



U.S. Department of Energy

0085339

~~Office of River Protection~~

P.O. Box 450, MSIN H6-60
Richland, Washington 99352

FEB 26 2010

10-ESQ-055

Ms. Jane A. Hedges, Program Manager
Nuclear Waste Program
Washington State
Department of Ecology
3100 Port of Benton Blvd.
Richland, Washington 99354

Dear Ms. Hedges:

SUBMITTAL OF HANFORD FACILITY RESOURCE CONSERVATION AND RECOVERY
ACT (RCRA) PERMIT MODIFICATION NOTIFICATION FORM 24590-PTF-PCN-ENV-09-
005

Reference: WA7890008967, "Dangerous Waste Portion of the Hanford Facility Resource
Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of
Dangerous Waste, Part III, Operating Unit 10, 'Waste Treatment and
Immobilization Plant.'"

This letter transmits the Hanford Facility RCRA Permit Modification Notification Form 24590-
PTF-PCN-ENV-09-005 attached, for the Washington State Department of Ecology review and
approval. The form describes a requested Class 1 modification to the Reference.

Modification Notification Form 24590-PTF-PCN-ENV-09-005 submits Piping and
Instrumentation Diagram (P&ID) drawings for the Pretreatment Facility Ultrafiltration Process
System to replace the permitted P&ID drawings currently found in Appendix 8.2 of the
Reference.

If you have any questions, please contact me, or your staff may contact Gae M. Neath, Office of
Environmental Safety and Quality, (509) 376-7828.

Sincerely,

RECEIVED
MAR 09 2010

W.J. Taylor

William J. Taylor, Assistant Manager
Office of Environmental Safety and Quality

EDMC

ESQ:GMN

Attachment

cc: See page 2

Ms. Jane A. Hedges
10-ESQ-055

-2-

FEB 26 2010

cc w/attach:

J. Brown, BNI
B. L. Curn, BNI
B. G. Erlandson, BNI
P. A. Fisher, BNI
S. K. Murdock, BNI
F. M. Russo, BNI

Administrative Record (WTP H-0-8)

BNI Correspondence
Environmental Portal, LMSI

cc electronic:

R. K. Biyani, Ecology
A. S. Carlson, Ecology
K. A. Elsethagen, Ecology (1 hard copy)
T. R. Williams, Ecology
S. A. Thompson, MSA
A. C. McKarns, RL
D. J. Sommer, SCS

cc w/o attach:

D. M. Busche, BNI
J. Cox, CTUIR
S. G. Harris, CTUIR
S. L. Dahl, Ecology
G. P. Davis, Ecology
D. McDonald, Ecology
G. P. Bohnee, NPT
K. Niles, Oregon Energy
S. R. Weil, RL
R. Jim, YN

Attachment
10-ESQ-055

Hanford Facility RCRA Permit Modification Notification
Form 24590-PTF-PCN-ENV-09-005

Quarter Ending March 31, 2010

24590-PTF-PCN-ENV-09-005

Hanford Facility RCRA Permit Modification Notification Form

Part III, Operating Unit 10

Waste Treatment and Immobilization Plant

Index

Page 2 of 4: Hanford Facility RCRA Permit, Part III, Operating Unit 10, Waste Treatment and Immobilization Plant
Update Piping and Instrumentation Diagrams (P&ID) for the PTF Ultrafiltration Process (UFP) System in
Appendix 8.2 of the Dangerous Waste Permit (DWP).

Submitted by Co-Operator:

Reviewed by ORP Program Office:

D. M. Busche
D. M. Busche

2/10/10
Date

G. A. Girard
G. A. Girard

2/24/10
Date

Quarter Ending March 31, 2010

24590-PTF-PCN-ENV-09-005

Hanford Facility RCRA Permit Modification Notification Form

Unit: Waste Treatment and Immobilization Plant	Permit Part: Part III, Operating Unit 10
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Description of Modification:

The purpose of this Class 1 prime modification is to update the P&IDs for the PTF UFP System, in Appendix 8.2 of the DWP. The permit P&IDs currently incorporated into the DWP are being replaced with source P&IDs as indicated in the table below.

Appendix 8.2			
Replace:	24590-PTF-M6-UFP-P0016, Rev 0	With:	24590-PTF-M6-UFP-00016001, Rev 0
	24590-PTF-M6-UFP-P0017, Rev. 0		24590-PTF-M6-UFP-00017001, Rev 0
			24590-PTF-M6-UFP-00019001, Rev 0
			24590-PTF-M6-UFP-00019002, Rev 0
			24590-PTF-M6-UFP-00019003, Rev 0
			24590-PTF-M6-UFP-00019004, Rev 0
			24590-PTF-M6-UFP-00020001, Rev 0
			24590-PTF-M6-UFP-00020002, Rev 0
			24590-PTF-M6-UFP-00020003, Rev 0
			24590-PTF-M6-UFP-00020004, Rev 0
			24590-PTF-M6-UFP-00021001, Rev 0
			24590-PTF-M6-UFP-00021002, Rev 0
			24590-PTF-M6-UFP-00022001, Rev 0
			24590-PTF-M6-UFP-00022002, Rev 0
			24590-PTF-M6-UFP-00031001, Rev 0
			24590-PTF-M6-UFP-00031002, Rev 0
			24590-PTF-M6-UFP-00031003, Rev 0
			24590-PTF-M6-UFP-00032001, Rev 0
			24590-PTF-M6-UFP-00032002, Rev 0
			24590-PTF-M6-UFP-00032003, Rev 0

This modification requests Ecology approval and incorporation into the permit, the changes provided in applicable document change forms (e.g., DCNs) and changes associated with the resolution to comments on change documents since the issuance of the last revision of the permitted drawing. Revisions are the result of ongoing design changes.

The following identifies the significant changes to the drawings:

- Modified, deleted, and added notes, holds, and references
- Modified, identified, and added support/utility system racks, lines, valves, bulges, in-line components, instruments and logic controls
- Incorporated changes from change documents identified in the final note on P&ID
- Drawings converted from a single sheet to multi-sheet drawings
- Revised, identified, and added slope symbols and/or the slope requirement

Drawings in this PCN not previously submitted are the result of enhanced instrumentation and utilities, such as air purging to mitigate hydrogen gas generation (HPAV). These drawings do not change the permitted UFP waste treatment process.

Outstanding change document 24590-PTF-M6N-UFP-00107 has not been incorporated into this modification

Quarter Ending March 31, 2010

24590-PTF-PCN-ENV-09-005

and applies to the following P&IDs:

- 24590-PTF-M6-UFP-00016001
- 24590-PTF-M6-UFP-00017001

Outstanding change document 24590-PTF-M6LN-UFP-00005 has not been incorporated into this modification and applies to the following P&IDs:

- 24590-PTF-M6-UFP-00019002
- 24590-PTF-M6-UFP-00019003
- 24590-PTF-M6-UFP-00019004
- 24590-PTF-M6-UFP-00020002
- 24590-PTF-M6-UFP-00020003
- 24590-PTF-M6-UFP-00020004

Outstanding change document 24590-PTF-M6LN-UFP-00008 has not been incorporated into this modification and applies to the following P&IDs:

- 24590-PTF-M6-UFP-00019002

Outstanding change document 24590-PTF-M6LN-UFP-00015 has not been incorporated into this modification and applies to the following P&IDs:

- 24590-PTF-M6-UFP-00019002
- 24590-PTF-M6-UFP-00019004

Outstanding change document 24590-PTF-M6LN-UFP-00018 has not been incorporated into this modification and applies to the following P&IDs:

- 24590-PTF-M6-UFP-00016001
- 24590-PTF-M6-UFP-00017001

Outstanding change document 24590-PTF-M6PR-UFP-00002 has not been incorporated into this modification and applies to the following P&IDs:

- 24590-PTF-M6-UFP-00019001
- 24590-PTF-M6-UFP-00019002

Outstanding change document 24590-PTF-M6PR-10-00009 has not been incorporated into this modification and applies to the following P&IDs:

- 24590-PTF-M6-UFP-00019002
- 24590-PTF-M6-UFP-00019003
- 24590-PTF-M6-UFP-00019004
- 24590-PTF-M6-UFP-00020002
- 24590-PTF-M6-UFP-00020003
- 24590-PTF-M6-UFP-00020004

Outstanding change document 24590-PTF-M6PN-UFP-00001 has not been incorporated into this modification and applies to the following P&ID:

- 24590-PTF-M6-UFP-00020001

Outstanding change document 24590-PTF-M6PR-UFP-00006 has not been incorporated into this modification and applies to the following P&IDs:

