AP 1001 Three Mile Island Nuclear Station SIDE 1 -ure 1001-8 SOP No. R-2-Special Operating Procedure Instructions and guidelines in AP 1001 NOTE: must be followed when completing Unit No. 2 this form. Date Chin DH-US , Dir 44 43. Lide cled of DH-VS, DH-VHA 1. Title MIRO 2. Purpose include purpose at sop To proof dy instructions for the depression for durining and boundary lebt check (DH-V3 DH-VEASE) of perturns of the DH system in superior ton for the installation of the Westingheuse albende delay heat unever suptem. 3. Attach procedure to this form written according to the following format. A. Limitations and Precautions 1. Nuclear Safety 2. Environmental Safety 3. Personnel Safety ATTACHED 4. Equipment Protection B. Prerequisites C. Procedure 4. Generated by Tunn Rd. Chino Data 6/19/19 Duration of SOP - Shall be no longer than 90 days from the effective date of the SOP or (a) or (b) below - whichever occurs first. SOP will be cancelled by incorporation into existing or new permanent (a) procedure submitted by SOP is not valid after Saturation (b) (Cramble Con (fill in circum stances which will result in SOP being cancelled 6. (a) Is the procedure Nuclear Safety Related? If "yes", complete Nuclear Safety Evaluation. (Side 2 of this Form) Yes No L (b) Does the procedure affect Environmental Protection? If "yes", complete Environmental Evaluation. (Side 2 of this Form) No (c) Does the procedure affect radiation exposure to personnel? . Yes No NOTE all answere are "no", the change may be approved by the Shift Supervisor. If any questions answered "yes", the change must be approved by the Unit Superintendent. 7. Review and Approval Approved - Shift Supervisor Reviewed - List members of PORC cont Approved - Unit Superintendent SOP is Cancelled 8. 8/19/79 68 800,2701 Shift Supervisor/Shift Foremen Date TMI-53 Rev. 8/77

and particular	"EVALUATION"	. 6. 1
AP-1001	Three Mile Island Suclear Station	SIDE 2 -
Figure 1001-8	Nuclear Safety/Environmental Impact Evaluation	SOP No
1. Title <u>Depr</u> Didu 2. <u>Nuclear Safety</u> Dou •(a) •(b) •(c)	A DA - V3, DA - VAA #B. Leve check of DA - V3, DA - V4A Evaluation es this SOP: increase the probability of occurrence or the consequences of an accident or mal equipment important to safety? create the possibility for an accident or malfunction of a different type than any previously in the safety analysis report? reduce the margin of safety as defined in the basis for any technical specification	DH pulpip function of yes no evaluatad yes no ? yes no
Details of Eval This proce Consequent pofets in pressure n	uation (Explain why answers to above questions are "no". Attach additional pages it require dure will not increase the probability of occurrence cos of air accident of real kinetion of expressionent ring pe that at least one (1) DH cupters traint will be autilar mass-up during the specialities of the operations const Evaluation By Jusuity. Cripp	estant ta li fue lew suptado lo by the [suptado Data c/.9/19
3. Environmental	Impact Evaluation	
Doe	s this SOP:	
(a)	possibly involve a significant environmental impact?	yes 🗆 no 🗆
•(b)	have a significant adverse effect on the environment?	
• (c)	involve a significant environmental matter or question not previously review evaluated by the N.R.C.	red and
Details of Evalu	ation	
	NA	
	Evaluation By	Date
NOTE: If the	questions are "yes", the change must recuive N.R.C. approval.	
. Review (PORC	review of evaluation is required only when requested by the Station Superintendent/Unit Super	erintendent. If this review is mad
the PO	RC must consist of two off-site members.)	
2.		
4	-Site Members J PORC Chairman Signature	Dete -
. <u>Approval</u>		
		CONTRACTOR OF A DESCRIPTION OF A DESCRIP

procedure. This will also assure that the margins of cofity thered in the basis for TMI-2 TS 3. 5.3 are not reduced. du addition, during two (2) of the this (3) to ins required for the installation of the Westinghause" alburte dicay lest rement system (those upstream of DH-VAAOIB) at last one DH system train will be avoilable for decay hest remoon if recessary. During the third tis in (doustuan of DA-43) the THJ-2 OTSG B LONG Town Cooling supter will be avoilde to provide an attenute lost sink for decay hist semous thus presiding assurance that this operation will not create the possibility for an accident or malfunction of a different type then any avoluated previous in the sefety analysis report. also, as an extra marin of safety a opecial procedure for the - restoration of the DH septen to a standly condition within a response amount of time will be avoilable for execution if recessary DAAD ADIGINIAI TUUM UMUMUM

