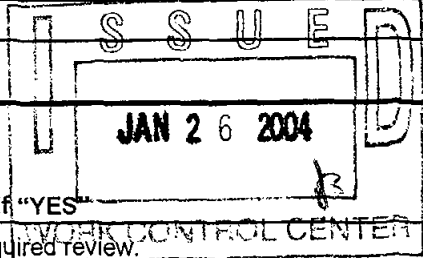


SECTION 1: Complete, with exception of Block 1, prior to presenting scope of work to the Vitrification or Hazard Control Specialists..

1. Work Control Number: VFS-102005 4. Location: VIT
2. Originator's Name/ext: Howard Payne 631
3. Labor Charge Number: WH5210004 V-001, V-011, V-031 7. Quality Level: C

CLOSED

8. Title: Preparation of Vitrification Vessels for Removal
9. Scope: SEE ATTACHED



SECTION 2: Complete prior to providing draft to reviewers.

Table with 10 columns: Item, Requirements Screen, NO, YES, Action Required if "YES". Rows include Hazards Analysis, RWP, IWP, ECN, TM, GDP, Confined Space Entry, Non-Routine/Critical, Welding, Waste generated, ALARA trigger levels exceeded, HLW, Pre-Job Brief, and Waikdown Complete.

Handwritten notes: THIS WORK WAS POSTPONED IN NOV 2002... CONTRACTORS OF RANGE 2004-2002... 8123370... 1/21/04... 1/21/04...

12. Estimated/Actual Labor Hours: PSO 40 / DDWO / QA / RC Tech / IH&S Tech / Maint E / Maint I / Maint M / RHWF / Other

SECTION 3: To be completed prior to commencement of work.

13. Reviewers: Check boxes below indicating if review required. Peer Reviewer, CM, SE, DDWO, EA, IH&S, Maint. Includes signatures and dates.

SYSTEM 55+B DESIGN MGR DE Form 1-22-04
PSO B Shf 1/21/04
QA [Signature] 1/21/04
RP [Signature] TO 1-21-04
WMS [Signature] 1/21/04
Other (List) [Signature] CSE 01/22/04
Other (List) [Signature] 1-22-04
Orig [Signature]

14. Is a USQD (USQP Form WV-3306, Sections V, VI and VII) required? Yes No X
C. Curtis (Printed Name) 1-22-04 (Date)

15. Approval: (Signature/Date) FM [Signature] 1/21/04 [Signature] 1/22/04
Signature indicates approval of WIP and agreement that all affected parties have reviewed and approved.

SECTION 4: To be completed upon completion of work or cancellation of WIP. (Attach lessons learned, if applicable, to WIP.)

16. Work Completion Documentation: (Signature/Date) Lessons Learned Yes No Check if WIP Canceled:
WGS [Signature] 1-25-04 Date 1/21/04 Orig [Signature] Date 10/4/04
17. WIP Closed: Work Control (Signature/Date) [Signature] 12/27/04

Handwritten initials or mark.

TASK	DESCRIPTION	SIGNATURE/DATE
1.0	<b>GENERAL INFORMATION</b>	
1.1	<b>PURPOSE</b>	
	<p>General Requirements</p> <p>The purpose of this work instruction is to describe methodology for preparing vessels previously used for vitrification for removal from the processing cell. It is intended to serve as guidance to put vessels in the condition necessary for removal or transfer from the cell. It includes activities such as draining, rinsing, pumping, drying, washing, dismantlement and removal of ancillary equipment (e.g. agitators). It is not intended to replace other documents currently in use, but rather to reference and supplement them (e.g. transferring cooling water coil/jackets contents to cell floor). Accommodations for vessels requiring unique considerations and specialized work instruction will be identified in an appendix to this WIP and documented on attachment A. Vessels covered by this WIP may include as a minimum, the concentrator feed make-up tank, (CFMT), melter feed hold tank (MFHT), the submerged bed scrubber (SBS), the melter, as well as various off-gas system components. Most evolutions contained within this document have been previously performed under similar circumstances e.g. tank transfers and additions. As a result, many steps included have been extracted from applicable, previously used work documents. e.g. WIPs, SOPs, etc..</p> <p>Upon transfer of material currently in the CFMT along with an associated rinse, the CFMT will no longer receive material for transfer to tank 8D-4. At that point, liquids resulting from in cell activity will be pumped to the cell floor for transfer to SD-4 via the north sump.</p>	
1.2	<b>SCOPE</b>	

TASK	DESCRIPTION	SIGNATURE/DATE
	<p>The scope of this WIP is intended to provide instruction as necessary to put vessels in a condition appropriate for removal from the cell for permanent or temporary disposition. This document will be revised as necessary to ensure sufficient clarification of work activities is present to perform work safely. Specific work activities may vary from vessel to vessel with clarification provided via associated appendices.</p> <p>A) Transfer material currently located in the CFMT to tank 8D-4                      B) Rinse the CFMT with utility water and transfer to 8D-4                      C) Secure the CFMT to prevent further transfer of material to it.                      D) Remove CFMT agitator and drain oil from drive assembly                      E) Remove existing material from the MFHT                      E) Rinse MFHT with utility water                      F) Remove MFHT agitator and drain oil from drive assembly                      G) Perform washing of selected vessel external surfaces</p>	
2.0	<b>PRECAUTIONS/LIMITATIONS</b>	
2.1	Steps in these instructions shall be completed in an order sufficient to prevent the inadvertent transfer of hazardous or radioactive material outside the vitrification cell.	