Quarter Ending March 31, 2010

24590-PTF-PCN-ENV-09-005

- 24590-PTF-M6-UFP-00020001
- 24590-PTF-M6-UFP-00020002
- 24590-PTF-M6-UFP-00020003

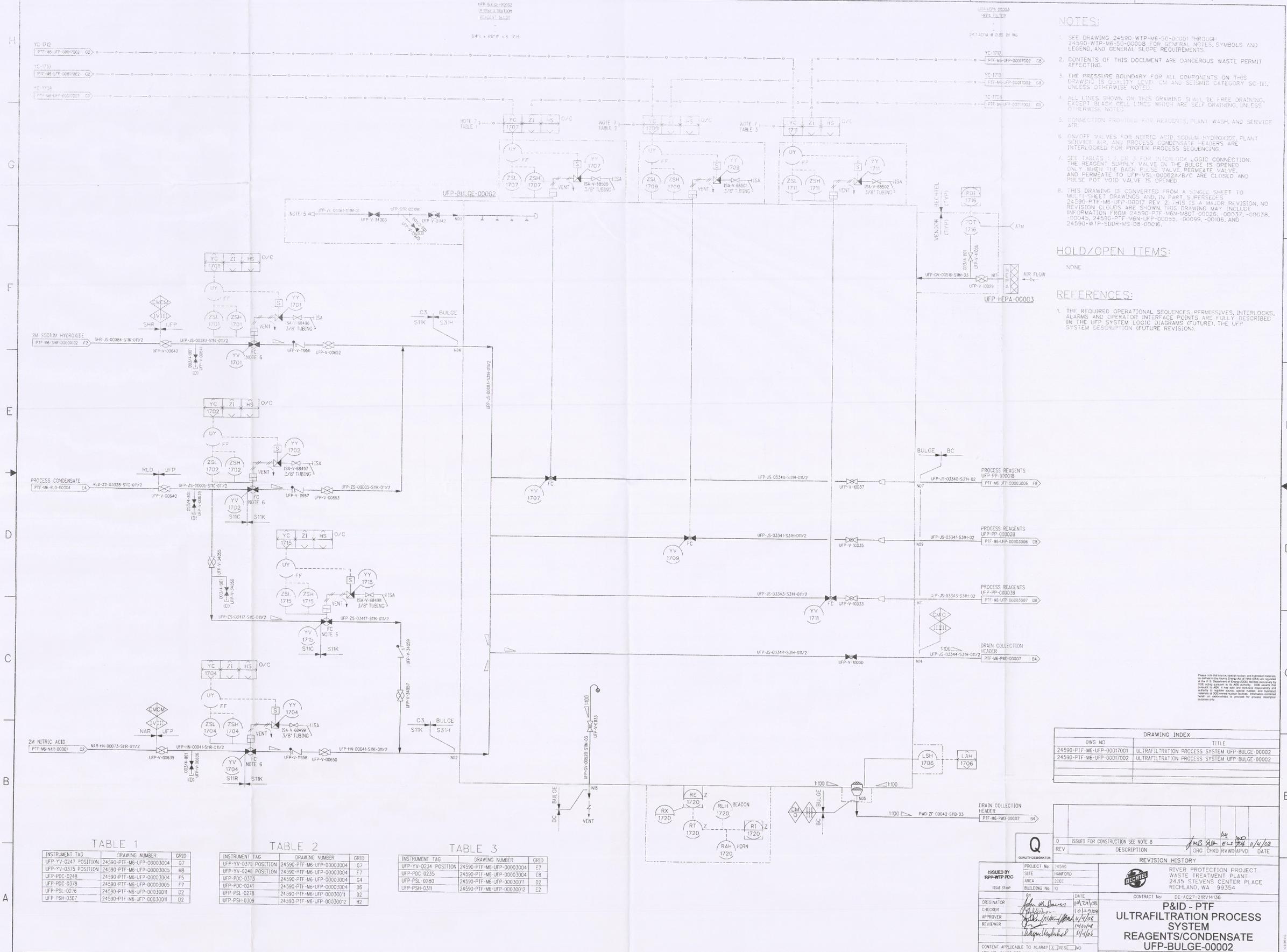
Outstanding change document 24590-PTF-M6N-M80T-00057 has not been incorporated into this modification and applies to the following P&IDs:

- 24590-PTF-M6-UFP-00021001
- 24590-PTF-M6-UFP-00022001

WAC 173-303-830 Modification Class:	Class 1	Class ¹ 1	Class 2	Class 3
Please mark the Modification Class:		X		

Enter relevant WAC 173-303-830, Appendix I Modification citation number:
 Enter wording of WAC 173-303-830, Appendix I Modification citation:
 In accordance with WAC 173-303-830(4)(d)(i), this modification notification is requested to be reviewed and approved as a Class ¹1 modification. WAC 173-303-830(4)(d)(ii)(A) states, "Class 1 modifications apply to minor changes that keep the permit current with routine changes to the facility or its operation. These changes do not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment. In the case of Class 1 modifications, the director may require prior approval."

Modification Approved/Concur: <input type="checkbox"/> Yes <input type="checkbox"/> Denied (state reason below) Reason for denial:	Reviewed by Ecology: Kelly Elsethagen _____ Date _____
---	---



- NOTES:**
- SEE DRAWING 24590-WTP-M6-50-00001 THROUGH 24590-WTP-M6-50-00008 FOR GENERAL NOTES, SYMBOLS AND LEGEND, AND GENERAL SLOPE REQUIREMENTS.
 - CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
 - THE PRESSURE BOUNDARY FOR ALL COMPONENTS ON THIS DRAWING IS QUALITY LEVEL CM AND SEISMIC CATEGORY SC-III, UNLESS OTHERWISE NOTED.
 - ALL LINES SHOWN ON THIS DRAWING SHALL BE FREE DRAINING, EXCEPT BLACK CELL LINES WHICH ARE SELF DRAINING, UNLESS OTHERWISE NOTED.
 - CONNECTION PROVIDED FOR REAGENTS, PLANT WASH, AND SERVICE AIR.
 - ON/OFF VALVES FOR NITRIC ACID, SODIUM HYDROXIDE, PLANT SERVICE AIR, AND PROCESS CONDENSATE HEADERS ARE INTERLOCKED FOR PROPER PROCESS SEQUENCING.
 - SEE TABLES 1, 2, OR 3 FOR INTERLOCK LOGIC CONNECTION. THE REAGENT SUPPLY VALVE IN THE BULGE IS OPENED ONLY WHEN THE BACK PULSE VALVE PERMEATE VALVE AND PERMEATE TO UFP-VSL-0002A/B/C ARE CLOSED AND PULSE POT VOID VALVE IS OPENED.
 - THIS DRAWING IS CONVERTED FROM A SINGLE SHEET TO MULTISHEET DRAWINGS AND, IN PART, SUPERSEDES 24590-PTF-M6-UFP-00017 REV 2. THIS IS A MAJOR REVISION, NO REVISION CLASSES ARE SHOWN. THIS DRAWING MAY INCLUDE INFORMATION FROM 24590-PTF-M6-UFP-00016, -00037, -00038, -00045, 24590-PTF-M6-UFP-00035, -00099, -00106, AND 24590-WTP-SDDR-MS-08-00016.

HOLD/OPEN ITEMS:

NONE

REFERENCES:

- THE REQUIRED OPERATIONAL SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS AND OPERATOR INTERFACE POINTS ARE FULLY DESCRIBED IN THE UFP SYSTEM LOGIC DIAGRAMS (FUTURE), THE UFP SYSTEM DESCRIPTION (FUTURE REVISION).

TABLE 1

INSTRUMENT TAG	DRAWING NUMBER	GRID
UFP-VY-0247 POSITION	24590-PTF-M6-UFP-00003004	G7
UFP-VY-0315 POSITION	24590-PTF-M6-UFP-00003005	H8
UFP-PDC-0248	24590-PTF-M6-UFP-00003004	F5
UFP-PDC-0378	24590-PTF-M6-UFP-00003005	F7
UFP-PSL-0276	24590-PTF-M6-UFP-00003001	D2
UFP-PSH-0307	24590-PTF-M6-UFP-00003001	D2

TABLE 2

INSTRUMENT TAG	DRAWING NUMBER	GRID
UFP-VY-0370 POSITION	24590-PTF-M6-UFP-00003004	G7
UFP-PDC-0235	24590-PTF-M6-UFP-00003004	F7
UFP-PDC-0378	24590-PTF-M6-UFP-00003004	G4
UFP-PSL-0278	24590-PTF-M6-UFP-00003004	D8
UFP-PSH-0309	24590-PTF-M6-UFP-00003011	D2
	24590-PTF-M6-UFP-00003012	H2

TABLE 3

INSTRUMENT TAG	DRAWING NUMBER	GRID
UFP-VY-0234 POSITION	24590-PTF-M6-UFP-00003004	E7
UFP-PDC-0235	24590-PTF-M6-UFP-00003004	E8
UFP-PSL-0780	24590-PTF-M6-UFP-00003001	D2
UFP-PSH-0311	24590-PTF-M6-UFP-00003012	E2

DRAWING INDEX

DWG NO	TITLE
24590-PTF-M6-UFP-00017001	ULTRAFILTRATION PROCESS SYSTEM UFP-BULGE-00002
24590-PTF-M6-UFP-00017002	ULTRAFILTRATION PROCESS SYSTEM UFP-BULGE-00002