- A. Limitations and Precautions
 - 1.0 Nuclear Safety
 - 1.1 If any air samples indicate high airborne activity (Iodine > 9E-8 Ac/CC or Particulate > 3E-8 Ac/CC), and/or radiation levels of DH piping exceed 20 R/Hr (contact), Stop draining the DH system. A determination of corrective action will be agreed upon between Met-Ed PORC, HP, and Westinghouse prior to continuation of procedure.
 - 1.2 A briefing between HP, Ops, and the work group will be held prior to each major evolution:
 - a. depressurization of DH-V4A, 4B & 3
 - b. leak check of DH-V4A, 4B & 3
 - c. draindown of DH-V4A, 4B & 3
 - d. alternate DH tie-in
 - e. fill, vent, and hydro.
 - 1.3 If AMS-3/CAM (or equivalent) unit indicates a factor of 10 change, a local air sample will be taken and counted.
 - 1.4 Do not pump down Aux. Building sump or Building Spray Vault sumps during the draining of DH-V4A, 4B and DH-V3.
 - 1.5 This operation will result in about 900 gallons of water being drain from the DH system. Ensure that transfer and storage facilities are available and sufficient make up water is available to refill the system at the completion of the modification.
 - 1.6 Refer to SOP No. \mathcal{R} -2-19-54 for returning the DH system to a stand by condition if required by EP #34.
 - 2.0 Environmental Safety None
 - 3.0 Personnel Safety

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- 3.1 The water within the piping to be depressurized is highly radioactive and may be at a high pressure. Exercise extreme caution at all times
- 3.2 Health Physics must be continuously present during this operation and shall monitor piping and area closely, particularly during drain operations.
- 3.3 No maintenance, testing and/or changes from normal operation of the Auxiliary/Fuel Handling Building ventilation should be performed during the operations associated with this procedure without the authorization of the Met-Ed Shift Supervisor/Foreman.
- 4.0 Equipment Protection
 - 4.1 Follow standard plant switching and tagging procedures, AP 1002.

Prerequisites

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- 1.0 Install tygon tubing.(7/16" ID) to the end of the test connections downstream of DH-V214A, V214B in the ACAF room* and DH-V200 in the makeup valve alley using a securely tightened hose clamp. The tygon tubes should have a three foot loop (with the exception of DH-V200 which will require 4 foot loo seal) above the highest point of the associated large DH pipe and ensure tha there are no kinks or restrictions in the tubing.
- 2.0 Route the tygon hose installed in section B.1 to a suitable container for collecting radioactive water as directed by TMI-2 Operations. The open end the tygon hose shall be secured to ensure that it is not inadvertently pulle out the container and the container opening sealed with "poly" and vented through HEPA and charcoal filters. The container shall be properly secured to prevent tilting.
- 3.0 The Westinghouse communications trailer shall be in operation and monitoring the DH (standpipe) levels with TV cameras. Operations personnel shall record this DH level hourly from the Westinghouse trailer. If no significal level changes occur during the first 6-8 hours after the draindown, change the data taking interval to every four (4) hours.
- 4.0 Rig standpipes of 3/8" tygon hose from DH pump A and B vents (downstream cf DH-V168A and DH-V168B) to elevation 300 ft.
 - 4.1 Use 100 feet of tygon hose for each standpipe to allow the open end of the standpipe to loop down and terminate at the decay heat removal pump vault floor drain.
 - 4.2 Fill the standpipe up to the 285' elevation with "dyed" demineralized water (provided by the Chemistry Dept.).
 - 4.3 Ensure that the hose is adequately secured at the pump and at the 300 elevation and that there are no kinks or restrictions in the line.
 - 4.4 Mark the elevations on the wall from 281' to 295' in 1/2 foot increments after the hose is installed.
- 5.0 Seal with "poly" the DH pumps drain to funnel area, the DH vaults floor drains, and the tygon penetrations through the floor drains seal. Vent the sump in each decay heat vault through HEPA and charcoal filters.
 - 6.0 Verify valve lineup per Data Sheet I to assure automatic transfer of the DH vaults sumps to the Miscellaneous Waste Storage Tank.
 - 7.0 Place the DH vaults sump pumps, WDL-P-16A & B in AUTO.
 - 8.0 The following should be used for communications between Met-Ed personnel, Westinghouse Shift Supervisor, and the NRC:

TMI-2 Control Room: 203, 329, 330, Plant Page Westinghouse Shift Supervisor: 351, 944-4969, Plant Page NRC: 306, 782-3950 Health Physics: 327, Plant Page

*ACAF Room - The cubicle on the 280'6" level at the South end of the Fuel Handling Building, West of the valve room.

- 9.0 The Miscellaneous Waste Holdup Tank must have a free volume of at least 2000 gallons in order to accept the estimated 900 gallons during draindown.
- 10.0 The internals for SF-V209 are removed to allow for filling and venting of the DH system when required.
 - 11.0 Low volume air samplers will be supplied for the areas listed below with tim for counting filters as noted:
 - _11.1 At the entrance to DH vaults. Pull and count filter 15 and 30 minute after initiating draindown and every hour thereafter. In addition, a AMS-3/CAM (or equivalent) continuous air sampler will be installed in the same area and monitored every 15 minutes while draining.
 - 11.2 In the DH vault while draining and during the fill and vent. Pull ar count filters every hour.
 - _11.3 In the areas around DH-V3, DH-V4A and DH-V4B. Pull and count the filters every 6 hours.
 - 12.0 Bio-Assays will be taken as determined by Health Physics.
 - 13.0 The plant conditons shall be as follows:
 - a. "A" OTSG steaming
 - b. RCS on natural circulation/solid system
 - c. OTSG "B" long term cooling system is operable prior to draindown of DH-V3 (section 9.0).
 - _14.0 Notify the Unit 2 Control Room of the impending depressurization of the DH piping.
 - C. Procedure

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- 1.0 Depressurization of DH-V4B
- Complete the valve lineup per Data Sheet II.
- 1.2 Verify the tygon hose is connected from DH-V214B to vent container and container is vented through HEPA and charcoal filters.
- 1.3 Verify air samplers are functional per Prerequisite 11.3.
 - 1.4 Slowly open DH-V214B and watch for water in the tygon hose. There should be no more than one liter of very low pressure drainage and possibly none. If there is a steady stream indicating a pressurized leak past DH-V4B and V213B, secure the depressurization by shutting DH-V214B. If draining stops as expected, continue the operation by fully oneping DH-V214B and backseat it lightly.

CAUTION: Tygon hose level should not exceed 18+ 5 inches.

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1.5 Slowly crack open DH-V213B. Watch for water level in tygon hose to increase. Be prepared to close DH-V213B. If level increase exceeds 18+ 5 inches, CLOSE DH-V213B and DH-V214B. Notify the Shift Supervisor/Foreman.

- 1.6 If flow stops, then the depressurization operation is complete.
- 2.0 Leak Check of DH-V4B.
 - _____2.1 Mark the water level on the tygon hose such that the O level corresponds to the level of water in the hose.
 - _2.2 Continuously monitor water level, (DO NOT ALLOW WATER LEVEL TO EXCEE TOP OF LOOP SEAL) and after exactly one hour record the level of water in the tygon hose.

DH-V4B leak rate: inch/hr.

STOP, IMPORTANT: This is a hold point. Notify the WNSD Shift Super visor for further guidance before proceeding with this procedure. At this time WNSD/Met-Ed will mak the determination if the measured leakage rate is acceptable from the Health Physics and suitability field welding standpoints. Met-Ed operations shal procure Unit Superintendent's authorization before proceeding to Section 3.0 if leakage was observed.

