSE OVERLOADING LIFT TABLE.

o. **BRIEFLY PRESS AND RELEASE** "UP" button until weight setpoint reached.

NOTE - Setpoint must be initially met or exceeded for "DRUM IN POSITION" light to illuminate. Weight may later fall below setpoint due to gasket set.

p. **VERIFY** "DRUM IN POSITION" light illuminated.

2. **OPEN/CLOSE BAGLESS TRANSFER PORT (107-DO-07-201)**

a. **ENSURE** desired drum is mated to port per Section VII.D.1.

b. **ENSURE** hoist chain (107-CR-07-201) is at "RAISED LIMIT".

c. **ENSURE** hoist TROLLEY is at "LEFT".

d. **ENSURE** Manipulator (EM-07-201) is PARKED.

e. **OPERATE** port per WRP1-OP-0705, Bagless Transfer Manual Operation.

3. **REMOVE DRUM FROM BAGLESS TRANSFER PORT (107-DO-07-201)**

a. **ENSURE** port is CLOSED and LOCKED.

b. **LOWER** lift table to (107-LT-09-201F) "AGV LOAD HEIGHT".

- REQUEST RCT SURVEY DRUM FOR CONTAMINATION. 1. IF DRUM IS CONTAMINATED, THEN DECONTAMINATE AS DIRECTED. 2. RESURVEY DRUM.

c. **REVERSE** lift table to "DRUM AT AGV END".

E. COMPLIANT WASTE PORT (107-DO-07-202) MANUAL OPERATIONS

1. MATE DRUM TO COMPLIANT WASTE PORT (107-DO-07-202)

a. **ENSURE** desired drum is on lift table (107-LT-09-201E).

b. **ENSURE** drum clamp band is removed.

c. **SCAN** "LLW RWM COMPLIANT" location barcode ~~with scanner 12-NT-313 to fix drum location.~~

d. **VERIFY** scanner displays correct location.

e. **SCAN** drum barcode ~~with scanner 12-NT-313.~~

f. **VERIFY** scanner displays correct drum pin.

g. **SCAN** "YEND" barcode to complete sequence.

h. **SCAN** "YYES" barcode to confirm sequence.

i. **PLACE** Lift Table 202E Switch 09-HS-229D in PANEL.

j. **PLACE** Lift Table 202E Switch 09-HS-229A in MAINTENANCE.

k. **FORWARD** lift table conveyor to "DRUM UNDER PORT" position.

l. **VERIFY** "DRUM UNDER PORT" light illuminated.

m. **SELECT** "PORT DO-07-202 MAINTENANCE MENU" at OIU-12-105B.

n. **VERIFY** "PORT DO-07-202 MAINTENANCE MENU" displayed.

o. **SELECT** "RETRACT LID DETACH".

p. **VERIFY** display "RETRACT SOLENOID ACTIVATED".

q. **ENSURE** Manipulator (EM-07-201) is PARKED.

r. **ENSURE** Manipulator Arms are RAISED.

s. **ENSURE** display "CENTERING CLAMPS RETRACTED".

t. **ENSURE** display "HVAC SEAL DEFLATED".

u. **RAISE** lift table to "DRUM CENTERING HEIGHT" as indicated by the local arrow labels.

v. **SELECT** "EXTEND CENTERING CLAMPS".

w. **VERIFY** display "CENTERING CLAMPS EXTENDED".

x. **SELECT** "TURN ON VACUUM".

y. **VERIFY** display "VACUUM GENERATED".

z. **RAISE** lift table to "LID IN POSITION HEIGHT".

aa. **VERIFY** display "LID IN POSITION"

ab. **SELECT** "INFLATE HVAC SEAL".

ac. **VERIFY** display "HVAC SEAL INFLATED".

2. **OPEN COMPLIANT WASTE PORT (107-DO-07-202)**

a. **ENSURE** desired drum is mated to Compliant Waste Port 107-DO-07-202 per Section VII.E.1.

b. **SELECT** "MAINT MAIN MENU" at OIU-12-105B.

c. **VERIFY** display, "MAINTENANCE MAIN MENU".

d. **ENSURE** Manipulator (EM-07-201) is PARKED.

e. **ENSURE** Manipulator (EM-07-201) Arms are RAISED.

f. **SELECT** "PORT DO-07-202 MAINTENANCE MENU".

g. **VERIFY** display "DO-07-202 MAINTENANCE MENU".

h. **SELECT** "UNLOCK PORT".

i. **VERIFY** display "PORT UNLOCKED".

NOTE - Steps VII.E.2.j, VII.E.2.k, and VII.E.2.l are performed concurrently.

j. **SELECT** and **HOLD** "OPEN VENTS".

k. **VERIFY** display "VENTS OPEN".

l. **RAISE** lift table (107-LT-09-201E) until port door lifts ~1/2 inch.

m. **VERIFY** display "DOOR IN POSITION".

n. **RELEASE** "OPEN VENTS".

o. **SELECT** "RAISE DOOR".

p. **VERIFY** display "DOOR RAISED".

q. **SELECT** "ROTATE PORT OPEN".

r. **VERIFY** display "PORT ROTATED OPEN".

s. **VERIFY** port OPEN.

t. **SELECT** "MAINT MAIN MENU".

3. **CLOSE COMPLIANT WASTE PORT (107-DO-07-202)**

a. **ENSURE** Manipulator (EM-07-201) is PARKED.

b. **ENSURE** Manipulator Arms (EM-07-201) are RAISED.

c. **SELECT** "PORT DO-07-202 MAINTENANCE MENU".

d. **VERIFY** display "DO-07-202 MAINTENANCE MENU"

e. **SELECT** "ROTATE PORT CLOSED".

f. **VERIFY** display "PORT ROTATED CLOSED".

g. **SELECT** "LOWER DOOR".

h. **VERIFY** display "DOOR IN POSITION".

i. **LOWER** lift table to "LID IN POSITION HEIGHT".

j. **VERIFY** display "DOOR LOWERED".

k. **SELECT** "LOCK PORT".

l. **VERIFY** display "PORT LOCKED"

m. **SELECT** "TURN OFF VACUUM".

n. **SELECT** "EXTEND LID DETACH".

o. **VERIFY** display "EXTEND SOLENOID ACTIVATED".

p. **LOWER** lift table (107-LT-09-201E) to "DRUM CENTERING HEIGHT" as indicated by local arrow labels.

q. **SELECT** "RETRACT LID DETACH".

r. **VERIFY** display "RETRACT SOLENOID ACTIVATED".

s. **SELECT** "DEFLATE HVAC SEAL".

t. **VERIFY** display "DEFLATE SOLENOID ACTIVATED".

u. **VERIFY** display "HVAC SEAL DEFLATED".

v. **SELECT** "RETRACT CENTERING CLAMPS".

w. **VERIFY** display "CENTERING CLAMPS RETRACTED".

x. **SELECT** "MAINT MAIN MENU".

4. **REMOVE DRUM FROM COMPLIANT WASTE PORT (107-DO-07-202)**

a. **ENSURE** port is CLOSED and LOCKED.

b. **VERIFY** Centering Clamps are retracted.

c. **LOWER** lift table (107-LT-09-201E) to "AGV LOAD HEIGHT".

d. **REVERSE** lift table to "DRUM AT AGV END".

F. **NON-COMPLIANT WASTE PORT (107-DO-07-203) MANUAL OPERATIONS**

1. **MATE DRUM TO NON-COMPLIANT WASTE PORT (107-DO-07-203)**

a. **ENSURE** desired drum is on lift table (107-LT-09-201D).

b. **ENSURE** drum clamp band is removed.

c. **SCAN** "LLW RWM NON-COMPLIANT" location barcode with scanner 12-NT-313 to fix drum location.

d. **VERIFY** scanner displays correct location.

e. **SCAN** drum barcode with scanner 12-NT-313.

f. **VERIFY** scanner displays correct drum pin.

g. **SCAN** "YEND" barcode to complete sequence.

h. **SCAN** "YYES" barcode to confirm sequence.

i. **PLACE** Lift Table 202D Switch 09-HS-227D in PANEL.

j. **PLACE** Lift Table 202D Switch 09-HS-227A in MAINTENANCE.

k. **FORWARD** lift table conveyor to position drum to "DRUM UNDER PORT POSITION".

l. **VERIFY** "DRUM UNDER PORT" light illuminated.

m. **SELECT** "PORT DO-07-203 MAINTENANCE MENU" at OIU-12-105B.

n. **VERIFY** "PORT DO-07-203 MAINTENANCE MENU" displayed.

o. **SELECT** "RETRACT LID DETACH".

p. **VERIFY** display "RETRACT SOLENOID ACTIVATED".

q. **ENSURE** Manipulator (EM-07-201) is PARKED.

r. **ENSURE** Manipulator Arms are RAISED.

s. **ENSURE** display "CENTERING CLAMPS RETRACTED".

t. **ENSURE** display "HVAC SEAL DEFLATED".

u. **RAISE** lift table to "DRUM CENTERING HEIGHT" as indicated by the local arrow labels.

v. **SELECT** "EXTEND CENTERING CLAMPS".

w. **VERIFY** display "CENTERING CLAMPS EXTENDED".

x. **SELECT** "TURN ON VACUUM".

y. **VERIFY** display "VACUUM GENERATED".

z. **RAISE** lift table to "LID IN POSITION HEIGHT".

aa. **VERIFY** display "LID IN POSITION"

ab. **SELECT** "INFLATE HVAC SEAL".

ac. **VERIFY** display "HVAC SEAL INFLATED".

2. OPEN NON-COMPLIANT WASTE PORT (107-DO-07-203)

a. **ENSURE** desired drum is mated to Non-Compliant Waste Port 107-DO-07-203 per Section VII.F.1.

b. **SELECT** "MAINT MAIN MENU" at OIU-12-105B.

c. **VERIFY** display, "MAINTENANCE MAIN MENU".

d. **ENSURE** Manipulator (EM-07-201) is PARKED.

e. **ENSURE** Manipulator (EM-07-201) Arms are RAISED.

f. **SELECT** "PORT DO-07-203 MAINTENANCE MENU".

g. **VERIFY** display "DO-07-203 MAINTENANCE MENU".

h. **SELECT** "UNLOCK PORT".

i. **VERIFY** display "PORT UNLOCKED".

NOTE - Steps VII.F.2.j, VII.F.2.k, and VII.F.2.l are performed concurrently.

j. **SELECT** and **HOLD** "OPEN VENTS".

k. **VERIFY** display "VENTS OPEN".

l. **RAISE** lift table (107-LT-09-201D) until port door lifts ~1/2 inch.

m. **VERIFY** display "DOOR IN POSITION".

n. **RELEASE** "OPEN VENTS".

o. **SELECT** "RAISE DOOR".

p. **VERIFY** display "DOOR RAISED".

q. **SELECT** "ROTATE PORT OPEN".

r. **VERIFY** display "PORT ROTATED OPEN".

s. **VERIFY** port OPEN.

t. **SELECT** "MAINT MAIN MENU".