REVISION HISTORY

REV	DESCRIPTION	ORG	CHKD	REVWDA/APPD	DATE
0	ISSUED FOR CONSTRUCTION SEE NOTE 8				11/14/08

ISSUED BY P&ID PDC

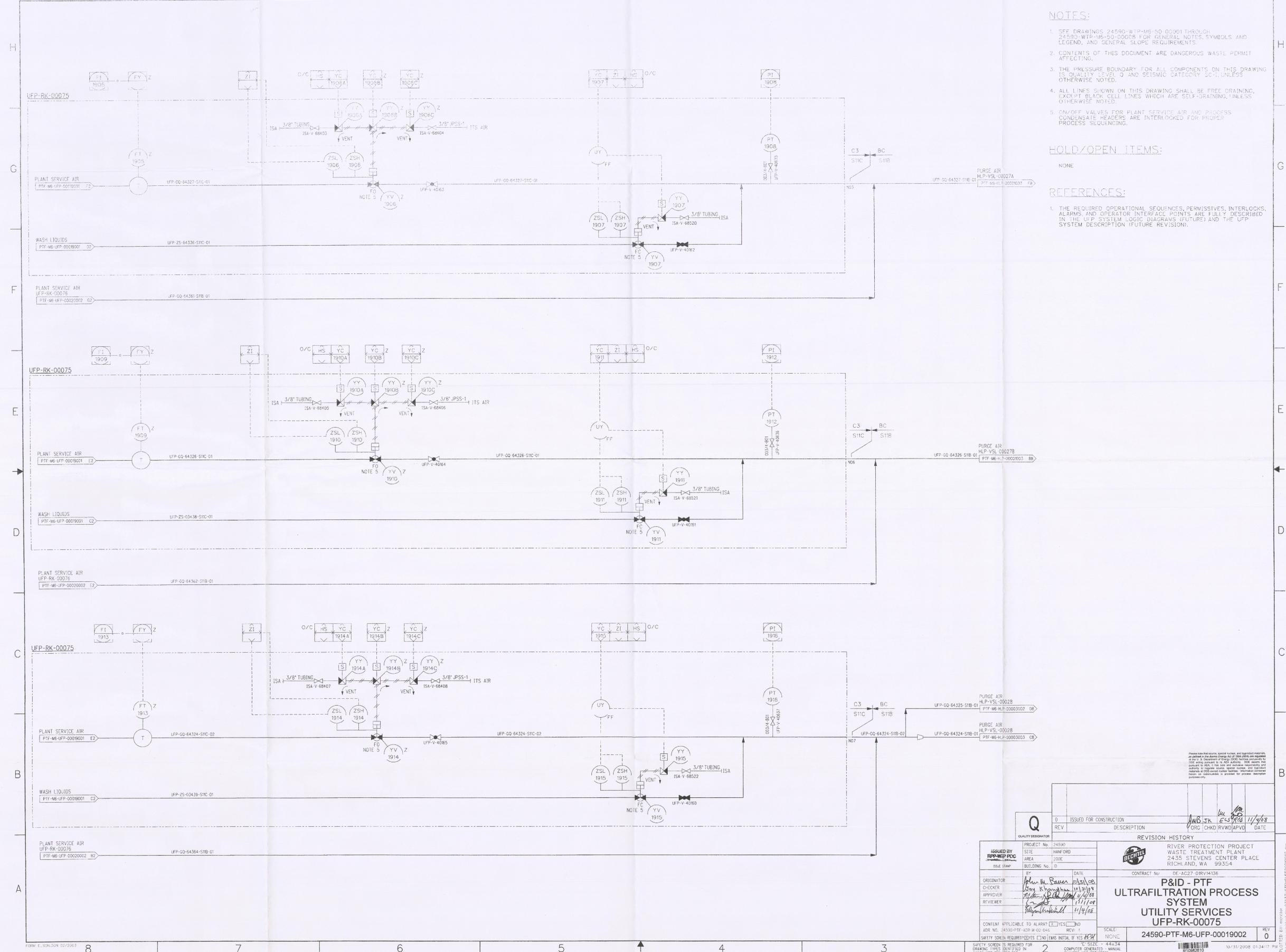
PROJECT No	14590
SITE	HANFORD
AREA	200C
BUILDING No	10
ORIGINATOR	J. M. Davis
CHECKER	J. M. Davis
APPROVER	J. M. Davis
REVIEWER	J. M. Davis

CONTRACT No DE-AC27-D/RV14136

RIVER PROTECTION PROJECT WASTE TREATMENT PLANT 2435 STEVENS CENTER PLACE RICHLAND, WA 99354

P&ID - PTF ULTRAFILTRATION PROCESS SYSTEM REAGENTS/CONDENSATE UFP-BULGE-00002

24590-PTF-M6-UFP-00017001



- NOTES:**
- SEE DRAWINGS 24590-WTP-M6-SO-00001 THROUGH 24590-WTP-M6-SO-00008 FOR GENERAL NOTES, SYMBOLS AND LEGEND, AND GENERAL SLOPE REQUIREMENTS.
 - CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
 - THE PRESSURE BOUNDARY FOR ALL COMPONENTS ON THIS DRAWING IS QUALITY LEVEL 'Q' AND SEISMIC CATEGORY SC1, UNLESS OTHERWISE NOTED.
 - ALL LINES SHOWN ON THIS DRAWING SHALL BE FREE DRAINING, EXCEPT BLACK CELL LINES WHICH ARE SELF-DRAINING, UNLESS OTHERWISE NOTED.
 - ON/OFF VALVES FOR PLANT SERVICE AIR AND PROCESS CONDENSATE HEADERS ARE INTERLOCKED FOR PROPER PROCESS SEQUENCING.

HOLD/OPEN ITEMS:

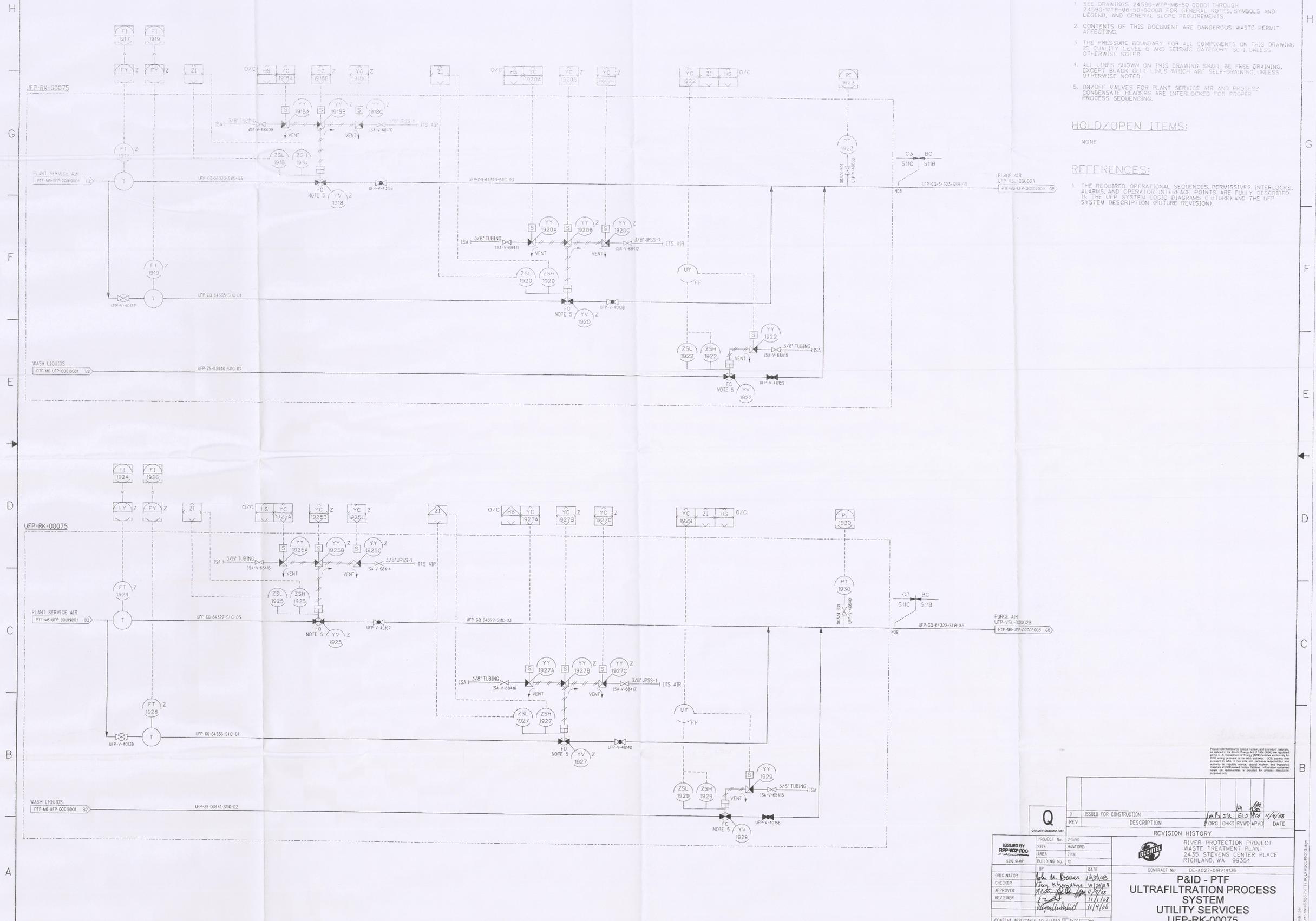
NONE

REFERENCES:

- THE REQUIRED OPERATIONAL SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS, AND OPERATOR INTERFACE POINTS ARE FULLY DESCRIBED IN THE UFP SYSTEM LOGIC DIAGRAMS (FUTURE) AND THE UFP SYSTEM DESCRIPTION (FUTURE REVISION).