3.0 Drain down of DH-V4B.

- CAUTION: During this section the decay heat "B" loop will be out of service and unavailable for DH removal.
- 3.1 Verify the standpipe is installed per Prerequisite 4.0 4.4.
- 3.2 Verify the DH Vault "B" sump area is covered per Prerequisite 5.0.
- 3.3 Verify valve lineup per Data Sheet I is completed per Prerequisite 6.0.
- 3.4 Verify the DH vault sump pump in AUTO per Prerequisite 7.0.
- 3.5 Verify Air Sampiers are operational per Prerequisites 11.1 & 11.2.
- 3.6 Start the draindown by slowly opening DH-V169B and throttle open DH-V170B to maintain 2 - 3 gpm draindown rate. Do not overflow the drain.
 - _____3.7 Monitor the Miscellaneous Waste Holdup Tank level while draining DH-V4B to insure correct flow path.
 - 3.8 Place the "B" DH pump vent standpipe in service by slowly opening DH-V168B. Lightly backseat the valve. Slowly open DH-V167B and allo the water to slowly rise in the standpipe. The water level in the standpipe should rise to about 292 feet and then stop. Fully open DH-V167B and lightly backseat. If the standpipe level exceeds 298 F stop the draining operation by shutting DH-V169B and DH-V167B.
 - _3.9 Continue the draining operation until the level in the standpipe is at the 285 (+ 2) foot mark, then shut DH-V169B and DH-V170B.
 - 3.10 After the draining operation has been stopped, allow the standpipe to remain on line and record the level of the stand pipe on Data Sheet !

- 3.11 This level shall be monitored by remote TV via the Westinghouse communications trailer for the entire time that the system is in a partially drained condition. Operations personnel shall record this level hourly from the Westinghouse trailer. If no significant change is observed during the first 6-8 hours after draindown, change the data collecting interval to every 4 hours. See Data Sheet V for recording water level in tygon hose.
- _____3.12 Proceed with tie-in of the alternate DH removal system upstream of DH-V4B per ECM 3475-109.
- ____3.13 Fill, vent and hydro the "B" train piping of the DH system per SOP_____.

4.0 Depressurization of DH-V4A

- 4.1 Complete the valve lineup per Data Sheet III.
- 4.2 Verify tygon hose is connected from DH-V214A to vent container and vent container is vented through HEPA and charcoal filter.
- 4.3 Verify air samplers functional per prerequisite 11.3.

4.4 Slowly open DH-V214A and watch for water in the tygon hose. There should be no more than one liter of very low pressure drainage and possibly none. If there is a steady stream indicating a pressurized leak past DH-V4A and V213A, secure the depressurization by shutting DH-V214A. If draining stops as expected, continue the operation by fully opening DH-V214A and backseat it lightly.

CAUTION: Tygon hose level should not exceed 6+ 5 inches/

4.5 Slowly crack open DH-V213A. Watch for water level increase in the tygon tube. Be prepared to close DH-V213A. If level increase exceed 6+ 5 inches close DH-V213A and DH-V214A. Notify the Shift Supervisor Foreman.

4.6 If flow stops, then the depressurization operation is complete.

5.0 Leak check of DH-V4A.

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5.1 Mark the water level on the tygon hose such that the O level corresponds to the level of water in the hose.

CAUTION: Do not allow water level in tygon hose to exceed loop seal.

5.2 Continuously monitor water level in tygon hose and after exactly one hour, record the level of water in the tygon hose.

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DH-V4A leakage rate ______ in./hr.

STOP, IMPORTANT:

ANT: This is a hold point. Notify the WNSD Shift Supervisor for further guidance before proceeding with this procedure. At this time WNSD/Met-Ed will make the determination if the measured leakage is accept able from the Health Physics and suitability for field welding standpoints. Met-Ed Operations shall procure the Unit Superintendent's authorization befor, proceeding with step 6.0 if leakage is observed.

6.0 Draindown of DH-V4A

CAUTION: During this section the DH "A" loop will be out of service and unavailable for Decay Heat Removal.

- 6.1 Verify the standpipe is installed per prerequisite 4.0 4.4.
 - 6.2 Verify the DH Vault "A" sump area is covered per prerequisite 5.0.
 - 6.3 Verify valve lineup per Data Sheet I is completed per prerequisite 6.
 - 6.4 Verify DH Vault sump pumps in AUTO pre prerequisite 7.0 and that the necessary free volume is available in MWHT.
 - 6.5 Verify air samplers functional per prerequisites 11.1 & 11.2.
 - Start the draindown by slowly opening DH-V169A and throttle open DH-V170A to maintain 2 3 gpm drainage rate. Do not overflow drains
 - Monitor Miscellaneous Waste Holdup Tank level while draining to insur correct flow path.

