OCT 26 1994 24 ENGINEERING DATA TRANSMITTAL						Page 1 of <u>1</u>	
2. To: (Receiving Organization)		3. From: (Originating Organization)		4. Related EDT No.: 601494			
Information Resource Management		K Basins Engineering		7. Purchase Order No.: NA			
5. Proj./Prog./Dept./Div.: 2A320 ^{SKB} _{10/26/94}		6. Cog. Engr.: M.W. Thompson		9. Equip./Component No.: CVHE Chillers			
8. Originator Remarks: For Approval		11. Receiver Remarks:		10. System/Bldg./Facility: 59/60-07, 105 E&W, 100K			
				12. Major Assm. Dwg. No.: H-1-45977, H-1-46309			
				13. Permit/Permit Application No.: NA			
				14. Required Response Date: NA			

15. DATA TRANSMITTED					(F)	(G)	(H)	(I)
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	Approval Designator	Reason for Transmittal	Originator Disposition	Receiver Disposition
1	WHC-SD-WM-AP-029		0	Boundary Description For Removal Of Water Cooled Chillers	Q	3	6	6

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 2. Release 3. Information 4. Review 5. Post-Review 6. Dist. (Receipt Acknow. Required)	1. Approved 2. Approved w/comment 3. Disapproved w/comment 4. Reviewed no/comment 5. Reviewed w/comment 6. Receipt acknowledged	

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)										(G)	(H)
Reason	Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN	Reason	Disp.
1	/	Cog. Eng. M.W. Thompson	<i>M.W. Thompson</i>	6-29-94	X3-76	ENG Mgr J.P. Schmidt			X3-73	3	
1	/	Cog. Mgr. T.H. Gronewald	<i>T.H. Gronewald</i>	4-29-94	X3-73	Central Files		18-04			
1	/	QA J.I. Diehl	<i>J.I. Diehl</i>	10-12-94	X3-72	O.S.T.I. (2)		18-07			
		Safety									
		Env.									
1		OPS C.A. Thompson	<i>C.A. Thompson</i>	10/12/94	X3-72						
3		ENG Mgr R.J. Kuhta			X3-76						

18. Signature of EDT Originator <i>M.W. Thompson</i> 6-29-94	19. Authorized Representative for Receiving Organization _____ Date _____	20. Cognizant Manager <i>T.H. Gronewald</i> 4-29-94	21. DOE APPROVAL (if required) Ctrl No. _____ ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments
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RELEASE AUTHORIZATION

Document Number: WHC-SD-WM-AP-029, REV 0

Document Title: Boundry Description For Removal Of Water Cooled Chillers

Release Date: 10/24/94

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This document was reviewed following the
procedures described in WHC-CM-3-4 and is:

APPROVED FOR PUBLIC RELEASE

* * * * *

WHC Information Release Administration Specialist:

Kara Broz

(Signature)

October 24, 1994

(Date)

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SUPPORTING DOCUMENT		1. Total Pages 6
2. Title Boundry Description For Removal Of Water Cooled Chillers	3. Number WHC-SD-WM-AP-029	4. Rev No. 0
5. Key Words 105 K-East and K-West Basins Removal Water Cooled Chillers (Trane Model CVHE Chillers)	6. Author Name: M.W. Thompson <i>M.W. Thompson</i> 7-6-94 Signature Organization/Charge Code 2A320/KK2E1	
7. Abstract This SD describes the boundries for removal of the water cooled chillers by projects.		
<p>8. PURPOSE AND USE OF DOCUMENT - This document was prepared for use within the U.S. Department of Energy and its contractors. It is to be used only to perform, direct, or integrate work under U.S. Department of Energy contracts. This document is not approved for public release until reviewed.</p> <p>PATENT STATUS - This document copy, since it is transmitted in advance of patent clearance, is made available in confidence solely for use in performance of work under contracts with the U.S. Department of Energy. This document is not to be published nor its contents otherwise disseminated or used for purposes other than specified above before patent approval for such release or use has been secured, upon request, from the Patent Counsel, U.S. Department of Energy Field Office, Richland, WA.</p> <p>DISCLAIMER - This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, nor any of their contractors, subcontractors or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or any third party's use or the results of such use of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.</p>		<p>10. RELEASE STAMP</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>OFFICIAL RELEASE BY WHC DATE OCT 26 1994 <i>Sta #19</i> (2A)</p> </div>
9. Impact Level Q		

MASTER

TITLE: BOUNDARY DESCRIPTION FOR REMOVAL OF WATER COOLED CHILLERS

PURPOSE

- * Define K Basins Engineering (KBE) and projects responsibilities for removal of the Trane (Trane is a registered trade mark) water cooled Model CVHE Chillers at 105 K-East and 105 K-West.
- * Document boundaries for removal of water cooled Trane Model CVHE Chillers at 105 K-East and 105 K-West.
- * Define criteria for removal of the CVHE chillers by projects.
- * Define any KBE actions for isolation and removal of the CVHE chillers.