<p>ISSUED BY: RPP-M6-PCO</p> <p>ISSUE DATE: 11/19/08</p>		<p>PROJECT No: 24590</p> <p>SITE: HANFORD</p> <p>AREA: 203E</p> <p>BUILDING No.: D</p>		<p>REVISION HISTORY</p> <table border="1"> <tr> <th>REV</th> <th>DESCRIPTION</th> <th>ORIG</th> <th>CHKD</th> <th>RWMD</th> <th>APVD</th> <th>DATE</th> </tr> <tr> <td>0</td> <td>ISSUED FOR CONSTRUCTION</td> <td></td> <td></td> <td></td> <td></td> <td>11/19/08</td> </tr> </table>		REV	DESCRIPTION	ORIG	CHKD	RWMD	APVD	DATE	0	ISSUED FOR CONSTRUCTION					11/19/08
REV	DESCRIPTION	ORIG	CHKD	RWMD	APVD	DATE													
0	ISSUED FOR CONSTRUCTION					11/19/08													
<p>ORIGINATOR: Alan M. Bauer</p> <p>CHECKER: Jay Khondhan</p> <p>APPROVER: [Signature]</p> <p>REVIEWER: [Signature]</p>		<p>CONTRACT No: DE-AC27-08RV14336</p> <p>RIVER PROTECTION PROJECT WASTE TREATMENT PLANT 24335 STEVENS CENTER PLACE RICHLAND, WA 99354</p>		<p>SCALE: NONE</p> <p>24590-PTF-M6-UFP-00019002</p>															
<p>CONTENT APPLICABLE TO ALARMS: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>SAFETY SCREEN IS REQUIRED FOR DRAWING TYPES: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>		<p>COMPUTER GENERATED - MANUAL CHANGES NOT PERMITTED</p>		<p>DATE: 10/31/2008 01:34:17</p>															

24590-PTF-M6-UFP-00019003



- NOTES:**
- SEE DRAWINGS 24590-WTP-M6-50-00001 THROUGH 24590-WTP-M6-50-00008 FOR GENERAL NOTES, SYMBOLS AND LEGEND, AND GENERAL SLOPE REQUIREMENTS.
 - CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
 - THE PRESSURE BOUNDARY FOR ALL COMPONENTS ON THIS DRAWING IS QUALITY LEVEL Q AND SEISMIC CATEGORY SC-1, UNLESS OTHERWISE NOTED.
 - ALL LINES SHOWN ON THIS DRAWING SHALL BE FREE DRAINING, EXCEPT BLACK CELL LINES WHICH ARE SELF-DRAINING, UNLESS OTHERWISE NOTED.
 - ON/OFF VALVES FOR PLANT SERVICE AIR AND PROCESS CONDENSATE HEADERS ARE INTERLOCKED FOR PROPER PROCESS SEQUENCING.

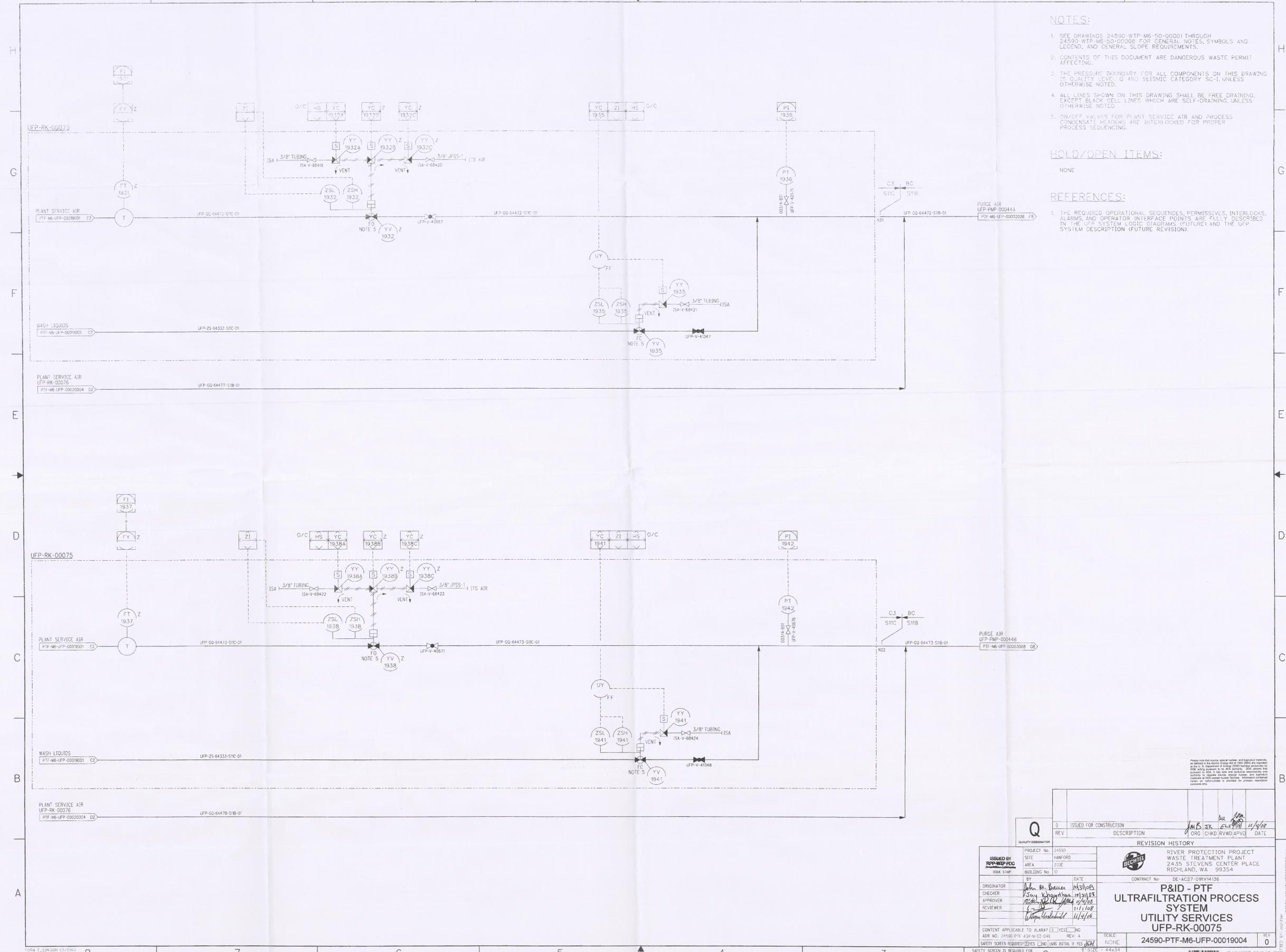
HOLD/OPEN ITEMS:
NONE

- REFERENCES:**
- THE REQUIRED OPERATIONAL SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS, AND OPERATOR INTERFACE POINTS ARE FULLY DESCRIBED IN THE UFP SYSTEM LOGIC DIAGRAMS (FUTURE) AND THE UFP SYSTEM DESCRIPTION (FUTURE REVISION).

Please use full name, special number, and approval initials. Approval of this drawing shall be the responsibility of the U.S. Department of Energy (DOE) and the contractor. The contractor shall be responsible for the design, construction, and operation of the system. The contractor shall be responsible for the design, construction, and operation of the system. The contractor shall be responsible for the design, construction, and operation of the system.

ISSUED BY RFP-WTP-PCC ISSUE STAMP	PROJECT No. 24590 SITE HANFORD AREA 200A BUILDING No. 10	REVISION HISTORY RIVER PROTECTION PROJECT WASTE TREATMENT PLANT 2435 STEVENS CENTER PLACE RICHLAND, WA 99354
	ORIGINATOR John M. Bauer 10/28/08 CHECKER Dana K. ... 10/28/08 APPROVER ... 11/11/08 REVIEWER ... 11/11/08	CONTRACT No. DE-AC27-03RV1436 P&ID - PTF ULTRAFILTRATION PROCESS SYSTEM UTILITY SERVICES UFP-RK-00075

24590-PTF-M6-UFP-00019004



- NOTES:**
- SEE DRAWINGS 24590-WTP-M6-DO-00001 THROUGH 24590-WTP-M6-DO-00008 FOR GENERAL NOTES, SYMBOLS AND LEGEND, AND GENERAL SLOPE REQUIREMENTS.
 - CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
 - THE PRESSURE BOUNDARY FOR ALL COMPONENTS ON THIS DRAWING IS QUALITY LEVEL Q AND SEISMIC CATEGORY SC-I, UNLESS OTHERWISE NOTED.
 - ALL LINES SHOWN ON THIS DRAWING SHALL BE FREE DRAINING, EXCEPT BLACK CELL LINES WHICH ARE SELF-DRAINING, UNLESS OTHERWISE NOTED.
 - ON/OFF VALVES FOR PLANT SERVICE AIR AND PROCESS CONDENSATE HEADERS ARE INTERLOCKED FOR PROPER PROCESS SEQUENCING.

HOLD/OPEN ITEMS:

NONE

- REFERENCES:**
- THE REQUIRED OPERATIONAL SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS, AND OPERATOR INTERFACE POINTS ARE FULLY DESCRIBED IN THE UFP SYSTEM LOGIC DIAGRAMS (FUTURE) AND THE UFP SYSTEM DESCRIPTION (FUTURE REVISION).

FORM E_330.DGN 03/2003

PLEASE NOTE THAT THESE SPECIAL WATER AND HYDROPHOBIC MATERIALS, AS SPECIFIED BY THE ABOVE GROUP AND/OR OTHER GROUPS, ARE REQUIRED TO BE USED IN THE CONSTRUCTION OF THIS PROCESS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY APPROVALS AND PERMITS FROM THE LOCAL, STATE, AND FEDERAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY APPROVALS AND PERMITS FROM THE LOCAL, STATE, AND FEDERAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY APPROVALS AND PERMITS FROM THE LOCAL, STATE, AND FEDERAL AGENCIES.