Place the "A" DH pump vent standpipe in service by slowly opening DH-V168A. Lightly backseat the valve. Slowly open DH-V167A and allo the water to slowly rise in the standpipe. The water level in the standpipe should rise to about 297 feet and then stop. Fully open DH-V167A and lightly backseat. If the standpipe level exceeds 298 feet, stop the draining operation by shutting DH-V169A and DH-V167A.

Continue the draining operation until the level in the standpipe is



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After the draining operation has been stopped, allow the standpipe to remain on line and record the level of the standpipe on Data Sheet V.

at the 285 (+ 2) foot mark, then shut DH-V169A and DH-V170A.

6.11 This level shall be monitored by remote TV via the Westinghouse communications trailer for the entire time that the system is in a partially drained condition. Operations personnel shall record this level hourly from the Westinghouse trailer. If no significant level change is observed during the first 6 - 8 hours after draindown, change the data collecting interval to every 4 hours. See Data Sheet V for recording water levels.

6.12 Proceed with the tie-in of the alternate DH removal system upstream of DH-V4A per ECM 3475-109.

6.13 Fill, vent and hydro "A" train of DH system per SOP

7.0 Depressurization of DH-V3

7.1 Verify that the "A" decay heat pump, DH-P1A, casing drains and pump vents are closed:

DH-V169A	
DH-V170A	a service extension of
DH-V167A	
DH-V168A	

7.2 Perform the valve lineup per Data Sheet IV.

7.3 Verify tygon hose is connected from DH-V200 to vent container and container is vented through HEPA and charcoal filters.

NOTE: Tygon hose will require 4 foot loop seal.

_7.4 Verify air samplers are functional per prerequisite 11.3..

CAUTION: The area drained DH-V199 and DH-V200 is a HIGH RADIATION AREA, stay times should be minimized at the direction of the HP Tech.

7.5 Slowly open DH-V200 and watch for water in the tygon hose. There should be no more than one liter of very low pressure drainage and possibly none. If there is a steady stream indicating a pressurized leak past DH-V3 and DH-V199, secure the depressurization operation by shutting DH-V200. Notify the WNSD Shift Supervisor and Unit 2 Contro Room. If drainage stops as expected, continue the operation by fully opening DH-V200 and backseat it lightly.

CAUTION: Tygon hose water level should not exceed 30+ 5 inches.

7.6 Slowly crack open DH-V199. Watch for water level increase in the tygon hose. Be prepared to close DH-V199. If level increase exceeds 30± 5 inches, CLOSE DH-V199 and DH-V200. Notify the Shift Supervisor Foreman.

7.7 If flow stops, then the depressurization of DH-V3 is complete.

8.0 Leak check of DH-V3

____8.1 Mark the water level on the tygon hose such that the O level corresponds to the level of water in the hose.

CAUTION: DO NOT ALLOW WATER LEVEL IN THE TYGOM HOSE TO EXCEED THE LOOP SEAL.

8.2 Monitor the water level in the tygon hose for a few minutes to ensure level increase will not exceed the loop seal elevation. Check the tygon hose in 30 minutes and after exactly one hour record the level of water in the tygon hose. DH-V3 leak rate

in./hr.

STOP, IMPORTANT:

ANT: This is a hold point. Notify the WNSD Shift Supervisor for further guidance before proceeding with this procedure. At this time, WNSD/Met-Ed will mal the determination if the measured leakage is accept able from the Health Physics and suitability for field welding standpoints. Met-Ed Operations shall procure the Unit Superintendent's authorization before proceeding with step 9.0 if leakage is observed

9.0 Draindown of DH-V3

CAUTION: During this section the DH system will be out of service and unavailable for DH removal.