3. **CLOSE NON-COMPLIANT WASTE PORT (107-DO-07-203)**

   a. **ENSURE** Manipulator (EM-07-201) is PARKED.

   b. **ENSURE** Manipulator Arms (EM-07-201) are RAISED.

   c. **SELECT** "PORT DO-07-203 MAINTENANCE MENU".

   d. **VERIFY** display "DO-07-203 MAINTENANCE MENU"

   e. **SELECT** "ROTATE PORT CLOSED".

   f. **VERIFY** display "PORT ROTATED CLOSED".

   g. **SELECT** "LOWER DOOR".

   h. **VERIFY** door lowered on top of drum.

   i. **LOWER** lift table to "DOOR IN POSITION" height.

   j. **VERIFY** display "DOOR IN POSITION".

   k. **LOWER** lift table to "LID IN POSITION" height.

   l. **VERIFY** display "DOOR LOWERED".

   m. **SELECT** "LOCK PORT".

   n. **VERIFY** display "PORT LOCKED"

   o. **SELECT** "TURN OFF VACUUM".

   p. **SELECT** "EXTEND LID DETACH".

   q. **VERIFY** display "EXTEND SOLENOID ACTIVATED".

   r. **VERIFY** display "HVAC SEAL DEFLATED" not displayed.

   s. **LOWER** lift table (107-LT-09-201D) to "DRUM CENTERING HEIGHT" as indicated by local arrow labels.

   t. **SELECT** "RETRACT LID DETACH".

   u. **VERIFY** display "RETRACT SOLENOID ACTIVATED".

   v. **SELECT** "DEFLATE HVAC SEAL".

   w. **SELECT** "RETRACT CENTERING CLAMPS".

   x. **VERIFY** display "CENTERING CLAMPS RETRACTED".

y. **VERIFY** Centering Clamps are actually retracted.

z. **SELECT** "MAINT MAIN MENU".

4. **REMOVE DRUM FROM NON-COMPLIANT WASTE PORT (107-DO-07-203)**

a. **ENSURE** port is CLOSED and LOCKED.

b. **LOWER** lift table (107-LT-09-201D) to "DOWN OVERTRAVEL".

c. **REVERSE** lift table to "DRUM AT AGV END".

VIII. PROCEDURE (TRU/RWM GLOVEBOX)

WARNING

IMPROPER OPERATION OF GLOVEBOX EQUIPMENT INCLUDING HOIST, SORTING TABLE, MANIPULATORS, TRANSFER CAR, ETC. MAY CAUSE INJURY. CAUTION MUST BE EXERCISED IF REACHING THROUGH GLOVEPORTS WHILE EQUIPMENT IS IN OPERATION.

CAUTION

WHEN AN OIU IS IN MAINTENANCE MODE, MOST INTERLOCKS AND SAFETY FEATURES ARE BYPASSED. IT IS POSSIBLE TO DAMAGE EQUIPMENT, AND/OR BYPASS SAFETY RESTRICTIONS SUCH AS GLOVEBOX CONTAINMENT. CAUTION MUST BE EXERCISED TO PREVENT VIOLATION OF OPERATIONAL SAFETY REQUIREMENTS OR EQUIPMENT DAMAGE.

NOTE 1 - Administrative hold steps are identified by letters in parentheses at the left margin of the procedure step. The direction given in the procedure step must be satisfied before work continues.

(M) - Operations management shall approve operation.

(R) - Radiological Control (RC) shall complete surveys or agree to permit continued operation.

NOTE 2 - Actions performed by the Plant Control System (PCS) or Data Management System (DMS) are identified by (PCS) or (DMS) in the left margin.

NOTE 3 - In Maintenance mode, OIU selections must be selected (screen touched) until the actuated device is visually verified to have reached it's desired state.

NOTE 4 - Manual operation of Bagless Transfer Port 107-DO-07-401 is performed per WRP1-OP-0705, Bagless Transfer Manual Operation.

NOTE 5 - Data Management System (DMS) actions in Section VIII are performed on DMS Monitor (107-OIU-12-106A).

NOTE 6 - UNLESS OTHERWISE SPECIFIED, selections and displays in Section VIII are on TRU/RWM Operator Interface Unit (OIU-12-106B).

NOTE 7 - Lift Table controls in Section VIII are located as follows:

Lift Table	*Lift Table Control Pedestal*
107-LT-09-201A	*107-PC-09-201A*
107-LT-09-201B	*107-PC-09-201B*
107-LT-09-201C	*107-PC-09-201C*

Manual lift table operation is performed per WRP1-OP-0703, Glovebox Lift Table Operation.

NOTE 8 - Hoist activities in Section VIII are performed on Hoist Control (107-PC-07-010A & 010B). Functions must be activated until associated indicator illuminates. Reference Attachment 1.

A. RESET DIAGNOSTIC FLAGS ON TRU/RWM GLOVEBOX (107-GB-07-401)

NOTE - Parameters flagged with red displays on the DIAGNOSTICS MENU indicate that associated equipment is in other than the most stable default mode, indicated in green.

1. **SELECT** "DIAGNOSTICS MENU" from "TRU RWM GLOVEBOX MAIN MENU" on OIU-12-106B.

(PCS) Displays flagged parameters in red, with negative messages and default parameters in green with positive messages.

2. **OBSERVE** diagnostic menu messages (Reference Table VIII-1 on the following page).

3. **ACCESS** MAINTENANCE MENU screens per applicable sections of this procedure, to reset diagnostic flags as required.

4. **VERIFY** desired diagnostic flags are reset by performing the following:

   a. **RETURN** to "MAINTENANCE MAIN MENU".
   b. **SELECT** "DIAGNOSTICS MENU".
   c. **ENSURE** messages associated with the particular equipment in question are displayed in green.

5. **WHEN** all required red flags have been reset (to green):

   a. **RETURN** to "MAINTENANCE MAIN MENU".
   b. **SELECT** "DIAGNOSTICS MENU".
   c. **GO TO** desired section(s).

6. VERIFY PORT 401 IS CLOSED AND IN AUTO MODE USING PORT 401 OPERATOR PANEL. REFERENCE WRP1-OP-0705 FOR MANUAL OPERATIONS IF REQUIRED.

TABLE VIII-1: TRU/RWM GLOVEBOX DIAGNOSTICS MENU MESSAGES

DIAGNOSTIC MESSAGE (negative state)	SIGNAL SOURCE
DO-07-402A DOOR NOT LOCKED	07-ZSC-952A 07-ZSC-952B
LT-09-201B DRUM NOT LOADED FROM AGV	09-ZS-223E
LT-09-201B LIFT TABLE NOT AT AGV HEIGHT	09-ZS-223G
LT-09-201B M/O/N NOT IN NORMAL	09-HS-223A
DO-07-402A SWAGING HEADS EXTENDED	07-ZS-966A 07-ZS-966B 07-ZS-966C 07-ZS-966D
DO-07-402B PORT DOOR NOT LOCKED	07-ZSC-969A 07-ZSC-969B
LT-09-201A DRUM NOT LOADED FROM AGV	09-ZS-221E
LT-09-201A LIFT TABLE NOT AT AGV HEIGHT	09-HS-221G
LT-09-201A M/O/N NOT IN NORMAL	09-HS-221A
DO-07-402B SWAGING HEADS EXTENDED	07-ZS-951A 07-ZS-951B 07-ZS-951C 07-ZS-951D
EM-07-401 MANIPULATOR NOT PARKED	07-ZS-970A
EM-07-401 LEFT ARM NOT PARKED	07-ZS-970C
EM-07-401 RIGHT ARM NOT PARKED	07-ZS-970D
Messages indicate positive or opposite state if criteria passed	

NOTE - Sections VIII.C through VIII.F.4 assume Maintenance Main Menu has been accessed per Section VIII.B.

B. ACCESS TRU/RWM GLOVEBOX MAINTENANCE MENUS

1. **SELECT** "MAINT ACCESS MENU" from OIU, TRU RWM GLOVEBOX MAIN MENU.

2. **VERIFY** display "ENTER ACCESS CODE".

3. **KEY** in maintenance password,
   THEN, SELECT "ENTER".

4. **VERIFY** display "MAINTENANCE MAIN MENU".

5. **SELECT** desired maintenance submenu(s).

6. **WHEN** desired,
   RETURN to Operating Menus as follows:

   a. **IF** at any maintenance submenu,
      THEN, SELECT "MAINT MAIN MENU".
   b. **SELECT** "MAIN MENU".

C. TRU/RWM GLOVEBOX HOIST (107-CR-07-401) MANUAL OPERATION

NOTE 1 - Manual hoist operation is performed the same as in Automatic Mode, except hoist control is continuously enabled.

1. **OPERATE** hoist as required for glovebox tasks or maintenance.

D. BAGLESS TRANSFER PORT (107-DO-07-401) MANUAL OPERATION

NOTE - Lift Table controls and indicators referred to in this Section are located on Lift Table Control Pedestal 107-PC-09-201C.

1. **MATE DRUM TO BAGLESS TRANSFER PORT (107-DO-07-401)**

   a. **ENSURE** lift table MAINT/OFF/NORMAL switch (09-HS-225A) set to ~~"NORMAL"~~ *"MAINT"*.

   b. **SELECT** "PORT DO-07-401 MENU" from MAIN MENU.

   c. **VERIFY** display "DRUM AT LIFT TABLE".

d. **SCAN** in order:

(1) Location (2Y) barcode on side of glovebox.

(2) Drum (S) barcode.

(PCS) Verifies drum PIN and location match that input by AGV delivery. Halts process if mismatched.

(M) e. **IF** scanner displays "PIN MIS-MATCH", **THEN:**

(1) **RECORD** PIN displayed on barcode scanner on PIN Change Form.

(2) **SCAN** Cancellation barcode.

(PCS) Clears pin mis-match message.

(3) **NOTIFY** DOS.

(4) **CORRECT** PIN information in PCS.

f. **SCAN** End (Y) barcode.

g. **SCAN** Yes (Y) barcode.

(PCS) PCS transmits drum location update message to the DMS.

(DMS) **DISPLAY** "DRUM LOCATED AT TRU-RWM ENTRY PORT."

NOTE - Operator cannot control the lift table with AGV/PANEL switch in "AGV" position.

h. **PLACE** lift table AGV/PANEL switch (09-HS-225D) to "PANEL".

i. **IF** drum is fitted with outer lid, **THEN, REMOVE** outer lid as follows:

(1) **LOWER** lift table as required.

(2) **REMOVE** outer lid bolts.

(3) **REMOVE** outer lid.

(4) **POSITION** lift table to "AGV LOAD HEIGHT".

j. **FORWARD** lift table to "DRUM UNDER PORT" position, using FORWARD push button at Control Pedestal PC-09-201C until drum is under port.

k. **ENSURE** drum centered under port DO-07-401.

1. **VERIFY** "DRUM UNDER PORT" light illuminated.

NOTE - Lift table cannot be raised unless the drum is located under the lift table. Drum under port is indicated by sensor illumination.

m. **PRESS** "UP" push button at control pedestal PC-09-201C until drum is approximately 2 inches below port.

CAUTION

DO NOT EXCEED WEIGHT SETPOINT BY MORE THAN 50 KILOGRAMS. FAILURE TO CAREFULLY JOG "UP" BUTTON TO REACH WEIGHT SETPOINT WILL CAUSE OVERLOADING LIFT TABLE.

n. **BRIEFLY PRESS AND RELEASE** "UP" button until weight setpoint reached. PER PORT MATING PRESSURE TABLE IN OP-0703.

NOTE - Setpoint must be initially met or exceeded for "DRUM IN POSITION" light to illuminate. Weight may later fall below setpoint due to gasket set.

o. **VERIFY** "DRUM IN POSITION" light illuminated.