Q	ISSUED FOR CONSTRUCTION	11/5/08	11/1/08
REV	DESCRIPTION	ORG	CHKD

REVISION HISTORY			
NO.	DESCRIPTION	DATE	BY
0	ISSUED FOR CONSTRUCTION	11/1/08	11/5/08

ISSUED BY	PROJECT No.	24590
DATE	SITE	HANFORD
AREA	220E	
BUILDING No.	10	
ORIGINATOR	BY	DATE
CHECKER	1/5/08	11/3/08
APPROVER	11/1/08	11/1/08
REVIEWER	11/1/08	11/1/08

CONTRACT No.	DE-AC27-SRV14136
P&ID - PTF	ULTRAFILTRATION PROCESS SYSTEM
UTILITY SERVICES	UFP-RK-00075
SCALE	NONE
24590-PTF-M6-UFP-00019004	REV 0

SAFETY SCREEN IS REQUIRED FOR DRAWING TYPES IDENTIFIED IN 24590-WTP-GRP-SPEC-002

SAFETY SCREEN REQUIRED YES NO

SAFETY SCREEN INITIAL YES NO

SCALE: NONE

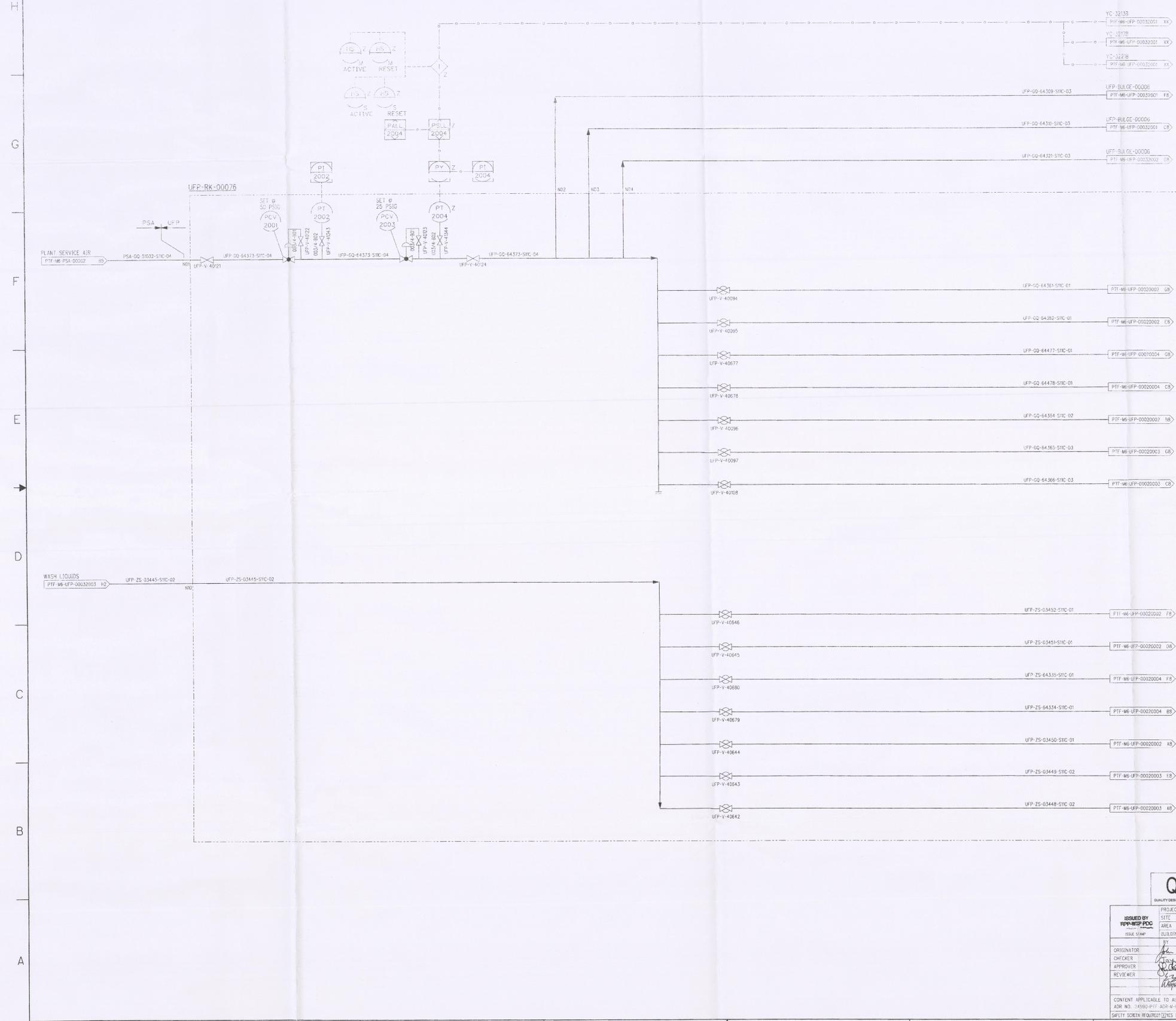
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COMPUTER GENERATED: MANUAL CHANGES NOT PERMITTED

10/31/2008 02:13:02

10882012

UFP-RK-00076
ULTRAFILTRATION PROCESS
UTILITY SERVICES



- NOTES:**
- SEE DRAWINGS 24590-WTP-M6-50-00001 THROUGH 24590-WTP-M6-50-00008 FOR GENERAL NOTES, SYMBOLS AND LEGEND, AND GENERAL SLOPE REQUIREMENTS.
 - CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
 - THE PRESSURE BOUNDARY FOR ALL COMPONENTS ON THIS DRAWING IS QUALITY LEVEL Q AND SEISMIC CATEGORY SC-1, UNLESS OTHERWISE NOTED.
 - ALL LINES SHOWN ON THIS DRAWING SHALL BE FREE DRAINING, UNLESS OTHERWISE NOTED.
 - ON/OFF VALVES FOR PLANT SERVICE AIR AND PROCESS CONDENSATE HEADERS ARE INTERLOCKED FOR PROPER PROCESS SEQUENCING.
 - PLANT SERVICE AIR HEADER PRESSURE LOW IS INTERLOCKED TO CLOSE IMPORTANT TO SAFETY AIR PURGE VALVES, IN THE BULGE.

HOLD/OPEN ITEMS:

NONE

REFERENCES:

- THE REQUIRED OPERATIONAL SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS, AND OPERATOR INTERFACE POINTS ARE FULLY DESCRIBED IN THE UFP SYSTEM LOGIC DIAGRAMS (FUTURE) AND THE UFP SYSTEM DESCRIPTION (FUTURE REVISION).

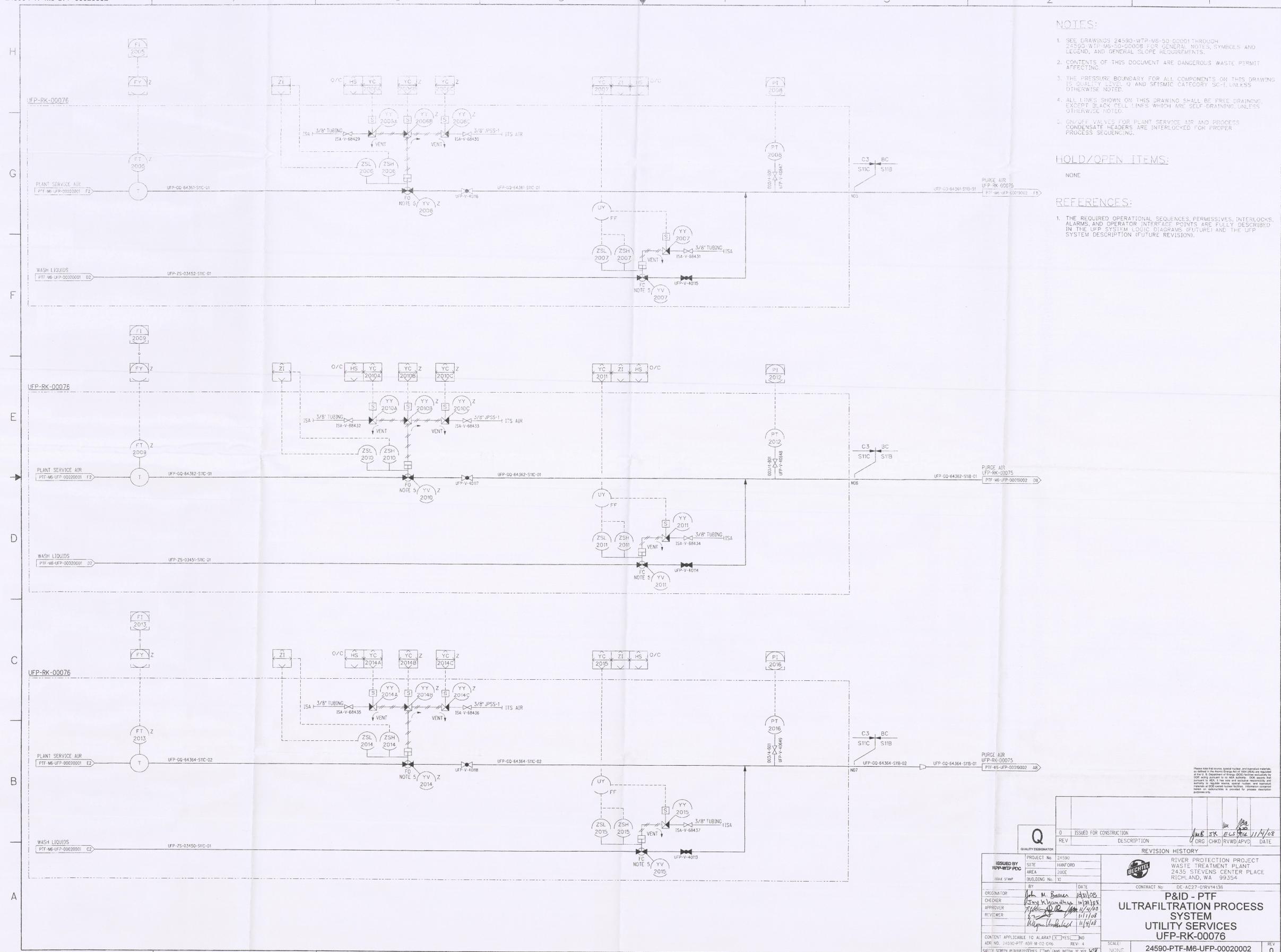
Please note that certain chemical names and associated symbols in contact with the public through the use of this drawing are regulated by the U.S. Department of Energy (DOE) under the Atomic Energy Act of 1954. The use of such symbols and associated information is restricted to authorized personnel only. The use of such symbols and associated information for purposes other than those intended by the U.S. Department of Energy is prohibited. The use of such symbols and associated information for purposes other than those intended by the U.S. Department of Energy is prohibited. The use of such symbols and associated information for purposes other than those intended by the U.S. Department of Energy is prohibited.