- 9.1 The Long Term OTSG "B" cooling is oper. it al.
- 9.2 Verify the standpipe is installed per prerequisite 4.0 4.4.
- 9.3 Verify the DH Vault "A" sump area is covered per prerequisite 5.0.
- 9.4 Verify valve lineup per Data Sheet I is completed per prerequisite 6.
- 9.5 Verify DH vault sump pumps are in AUTO per prerequisite 7.0.
- 9.6 Verify necessary free volume is available in MWHT per prerequisite 9.
- 9.7 Verify air samplers are functional perpresequisite 11.1 and 11.2.
- 9.8 Open DH-V100A

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- 9.9 Start the draindown by slowly opening DH-V169A and throttle open DH-V170A to maintain 2 -3 gpm drainage rate. Do not overflow drains:
 - ____9.10 Monitor the Miscellaneous Waste Holdup Tank level while draining to insure correct flow path.
 - 9.11 Place the "A" DH pump vent standpipe in service by slowly opening DH-V168A. Lightly backseat the valve. Slowly open DH-V167A and allo the water to slowly rise in the standpipe. The water level in the standpipe should rise and then stop. Fully open DH-V167A and lightly backseat. If the standpipe level exceeds 298 feet stop the draining operation by closing DH-V169A and DH-V167A.
 - ____9.12 Continue the draining operation until the level in the standpipe is at the 285 (+ 2) foot mark, then close DH-V169A and DH-V170A.
 - _9.13 After the draining operation has been stopped, allow the standpipe to remain on line and record the level on Data Sheet V.
 - _____9.14 This level shall be monitored by remote TV via the Westinghouse communications trailer for the entire time that the system is in a partially drained. Operations personnel shall record this level hourly from the Westinghouse trailer. If no significant level chages is observed during the first 6-8 hours after the draindown, change the data taking interval to every four hours. See Data Sheet V for recording levels.

9.15 Proceed with the tie-in of the alternate DH removal system downstream of DH-V3 per ECM 347.5-109.

9.16 Fill, vent and hydro the "A" train piping of the DH system per SOP_____.

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A. Close or verify closed the following valves:

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Valv	e No.	Signature/Date
WDL-V-1147A WDL-V-388 WDL-V-388 WDL-V-316 WDL-V-902 WDL-V-315 WDL-V-215 WDL-V-330 WDL-V-361 WDL-V-361 WDL-V-386 WDL-V-386 WDL-V-333 WDL-V-414 WDL-V-357A WDL-V-358A WDL-V-565A WDL-V-565A WDL-V-565A WDL-V-331B WDL-V-332B WDL-V-391	Assumed Closed Do	Not Operate Per Alara
WDL-V-356A		

B. Open or verify open the following valves:

Valve No.

Signature/Date

WDL-V-209A WDL-V-384 WDL-V-364 WDL-V-331A WDL-V-359A------Assumed Closed ----Do Not Operate Per Alara WDL-V-360A------Assumed Closed ----Do Not Operate Per Alara WDL-V-332A WDL-V-269 WDL-V-256

DATA SHEET II

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C	Valve No.	Desctiption	Position	Signature/E te
	Place in pull t Rack out and re	to lock and red tag DH-P-1B ed tag DH-P-1B.		
	Fuel Handling Building Floor Elevation 280'6"			
	DH-V4B	DH "B" Loop to Primary, Motor Op.	Closed and Red Tag extension control	
	DH-V213B	Test Connection upstream of DH-V4B	Closed	
	DH-V214B	Test Connection upstream of DH-V4B	Closed	
	Makeup Valve Al	ley Floor Elevation 280'6"		
	DH-V7B	DH "B" Loop to MU pumps	Closed and Red Tag extension control	
•	DH-V186B	DH "B" Loop to PRZR. Aux. Spray Line	Closed	
	DH Vault "B" Floor Elevation 258'6"			
(DH-V193B	DH Coolers Discharge Cross Connect	Clused	
	DH-V106B .	DH "B" Loop Discharge to SF Demin.	Closed and Red Tag extension control	
	DH-V112B	DH "B" Loop Discharge Sample	Closed	
	DH-V100B	Primary to DH "B" Loop Suction	Closed and Red Tag extension control	
	0H-V1018	-BWST-Resirc, to DH "B" Loop suction	Closed and Red Tag Del extension-control	t: 7-29.18
	DH-V102B	BWST/RB Sumps to DH "B" Loop suction	Closed and Red Tag extension control	<u></u>
	DH-V128B	DH "B" Coolers (DH-C-1B) Discharge Motor op.	Open	
	DH-V1788	DH "B" Cooler (DH-C-1B) Discharge	Open	
	DH Vault "A" Fl	oor Elevation 258'6"		
1	Dh-V108B	DH Discharge Cross Connect	Closed ,	
(,	DH-V193A	DH Coolers Discharge Cross Connect	Closed	