2. **OPEN/CLOSE BAGLESS TRANSFER PORT (107-DO-07-401)**

a. **ENSURE** desired drum is mated to port per Section VIII.D.1.

b. **ENSURE** hoist chain (107-CR-07-401) is at "RAISED LIMIT".

c. **ENSURE** hoist TROLLEY is at "LEFT".

d. **ENSURE** Manipulator (EM-07-401) is PARKED.

e. **OPERATE** port per WRP1-OP-0705, Bagless Transfer Manual Operation.

3. **REMOVE DRUM FROM BAGLESS TRANSFER PORT (107-DO-07-401)**

a. **ENSURE** port is CLOSED and LOCKED.

b. **LOWER** lift table to (107-LT-09-~~401F~~ 201C) "AGV LOAD HEIGHT".

c. **REVERSE** lift table to "DRUM AT AGV END".

E. **COMPLIANT WASTE PORT (107-DO-07-402A) MANUAL OPERATIONS**

1. **MATE DRUM TO COMPLIANT WASTE PORT (107-DO-07-402A)**

a. **ENSURE** desired drum is on lift table (107-LT-09-201B).

b. **ENSURE** drum clamp band AND OUTER LID ARE ~~is~~ removed.

OK

c. ENSURE LIFT TABLE M/O/N SWITCH (09-HS-223A) SET TO **FORWARD** lift table to "DRUM UNDER PORT". MAINTENANCE.

d. **RAISE** lift table (and drum) to proper port mating pressure. PER PORT MATING PRESSURE TABLE IN OP-0703.

2. **OPEN COMPLIANT WASTE PORT (107-DO-07-402A)**

a. **ENSURE** desired drum is mated to port per Section VIII.E.1.

b. **ENSURE** Manipulator (EM-07-401) is PARKED.

c. **ENSURE** Manipulator (EM-07-401) Arms are RAISED. SELECT MAINT ACCESS MENU. ENTER PASSWORD.

d. **SELECT** "PORT DO-07-402A MAINTENANCE MENU".

e. **VERIFY** display "PORT DO-07-402A MAINTENANCE MENU".

f. **SELECT** "TURN ON VACUUM".

g. **VERIFY** display "VACUUM GENERATED".

h. **SELECT** "UNLOCK PORT".

i. **VERIFY** display "PORT UNLOCKED".

j. **SELECT** "RAISE DOOR".

k. **VERIFY** display "DOOR RAISED".

l. **SELECT** "OPEN PORT".

m. **VERIFY** display "PORT OPEN".

n. **VERIFY** Compliant Waste Port (107-DO-07-402A) is open.

o. **SELECT** "MAINT MAIN MENU".

3. **CLOSE COMPLIANT WASTE PORT (107-DO-07-402A)**

a. **ENSURE** Manipulator (EM-07-401) is PARKED.

b. **SELECT** "PORT DO-07-402A MAINTENANCE MENU".

c. **VERIFY** display "PORT DO-07-402A MAINTENANCE MENU".

d. **SELECT** "CLOSE PORT".

e. **VERIFY** display "PORT CLOSED".

f. **SELECT** "LOWER DOOR".

g. **VERIFY** display "DOOR LOWERED".

h. **SELECT** "EXTEND SWAGING HEADS".

i. **VERIFY** display "SWAGING HEADS EXTENDED".

j. **SELECT** "TURN OFF VACUUM".

k. **VERIFY** display "TURN ON VACUUM" (E.G., "VACUUM GENERATED" not displayed.)

l. **SELECT** "LOCK PORT".

m. **VERIFY** display "PORT LOCKED".

n. **SELECT** "MAINT MAIN MENU".

o. **VERIFY** display "MAINTENANCE MAIN MENU".

4. **REMOVE DRUM FROM COMPLIANT WASTE PORT (107-DO-07-402A)**

a. **ENSURE** port is CLOSED and LOCKED per Section VIII.E.3.

b. **LOWER** lift table (107-LT-09-201B) to "AGV LOAD HEIGHT".

c. **REVERSE** lift table to "DRUM AT AGV END".

F. **NON-COMPLIANT WASTE PORT (107-DO-07-402B) MANUAL OPERATIONS**

1. **MATE DRUM TO NON-COMPLIANT WASTE PORT (107-DO-07-402B)**

a. **ENSURE** desired drum is on lift table (107-LT-09-201A).

b. **ENSURE** drum clamp band AND OUTER LID ARE ~~is~~ removed.

OK

ENSURE LIFT TABLE M/O/N SWITCH (09-HS-221A) SET TO MAINTENANCE.

c. **FORWARD** lift table to "DRUM UNDER PORT".

d. **RAISE** lift table to proper port mating pressure. PER PORT MATING PRESSURE TABLE IN OP-0703.

2. **OPEN NON-COMPLIANT WASTE PORT (107-DO-07-402B)**

a. **ENSURE** desired drum is mated to port.

b. **ENSURE** Manipulator (EM-07-401) is PARKED.

c. **ENSURE** Manipulator (EM-07-401) Arms are RAISED.

SELECT MAINT: ACCESS MENU. ENTER PASSWORD.

d. **SELECT** "PORT DO-07-402B MAINTENANCE MENU".

e. **VERIFY** display "PORT DO-07-402B MAINTENANCE MENU".

f. **SELECT** "TURN ON VACUUM".

g. **VERIFY** display "VACUUM GENERATED".

h. **SELECT** "UNLOCK PORT".

i. **VERIFY** display "PORT UNLOCKED".

j. **SELECT** "RAISE DOOR".

k. **VERIFY** display "DOOR RAISED".

l. **SELECT** "OPEN PORT".

m. **VERIFY** display "PORT OPEN".

n. **VERIFY** Compliant Waste Port (107-DO-07-402B) is open.

o. **SELECT** "MAINT MAIN MENU".

3. **CLOSE NON-COMPLIANT WASTE PORT (107-DO-07-402B)**

a. **ENSURE** Manipulator (EM-07-401) is PARKED.

b. **SELECT** "PORT DO-07-402B MAINTENANCE MENU".

c. **VERIFY** display "PORT DO-07-402B MAINTENANCE MENU".

d. **SELECT** "CLOSE PORT".

e. **VERIFY** display "PORT CLOSED".

f. **SELECT** "LOWER DOOR".

g. **VERIFY** display "DOOR LOWERED".

h. **SELECT** "EXTEND SWAGING HEADS".

i. **VERIFY** display "SWAGING HEADS EXTENDED".

j. **SELECT** "TURN OFF VACUUM".

k. **VERIFY** display "TURN ON VACUUM" (E.G., "VACUUM GENERATED" not displayed.)

l. **SELECT** "LOCK PORT".

m. **VERIFY** display "PORT LOCKED".

n. **SELECT** "MAINT MAIN MENU".

o. **VERIFY** display "MAINTENANCE MAIN MENU".

4. **REMOVE DRUM FROM NON-COMPLIANT WASTE PORT (107-DO-07-402B)**

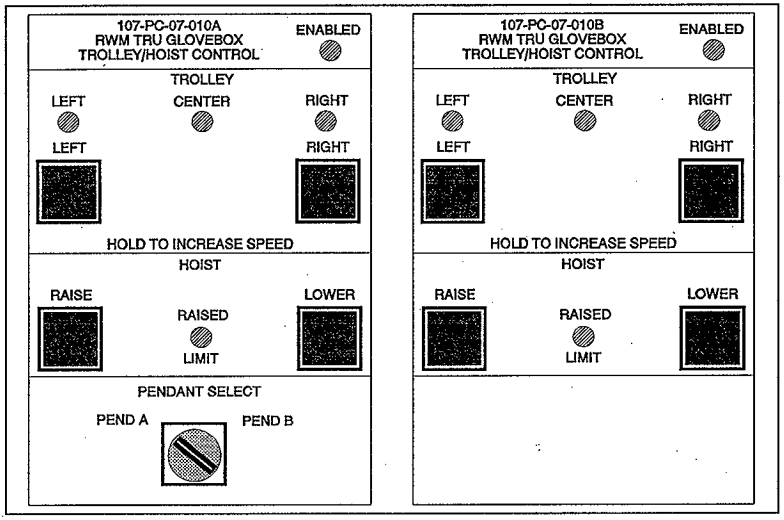
a. **ENSURE** port is CLOSED and LOCKED per Section VIII.F.3.

b. **LOWER** lift table (107-LT-09-201A) to "AGV LOAD HEIGHT".

c. **REVERSE** lift table to "DRUM AT AGV END".

ATTACHMENT 1: RWM GLOVEBOX HOIST CONTROL FUNCTIONS

NOTE - Controllers for LLW/RWM and TRU/RWM gloveboxes are the same except for equipment number.



107-PC-07-009A/009B, LLW/RWM GLOVEBOX RWM TROLLEY/HOIST/LIFTER CONTROL 107-PC-07-010A/010B, TRU/RWM GLOVEBOX RWM TROLLEY/HOIST/LIFTER CONTROL	
CONTROL SWITCHES	
SWITCH	FUNCTION
LEFT / RIGHT	MOVE HOIST TROLLEY LEFT / RIGHT
RAISE / LOWER	RAISE / LOWER HOIST
PENDANT SELECT (*)	SELECTS ACTIVE CONTROL 107-PC-07-010A or 010B
NOTE (*): Active control is selected at Operator discretion.	
INDICATORS	
LEFT	HOIST LOCATED ABOVE RWM TRANSFER PORT 107-DO-07-402A
CENTER	HOIST LOCATED ABOVE RWM TRANSFER PORT 107-DO-07-402B
RIGHT	HOIST LOCATED ABOVE RWM TRANSFER PORT 107-DO-07-401
RAISED LIMIT	HOIST RAISED TO UPPER HEIGHT LIMIT

ATTACHMENT 2: GLOVEBOX INTERLOCK SIGNALS

TABLE 1: LLW/RWM GLOVEBOX RELATED INTERLOCK SIGNALS		
SIGNAL SOURCE	DESCRIPTION	ADDITIONAL INTERLOCK INFORMATION
GENERAL LLW/RWM GLOVEBOX RELATED INTERLOCK SIGNALS		Procedure Sections: VII (all)
PDISL-393	GLOVEBOX DIFF PRESS TRIP	STOPS ALL PNEUMATIC HARDWARE IN GLOVEBOX
LIFT TABLE (LT-09-201F) RELATED INTERLOCK SIGNALS		Procedure Sections: VII.D, F
ZS-231E	DRUM AT AGV END	
ZS-231F	DRUM UNDER PORT	
ZS-231G	LIFT TABLE AT AGV HEIGHT	
PORT (DO-07-201) RELATED INTERLOCKS SIGNALS		Procedure Sections: VII.D through F
ZS-901B	PORT DOOR LOCKED	
ZS-901A	PORT DOOR UNLOCKED	
ZS-903A	LID DETACHED	
ZS-903B	LID ATTACHED	
ZS-902B	PORT LID DOWN	
ZS-902A	PORT LID LIFTED	
ZS-904B	PORT DOOR CLOSED	
ZS-904A	PORT DOOR OPEN	
LIFT TABLE (LT-09-201E) RELATED INTERLOCK SIGNALS		Procedure Sections: VII.G through J
ZS-229E	DRUM AT AGV END	
ZS-229F	DRUM UNDER PORT	
ZS-229G	LIFT TABLE AT AGV HEIGHT	