DRAWING INDEX	
DWG NO	TITLE
24590-PTF-M6-UFP-00020001	ULTRAFILTRATION PROCESS SYSTEM UFP-RK-00076
24590-PTF-M6-UFP-00020002	ULTRAFILTRATION PROCESS SYSTEM UFP-RK-00076
24590-PTF-M6-UFP-00020003	ULTRAFILTRATION PROCESS SYSTEM UFP-RK-00076
24590-PTF-M6-UFP-00020004	ULTRAFILTRATION PROCESS SYSTEM UFP-RK-00076

REV	DESCRIPTION	ORG	CHKD	IRWD	APVD	DATE
0	ISSUED FOR CONSTRUCTION					11/4/08

REVISION HISTORY	
PROJECT No.	24590
SITE	HANFORD
AREA	2002
BUILDING No.	10
CONTRACT No.	DE-AC27-01RV1436
P&ID - PTF ULTRAFILTRATION PROCESS SYSTEM UTILITY SERVICES UFP-RK-00076	
ISSUED BY	PTF-M6-ECC
ORIGINATOR	John M. Bowen 10/21/08
CHECKER	John M. Bowen 10/21/08
APPROVER	John M. Bowen 11/4/08
REVIEWER	John M. Bowen 11/4/08
CONTENT APPLICABLE TO ALARMS	YES <input type="checkbox"/> NO <input type="checkbox"/>
ADR NO.	24590-PTF-ADR-W-02-046
SCALE	NONE
SAFETY SCREEN REQUIRED	YES <input type="checkbox"/> NO <input type="checkbox"/>
COMPUTER GENERATED	MANUAL
CHANGES NOT PERMITTED	

24590-PTF-M6-UFP-00020002



- NOTES:**
- SEE DRAWINGS 24590-WTP-M6-50-00001 THROUGH 24590-WTP-M6-50-00008 FOR GENERAL NOTES, SYMBOLS AND LEGEND, AND GENERAL SLOPE REQUIREMENTS.
 - CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
 - THE PRESSURE BOUNDARY FOR ALL COMPONENTS ON THIS DRAWING IS QUALITY LEVEL 2 AND SEISMIC CATEGORY SC-1, UNLESS OTHERWISE NOTED.
 - ALL LINES SHOWN ON THIS DRAWING SHALL BE FREE DRAINING, EXCEPT BLACK CELL LINES WHICH ARE SELF-DRAINING, UNLESS OTHERWISE NOTED.
 - ON/OFF VALVES FOR PLANT SERVICE AIR AND PROCESS CONDENSATE HEADERS ARE INTERLOCKED FOR PROPER PROCESS SEQUENCING.

HOLD/OPEN ITEMS:
NONE

- REFERENCES:**
- THE REQUIRED OPERATIONAL SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS, AND OPERATOR INTERFACE POINTS ARE FULLY DESCRIBED IN THE UFP SYSTEM LOGIC DIAGRAMS (FUTURE) AND THE UFP SYSTEM DESCRIPTION (FUTURE REVISION).

Please note that valves, special valves, and bypass valves are added to the process flow diagram as required. The location of these valves is indicated by the symbol in the legend. The location of these valves is indicated by the symbol in the legend. The location of these valves is indicated by the symbol in the legend.

REV	ISSUED FOR CONSTRUCTION	DESCRIPTION	ORG	CHKD	REVWD	APVD	DATE
0	ISSUED FOR CONSTRUCTION						11/1/08

ISSUED BY RPP-WTP-PDC	PROJECT No 24590
ISSUE STAMP	SITE HANFORD
ORIGINATOR John M. Baker	AREA J006
CHECKER John M. Baker	BUILDING No. 10
APPROVER John M. Baker	BY John M. Baker
REVIEWER John M. Baker	DATE 11/1/08

REVISION HISTORY	
CONTRACT No: DE-AC27-07R14336	
RIVER PROTECTION PROJECT WASTE TREATMENT PLANT 2435 STEVENS CENTER PLACE RICHLAND, WA 99354	
P&ID - PTF ULTRAFILTRATION PROCESS SYSTEM UTILITY SERVICES UFP-RK-00076	
SCALE NONE	24590-PTF-M6-UFP-00020002
CONTENT APPLICABLE TO ALARMS YES	REV 0
SAFETY SCREEN REQUIREMENTS NONE	11/1/08

24590-PTF-M6-UFP-00021001

PSA-RK-00055
PLANT SERVICE
AIR SPARGE RACK
R POINTS
UFT. x 508 x 2.6ft

NOTES:

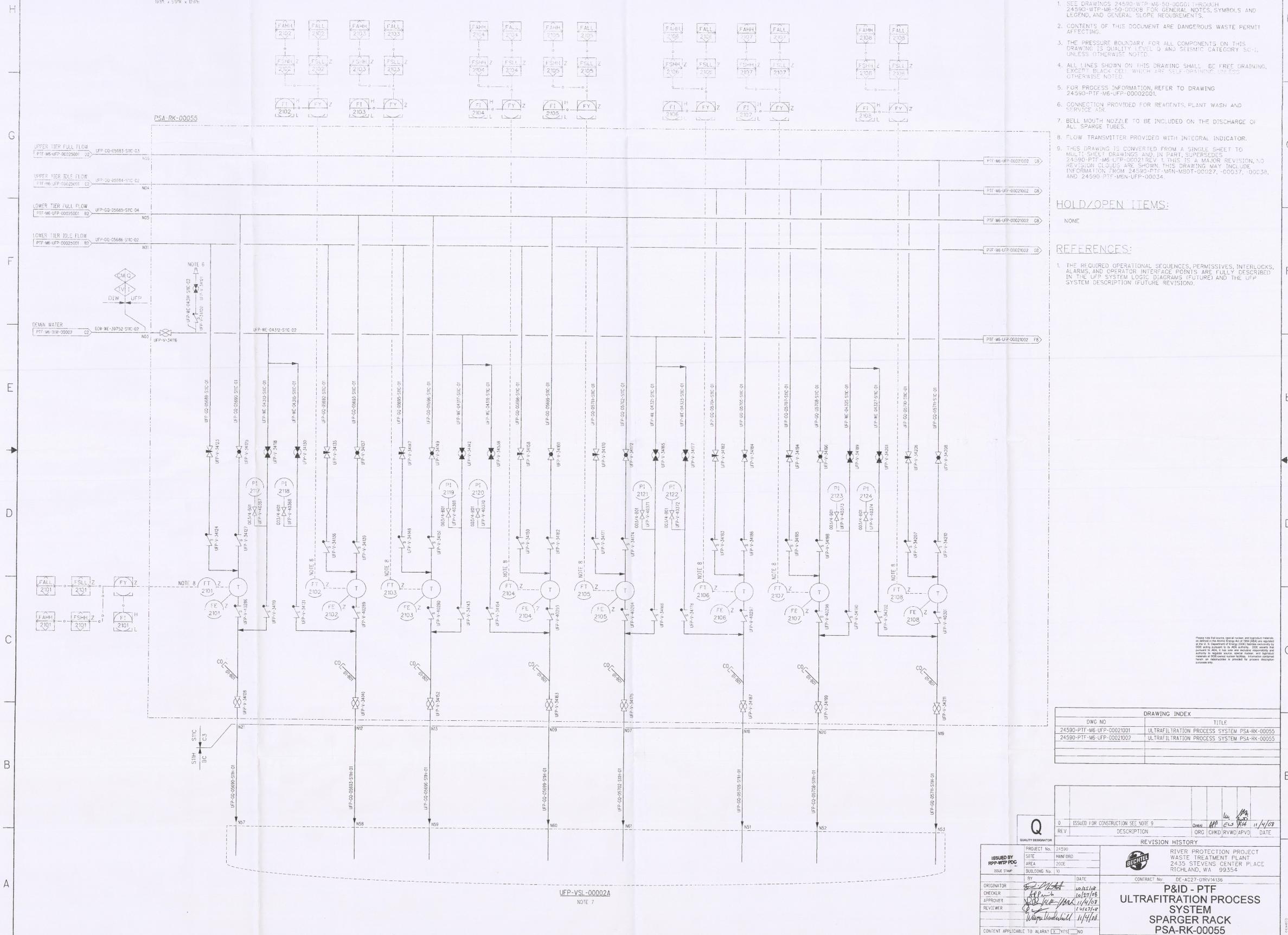
- SEE DRAWINGS 24590-WTP-M6-50-00001 THROUGH 24590-WTP-M6-50-00008 FOR GENERAL NOTES, SYMBOLS AND LEGEND, AND GENERAL SLOPE REQUIREMENTS.
- CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
- THE PRESSURE BOUNDARY FOR ALL COMPONENTS ON THIS DRAWING IS QUALITY LEVEL Q AND SEISMIC CATEGORY S0-1, UNLESS OTHERWISE NOTED.
- ALL LINES SHOWN ON THIS DRAWING SHALL BE FREE DRAINING, EXCEPT BLACK CELLS WHICH ARE SELF-DRAINING UNLESS OTHERWISE NOTED.
- FOR PROCESS INFORMATION, REFER TO DRAWING 24590-PTF-M6-UFP-0002001.
- CONNECTION PROVIDED FOR REAGENTS, PLANT WASH AND SERVICE AIR.
- BELL MOUTH NOZZLE TO BE INCLUDED ON THE DISCHARGE OF ALL SPARGE TUBES.
- FLOW TRANSMITTER PROVIDED WITH INTEGRAL INDICATOR.
- THIS DRAWING IS CONVERTED FROM A SINGLE SHEET TO MULTI SHEET DRAWING AND IN PART SUPERSEDES 24590-PTF-M6-UFP-00021 REV 1. THIS IS A MAJOR REVISION, NO REVISION CIRCLES ARE SHOWN. THIS DRAWING MAY INCLUDE INFORMATION FROM 24590-PTF-M6N-MS0T-00027, -00037, -00038, AND 24590-PTF-M6N-UFP-00034.