TASK	DESCRIPTION	SIGNATURE/DATE
	<p>This document does not include provisions for physically removing vessel equipment from the cell. Liquids have been or will be sampled and analyzed for proper disposition. This includes the identification of RCRA constituents.</p> <p>Additional references and clarification may be incorporated as appendices as required to meet the scope.</p> <p>Clarifications introducing new hazards shall be reviewed by the cognizant subject matter experts as listed in the original Hazards Screen Checklist (WV-3909) and documented on attachment A.</p> <p>Activities creating new waste i.e. addition of clean rinse water to a contaminated vessel are to be reviewed by EA prior to performance.</p>	
3.0	<b>PREREQUISITES</b>	
3.1	PERFORMANCE DOCUMENTS	
	<p>Obtain Confined Space Permit from IHS</p> <p>WV-3909, "HAZARDS SCREEN CHECKLIST"</p>	<p>J. cat/2/04 N/A HP 10/29/04</p>
3.2	<b>MATERIAL/SPECIAL TOOLS AND EQUIPMENT</b>	
	As described within specific appendices	
3.3	<b>FIELD PREPARATIONS (MAY BE COMPLETED OUT OF SEQUENCE)</b>	
4.0	<b>PERFORMANCE SECTION</b>	

THIS ROW WAS BASED UPON A POTENTIAL FOR A FUTURE APPENDIX TO BE ADDED WHICH MIGHT REQUIRE A CONFINED SPACE ENTRY OR A GDP. THIS WAS NEVER THE CASE & NONE WERE EVER REQUIRED.  
 HP, 9/29/04

102005

TASK

DESCRIPTION

SIGNATURE/DATE

4.1 + Record initial density 1.138 and tank level 32.7" of CFMT prior to starting agitator.

8D-4 16.5" START  
28.2 FINISH

Run the CFMT agitator for at least one hour prior to commencing transfer activities.

Transfer contents of the CFMT to 8D-4 as described in appendix A1 and A2. These describe actions necessary for the jetting and receipt activities at the WTF.

LEVEL AFTER 1.7"

Transfer 200 gallons of rinse water per appendix B.

Record CFMT tank level 6.4 and 1.15 density after adding rinse water. Repeat transfer of CFMT contents to 8D-4 per the above steps.

BEFORE  
8D-4 28.2  
8D-4 NA

Record CFMT tank level 1.7 and 1.15 density.

AFTER  
8D-4 29.5

Perform line back flush per attachment A-1.

Record final CFMT tank level 1.7 and 1.08 density.

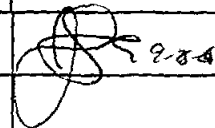
5.0 POST MAINTENANCE TESTING

5.1 NONE REQUIRED

6.0 POST COMPLETION CONFIGURATION

NP 1/21/04

+ ITEMS RETURNED TO INITIAL CONFIGURATION

 2-8-04

Attachment A

Preparation of Vit Vessels for Review

Additions and Supplements to the Work Package

As described in the General Information section of the WIP, the additions of additional references or appendices shall be documented here.

Description of change and date; appropriate reviewers initial as required.

Description	Spvsr.	IH&S	QA	EA	WMS	FM	RP
CLARIFICATION - PROCEDURE DOESN'T PROVIDE TIMEFRAME FOR POST TRANSFER LINE FLUSH (APXA-2 S.2.1)						[Initials]	[Initials]
UTILITY WATER LINE IS FROZEN & BEING THAWED. FLUSH WILL COMMENCE UPON COMPLETION OF THAWING & PRIOR TO CLOSURE of WORK DOCUMENT #P 1/26/04						[Initials]	[Initials]

DCM  
1-26-04  
OTHER

DCM  
1-26-04

Appendix A-1

10.1 Transferring Wastes from CFMT to the Waste Tank Farm  
(ref. SOP 63-21 Rev.10)

The following section provides instructions for transferring the contents of the CFMT to the WTF.

[+] [1] Complete and sign off the following pretransfer items. These actions MUST be completed and signed off BEFORE transfer.

TOP 1-27-04 CWS 1-26-04 Verify CFMT agitator has been operating for at least one hour before transfer by looking at HISTORIAN of II-0101 (CFMT\* Agitator Current)

TOP 1-27-04 CWS 1-26-04 Ensure CFMT bubbler probes have been blown down and proven operational in accordance with SOP 63-24

IF NECESSARY THIS IS NOT NECESSARY IF READING IS NOT SUSPECT. AP/20/04

TOP 1-27-04 CWS 1-26-04 Ensure HIC 0179 (CBUBAUTO\* CFMT Bubbler Auto Purge) cycle is OFF in accordance with SOP 63-24.