TABLE 1: LLW/RWM GLOVEBOX RELATED INTERLOCK SIGNALS		
SIGNAL SOURCE	DESCRIPTION	ADDITIONAL INTERLOCK INFORMATION
PORT (DO-07-202) RELATED INTERLOCK SIGNALS		Procedure Sections: VII.G through J
ZSC-908A & B	PORT CLOSED AND LOCKED	
ZS-907	PORT DRUM LID IN POSITION	
ZS-900A	PORT DRUM DOOR CLOSED	
ZS-900B	PORT DRUM IN POSITION	
ZS-900C	PORT DRUM DOOR OPEN	
ZSC-909	PORT DOOR DOWN	
ZSO-909	PORT DOOR ROTATED	
PS-900	PORT LID VACUUM	
LIFT TABLE (LT-09-201D) RELATED INTERLOCK SIGNALS		Procedure Sections: VII.K through N
ZS-227E	DRUM AT AGV END	
ZS-227F	DRUM UNDER PORT	
ZS-227G	LIFT TABLE AT AGV HEIGHT	
PORT (DO-07-203) RELATED INTERLOCK SIGNALS		Procedure Sections: VII.K through N
ZSC-910A & B	PORT CLOSED AND LOCKED	
ZS-913	PORT DRUM LID IN POSITION	
ZS-912A	PORT DRUM DOOR CLOSED	
ZS-912B	PORT DRUM IN POSITION	
ZS-912C	PORT DRUM DOOR OPEN	
ZSC-911	PORT DOOR DOWN	
ZSO-911	PORT DOOR ROTATED	
PS-901	PORT LID VACUUM	

TABLE I: LLW/RWM GLOVEBOX RELATED INTERLOCK SIGNALS		
SIGNAL SOURCE	DESCRIPTION	ADDITIONAL INTERLOCK INFORMATION
HOIST (107-CR-07-201) RELATED INTERLOCK SIGNALS		Procedure Sections: VII.C
ZS-906A & B	HOIST TROLLEY POSITION	
ZS-906C	HOIST RAISED	
MANIPULATOR (107-EM-07-201) RELATED INTERLOCK SIGNALS		Procedure Sections: VII.E, H, L, M
ZS-920A	MANIPULATOR PARK POSITION 1	
ZS-920B	MANIPULATOR PARK POSITION 2	
ZS-920C	LEFT ARM PARKED	
ZS-920D	RIGHT ARM PARKED	

TABLE 2: TRU/RWM GLOVEBOX RELATED INTERLOCK SIGNALS		
SIGNAL SOURCE	DESCRIPTION	ADDITIONAL INTERLOCK INFORMATION
GENERAL TRU/RWM GLOVEBOX RELATED INTERLOCK SIGNALS		Procedure Sections: VIII (all)
PDISL-375	GLOVEBOX DIFF PRESS TRIP	STOPS ALL PNEUMATIC HARDWARE IN GLOVEBOX
LIFT TABLE (LT-09-201C) RELATED INTERLOCK SIGNALS		Procedure Sections: VIII.D, F
ZS-225E	DRUM AT AGV END	
ZS-225F	DRUM UNDER PORT	F
ZS-225G	LIFT TABLE AT AGV HEIGHT	
PORT (DO-07-401) RELATED INTERLOCKS SIGNALS		Procedure Sections: VII.D through F
ZS-956A	PORT DOOR LOCKED	
ZS-956B	PORT DOOR UNLOCKED	
ZS-958B	LID DETACHED	
ZS-958A	LID ATTACHED	
ZS-957A	PORT LID DOWN	
ZS-957B	PORT LID LIFTED	
ZS-959B	PORT DOOR CLOSED	
ZS-959A	PORT DOOR OPEN	
LIFT TABLE (LT-09-201B) RELATED INTERLOCK SIGNALS		Procedure Sections: VIII.G, J
ZS-223E	DRUM AT AGV END	
ZS-223F	DRUM UNDER PORT	
ZS-223G	LIFT TABLE AT AGV HEIGHT	

TABLE 2: TRU/RWM GLOVEBOX RELATED INTERLOCK SIGNALS		
SIGNAL SOURCE	DESCRIPTION	ADDITIONAL INTERLOCK INFORMATION
PORT (DO-07-402A) RELATED INTERLOCK SIGNALS		Procedure Sections: VIII.G through J
ZSC-952A & B	DOOR LOCKED	
ZSO-968	DOOR OPEN	
ZS-966A thru D	SWAGING HEADS EXTENDED	
PS-960A	PORT LID VACUUM	
LIFT TABLE (LT-09-201A) RELATED INTERLOCK SIGNALS		Procedure Sections: VIII.K, N
ZS-221E	DRUM AT AGV END	
ZS-221F	DRUM UNDER PORT	
ZS-221G	LIFT TABLE AT AGV HEIGHT	
PORT (DO-07-402B) RELATED INTERLOCK SIGNALS		Procedure Sections: VIII.K through N
ZSC-969A & B	DOOR LOCKED	
ZSO-950	DOOR OPEN	
ZS-951A thru D	SWAGING HEADS EXTENDED	
PS-960B	PORT LID VACUUM	
HOIST (107-CR-07-401) RELATED INTERLOCK SIGNALS		Procedure Sections: VIII.C
ZS-963A & B	HOIST TROLLEY POSITION	
ZS-963C	HOIST RAISED	
MANIPULATOR (107-EM-07-401) RELATED INTERLOCK SIGNALS		Procedure Sections: VIII.H, I, L, M
ZS-970A	MANIPULATOR PARK POSITION 1	
ZS-970B	MANIPULATOR PARK POSITION 2	
ZS-970C	LEFT ARM PARKED	
ZS-970D	RIGHT ARM PARKED	

WASTE RECEIVING AND PROCESSING (WRAP) PLANT OPERATING PROCEDURE

SYSTEM: PROCESS

RESTART RWM GLOVEBOX OPERATION

I. SYSTEM DESCRIPTION

This procedure provides instructions for restart of the Low Level Waste (LLW) and Transuranic (TRU), Restricted Waste Management (RWM) Gloveboxes after Emergency Stop, Fire Alarm, Power Outage, Equipment Failure, Low Glovebox Pressure or other abnormal shutdown.

Emergency Stop or other abnormal shutdown of the gloveboxes may leave various glovebox equipment including entry/exit ports, hoists, lift tables etc. in an abnormal state (i.e., partially open/closed, seals deflated or inflated at the wrong time, etc.). Prior to restart, the condition of all glovebox equipment must be analyzed, and as required, returned to normal initialization status. Because of numerous interlocks and other safety features, return of most equipment to the proper position must be accomplished manually through use of the Maintenance Mode menus on the glovebox Operator Interface Units (OIUs), Lift Table Controllers and other operator control stations.

II. REFERENCE DOCUMENTS

HSRCM-1, Hanford Site Radiological Control Manual.
WRP1-OP-0721, RWM Gloveboxes Manual Operation.
WRP1-OP-0717, LLW/RWM Glovebox Operation.
WRP1-OP-0728, TRU/RWM Process Glovebox Operation.

III. PRESTART CONDITIONS

All personnel performing this procedure shall be qualified in accordance with WHC-CM-5-34, Section 1.8, "Training Plan," and on-the-job training.

Process area Heating, Ventilation, Air Conditioning (HVAC) in OPERATION.
Applicable portions of plant electrical system in OPERATION.
Compressed air system in OPERATION.

IV. SAFETY

Potential hazards, such as lifting heavy containers or handling sharp objects present in waste containers, must be mitigated by protective equipment, procedures, and administrative controls to ensure acceptable-risk operating conditions.

Consult with Operations Management and Industrial Hygiene, and refer to the Job Hazards Analysis (JHA), Radiological Work Permit (RWP) and Material Safety Data Sheets (MSDS) to determine required Personal Protective Equipment (PPE).

This procedure requires accessing gloveboxes through gloveports on a regular basis. Operators shall perform self survey upon exiting gloveport after each use. Radiological Control Technician (RCT) shall be contacted anytime self survey limits are exceeded.

Warning - Use care to prevent injury. Possible safety hazards include:

- Tripping/Slipping
- Injuries to the hands at glovebox ports
- Radiological Contamination
- Interference with the Automatic Guided Vehicle (AGV)

When an OIU is in maintenance mode, most interlocks and safety features are bypassed. This allows equipment to be manipulated to a desired state to satisfy operational needs. It is also possible to damage equipment, and/or bypass safety restrictions such as glovebox containment. Caution must be exercised to prevent unwanted violation of operational safety requirements or personnel injury.

V. TOOLS AND SUPPLIES

None.

VI. TABLE OF CONTENTS

VII. PROCEDURE

NOTE - Equipment status is determined by visual observation of equipment and status indicating lights as applicable.

A. DETERMINE GLOVEBOX EQUIPMENT STATUS

1. **IF** restarting LLW/RWM Glovebox,
   PERFORM Attachment 1 LLW/RWM Glovebox Equipment Status.

2. **IF** restarting TRU/RWM Glovebox,
   PERFORM Attachment 2, TRU/RWM Glovebox Equipment Status.

B. RETURN RWM GLOVEBOXES TO OPERATION

1. **SELECT** attachment for glovebox to be returned to service:

   a. ATTACHMENT 1: LLW/RWM GLOVEBOX EQUIPMENT STATUS

   b. ATTACHMENT 2: TRU/RWM GLOVEBOX EQUIPMENT STATUS

2. **COMPARE** AS FOUND status on selected attachment to the following:

   a. INITIALIZE POSITION listed on selected attachment.

   b. Interlock information in applicable section of WRP1-OP-0721, RWM Gloveboxes Manual Operation.

   c. Operational sequencing in applicable operating procedure:

      - WRP1-OP-0717, LLW/RWM Glovebox Operation.
      - WRP1-OP-0728, TRU/RWM Process Glovebox Operation

3. **RECORD** required equipment corrections in COMMENTS section of selected attachment.

4. **GO TO** applicable section(s) of WRP1-OP-0721 and **PERFORM** necessary actions to return equipment to desired status.

5. **RETURN** glovebox OIU to automatic operation per WRP1-OP-0721.

6. **REPEAT** Steps VII.B.1 through VII.B.5 as required for additional glovebox.