HOLD/OPEN ITEMS:

NONE

REFERENCES:

- THE REQUIRED OPERATIONAL SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS, AND OPERATOR INTERFACE POINTS ARE FULLY DESCRIBED IN THE UFP SYSTEM LOGIC DIAGRAMS (FUTURE) AND THE UFP SYSTEM DESCRIPTION (FUTURE REVISION).



UFP-VSL-00002A
NOTE 7

DRAWING INDEX	
DWG NO	TITLE
24590-PTF-M6-UFP-00021001	ULTRAFILTRATION PROCESS SYSTEM PSA-RK-00055
24590-PTF-M6-UFP-00021002	ULTRAFILTRATION PROCESS SYSTEM PSA-RK-00055

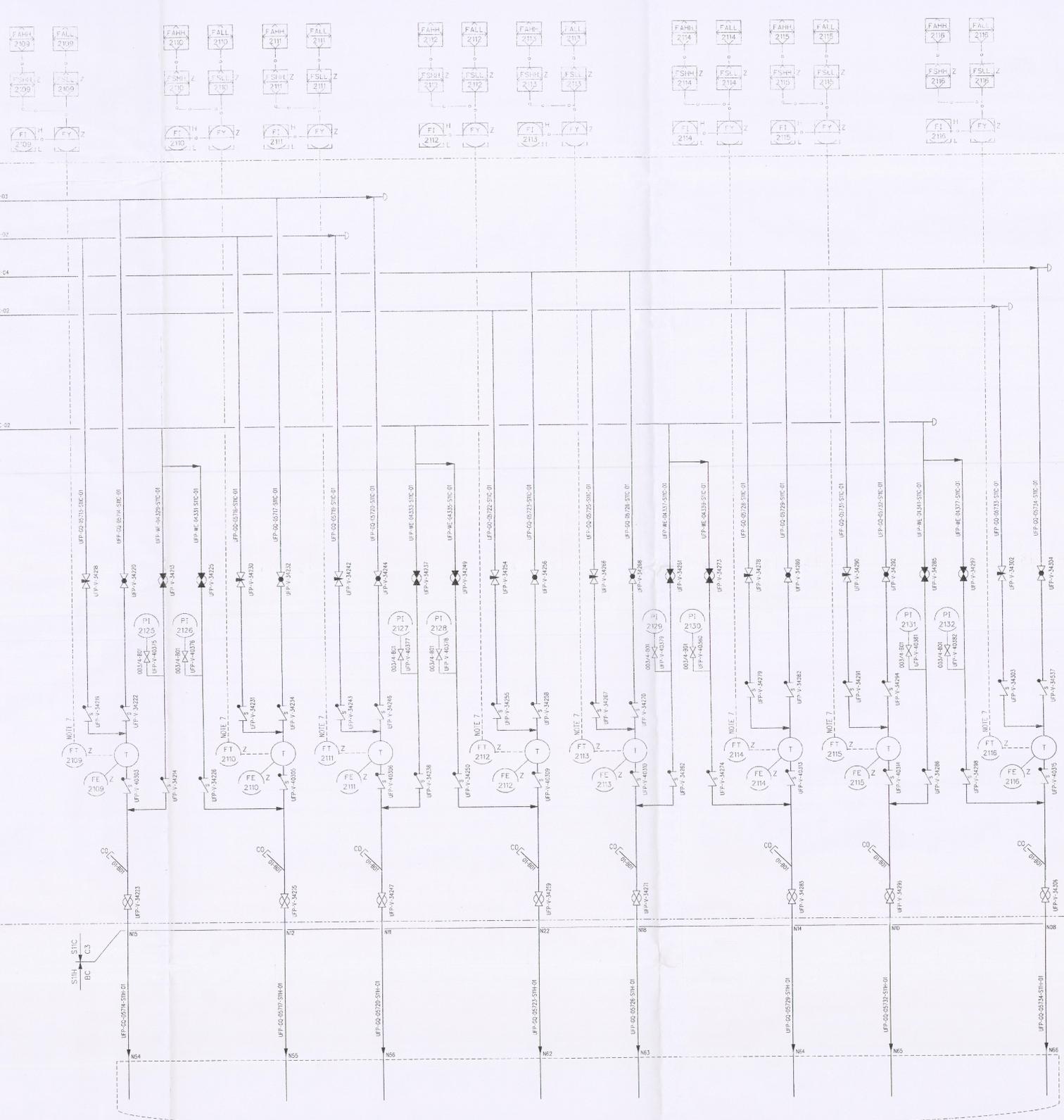
ISSUED FOR CONSTRUCTION SEE NOTE 9	DATE
REV 0	11/1/09

REVISION HISTORY		
NO	DESCRIPTION	DATE
0	ISSUED FOR CONSTRUCTION SEE NOTE 9	11/1/09

ISSUED BY RPP-WTP-PDC	PROJECT No. 24590
ISSUE STAMP	SITE NAME GRID
ORIGINATOR	AREA 2100
CHECKER	BUILDING No. 10
APPROVER	CONTRACT No. DE-AC27-08RV4136
REVIEWER	SCALE NONE

RIVER PROTECTION PROJECT WASTE TREATMENT PLANT 2435 STEVENS CENTER PLACE RICHLAND, WA 99354	
P&ID - PTF ULTRAFILTRATION PROCESS SYSTEM SPARGER RACK PSA-RK-00055	
CONTENT APPLICABLE TO ALABAMA <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	SCALE NONE
SAFETY SCREEN REQUIREMENTS <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	24590-PTF-M6-UFP-00021001
BRANDING TYPES IDENTIFIED IN <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	REV 0

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UFP-VSL-00002A
NOTE 6

NOTES:

- SEE DRAWINGS 24590-WTP-M6-SD-00001 THROUGH 24590-WTP-M6-SD-00008 FOR GENERAL NOTES, SYMBOLS AND LEGEND, AND GENERAL REQUIREMENTS.
- CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
- THE PRESSURE BOUNDARY FOR ALL COMPONENTS ON THIS DRAWING IS QUALITY LEVEL 0 AND SEISMIC CATEGORY SC-1, UNLESS OTHERWISE NOTED.
- ALL LINES SHOWN ON THIS DRAWING SHALL BE FREE DRAINING, EXCEPT BLACK BELL LINES WHICH ARE SELF-DRAINING, UNLESS OTHERWISE NOTED.
- FOR PROCESS INFORMATION, REFER TO DRAWING 24590-PTF-M6-UFP-0002001.
- BELL MOUTH NOZZLE TO BE INCLUDED ON THE DISCHARGE OF ALL SPARGE TUBES.
- FLOW TRANSMITTER PROVIDED WITH INTEGRAL INDICATOR.
- THIS DRAWING IS CONVERTED FROM A SINGLE SHEET TO MULTI-SHEET DRAWINGS AND, IN PART, SUPERSEDES 24590-PTF-M6-UFP-00021 REV 1. THIS IS A MAJOR REVISION. NO REVISION CLOUDS ARE SHOWN. THIS DRAWING MAY INCLUDE INFORMATION FROM 24590-PTF-M6-MB01-00027, -00037, -00038, AND 24590-PTF-M6-UFP-00034.

HOLD/OPEN ITEMS:

NONE

REFERENCES:

- THE REQUIRED OPERATIONAL SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS, AND OPERATOR INTERFACE POINTS ARE FULLY DESCRIBED IN THE UFP SYSTEM LOGIC DIAGRAMS (FUTURE) AND THE UFP SYSTEM DESCRIPTION (FUTURE REVISION).

ISSUED FOR CONSTRUCTION. SEE NOTE 8

REV	DESCRIPTION	ORG	CHKD	R/W	APV/D	DATE
0	ISSUED FOR CONSTRUCTION. SEE NOTE 8	APP	ECS	YES		11/4/08

REVISION HISTORY

PROJECT No.	24590
SITE	HANFORD
AREA	100E
BUILDING No.	10
DATE	11/11/08
CONTRACT No.	DE-AC27-08W1433
P&ID - PTF ULTRAFILTRATION PROCESS SYSTEM SPARGER RACK PSA-RK-00055	
SCALE	NONE
24590-PTF-M6-UFP-00021002	0

SAFETY SCREEN REQUIRED FOR ALARMS [X] YES [] NO
 E-STEP 4.4x3.4
 COMPUTER GENERATED. MANUAL CHANGES NOT PERMITTED.