TOP 1-27-04 CWS 1-26-04 Ensure HIC-0101 (CFMT Agitator On/Off) is ON.

TOP 1-27-04 CWS 1-26-04 Ensure designated tank has sufficient void space remaining to accept total transfer AND jet dilution.

TOP 1-27-04 CWS 1-26-04 Ensure ALL system 55 transfer requirements are complete.

TOP 1-27-04 CWS 1-26-04 Verify transfer permissive XI-0117A (CFMT-WTF\* 8D-4 Waste Transfer Ret) has been activated in VPCR.

[2] Install or verify installed CFMT to Waste Tank Farm Transfer Jumper H-11-7360 (4223-V001-G2) per an approved work document.

[3] Ensure vacuum break for Jet J-0117 is aligned at rack 3W6.

C Open/check open 63-SH-G-1147

C Open/check open 63-VH-G-1155

C Open/check open 6-SH-GV-664

C Open/check open 63-SH-H-1264

TJP 1-29-04

[4] Energize steam to 63-HV-0110D at rack 3W6.

[a] Open the blowdown valve 6-SC-GT-655 on trap 6-SH-T-663 and 6-SC-GT-659 on trap 6-SH-T-661.

[b] Open 63-SH-H-1199.

[c] Crack open 63-SH-GL-1200 to warm the line.

[d] Blowdown condensate to a catch pan then close blowdown valve 6-SC-GT-655 and 6-SC-GT-659.

[e] Slowly open 63-SH-H-1198.

(f) OPEN 6-SH-GL-653 AP/29/04

TOP 1-29-04

NOTE Operating a jet to the waste header for longer than 2 minutes may cause a loss of off-gas ventilation on 8D-4.

[5] Perform Appendix A-2, Steps 1-5, Prior to initiating transfer.

[6] Turn HIC-0117 (CFMT-WTF\*Jet On/Off) to ON.

Indict 1/20/04 CWS

102005

1303

Appendix A-1

[a] During the jetting operation continuously monitor PI-Q09 to ensure 8D-4 is maintained at 0.5" W.C.

[b] After a maximum of two minutes jetting time, turn HIC-0117 to OFF.

[7] After waiting a minimum of 15 minutes\* for the waste header and tanks 8D-2/8D-4 pressures to stabilize, repeat Section 10.1 [6] until the desired volume of the CFMT has been transferred to the WTF.

[+][8] CLOSE the following valves at 8Q-5 and document completion in the spaces provided:

~~\_\_\_\_\_~~ 55-PH-H-124, isolation valve from 8Q-5 to the 8D-4 waste header  
~~\_\_\_\_\_~~ 55-PH-H-125, CFMT to 8Q-5 isolation valve for primary line 55-PH-2-006 because the primary transfer line was used,

[+] [a] Perform independent verification of above valving and document completion here \_\_\_\_\_.

[9] Upon completion of CFMT jetting (initial contents), add 200 gallons (approximately) of rinse water (utility water) to the CFMT per Appendix B, and again jet to 8D-4 per these appendices (A-1 and A-2).

[+][10] CLOSE the following valves at 8Q-5 and document completion in the spaces provided:

~~\_\_\_\_\_~~ 55-PH-H-124, isolation valve from 8Q-5 to the 8D-4 waste header  
~~\_\_\_\_\_~~ 55-PH-H-125, CFMT to 8Q-5 isolation valve for primary line 55-PH-2-006 because the primary transfer line was used,

[+] [a] Perform independent verification of above valving and document completion here \_\_\_\_\_.

[11] Close 63-SH-H-1198, 63-SH-H-1199, and 63-SH-GL-1200.

→ Perform LINE FLUSH PER A2 5.2 [1]

[12] Remove CFMT to Waste Tank Farm Transfer Jumper H-11-7360 (4223-V001-G2) as directed.

WASTEHEADER/

\* IF 8D-4 PRESSURE STABILIZES IN LESS THAN 15 MIN.,  
JETTING MAY RESUME SOONER.

AP 1/26/04

N/A  
200 gals  
FLUSH PERFORMED  
IMMEDIATELY  
KTD  
1/26/04

X  
OP  
RP

AP 1/26/04



## Appendix A-2

### 5.2 Waste Return from the CFMT to Tank 8D-4 (ref. SOP 55-13 Rev. 4)

**NOTE** The waste return from the CFMT to Tank 8D-4 operates passively and requires no active involvement other than monitoring. Refer to the PLC screen INTLK\_R4 for indications of correct valving. This PLC screen may be used to perform independent verification of valving.

The primary transfer line from the CFMT is to be used for this evolution.

[1] Verify that the alternate ventilation path is being utilized per the following valve lineup:

Verify **CLOSED**:

55-PH-H-019 (8Q-1)

55-PH-H-004 (8Q-1)

55-PH-H-003 (8Q-1)

55-PH-H-042 (8Q-4)

55-PH-H-039 (8Q-4)

55-PH-H-037 (8Q-1)

Verify **OPEN**:

55-PH-H-016 (8Q-1)

55-PH-H-022 (8Q-1)

55-PH-H-038 (8Q-4)

55-PH-H-045 (8Q-4)

[+] [3] **OPEN** at the 8Q-5 pit, 55-PH-H-124, CFMT Return to 8Q-4 Isolation and document completion here     OK    .