ATTACHMENT 1: LLW/RWM GLOVEBOX EQUIPMENT STATUS

EQUIPMENT/COMPONENT	AS FOUND POSITION	INITIALIZE POSITION
1) Circle applicable AS FOUND status for each component. 2) IF component status is not listed, THEN draw a line through all indicated choices AND describe AS FOUND status in COMMENTS section. 3) RECORD all other indications, conditions or supplemental information in COMMENTS section.		
EXIT PORT (107-DO-07-203)		
PORT DOOR	ROTATED OPEN / CLOSED (ZSO-911 / ZSC-911)	CLOSED
VACUUM	VENTED/NOT VENTED (PS-901)	VENTED
DRUM DOOR	OPEN / CLOSED / IN POSITION (raised 1/2") (ZS-912C / ZS-912A / ZS-912B)	CLOSED
PORT DOOR LOCK	LOCKED / UNLOCKED (ZSC-910A & B)	LOCKED
LID AGAINST DRUM DOOR	YES / NO (ZS-913)	NO
HVAC SEAL	INFLATED / DEFLATED (PS-917)	DEFLATED
DRUM CENTERING DEVICE	EXTENDED / RETRACTED (ZSO-915A & B)	RETRACTED
LIFT TABLE (107-LT-09-201D)		
PED SW POSITION	AGV / PANEL (VISUAL)	AGV
ROPE SWITCHES (ALL)	ACTUATED / RESET (VISUAL)	RESET
DRUM ON LIFT TABLE	YES / NO (VISUAL)	YES
DRUM UNDER PORT	ON / OFF (ZS-227F)	OFF
DRUM IN POSITION	ON / OFF (ZS-227D)	OFF
DRUM AT AGV END	ON / OFF (ZS-227E)	ON
AGV LOAD HEIGHT	ON / OFF (ZS-227G)	ON
DOWN OVERTRAVEL	ON / OFF (ZS-227C)	OFF

ATTACHMENT 1: LLW/RWM GLOVEBOX EQUIPMENT STATUS

EQUIPMENT/COMPONENT	AS FOUND POSITION	INITIALIZE POSITION
EXIT PORT (107-DO-07-202)		
PORT DOOR	ROTATED OPEN / CLOSED (ZSO-909 / ZSC-909)	CLOSED
VACUUM	VENTED / NOT VENTED (PS-900)	VENTED
DRUM DOOR	OPEN / CLOSED / IN POSITION (raised 1/2") (ZS-900C / ZS-900A / ZS-900B)	CLOSED
PORT DOOR LOCK	LOCKED / UNLOCKED (ZSC-908A & B)	LOCKED
HVAC SEAL	INFLATED / DEFLATED (PS-916)	DEFLATED
LID AGAINST DRUM DOOR	YES / NO (ZS-907)	NO
DRUM CENTERING DEVICE	EXTENDED / RETRACTED (ZSO-914A & B)	RETRACTED
LIFT TABLE (107-LT-09-201E)		
PED SW POSITION	AGV / PANEL (VISUAL)	AGV
ROPE SWITCHES (ALL)	ACTUATED / RESET (VISUAL)	RESET
DRUM ON LIFT TABLE	YES / NO (VISUAL)	YES
DRUM UNDER PORT	ON / OFF (ZS-229F)	OFF
DRUM IN POSITION	ON / OFF (ZS-229D)	OFF
DRUM AT AGV END	ON / OFF (ZS-229E)	ON
AGV LOAD HEIGHT	ON / OFF (ZS-229G)	ON
DOWN OVERTRAVEL	ON / OFF (ZS-229C)	OFF
RWM TRANSFER PORT (107-DO-07-201)		
DOUBLE LID	OPEN / CLOSE (ZS-904A / ZS-904B)	CLOSE
DOUBLE LID LOCK	OPEN / CLOSE (ZS-901B & 901A)	CLOSE
DOUBLE LID VERTICAL	UP / DOWN (ZS-902A / ZS-902B)	DOWN
LID GRIPPER	HOLD / RELEASE (ZS-903B / ZS-903A)	RELEASE

ATTACHMENT 1: LLW/RWM GLOVEBOX EQUIPMENT STATUS

EQUIPMENT/COMPONENT	AS FOUND POSITION		INITIALIZE POSITION
LIFT TABLE (107-LT-09-201F)			
PED SW POSITION	AGV / PANEL	(VISUAL)	AGV
ROPE SWITCHES (ALL)	ACTUATED / RESET	(VISUAL)	RESET
DRUM ON LIFT TABLE	YES / NO	(VISUAL)	YES
DRUM UNDER PORT	ON / OFF	(ZS-231F)	OFF
DRUM IN POSITION	ON / OFF	(ZS-231D)	OFF
DRUM AT AGV END	ON / OFF	(ZS-231E)	ON
AGV LOAD HEIGHT	ON / OFF	(ZS-231G)	ON
DOWN OVERTRAVEL	ON / OFF	(ZS-231C)	OFF
MANIPULATOR (107-EM-07-201)			
MANIPULATOR PARKED	POS 1 / POS 2 / NO	(ZS-920A / ZS-920B / NONE)	POS 1 OR 2
LEFT ARM UPPER LIMIT	YES / NO	(ZS-920C)	YES
RIGHT ARM UPPER LIMIT	YES / NO	(ZS-920D)	YES
GLOVEBOX HOIST (107-CR-07-201)			
HOIST FULLY RAISED	YES / NO	(ZS-906C)	YES
HOIST TROLLEY POSITION	LEFT / MIDDLE / RIGHT	(ZS-906A & B)	LEFT

ATTACHMENT 1: LLW/RWM GLOVEBOX EQUIPMENT STATUS

COMMENTS:

ATTACHMENT 1: LLW/RWM GLOVEBOX EQUIPMENT STATUS

COMMENTS:

ATTACHMENT 2: TRU/RWM GLOVEBOX EQUIPMENT STATUS

EQUIPMENT/COMPONENT	AS FOUND POSITION		INITIALIZE POSITION
1) Circle applicable AS FOUND status for each component. 2) IF component status is not listed, THEN draw a line through all indicated choices AND describe AS FOUND status in COMMENTS section. 3) RECORD all other indications, conditions or supplemental information in COMMENTS section.			
EXIT PORT (107-DO-07-402B)			
PORT DOOR	TRANSLATED OPEN / TRANSLATED (CLOSED)	(ZSO-950 & ZSC-950)	TRANSLATED CLOSED
PORT DOOR	RAISED / (LOWERED)	(ZSO-953 & ZSC-953)	LOWERED
PORT DOOR LOCK	(LOCKED) / UNLOCKED	(ZSC-969A & B)	LOCKED
SWAGING HEADS	EXTENDED / (RETRACTED)	(ZS-951A thru D)	RETRACTED
LID VACUUM	(OFF & VENTED) / VACUUM ON	(PS-960B)	OFF & VENTED
LIFT TABLE (107-LT-09-201A)			
PED SW POSITION	AGV / (PANEL)	(VISUAL)	AGV
ROPE SWITCHES (ALL)	ACTUATED / (RESET)	(VISUAL)	RESET
DRUM ON LIFT TABLE	(YES) / NO	(VISUAL)	YES
DRUM UNDER PORT	ON / (OFF)	(ZS-221F)	OFF
DRUM IN POSITION	ON / (OFF)	(ZS-221D)	OFF
DRUM AT AGV END	(ON) / OFF	(ZS-221E)	ON
AGV LOAD HEIGHT	(ON) / OFF	(ZS-221G)	ON
DOWN OVERTRAVEL	ON / (OFF)	(ZS-221C)	OFF
EXIT PORT (107-DO-07-402A)			
PORT DOOR	TRANSLATED OPEN / TRANSLATED CLOSED	(ZSO-968 & ZSC-968)	TRANSLATED CLOSED
PORT DOOR	(RAISED) / LOWERED	(ZSO-967 & ZSC-967)	LOWERED
PORT DOOR LOCK	LOCKED / (UNLOCKED)	(ZSC-952A & B)	LOCKED
SWAGING HEADS	EXTENDED / (RETRACTED)	(ZS-966A thru D)	RETRACTED
LID VACUUM	OFF & VENTED / (VACUUM ON)	(PS-960B)	OFF & VENTED

ATTACHMENT 2: TRU/RWM GLOVEBOX EQUIPMENT STATUS

EQUIPMENT/COMPONENT	AS FOUND POSITION		INITIALIZE POSITION
LIFT TABLE (107-LT-09-201B)			
PED SW POSITION	AGV / (PANEL)	(VISUAL)	AGV
ROPE SWITCHES (ALL)	ACTUATED / (RESET)	(VISUAL)	RESET
DRUM ON LIFT TABLE	(YES) / NO	(VISUAL)	YES
DRUM UNDER PORT	(ON) / OFF	(ZS-223F)	OFF
DRUM IN POSITION	(ON) / OFF	(ZS-223D)	OFF
DRUM AT AGV END	ON / (OFF)	(ZS-223E)	ON
AGV LOAD HEIGHT	ON / (OFF)	(ZS-223G)	ON
DOWN OVERTRAVEL	ON / (OFF)	(ZS-223C)	OFF
RWM TRANSFER PORT (107-DO-07-401)			
DOUBLE LID	(OPEN) / CLOSE	(ZS-959A / ZS-959B)	CLOSE
DOUBLE LID LOCK	(OPEN) / CLOSE	(ZS-956A & 956B)	CLOSE
DOUBLE LID VERTICAL	(UP) / DOWN	(ZS-957B / ZS-957A)	DOWN
LID GRIPPER	(HOLD) / RELEASE	(ZS-958A) / ZS-958B)	RELEASE
LIFT TABLE (107-LT-09-201C)			
PED SW POSITION	AGV / (PANEL)	(VISUAL)	AGV
ROPE SWITCHES (ALL)	ACTUATED / (RESET)	(VISUAL)	RESET
DRUM ON LIFT TABLE	(YES) / NO	(VISUAL)	YES
DRUM UNDER PORT	(ON) / OFF	(ZS-225F)	OFF
DRUM IN POSITION	(ON) / OFF	(ZS-225D)	OFF
DRUM AT AGV END	ON / (OFF)	(ZS-225E)	ON
AGV LOAD HEIGHT	ON / (OFF)	(ZS-225G)	ON
DOWN OVERTRAVEL	ON / (OFF)	(ZS-225C)	OFF
MANIPULATOR (107-EM-07-401)			
MANIPULATOR PARKED	POS 1 / (POS 2) / NO	(ZS-970A / ZS-970B / NONE)	POS 1 OR 2
LEFT ARM UPPER LIMIT	(YES) / NO	(ZS-970C)	YES
RIGHT ARM UPPER LIMIT	(YES) / NO	(ZS-970D)	YES

ATTACHMENT 2: TRU/RWM GLOVEBOX EQUIPMENT STATUS

EQUIPMENT/COMPONENT	AS FOUND POSITION		INITIALIZE POSITION
GLOVEBOX HOIST (107-CR-07-201)			
HOIST FULLY RAISED	YES / (NO)	(ZS-963C)	YES
HOIST TROLLEY POSITION	LEFT / (MIDDLE) / RIGHT	(ZS-963A & B)	LEFT

ATTACHMENT 2: TRU/RWM GLOVEBOX EQUIPMENT STATUS

COMMENTS:

ATTACHMENT 2: TRU/RWM GLOVEBOX EQUIPMENT STATUS

COMMENTS:

WASTE RECEIVING AND PROCESSING (WRAP) PLANT OPERATING PROCEDURE

SYSTEM: PROCESS

TRU/RWM GLOVEBOX OPERATION

I. SYSTEM DESCRIPTION

This procedure provides instructions for operation of the Transuranic Waste, Restricted Waste Management (TRU/RWM) Glovebox (107-GB-07-401).

II. REFERENCE DOCUMENTS

HSRCM-1, Hanford Site Radiological Control Manual.
WRP1-OP-0703, Glovebox Lift Table Operation.
WRP1-OP-0704, Glovebox Manipulator Operation.
WRP1-OP-0708, Vent Aerosol Cans.
WRP1-OP-0710, Waste Sampling.
WRP1-OP-0711, Waste Treatment.
WRP1-OP-1708, Packaging Low-Level Waste.
WRP1-OP-1709, Packaging Mixed Waste.

III. PRESTART CONDITIONS

All personnel performing this procedure shall be qualified per WHC-CM-5-34, Section 1.8, "Training Plan," and on-the-job training.