RESPONSIBILITIES

K Basins Engineering (KBE) shall be responsible for refrigerant removal and removal of facility electrical to the chiller power panel. Projects shall be responsible for removal of the chillers as described below.

BOUNDARY OF REMOVAL

K-East: Remove valves GV-21 and GV-23 from primary water loop and valves GV-6 and GLV-8 from the secondary water loop of the chiller. All piping, chiller components and associated instruments between the removed valves shall also be removed. The remaining pipe flanges are to be blanked off. Chiller electrical shall be removed up to and including the fuses in the chiller electrical panel.

Remove the 1/2" cooling water line that goes to the chiller purge unit. Install a 1/2" NPT pipe plug in the remaining 3000#, 8 x 1/2" threadolet (part #39 of H-1-45977).
ECN 160204 has been written to remove cooling lines to the K-East purge unit. Reference Job Control System (JCS) work package# 1N-93-090.

K-West: Remove valves BV-15 and BV-17 from primary water loop. Remove valve GV-6 but leave CHV-213 in place in the secondary water loop of the chiller. All piping, chiller components and associated instruments between the removed valves and CHV-213 shall also be removed. The remaining pipe flanges in the primary loop are to be blanked off. A spool piece including any necessary pipe supports shall be designed and installed where the chiller is removed from the secondary water loop. The spool piece in the service water loop is necessary so that flow can be established to prevent stagnation of the clearwells.

Chiller electrical shall be removed up to and including the fuses in the chiller electrical panel.

Remove the 1/2" purge cooling water line. Install a 1/2" NPT pipe plug in the remaining 3000#, 8 x 1/2" threadolet (part #40 of H-1-46309).

Footnote: Trane is a registered trademark of THE TRANE COMPANY, LA CROSSE, WISCONSIN.

DESIGN AND OPERATING CONSIDERATIONS

Consideration shall be given for any pipe supports necessary to support the remaining existing piping and the K-West spool piece.

The K-West chiller shall be removed and the spool piece installed before the K-East chiller is removed. This will allow a way to circulate service water through the clearwells while the K-East chiller is being removed.

REFERENCE DRAWINGS

K-East

H-1-45977, sht 1, K-East Water Chiller Bill Of Materials And General Notes

H-1-45977, sht 2, K-East Water Chiller P&ID & Power Distribution

H-1-45977, sht 3, K-East Water Chiller Assembly Plan And Sections

H-1-45977, sht 4, K-East Water Chiller Assembly Support Details

H-1-51837, sht 1, K-East Fuel Storage Basin P&ID Legend Notes & Key

H-1-51837, sht 2, K-East Fuel Storage Basin P&ID Cooling Water System

Design Change #86094, Modification of chiller piping. Written against H-1-45977 sht. 1, 2 and 3. H-1-45977 has not been revised.

Design Change #82107, The purpose of this design change was to authorize and document the installation of a water chiller (per H-1-45977) in the 105 K-East basin recirculation system.

ECN 160204, Removal of the 1/2" cooling lines to the purge unit.

K-West

H-1-46309, sht 1, K-West Water Chiller Bill Of Materials And General Notes

H-1-46309, sht 2, K-West Water Chiller P&ID & Power Distribution

H-1-46309, sht 3, K-West Water Chiller Assembly Plan And Sections

H-1-46309, sht 4, K-West Water Chiller Assembly Support Details

H-1-46309, sht 5, K-West Water Chiller Details

Design Change #87238, Heat exchanger and water chiller drain modification.

Design Change #83057, The purpose of this design change was to authorize and document the installation of a water chiller (per H-1-46309) in the 105 K-West basin recirculation system.

Note: K-West does not have a P&ID of the fuel storage basin cooling water system.

DEFINE ANY KBE ACTIONS FOR ISOLATION AND REMOVAL OF THE CVHE CHILLERS

Support from operations will be required to isolate and drain the primary and secondary water lines. This is required so that the chillers can be removed, the spool piece installed in the service water loop at K-West and the remaining water lines can be blanked or plugged as needed.

Job Control Work System (JCS) work package 1K-94-351 for refrigerant removal must be complete before any physical removal effort of the chillers begins.

KBE shall be responsible removal of facility electrical from the chiller power panels.

The following JCS work packages can be canceled.

1N-93-090: Install "Purifier" Purge ON KE Chiller

1N-92-321: Replace Chiller temperature indicators (TI's) With Calibrated TI's,

1N-93-098: Replace 105 KE Chiller Control Module

KE

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GENERAL FLOW DIAGRAM

KW

GENERAL FLOW DIAGRAM