[+] [4] **OPEN** one of the following two valves at 8Q-5 pit and document completion here     OK    .

55-PH-H-125, CFMT to 8Q-5 isolation valve for the primary line from CFMT to 8Q-5 manifold (because the primary line is to be used for transfer)

[+] [a] Perform independent verification of valving above     OK    .  
Refer to PLC screen INTLK\_R4, Appendix F, sheet 3.

[5] Notify PSO that the valving is set to transfer waste from the CFMT to 8D-4.

[a] Respond to any alarms for the receiving tanks, such as high level or high pressure, per SOP 55-17, SMS Alarm Response Procedure. If required, notify PSO to stop the transfer.

**NOTE** When the transfer is complete, notify PSO that the jet is off.

[+] [6] **CLOSE** the following valves at 8Q-5 and document completion in the spaces provided:

    OK     55-PH-H-124, isolation valve from 8Q-5 to the 8D-4 waste header

    OK     55-PH-H-125, CFMT to 8Q-5 isolation valve for primary line 55-PH-2-006 because the primary transfer line was used,

[+] [a] Perform independent verification of above valving and document completion here     OK    .

102005

## Appendix A-2

### WARNING

Do not enter the utility pit until a RP survey of the utility pit has been performed and radiation levels are determined to be acceptable for entry to the pit.

[+] [7] Following completion of the return transfer of waste, obtain the actual volume transferred from the CFMT from and record it in the space provided 5968 l  
~~6120 l~~ calculate the volume received, and record here 6720 l.  
(in 80.4) (includes 200 gals)

[+] [8] PSO Supervisor verify that the material balance of volume received versus volume transferred is acceptable RJ/MYU 1/24/01

[9] Activate (and secure) the utility water system as described below.

### Operation of the Utility Water System

NOTE1 This section contains directions for activating the utility water system when directed by other steps in this procedure.

NOTE2 Steps [1] - [2][a] are optional if warm water is to be used for line flushing.

[1] If warm water is desired for flushing, assure that the breaker for the Tank 55-D-005 immersion heaters, located at the HT-3 Panel on the north wall of the PVS MCC room, is ON. If warm water is not desired, then proceed to 6.1[3].

### WARNING

DO NOT allow the temperature of 55-D-005 to increase to above 1400F. Water temperatures above this limit can cause personal injury if a leak occurs.

NOTE Operating the utility pump 55-G-016 in recirculation will help to mix the tank 55-D-005 contents to obtain uniform liquid temperature.

[2] Perform this step only if warm water is desired for flushing line, otherwise, omit this step. Turn on the six disconnects located on the south wall of the PVS Utility Room next to Tank 55-D-005.

[a] If the water temperature is below the setpoint of the temperature controller (setpoint . 1300F), the green LED in the lower right corner of 55-TI-150 temperature indicator will illuminate. Press the '\*' key on 55-TI-150 and ensure the setpoint is 130EF. If not, adjust the setpoint to 130EF by holding down the '\*' key and press the up or down arrow to change the setpoint to the desired setting. DO NOT adjust the setpoint above 135EF.

[3] Manually fill the Utility Water Tank 55-D-005 to approximately 800 gallons by placing the level control, HIC-053 to "ON".

[4] Manually CLOSE HIC-053.

\* NOTE 55-UW-H-102 MUST BE OPEN TO FILL 55-D-005 UTILITY WATER TANK.

AP 1/22/04

102005

## Appendix A-2

NOTE LCV-053 will automatically cycle open and shut maintaining the Utility Tank level between the high (800 gal.) and low (450 gal.) level control set points. High and low level alarms will occur at (970 gal.) and (380 gal.).

- [5] Place HIC-053 in "~~APTO~~". *MANUAL HP 1/22/04*
- [6] Turn the breaker for 55-G-016, located at MCC-A, compartment #2D, to the ON position and turn the PVS-001 disconnect switch ON at 55-G-016.
- [7] Place the 55-G-016 motor starter hand switch HS-070A at MCC-A, position 2D, in the REMOTE position.
- [+1] [8] Verify the utility pump seal water valve UW-H-177 is OPEN and document *HP 2-3-04*
- [9] Start 55-G-016 utility pump at PLC 55-B-011 by enabling the HIC-70B permissive and executing START at HIC-70A on 55-B-011.

### Securing the Utility Water System

NOTE The utility water system will be secured per the following when directed by other steps in this procedure.

- [1] CLOSE valve FCV-054 by turning HIC-054 OFF and STOP 55-G-016 by turning HS-070 OFF.
- [+1] [2] CLOSE valve 55-UW-H-177, 55-G-016 seal water valve. Document completion *HP 2-3-04*
- [3] Turn HIC-053, 55-D-005 level control, to MANUAL and CLOSE the valve.
- N/A* [4] If ON, then turn OFF the six disconnects for the immersion heaters in 55-D-005 if they were turned on. Document completion on Appendix E or N/A step.