Process area Heating, Ventilation, Air Conditioning (HVAC) in OPERATION.
Applicable light curtains in OPERATION.
Applicable portions of plant electrical system in OPERATION.
Compressed air system in OPERATION.

Waste has been sorted in the TRU Processing glovebox and/or otherwise has been determined to be restricted. Restricted items are on a Non-Compliant Item Transfer Stand inside of a Drath and Schrader drum, located on the AGV end of Lift Table 107-LT-09-201C.

IV. SAFETY

Potential hazards, such as lifting heavy containers or handling sharp objects present in waste containers, must be mitigated by protective equipment, procedures, and administrative controls to ensure acceptable-risk operating conditions.

IV. SAFETY (Cont.)

Consult with Operations Management and Industrial Hygiene, and refer to the Job Hazards Analysis (JHA), Radiological Work Permit (RWP) and Material Safety Data Sheets (MSDS) to determine required Personal Protective Equipment (PPE).

Check glovebox contents prior to startup/restart for any materials which might require special handling precautions (i.e. flammable, reactive, etc.). If problems exist, or if unsure that glovebox operation may be safely conducted, then notify Duty Operations Supervisor (DOS).

This procedure requires accessing gloveboxes through gloveports on a regular basis. Operators shall perform self survey upon exiting gloveport after each use. Radiological Control Technician (RCT) shall be contacted anytime self survey limits are exceeded.

Warning - Use care to prevent injury. Possible safety hazards include:

- Tripping/Slipping
- Injuries to the hands at glovebox ports
- Radiological Contamination
- Interference with the Automatic Guided Vehicle (AGV)

Waste must be segregated by hazard class to avoid dangerous reactions or explosions. If reactive, pyrophoric, or explosive materials are identified upon opening of waste packets, immediately STOP WORK and contact Duty Operations Supervisor (DOS).

Aerosol cans which have contained acutely hazardous waste are placed in RWM drums only if the cans have been punctured and emptied. Contents must be captured and managed as waste. Contact Environmental Compliance Group (ECG) if questions arise concerning hazard class of waste items contained in aerosol cans.

Ensure that sharp objects and large dense objects are wrapped and packaged to minimize potential for puncturing the container and to prevent shifting during drum handling.

V. TOOLS AND SUPPLIES

None.

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VII. PROCEDURE

NOTE 1 - Administrative hold steps are identified by letters in parentheses at the left margin of the procedure step. The direction given in the procedure step must be satisfied before work continues.

(M) - Operations management shall approve operation.

(R) - Radiological Control (RC) shall complete surveys or agree to permit continued operation.

NOTE 2 - UNLESS OTHERWISE SPECIFIED, selections and displays throughout this procedure are on TRU/RWM Glovebox Operator Interface Unit (OIU-12-106B).

NOTE 3 - All Data Management System (DMS) data entry, is performed on DMS Terminal (107-TE-12-103). DMS sample treatment information is displayed on DMS display (OIU-12-106A).

NOTE 4 - All hoist control activities in this procedure are performed on Hoist Control (107-PC-07-010A or 010B) at operator discretion. Active controller is selected by switch on 107-PC-07-010A. Functions must be activated until associated indicator illuminates. Reference Attachment 1.

NOTE 5 - Manipulators are used throughout this procedure as required, to move and sort items in the gloveboxes. Manipulator operation is per WRP1-OP-0704, Glovebox Manipulator Operation.

NOTE 6 - Manual Lift table operation when specified throughout this procedure is performed per WRP1-OP-0703, Glovebox Lift Table Operation.

NOTE 7 - All scanning is performed with Portable Scanner 12-NE-303 or assigned spare.

A. INITIALIZE SYSTEM

(PCS) When powered up, performs system initialization check and displays results on OIU Main Menu.

1. **REVIEW** OIU "MAIN MENU".

2. **SELECT** "DIAGNOSTICS MENU".

(PCS) Displays failed parameters in red, with negative messages. Passed parameters are displayed in green with positive message.

5.2.1

a. **VERIFY** display "DIAGNOSTICS MENU".

b. **NOTIFY** DOS.

(DOS) c. **SELECT** "MAINT. ACCESS" on OIU.

(DOS) d. **ENTER** MAINTENANCE access password on OIU and **SELECT** ENTER.

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(DOS) e. **ACCESS** MAINTENANCE MENU screens as necessary to correct indicated initialization faults.

(DOS) f. **WHEN** all faults have been corrected, **SELECT** "MAIN MENU".

B. OPEN BAGLESS TRANSFER PORT (107-DO-07-401)

NOTE - Lift Table 107-LT-09-201C controls and indicators in Section VII.B are located on Lift Table Control Pedestal 107-PC-09-201C.

1. **ENSURE** lift table MAINT/OFF/NORMAL switch (09-HS-225A) set to "NORMAL".

5.2.2

2. **SELECT** "PORT DO-07-401" from MAIN MENU.

3. **VERIFY** display "DRUM AT LIFT TABLE".

4. **SCAN** in order:

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a. Location (2Y) barcode on side of glovebox.

b. Drum (S) barcode.

(PCS) Verifies drum PIN and location match that input by AGV delivery. Halts process if mismatched.

(M) 5. **IF** scanner displays "PIN MIS-MATCH", **THEN:**

a. **RECORD** PIN displayed on barcode scanner on PIN Change Form.

b. **SCAN** Cancellation barcode.

(PCS) Clears pin mis-match message.

c. **NOTIFY** DOS.

d. **CORRECT** PIN information in PCS.

6. **SCAN** End (Y) barcode.

7. **SCAN** Yes (Y) barcode.

(DMS) Updates drum location.

8. **PLACE** lift table AGV/PANEL switch (09-HS-225D) to "PANEL".

9. **IF** drum is fitted with outer lid, **THEN, REMOVE** outer lid as follows:

a. **LOWER** lift table as required.

b. **REMOVE** outer lid bolts.

c. **REMOVE** outer lid.

d. **POSITION** lift table to "AGV LOAD HEIGHT".

10. **FORWARD** lift table to "DRUM UNDER PORT" position.

(PCS) Moves drum under port.

11. **RAISE** lift table to "DRUM IN POSITION" height.

12. **ENSURE** manipulator (107-EM-07-401) is PARKED.

13. **SELECT** "OPEN PORT".

14. **VERIFY** display "PORT OPENING...".

15. **WAIT** for display "PORT OPEN".

(PCS) Writes OIU displays , completes port opening sequence.

C. **REMOVE NON-COMPLIANT ITEM TRANSFER STAND FROM RWM DRUM**

1. **ENSURE** manipulator (107-EM-07-401) is PARKED.

2. **ENSURE** RWM Transfer Port (107-DO-07-401) is OPEN.

3. **PERFORM** with hoist control, as required:

   a. **POSITION** TROLLEY (hoist hook) above Port (107-DO-07-401).

   b. **LOWER** HOIST to transfer stand.

   c. **ATTACH** hoist hook to transfer stand.

   d. **RAISE** HOIST until transfer stand clears glovebox floor.

   e. **POSITION** TROLLEY to glovebox sorting or treatment area, as desired.

NOTE - At operators discretion, hoist can remain attached to transfer stand and transfer stand may be set on glovebox floor or left suspended, as desired for packet removal.

   f. **LOWER** HOIST until transfer stand is at desired height.

D. **REMOVE WASTE ITEMS FROM TRANSFER STAND FOR SORTING/SAMPLING**

1. **SELECT** in order, on DMS terminal, as required:

   a. "PROCESS OPS".

   b. "TRU RWM GLOVEBOX".

   c. "RWM WASTE SORTING".

2. **VERIFY** DMS screen "DMSS0341 TRU RWM Waste Sorting" is displayed.

3. **VERIFY** correct drum and packet IDs displayed on DMS screen.

4. **SELECT** in order on OIU, as required:

   a. "MAIN MENU".

   b. "TRANSFER STAND MENU".

   c. "REMOVE ITEMS".

5. **VERIFY** display "REMOVAL OF ITEMS IN PROGRESS...".

6. **SCAN** Sample Sorting Location (2Y) barcode on glovebox.

7. **REMOVE** packet from transfer stand.

8. **SCAN** Packet identification (20T) barcode.

9. **PLACE** scanned packet in glovebox sorting area.

10. **SCAN** End (Y) barcode.

11. **SCAN** Yes (Y) barcode.

(DMS) Removes packet ID from RWM transfer drum inventory.

12. **REPEAT** Steps VII.D.6 through VII.D.11 until all items have been removed from transfer stand.

CAUTION

ALL ITEMS MUST BE REMOVED FROM TRANSFER STAND AND SCANNED PRIOR TO SELECTING "END REMOVE" OR PCS WILL NOT CORRECTLY UPDATE PACKET LOCATIONS IN DMS.

13. **SELECT** "END REMOVE" on OIU screen.

14. **VERIFY** display "REMOVAL OF ITEMS COMPLETE".

15. **SELECT** "REFRESH" on DMS screen.

16. **VERIFY** PINs of packets removed from transfer stand are displayed in DMS "Sample Station Packets" column.

E. REMOVE WASTE ITEMS FROM TRANSFER STAND FOR TREATMENT

1. **SELECT** in order, on DMS terminal:

   a. "PROCESS OPS".

   b. "TRU RWM GLOVEBOX".

   c. "RWM WASTE TREATMENT".

2. **VERIFY** DMS screen "DMSS0344 - TRU RWM Treatment Item Assembly".

3. **SELECT** proper worksheet from "LIST OF VALUES".

4. **VERIFY** correct drum and packet IDs displayed on DMS screen.

5. **SCAN** Treatment Location (2Y) barcode on glovebox.

6. **REMOVE** packet from ~~STC~~ TRANSFER STAND

7. **SCAN** Packet identification (20T) barcode

8. **PLACE** scanned packet in glovebox treatment area.

9. **SCAN** End (Y) barcode.

10. **SCAN** Yes (Y) barcode.

(DMS) Removes packet ID from RWM transfer drum inventory.

11. **REPEAT** Steps VII.E.5 through VII.E.10 until all items have been removed from transfer stand.

F. **REMOVE SAMPLE BOTTLES FROM STC FOR TREATMENT**

1. **SELECT** in order, on DMS terminal:

   a. "PROCESS OPS".

   b. "TRU RWM GLOVEBOX".

   c. "RWM WASTE TREATMENT".

2. **VERIFY** DMS screen "DMSS0344 - TRU RWM Treatment Item Assembly".

3. **SELECT** proper worksheet from "LIST OF VALUES".

4. **SCAN** Treatment Location (2Y) barcode on glovebox.

5. **REMOVE** sample bottle from ~~transfer stand~~ STC

6. **SCAN** sample bottle identification (1S) barcode.

7. **PLACE** scanned sample bottle in glovebox treatment area.

8. **SCAN** End (Y) barcode.

9. **SCAN** Yes (Y) barcode.

(DMS) Removes sample bottle from STC inventory.

10. **REPEAT** Steps VII.F.4 through VII.F.9 until all sample bottles on Treatment Work Sheet or DMS Screen DMSS0345, Processing Instructions have been removed from STC.

G. **OPEN COMPLIANT WASTE PORT (107-DO-07-402A)**

NOTE - Lift Table controls and indicators in Section VII.G are located on Lift Table Control Pedestal 107-PC-09-201B.

1. **PREPARE** TRU Waste or Mixed Waste, 55 gallon drum per WRP1-OP-1709, Packaging Mixed Waste.