DATA SHEET III

	Valve No.	Description	Position	Signature/Dat		
	Place in pull Rack out and re	to lock and red tag DH-P-1A ed tag DH-P-1A				
	Fuel Handling E	Building Floor Elevation 280'6"				
	DH-V4A	DH "A" Loop to Primary, Motor Op.	Closed and Red Tag extension control			
	DH-V213A	Test Connection upstream of DH-V4A	Closed			
	DH-V214A	Test Connection upstream of DH-V4A	Closed			
	Makeup Valve Al	ley Floor Elevation 280'6"				
	DH-V7A	DH "A" Loop to MU pumps	Closed and Red Tag extension control			
	DH-V186A	DH "A" Loop to PRZR Aux. Spray Line	Closed			
	DH Vault "A" Fl	DH Vault "A" Floor Elevation 258'6"				
	DH-V108A	DH Discharge Cross Connect	Closed			
	DH-V193A	DH Coolers Discharge Cross Connect	Closed			
	DH-V106A	DH "A" Loop Discharge to SF Demin.	Closed and Red Tag extension control			
	DH-V112A	DH "A" Loop Discharge Sample	Closed .			
	DH-V100A	Primary to DH "A" Loop Suction	Closed and Red Tag extension control			
	. DH-V101A	BWST Recirc. to DH "A" Loop	Closed and Red Tag	0.29.19		
	DH-V102A	BWST/RB Sump to DH "A" Loop Suction	Closed and Red Tag extension control	¥		
	DH-V128A	DH "A" Coolers (DH-C-1A) Discharge Motor Op.	Open			
	DH-V178A	DH "A" Cooler (DH-C-1A) Discharge	Open			
*	DH Vault "B" Fl	oor Elevation 258'6"				
	DH-V193B	DH Coolers Discharge Cross Connect	Closed			

DATA SHEET IV

Valve No.	Description	Position	Signature/Date
Place in pul Rack out and	l to lock and red tag DH-P-1A I red tag DH-P-1A		
Reactor Buil	ding		
DH-V-1	Primary Loop to DHR System Motor Op.	Closed and Red Tag extension control	
DH-V171	DH-V1 Bypass	Closed and Red Tag extension control	
Fuel Handlin	g Building Floor Elevation 280'6"		
DH-V3	Primary Loop to DHR System Motor Op.	Closed and Red Tag extension control	
DH-V199	Test connection upstream of DH-V3	Closed	
DH-V200	Test Connection upstream of DH-V3	Closed	
DH Vault "B"	Floor Elevation 258'6"		
DH-V100B	Primary to DH Loop "B" Suction	Closed and Red Tag extension control	
DH-V1938	DH Coolers Discharge Cross Connect	Closed	
DH-V102B	RB Sump to DH Loop "B" Suction	Closed and Red Tag extension control	
DH Vault "A"	Floor Elevation 258'6"		
DH-V193A	DH Coolers Discharge Cross Connect	Closed	-
DH-V106A	DH "A" Loop Discharge to SF Demin.	Closed and Red Tag extension control	
DH-V112A	DH "A" Loop Discharge Sample	Closed	
DH-V100A	Primary to DH "A" Loop Suction	Closed	0
BH-VIOIA	BWST Recirc. to DH "A" Loop	Closed and Red Tages	2 a down 29.79
DH-V102A	BWST/RB Sump to DH "A" Loop Suction	Closed and Red Tag . extensic control	
DH-V128A	DH "A" Coolers (DH-C-1A) Discharge	Closed and Red Tag	

"Continued: (DATA SULLI IV)

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Valve 1	o. Description	Position	Signature/Date
DH-V17	A DH "A" Cooler (DH-C-1A) Discharg	ge Closed	
Makeup	Valve Alley Elevation 280'6"		
DH-V18	From SFC to DH Suction	Locked Closed	

DATA SHEET V

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Standpipe water level measurements per steps 3.11, 6.11 and 9.12 (indicate appropriat step by circling step being performed above).

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