[5] Place the motor starter hand switch (HS-070A) at MCC-A compartment 2D for the utility water pump in "OFF".

[10] Obtain an RP survey of the 8Q-5 utility pit for entry to the utility pit to perform valving.

*HP 2/15/04*  
*NOTE CHANGE DESCRIPTION ON ATT A (RE-DELAYED FLUSH RESULTING FROM FROZEN UTILITY WATER LINE)*  
5.2.1 Flush 8Q-5 to the CFMT

- [1] Set FQIC-054 for a flush volume of 50 - 75 gallons.
- [2] Press the START button on FQIC-054 and OPEN FV-054 by turning HIC-054 ON on the PLC.

Appendix A-2

[+] [3] CLOSE valve 55-CH-GL-206, utility bleed valve and document completion here W 2-3-04

[+] [a] Perform independent verification that valve 55-CH-GL-206 is closed  
SMA 2-3-04. REMOVE PERMANENT LO/TO DEVICES AS NECESSARY FOR  
THE FOLLOWING VALVES AP 1/22/04

[+] [4] OPEN the following valves in the 8Q-5 utility pit and document completion here W 2/3/04

55-CH-H-103, utility inlet isolation valve  
Verify pressure is >100psig on PI-162  
55-CH-GL-104, utility block valve  
55-CH-GL-106, utility block valve

VALVE LO/TO DEVICES  
TO BE REPLACED UPON  
COMPLETION & TRANSFERS.  
AP 1/22/04

[+] [a] Perform independent verification of the above valving and document completion here W 2-3-04

[5] Notify PSO that the minimum 50 gallon flush to the CFMT is about to commence.

[+] [6] Perform the following valving at 8Q-5 and document completion here W 2-3-04

OPEN valve 55-PH-H-125, CFMT to 8Q-5  
isolation valve for the primary transfer line PH-2-006

[7] OPEN valve 55-PH-H-136, utility isolation valve to 8Q-5 to commence flush.

[8] CLOSE valve 55-PH-H-136, utility isolation valve to 8Q-5, when the 50 gallon minimum flush is complete.

[+] [9] OPEN valve 55-PH-H-124, 8Q-5 manifold to the waste header (8Q-5 pit) and allow the line from the CFMT to 8D-4 to drain for a minimum of two minutes and document completion here W 2-3-04

[+] [10] Perform the following valving and document completion here: W 2-3-04  
CLOSE valve 55-PH-H-125,

[11] Reset FQIC-054 to 100 - 150 gallons per the Shift Supervisor and press the start button on FQIC-054.

[12] OPEN valve 55-PH-H-136, utility isolation valve to 8Q-5 (8Q-5 pit) and flush a volume of at least 100 gallons to 8D-4.

[13] CLOSE 55-PH-H-136 and when a minimum of 100 gallons is indicated on FQIC-054.

[14] OPEN valve 55-PH-H-125 and allow the line from the CFMT to Tank 8D-4 to drain for a minimum of two minutes.

[+] [15] After the line has been drained, perform the following valving at the

Appendix A-2

8Q-5 pit and document completion here W 2-3-04  
CLOSE valve 55-PH-H-125, CFMT to 8Q-5 isolation valve (primary line)  
AND  
CLOSE valve 55-PH-H-124, 8Q-5 manifold to the waste header isolation valve.

WARNING

Do not enter the utility pit without first obtaining a Radiation Protection survey to determine the radiation levels in the utility pit are acceptable.

[+] [16] Obtain an RP survey of the 8Q-5 utility pit, then perform the following valving and document completion here: W 2-3-04

CLOSE valve 55-CH-GL-106, utility block isolation valve  
CLOSE valve 55-CH-GL-104, utility inlet isolation valve  
CLOSE valve 55-CH-H-103, utility water isolation valve  
OPEN valve 55-CH-GL-206, utility bleed valve for 8Q-5 utility line

[+] [a] Perform independent verification of above valving and document completion here: W 2-3-04

AND REPLACEMENT OF PERMANENT  
CABLE LOCKS  
HP  
1/22/04

[17] Notify PSO that the flush is complete and the valves to the CFMT are CLOSED.

[18] Secure the Utility Water System per Section 6.2 (ref. SOP 55-13 Rev. 4)

↓  
Not  
Necessary, none  
pulled  
RB Mynd  
2/3/04

Z

TASK

DESCRIPTION

SIGNATURE/DATE

App. B

WV-3909, "HAZARDS SCREEN CHECKLIST"

B 3.2

MATERIAL/SPECIAL TOOLS AND EQUIPMENT

- A) 55 gallon drum for measuring rinse water (UTILITY WATER)
- B) Drum pump suitable for transferring rinse water to CFMT (whse. Stock no. 0213-003.0) (if existing pump isn't available)
- C) Drum lifting/rolling devices to assist in transferring the drum
- D) Associated clamps or fittings necessary to connect the pump to the transfer line

HP  
1/21/04

B 3.3

FIELD PREPARATIONS (MAY BE COMPLETED OUT OF SEQUENCE)

- A) Obtain 55 gallon drum with transfer pump with necessary fittings, and transport to working location in the MWOA

B 4.0

PERFORMANCE SECTION

+B 4.1

- PSO: Verify the following valves are in the closed position:
- 6 CH-H-900 Ball isolation valve upstream of hose connection 6-CH-HC-902 (pump tie in location in MWOA)
  - 6 CH-H-901 Ball isolation valve down stream of the hose connection (MWOA)
  - 6 CH-H-944 Cell Wall Isolation valve (LWOA)

PSO

*[Signature]*  
1/29/04

B 4.2

Consistent with PPE as described in the RWP, fill drum with rinse water and install pump in preparation for tie in to transfer line.