2. **SELECT** in order, as required:

   a. "MAIN MENU".

   b. "PORT DO-07-402A".

3. **VERIFY** display "DRUM AT LIFT TABLE".

4. **SCAN** in order:

   a. Location (2Y) barcode on side of glovebox.

   b. Drum (S) barcode.

   c. End (Y) barcode.

   d. Yes (Y) barcode.

(PCS) Verifies drum PIN and location match that input by AGV delivery. Halts process if mismatched.

(DMS) Updates drum location.

(M) 5. **IF** scanner displays "PIN MIS-MATCH", **THEN:**

   a. **RECORD** PIN displayed on barcode scanner on PIN Change Form.

   b. **SCAN** Cancellation barcode.

(PCS) Clears pin mis-match message.

   c. **NOTIFY** DOS.

   d. **CORRECT** PIN information in PCS.

6. **PLACE** lift table AGV/PANEL switch (09-HS-225D) to "PANEL".

7. **REMOVE** clamp band and outer lid from drum as follows:

   a. **LOWER** lift table as required.

   b. **REMOVE** clamp band.

   c. **REMOVE** outer lid.

   d. **POSITION** lift table to "AGV LOAD HEIGHT".

8. **FORWARD** lift table to "DRUM UNDER PORT".

(PCS) Moves drum under port.

9. **RAISE** lift table to "DRUM IN POSITION" height.

10. **SELECT** "~~TURN ON~~ GENERATE VACUUM".

11. **VERIFY** display "VACUUM ~~GENERATED~~ HELD".

~~12. SELECT "UNLOCK PORT".~~

~~13. VERIFY display "PORT UNLOCKED".~~

14. **SELECT** "OPEN PORT". → PORT OPENING... DISPLAYED

15. **VERIFY** display "PORT OPEN".

(PCS) Writes OIU displays, completes port opening sequence.

H. OPEN NON-COMPLIANT WASTE PORT (107-DO-07-402B)

NOTE - Lift Table 107-LT-09-201A controls and indicators in Section VII.H are located on Lift Table Control Pedestal 107-PC-09-201A.

1. **PREPARE** Mixed Waste 85 gallon drum per WRP1-OP-1709, Packaging Mixed Waste.

2. **SELECT** "MAIN MENU" on OIU-12-106B.

3. **VERIFY** display "TRU RWM GLOVEBOX MAIN MENU".

4. **SELECT** "PORT DO-07-402B MENU".

5. **VERIFY** display "PORT DO-07-402B MENU".

6. **VERIFY** ~~display~~ "LIFT TABLE WEIGHT" ~~matches~~ "LIFT TABLE WEIGHT SETPOINT". ARE DISPLAYED.

7. **SCAN** the following:

   a. Location (2Y) barcode on side of glovebox.

   b. Drum (S) barcode.

   c. End (Y) barcode.

   d. Yes (Y) barcode.

(PCS) Verifies drum PIN and location match that input by AGV delivery. Halts process if mismatched.

(M) 8. **IF** scanner displays "PIN MIS-MATCH", **THEN:**

   a. **RECORD** PIN displayed on barcode scanner on PIN Change Form.

   b. **SCAN** Cancellation barcode.

(PCS) Clears pin mis-match message.

   c. **NOTIFY** DOS.

   d. **CORRECT** PIN information in PCS.

9. **PLACE** lift table AGV/PANEL switch (09-HS-221D) to "PANEL".

10. **REMOVE** clamp band and outer lid from drum as follows:

   a. **LOWER** lift table as required.

   b. **REMOVE** clamp band.

   c. **REMOVE** outer lid.

   d. **POSITION** lift table to "AGV LOAD HEIGHT".

11. **FORWARD** lift table to "DRUM UNDER PORT" position.

(PCS) Moves drum under port.

12. **RAISE** lift table to "DRUM IN POSITION" height.

13. **SELECT** "GENERATE VACUUM", **THEN, WAIT** for display "VACUUM HELD".

14. **SELECT** "OPEN PORT",

15. **VERIFY** display "PORT OPENING...".

16. **WAIT** for display "PORT OPEN".

(PCS) Writes OIU displays , completes port opening sequence.

I. **SORT WASTE ITEMS**

1. **SELECT** in order, on DMS terminal, as required:

   a. "PROCESS OPERATIONS MENU".

   b. "TRU RWM GLOVEBOX".

   c. "RWM WASTE SORTING".

   d. "REPACKAGE".

2. **VERIFY** DMS screen "DMSS0342 - TRU RWM Waste Repackaging" shows "Compliant Loadout Drum PIN:" but no packet data.

3. **IF** item is an aerosol container,
   THEN perform the following:

   a. **PROCESS** per WRP1-OP-0708, Vent and Drain Aerosol Cans.

   b. **PROCEED** to Step VII.I.10.

4. **REMOVE** packet wrapping and **PLACE** in retrievable location in glovebox sorting area.

5. **EXAMINE** packet contents.

6. **IF** entire packet is compliant waste,
   THEN perform the following:

   a. **SELECT** "COMPLIANT PACKET" from screen "DMSS0342 - TRURWM WASTE REPACKAGING".

   b. **SELECT** Packet PIN from list.

   c. **SELECT** "PHYSCOMP" on DMS terminal.

   d. **MODIFY** compliant loadout drum Waste Description.

   e. **ENTER** signature password.

ETR
DMS342 SCREEN - "COMPLIANT PACKET" SELECTION - CANNOT SEE PACKET #. NO POPUP TITLE

f. **SELECT** "COMMIT."

7. **PLACE** packet in compliant loadout drum.

8. **IF** item requires field screening to determine compliant/non-compliant status,
THEN, PERFORM field screening per Section VII.J.

9. **PROCESS** non-compliant items from the packet as follows:

a. **IF** the non-compliant item is an aerosol container,
THEN perform the following:

(1) **PROCESS** per WRP1-OP-0708, Vent and Drain Aerosol Cans.
(2) **PROCEED** to Step VII.I.10.

b. **IF** non-compliant item requires containment/packaging,
THEN, PLACE item in proper container/packing.

c. **ATTACH** new barcode to non-compliant item/package.

NOTE - Each scan of original packet barcode must be followed by scan of a new barcode, or an error message occurs. For multiple items in a single packet, original packet barcode must be scanned prior to each new barcode.

d. **SCAN** in order:

(1) Sorting location (2Y) barcode.

(2) Original packet identification (20T) barcode.

e. **VERIFY** barcode reader displays operation prompt "NEW PACKET" and original packet barcode.

f. **SCAN** new packet identification (20T) barcode.

g. **VERIFY** new packet barcode displayed on barcode reader.

h. **IF** OIU displays "Barcode ERROR",
THEN:

(1) **SELECT** "ACKNOWLEDGE ERROR"

(2) **RE-SCAN** original packet identification (20T) barcode.

(3) **RE-SCAN** new packet identification (20T) barcode.

i. **SCAN** End (Y) barcode.

j. **SCAN** Yes (Y) barcode.

10. **ENTER** data for new container as follows:

a. **SELECT** "NEXT NEW CONTAINER" from screen "DMSS0342 - TRURWM WASTE REPACKAGING".

b. **VERIFY** DMS displays data for original packet and ID for new packet.

c. **ENTER** Container Type, Material Group Code, and Waste Description for new container.

11. **ENTER** data for compliant portion of packet (includes wrapping and compliant material found in the packet) as follows:

a. **CHECK** the Compliant Waste block if wrapping or other compliant waste has been separated from original packet.

b. **MODIFY** compliant loadout drum waste description.

12. **SAVE** data to the DMS database as follows:

a. **ENTER** signature password

b. **SELECT** "COMMIT".

(DMS) Stores entered data in DMS database.

13. **LOAD** compliant material into compliant loadout drum.

14. **REPEAT** Steps VII.I.9 through VII.I.13 for each non-compliant item in packet.

15. **REPEAT** Steps VII.I.3 through VII.I.13 for all remaining packets.

16. **SELECT** "RETURN TO SORTING" on DMS terminal.

17. **VERIFY** DMS display "DMSS0341 - TRU RWM Waste Sorting".

18. **SELECT** "COMPLIANT LOADOUT" on DMS Terminal.

19. **VERIFY** DMS display, "DMSS0343 - TRU RWM Compliant Waste Loadout.

20. **SELECT** "PHYSCOMP" on DMS Terminal.

21. **ENTER** the following for items added to the drum:

    a. "Description"
    b. "Vol %"
    c. "Weight"

22. **ENTER** signature password.

23. **SELECT** "COMMIT".

24. **IF** "Storage Category" has been modified,

    a. **ENTER** signature password.

    b. **SELECT** "COMMIT."

J. SCREEN WASTE ITEMS

1. **IF** item has not been completely characterized, **THEN, PERFORM** field screening per WRP1-OP-0710, Glovebox Waste Sampling.

2. **SAMPLE** remaining non-compliant items per applicable procedure:

   - WRP1-OP-0710, Waste Sampling
   - WRP1-OP-0708, Vent and Drain Aerosol Cans

K. TREAT NON-COMPLIANT WASTE ITEMS

1. **TREAT** characterized waste per WRP1-OP-0711, Waste Treatment.

2. **LOADOUT** treated/non-compliant waste per Section VII.L.

L. TREATED WASTE ITEM LOADOUT

1. **SELECT** in order on OIU as required:

   a. "MAIN MENU".

   b. "TREATED ITEM MENU".

   c. "LOADOUT TREATED ITEMS".

2. **VERIFY** display "TREATED ITEM LOADOUT IN PROGRESS...".

3. **SCAN** treatment location barcode.

4. **VERIFY** barcode reader displays operation prompt "TREATED ITEM LOADOUT".

5. **SCAN** treated item barcode.

6. **LOAD** item into drum at port 107-DO-07-402B.

7. **SCAN** End (Y) barcode.

8. **SCAN** Yes (Y) barcode.

9. **IF** more items require loadout,
   THEN, REPEAT steps VII.L.3 to VII.L.8.

10. **SELECT** "END TR. ITEM LDOUT".

11. **VERIFY** display "TREATED ITEM LOADOUT COMPLETE".

12. **WHEN** drum is full,
    THEN, PERFORM the following steps:

    a. **SELECT** in order, on DMS terminal, as required:

       (1) "PROCESS OPS".

       (2) "TRU RWM GLOVEBOX".

       (3) "TREATED WASTE LOADOUT".

    b. **VERIFY** DMS display "DMSS0348 - TRU RWM TREATED WASTE LOADOUT" shows correct "TREATED WASTE LOADOUT DRUM".

    c. **SELECT** "PHYSCOMP".

d. **ENTER** Physical Component Description and corresponding volume percents and weights. AND COMMIT DATA.

e. **SELECT** ~~"RETURN"~~. EXIT.

f. **SELECT** "CHEMCOMP".

g. **ENTER** I.D. and weight of any hazardous components, AND COMMIT DATA.

h. **SELECT** ~~"RETURN"~~. EXIT.

i. **ENTER** the following:

(1) Primary Waste Type.

(2) Hazardous Waste Storage Category.

(3) Assay Profile ID.

(4) Assay Default Flag.

(5) Liner Venting Method.

(6) Drum Filter Model # (if installed).

(7) Void filler type and weight (if used) (LLW only)

(8) Filter installed (Y/N)

j. **ENTER** signature password.

k. **SELECT** "COMMIT".