+B 4.3

RP  
HOLDPOINT

RP Tech: GM survey line in MWOA where pump installation will occur to verify <100 cpm/probe beta-gamma above background on line. If activity above this is detected, stop operations until additional controls can be put in place.

<100 cpm/probe beta-gamma above bkg.  
RP TECH *[Signature]*  
1/29/04

B 4.4

Verify absence of pressure (gage on pressure pot) and disconnect pressure pot from transfer line at hose connection 6-CH-HC-902 (upstream of valve 6 CH-H-901) and connect transfer pump.

B 4.5

Verify CFMT off gas blower is operating

B 4.6

Open valve 6 CH-H-944 and valve 6 CH-H-901 and turn on pump to begin transfer of rinse water.

TASK	DESCRIPTION	SIGNATURE/DATE
B4.7	Upon completion of transfer, refill drum with utility water and repeat process.	
B4.8	Upon completion of 200 gallon transfer, secure pump in the off position and close valves 6 CH-H-944 and 6 CH-H-901.	
B4.9	Line originally breached for transfer to be reconnected and valves 6 CH-H-900, 6 CH-H-901, and 6 CH-H-944 returned to their original closed position. Drum moving equipment, empty drum, pump, any additional items used, returned to proper location.	
B4.10	Upon completion of addition of rinse water, return to the <del>the</del> <del>WIP</del> for direction in jetting to 8D-4.	APPENDICES A-1/A-2 AF 10/20/04
B5.0	POST MAINTENANCE TESTING	
B5.1	NONE REQUIRED	
B6.0	POST COMPLETION CONFIGURATION	
+B6.1	Same as prior to starting	PSO [Signature] 2-04-04

NOTE: B SUFFIX ADDED TO ALL STEPS IN APPENDIX B. SO NO DUPLICATE STEP NUMBERS APPEAR IN WIP. PRIOR TO ISSUE.  
Bill Quinn 1/26/04

# HAZARDS SCREEN CHECKLIST

Project/Document ID:	Preparation of Vitrification Vessels for Removal	Rev.	0	FC#
Hazards Analyst:	Howard Payne	Date:	1/14/2004	

If the answer to any of the following questions in "Yes," consult the Hazard Control Specialty Area indicated in the right-hand column for assignment of a Hazards Controls Specialist. Screening of a field change needs to address only the impact of the field change on the original Hazards Screen Checklist.

### Hazard Control Specialty Areas Acronyms

- |                                   |  |
|-----------------------------------|--|
| CSE - Criticality Safety Engineer | IH&S - Industrial Hygiene & Safety             |
| EA - Environmental Affairs        | MPOSS - Main Plant Operations Shift Supervisor |
| EM - Emergency Management         | RP - Radiation Protection                      |
| FM - Facility Manager             | USQD Orig - USQD Originator                    |
| FP - Fire Protection              | WM - Waste Management Services                 |

**YOU SHALL CONSIDER BOTH NORMAL OPERATIONS AND PROCESS UPSET CONDITIONS.**  
Sheet 1 of 4

#	Yes	No	Potentially Hazardous Situations	Cog. Function
<b>Radiological and Utilities</b>				
1a	X		Will the work be performed in a radiologically posted area, i.e., radiological buffer area, radiation area, high radiation area, contamination area, etc.?	RP
1b		X	Will the work involve high-activity sealed radioactive sources?	RP
1c		X	Will the work involve any type of excavation or ground intrusion (e.g., driving posts, installing Hilti bolts)? (See WV-370; use Form WV-3521.)	RP, IH&S
1d		X	Will the work involve any type of construction, remodeling, or demolition?	RP, IH&S
1e		X	Will the work be conducted on equipment containing radiation detectors?	RP
1f	X		Will the work involve systems or vessels containing Highly Radioactive Waste?	RP
<b>Chemical</b> Note: Obtain and review Material Safety Data Sheets for all chemicals involved.				
2a		X	Will toxic, carcinogenic, flammable, or reactive chemicals be involved (either used, e.g., lead paint, PCBs, or generated, e.g., wastes)?	IH&S, EM, EA
2b		X	Will corrosive or oxidizing chemicals other than water be used or generated?	IH&S
2c		X	Will compressed or uncompressed gases in cylinders or bottles or cryogenics be involved, e.g., halon in cylinders?	IH&S
2d		X	Will the work involve piped-in chemicals, chemical sensors, or equipment or piping containing chemicals?	IH&S
2e		X	Will the work involve Trade/Brand name chemicals that do not list all the ingredients on the MSDS?	IH&S, EM, EA
2f		X	Will the work involve the purchase of new or increase an existing inventory level of chemicals?	IH&S, EA, EM, WMS

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**YOU SHALL CONSIDER BOTH NORMAL OPERATIONS AND PROCESS UPSET CONDITIONS.**  
**Sheet 3 of 4**

#	Yes	No	Potentially Hazardous Situations	Cog. Function
6f		X	Will the work disable or be performed in close proximity to any environmental monitoring equipment (i.e., air monitors, groundwater wells, etc.)?	EA
6g		X	Will the work require the disturbance of migratory bird nests or involve animal control?	EA
6h		X	Will the work involve PCB items in use (e.g., transformers, capacitors, voltage regulators), PCB wastes, or the removal or abandonment of pipes that distribute natural gas?	EA
6i		X	Will the work potentially affect wetlands, the flow of creeks or streams, or lake discharges?	EA
6j		X	Will the work require special packaging accommodations for waste including application of fixative or foaming agent?	WMS, EA

**Equipment Status** \* Facility Manager shall decide whether the Radiation and Safety Committee must review the proposed activity pursuant to WV-906.

7a		X	Will the work involve removing Process Safety Requirement (PSR) controlled equipment from service? (See <u>WVDP-218</u> .)	FM *
7b		X	Will the work be performed on equipment identified in any Process Safety Requirement? (See <u>WVDP-218</u> .)	FM *
7c		X	Will the work be performed on or disable Safety Class A, B, or C equipment? (See <u>WVDP-204</u> .)	FM *
7d		X	Will the work be performed on ventilation systems or air effluent monitoring systems?	FM *
7e		X	Will the work impair the operability of or have the potential to inadvertently actuate any alarm (e.g., fire detection, fire suppression, carbon monoxide, NOx, ammonia) system?	FM *, IH&S, MPOSS
7f		X	Will the work be performed on any standby or backup power supply? (See <u>SOP 00-04</u> , Appendix E.)	FM *
7g		X	Will the work impair any breathing air supply or fresh air intake?	FM *

**Industrial Hygiene and Safety, Emergency Management and Construction Safety**

8a		X	Will the work be performed on open-sided platforms or roofs more than 4 feet above ground level or more than 6 feet up on a ladder?	IH&S
8b		X	Will the work require designing and/or building a permanent fall-protection system for other than field or construction use?	IH&S
8c	HP 1/21/04	X	Will the work require burning, welding, or grinding or involve forms of high energy (e.g., electrical, steam, high-pressure air, or water)?	IH&S
8d	X	X	Will the work require entry into a confined space?	IH&S
8e		X	Will the work produce a breathing hazard (dust, fumes, solvent vapors, etc.) requiring use of respiratory protection for non-radiological purposes?	IH&S
8f		X	Will the work require handling asbestos or insulation-containing materials?	IH&S
8g		X	Will the work be conducted on or near live electrical components with more than 50 volts alternating current (VAC)?	IH&S
8h		X	Could the work or job location result in "heat" or "cold" injuries such as heat exhaustion, frost bite, or hypothermia?	IH&S
8i		X	Will the work produce noise greater than 85 dBA at the job site or at other locations?	IH&S

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**YOU SHALL CONSIDER BOTH NORMAL OPERATIONS AND PROCESS UPSET CONDITIONS.**  
**Sheet 4 of 4**

#	Yes	No	Potentially Hazardous Situations	Cog. Function
8j		X	Will the work produce paint or chemical fumes at the job site or at other locations?	IH&S
8k		X	Will the activity involve manual lifting of materials, power tools, vibrating equipment, or repetitive motions that could cause musculoskeletal injury?	IH&S
8l		X	Will the work involve hoisting and/or rigging activities?	IH&S
8m		X	Will the work result in the temporary or permanent routing of utilities (e.g., electricity, air, gas, steam, water, gasoline, fuel oil) that may become damaged as a result of exposure to personnel or vehicular traffic?	IH&S
8n		X	Will the work result in the temporary or permanent routing of utilities (e.g., electricity, air, gas, steam, water, gasoline, fuel oil) that may unintentionally become covered in some manner by material (e.g., snow, water, sand, dirt, gravel, mud, boxes, containers)?	IH&S
8o		X	Will the work breach a system known or suspected to contain hazardous materials (e.g., mercury) or energy sources (e.g., steam, electricity)?	IH&S
8p		X	Will the work be performed in an area where previous spills of hazardous materials (e.g., mercury) are known or suspected to have occurred?	IH&S
8q		X	Will the work involve conditions where the unexpected energization or startup of machines or equipment or the release of stored energy could cause injury or death to personnel? (See SOP 00-04.)	FM
<b>Nuclear Criticality</b>				
9a	X	X	Will the work involve or potentially involve greater than 1 gram of fissionable material (e.g., U-233, U-235, Pu-239, Pu-241)?	CSE
9b		X	Will the work involve spent fuel handling outside an approved shipping container?	CSE
9c		X	Will the work involve storage of fissile material in a container other than described in PSR-6 or PSR-18?	CSE
9d		X	Will the work impact any fissionable material contained in the GPC, PMC, XC-1, XC-2, or PPC?	CSE
9e		X	Will the work involve handling or placement of containers within the storage racks in the CPC?	CSE