M. ADD ITEMS TO TRANSFER STAND

1. **SELECT** in order on OIU, as required:

   a. "MAIN MENU".

   b. "TRANSFER STAND MENU".

   c. "ADD ITEMS".

2. **VERIFY** display "ADD ITEMS IN PROGRESS".

3. **SELECT** packet to be added to transfer stand.

4. **SCAN** Sample Location (2Y) barcode on inside of glovebox.

5. **VERIFY** barcode reader displays operation prompt "ADD ITEMS".

6. **SCAN** packet identification (20T) barcode.

7. **PLACE** scanned packet on transfer stand.

8. **SCAN** End (Y) barcode.

9. **SCAN** Yes (Y) barcode.

(DMS) Removes packet ID from glove box inventory.

10. **REPEAT** Steps VII.M.3 through VII.M.9 until all items have been added to transfer stand.

11. **SELECT** "END ADD".

12. **VERIFY** display "ADD ITEMS COMPLETE".

13. **SELECT** in order, on DMS terminal, as required:

    a. "PROCESS OPS".

    b. "TRU RWM GLOVEBOX".

    c. "RWM WASTE SORTING".

14. **VERIFY** DMS screen "DMSS0341 - TRU RWM Waste Sorting".

    a. **SELECT** "REFRESH".

15. **VERIFY** PINs for packets added to transfer stand are displayed in DMS "Transfer Drum Packets" column.

N. LOAD TRANSFER STAND INTO RWM DRUM

1. **ENSURE** manipulator (107-EM-07-401) is PARKED.

2. **ENSURE** RWM Transfer Port (107-DO-07-401) is OPEN.

3. **LOAD** transfer stand into transfer drum using Glovebox Hoist.

O. CLOSE BAGLESS TRANSFER PORT (107-DO-07-401)

NOTE - Lift Table controls and indicators in Section VII.O are located on Lift Table Control Pedestal 107-PC-09-201C.

1. **ENSURE** lift table MAINT/OFF/NORMAL switch (09-HS-225A) set to "NORMAL".
   ENSURE HOIST IS RAISED CLEAR OF BTP LID.
2. **SELECT** on OIU-12-106B, in order:

   a. "MAIN MENU".

   b. "PORT DO-07-401 MENU".

   c. "CLOSE PORT".

3. **VERIFY** display "PORT CLOSING...".

4. **WAIT** for display "PORT CLOSED".

(PCS) Writes OIU displays, completes port closing sequence.

5. **PLACE** lift table AGV/PANEL switch (09-HS-225D) to "PANEL".

6. **POSITION** lift table to "AGV LOAD HEIGHT".

(R) 7. **REQUEST** RCT survey drum for contamination.

   a. **IF** drum is contaminated,
   THEN DECONTAMINATE as directed.

   b. **RESURVEY** drum.

8. **IF** drum was fitted with outer lid,
THEN, REINSTALL outer lid as follows:

   a. **LOWER** lift table as required.

   b. **REINSTALL** outer lid.

   c. **REINSTALL** outer lid bolts.

9. **REVERSE** lift table to "DRUM AT AGV END" position.

(PCS) Moves drum to AGV end of lift table.

10. **PLACE** lift table AGV/PANEL switch to "AGV".

P. CLOSE COMPLIANT WASTE PORT (107-DO-07-402A)

NOTE - Lift Table controls and indicators in Section VII.P are located on Lift Table Control Pedestal 107-PC-09-201B.

1. **ENSURE** drum is filled to desired level.

2. **SELECT** in order, on DMS terminal, as required:

   a. "PROCESS OPS".

   b. "TRU RWM GLOVEBOX".

   c. "RWM WASTE SORTING".

   d. "RWM COMPLIANT LOADOUT".

3. **VERIFY** DMS screen "DMSS0343 - TRU RWM Compliant Waste Loadout".

4. **ENTER** the following information on waste in the compliant waste loadout drum:

   a. Primary waste type.

   b. Hazardous waste storage category for drum.

   c. Assay profile and default profile flag.

5. **SELECT** "PHYSCOMP" on DMS terminal.

6. **UPDATE** compliant loadout drum waste Description, if required.

~~7. **SELECT** "RETURN TO SORTING TABLE SCREEN".~~

8. **VERIFY** DMS screen "DMSS0343 - TRU RWM Compliant Waste Loadout".

9. **ENTER** signature password

10. **SELECT** "COMMIT".

(DMS) Store data in database.

11. **SELECT** in order, as required:

    a. "MAIN MENU".

    b. "PORT DO-07-402A".

    c. "CLOSE PORT".

12. **VERIFY** display "PORT CLOSING...".

13. **WAIT** for OIU display "PORT CLOSED".

(PCS) Writes OIU displays, completes port closing sequence.

14. **SELECT** "~~EXTEND SWAGING HEADS~~", **THEN, WAIT** for display "~~SWAGING HEADS EXTENDED~~".

15. **SELECT** "~~TURN OFF VACUUM~~".

16. **VERIFY** display "~~TURN ON VACUUM~~" (e.g., VACUUM GENERATED display changes state.)

17. **PLACE** lift table AGV/PANEL switch (09-HS-229D) to "PANEL".

18. **LOWER** lift table to "AGV HEIGHT".

(R) 19. **REQUEST** RCT survey drum for contamination.

    a. **IF** drum is contaminated,
    THEN DECONTAMINATE as directed.

    b. **RESURVEY** drum.

20. **REVERSE** lift table to "DRUM AT AGV END" position.

(PCS) Moves drum to AGV end of lift table.

21. **SELECT** in order, on DMS terminal, as required:

    a. "PROCESS OPS".

    b. "TRU RWM GLOVEBOX".

    c. "RWM WASTE TREATMENT".

    d. "COMPLIANT LOADOUT".

22. **VERIFY** DMS screen "DMSS0343 - TRU RWM Compliant Waste Loadout".

    a. **ENTER** "Beta/Gamma Dose Rate" and "Seal No.: for drum.

    b. **ENTER** signature password.

    c. **SELECT** "COMMIT".

23. **SELECT** "RETURN".

24. **PLACE** lift table AGV/PANEL switch to "AGV".

Q. **CLOSE NON-COMPLIANT WASTE PORT (107-DO-07-402B)**

NOTE - Lift Table controls and indicators in Section VII.Q are located on Lift Table Control Pedestal 107-PC-09-201A.

1. **ENSURE** drum is full and contents properly documented.

2. **SELECT** on OIU in order, as required:

    a. "MAIN MENU".

    b. "PORT DO-07-402B MENU".

    c. "CLOSE PORT".

3. **VERIFY** display "PORT CLOSING...".

4. **WAIT** for display "PORT CLOSED".

(PCS) Writes OIU displays, completes port closing sequence.

5. **SELECT** "~~EXTEND SWAGING HEADS~~", "SWAGE DRUM HEAD" DRUM HEAD SWAGE IN PROGRESS...
THEN, WAIT for display "SWAGING HEADS EXTENDED".

6. **SELECT** "TURN OFF VACUUM".

7. **VERIFY** display "TURN ON VACUUM" (e.g., VACUUM GENERATED display changes state.)

8. **PLACE** lift table AGV/PANEL switch (09-HS-221D) to "PANEL".

9. **LOWER** lift table to "AGV HEIGHT".

10. **REVERSE** lift table to "DRUM AT AGV END" position.

(PCS) Moves drum to AGV end of lift table.

(R) 11. **REQUEST** RCT survey drum for contamination.

a. **IF** drum is contaminated,
THEN DECONTAMINATE as directed.

b. **RESURVEY** drum.

~~12. **RAISE** lift table to "AGV HEIGHT".~~

~~13. **REVERSE** lift table to "DRUM AT AGV END" position.~~

(PCS) ~~Moves drum to AGV end of lift table.~~

14. **SELECT** in order, on DMS terminal, as required:

a. "PROCESS OPS".

b. "TRU RWM GLOVEBOX".

c. "RWM WASTE TREATMENT".

d. "TREATED WASTE LOADOUT".

15. **VERIFY** DMS screen "DMSS0348 - TRU RWM Treated Waste Loadout".

a. **ENTER** "Beta/Gamma Dose Rate" and "Seal No.: for drum.

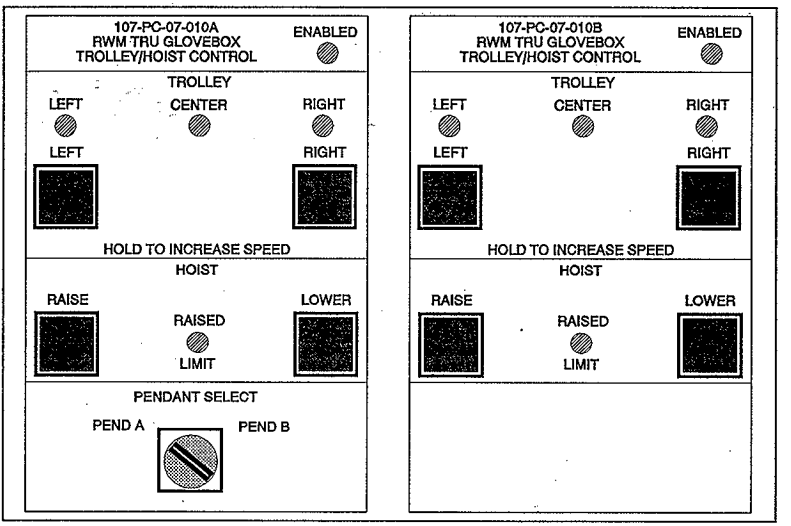
b. **ENTER** signature password

c. **SELECT** "COMMIT".

16. **SELECT** "RETURN".

17. **PLACE** lift table AGV/PANEL switch to "AGV".

ATTACHMENT 1: SORTING GLOVEBOX HOIST CONTROL FUNCTIONS



107-PC-07-010A/010B, TRU SORTING GLOVEBOX RWM TROLLEY/HOIST/LIFTER CONTROL	
CONTROL SWITCHES	
SWITCH	FUNCTION
LEFT / RIGHT	MOVE HOIST TROLLEY LEFT / RIGHT
RAISE / LOWER	RAISE / LOWER HOIST
PENDANT SELECT (*)	SELECTS ACTIVE CONTROL 107-PC-07-010A or 010B
NOTE (*): Active control is selected at Operator discretion.	
INDICATORS	
LEFT	HOIST LOCATED ABOVE RWM TRANSFER PORT 107-DO-07-402A
CENTER	HOIST LOCATED ABOVE RWM TRANSFER PORT 107-DO-07-402B
RIGHT	HOIST LOCATED ABOVE RWM TRANSFER PORT 107-DO-07-401
RAISED LIMIT	HOIST RAISED TO UPPER HEIGHT LIMIT

DISTRIBUTION SHEET

To	From	Page 1 of 1
Distribution	WRAP Engineering	Date 02/03/98
Project Title/Work Order		EDT No. 621918
HNF-SD-W026-OTR-014, Rev. 0, TRU RWM OPERATIONAL TEST REPORT		ECN No. N/A

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
RJ Bottenus	T4-51				X
WG Jasen	T4-52	X			
JK Kersten	T4-52	X			
RJ Koll	T4-51				X
KJ Leist	T4-52				X
WR Thackaberry	T4-52				X
JR Weidert	T4-52				X
Engineering Files	A3-88	X			