**APPENDIX C  
PRE-JOB BRIEFING CHECKLIST**  
(Page 1 of 5)

**Pre-Job Briefing Checklist**

Work Instruction No.: 102005

Date: 1/26/04

Title: Preparation of V. + Vessels for Removal

**Attendance:**

RJ Myers                      RJ Wynne  
Responsible Work Group Supervisor (WGS) or designee

Assigned Workers (Print Name/Signature/Date):

<u>Chad Etanson</u> / <u>[Signature]</u> <u>1-26-04</u>	_____
<u>Scott Schelle</u> / <u>[Signature]</u> <u>1-26-04</u>	_____
<u>D. Rhoads</u> / <u>Rhoads</u> <u>1-26-04</u>	_____
<u>JPloetz</u> / <u>[Signature]</u> <u>1-29-04</u>	_____
<u>JBRETT</u> / <u>[Signature]</u> <u>1/29/04</u>	_____
<input checked="" type="checkbox"/> <u>[Signature]</u> <u>1/29/04</u> (Work Instruction Originator)	<input type="checkbox"/> _____ (Technical Specialist)
<input type="checkbox"/> _____ (IH&S Engineer)	<input type="checkbox"/> _____ (IH&S Field Representative)
<input type="checkbox"/> _____ (Radiological Engineer)	<input type="checkbox"/> _____ (Radiological Control Technician)
<input type="checkbox"/> _____ (facility designee)	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____

**A: ALARA TRIGGER LEVELS**

Check all that apply. If any ALARA Trigger levels are exceeded (any "yes" checked below), perform Section B and Section C. If no ALARA Trigger levels are exceeded (all "no" below), perform Section B only.

- | YES | NO  |  |
|-----|-----|--|
| [ ] | [x] | Estimated individual or collective dose greater than 100 person-mrem.  |
| [ ] | [x] | Predicted airborne radioactivity concentrations in excess of one Derived Air Concentration (DAC) to a worker taking into account assigned respiratory protection factors.  |
| [ ] | [x] | Work area removable contamination levels that exceed 100 times the releasable contamination levels in table 2-2 of <u>WVDP-010</u> .   |
| [ ] | [x] | Entry into areas where dose rates exceed 1.0 rem/hour.   |
| [ ] | [x] | Potential releases of radioactive material to the environment (onsite or offsite) that could produce a concentration greater than or equal to (>) one Derived Concentration Guide (DCG) or other limits for an individual radionuclide or > one for the sum of the fractional DCG for a mixture of radionuclides per <u>DOE Order 5400.5</u> . |
| [ ] | [x] | Potential for significant radiological exposures.  |

APPENDIX C  
PRE-JOB BRIEFING CHECKLIST  
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B: ALARA AND NON-ALARA JOBS

1.  Yes Ensured scope of work is understood?  
\_\_\_\_\_  
\_\_\_\_\_
2.  Yes Ensured identified worker Health & Safety training requirements have been verified by reviewing the workers' Health & Safety Training Tracking Badges?  
\_\_\_\_\_  
\_\_\_\_\_
3.  Yes Ensured hazards and hazard controls, including LO/TO are understood?  
 N/A  
\_\_\_\_\_  
\_\_\_\_\_
4.  Yes Discussed applicable permits (e.g., Ground Disturbance Permit, etc. )?  
 N/A  
\_\_\_\_\_  
\_\_\_\_\_
5.  Yes Discussed facility/area conditions including impact of other work in the area?  
 N/A  
\_\_\_\_\_  
\_\_\_\_\_
6.  Yes Discussed coordination with support groups including individual assignments?  
 N/A  
\_\_\_\_\_  
\_\_\_\_\_
7.  Yes Discussed all steps including "skill of craft", completion criteria, and cleanup?  
 N/A  
\_\_\_\_\_  
\_\_\_\_\_
8.  Yes Identified safe stopping conditions and hold points for necessary breaks in work?  
 N/A  
\_\_\_\_\_  
\_\_\_\_\_
9.  Yes Reviewed Emergency Response actions?  
 N/A  
\_\_\_\_\_  
\_\_\_\_\_
10.  Yes Identified and verified availability of required waste containers?  
 N/A  
\_\_\_\_\_  
\_\_\_\_\_

APPENDIX C  
PRE-JOB BRIEFING CHECKLIST  
(Page 3 of 5)

Section B (continued)

11.  Yes Discussed "Lessons Learned" from recent events? If "Yes", list below.  
 N/A

12.  Yes Discussed PPE and IWP requirements?  
 N/A

13.  Yes Applicable MSDS's for chemicals and hazardous materials available and  
 N/A understood?

14.  Yes Radiation Protection discussed radiation conditions and RWP requirements?  
 N/A

15. Additional comments: (Use additional sheets as necessary)

Pre-Job Briefing Prepared By:

Responsible WGS:

R J Myers  
Print Name

RJ Myers  
Signature

1/26/04  
Date