PSA-RK-00056
PLANT SERVICE
M6 SERVICE BLOCK
M6 PROCESS
NPS1 - 52.74 x 12.511

NOTES:

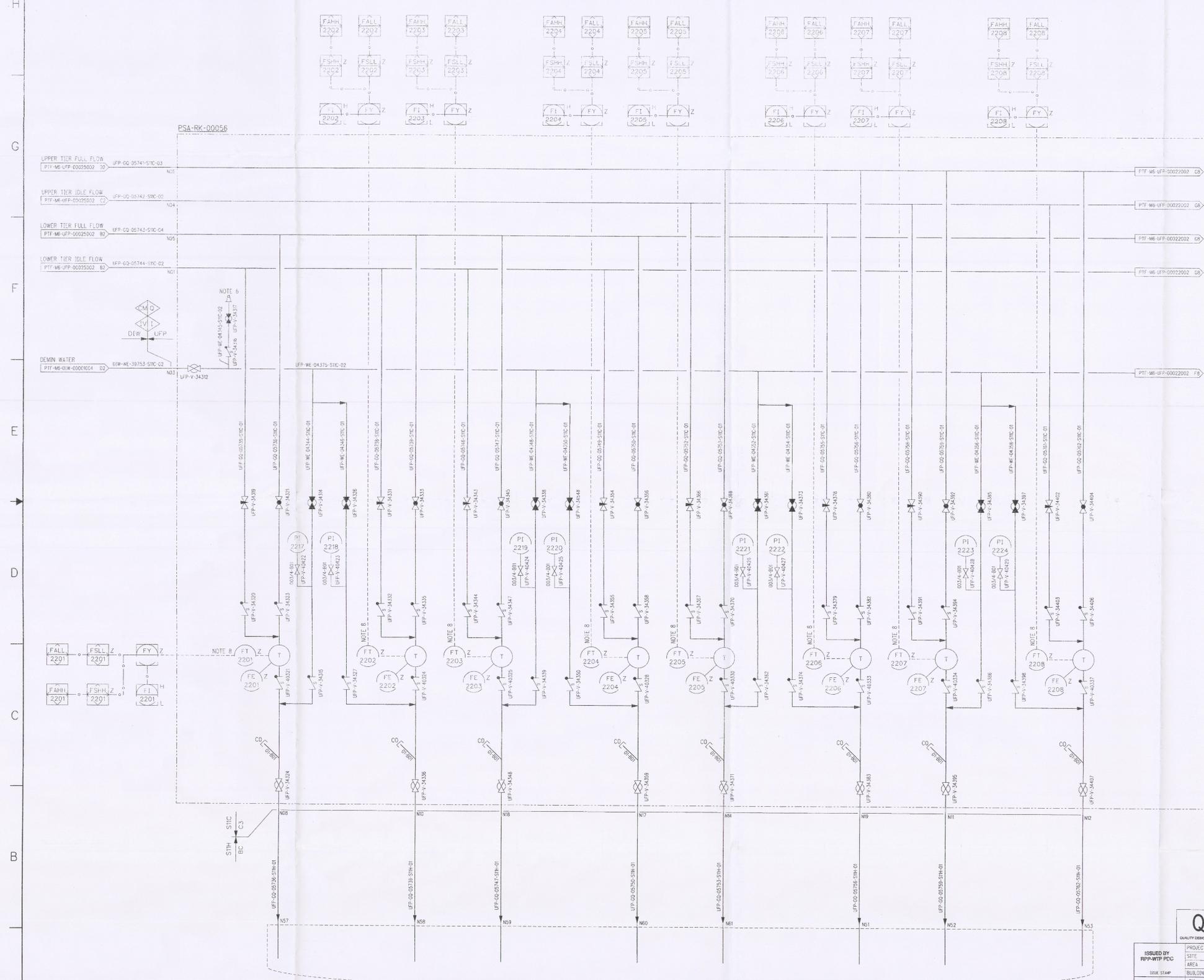
- SEE DRAWINGS 24590-WTP-M6-50-00001 THROUGH 24590-WTP-M6-50-00008 FOR GENERAL NOTES, SYMBOLS AND LEGEND, AND GENERAL SLOPE REQUIREMENTS.
- CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
- THE PRESSURE BOUNDARY FOR ALL COMPONENTS ON THIS DRAWING IS QUALITY LEVEL 4 AND SEISMIC CATEGORY SC-1, UNLESS OTHERWISE NOTED.
- ALL LINES SHOWN ON THIS DRAWING SHALL BE FREE DRAINING, EXCEPT BLACK CELL LINES WHICH ARE SELF-DRAINING UNLESS OTHERWISE NOTED.
- FOR PROCESS INFORMATION, REFER TO DRAWING 24590-PTF-M6-UFP-00003001.
- CONNECTION PROVIDED FOR REAGENTS, PLANT WASH AND SERVICE AIR.
- BELL MOUTH NOZZLE TO BE INCLUDED ON THE DISCHARGE OF ALL SPARGE TUBES.
- FLOW TRANSMITTER PROVIDED WITH INTERNAL INDICATOR.
- THIS DRAWING IS CONVERTED FROM A SINGLE SHEET TO MULTI-SHEET DRAWINGS AND, IN PART, SUPERSEDES 24590-PTF-M6-UFP-00022 REV 1. THIS IS A MAJOR REVISION, NO REVISION CLOUDS ARE SHOWN THIS DRAWING MAY INCLUDE INFORMATION FROM 24590-PTF-M6N-WROT-00027, -00037, -00038, AND 24590-PTF-M6N-UFP-00035.

HOLD/OPEN ITEMS:

NONE

REFERENCES:

- THE REQUIRED OPERATIONAL SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS, AND OPERATOR INTERFACE POINTS ARE FULLY DESCRIBED IN THE UFP SYSTEM LOGIC DIAGRAMS (FUTURE) AND THE UFP SYSTEM DESCRIPTION (FUTURE REVISION).



UFP-VSL-000028
NOTE 7

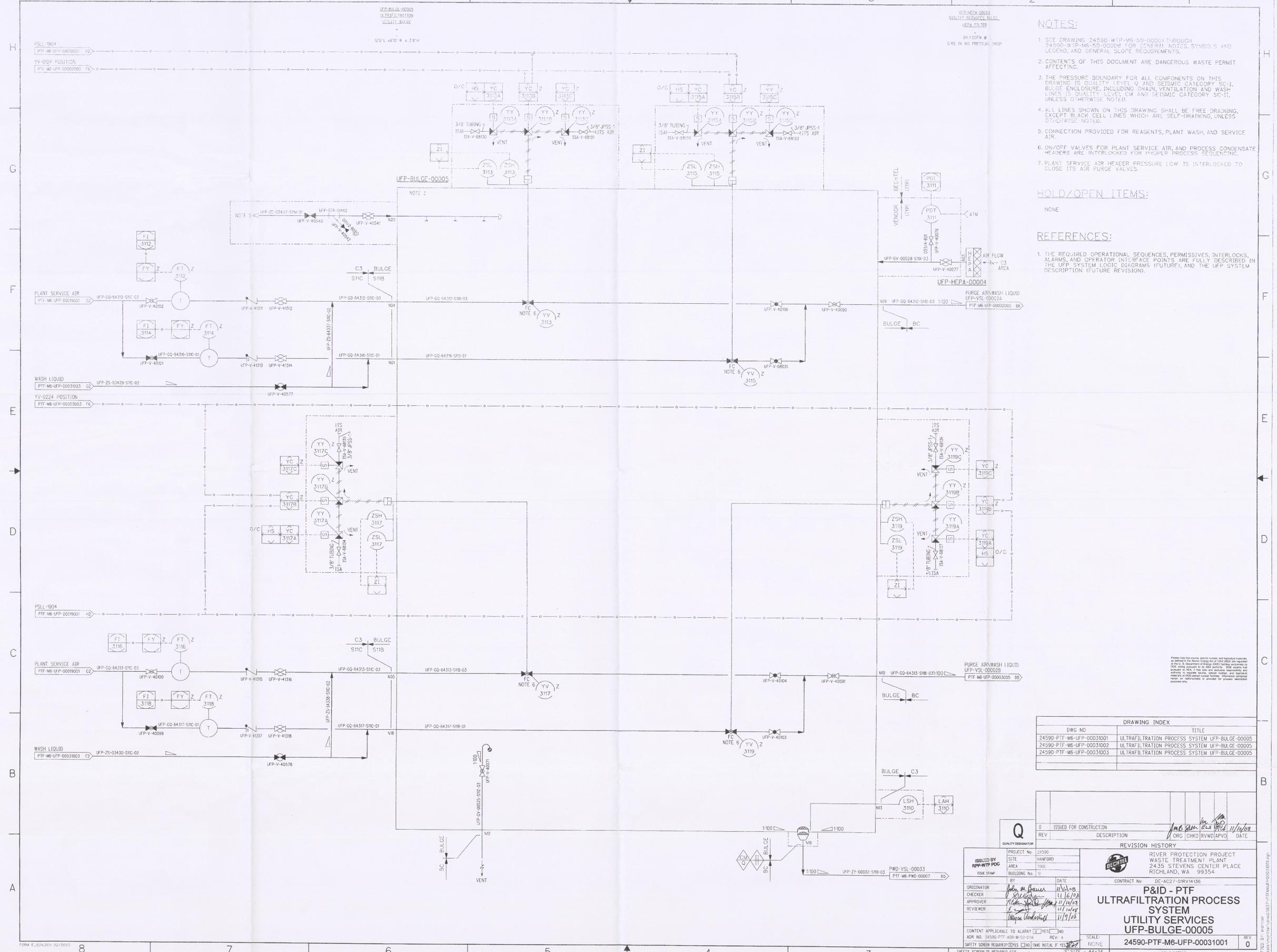
DRAWING INDEX	
DWG NO	TITLE
24590-PTF-M6-UFP-00022001	ULTRAFILTRATION PROCESS SYSTEM PSA-RK-00056
24590-PTF-M6-UFP-00022002	ULTRAFILTRATION PROCESS SYSTEM PSA-RK-00056

REV	ISSUED FOR CONSTRUCTION SEE NOTE 9	DATE	BY	CHKD	APPROV
0	ISSUED FOR CONSTRUCTION SEE NOTE 9	11/07/08	AP	AP	AP

REVISION HISTORY	
PROJECT No:	24590
SITE:	HANFORD
AREA:	200E
BUILDING No.:	11
ISSUE DATE:	11/07/08
ORIGINATOR:	AP
CHECKER:	AP
APPROVER:	AP
REVIEWER:	AP
CONTRACT No.:	DE-AC27-01R14136
P&ID - PTF ULTRAFILTRATION PROCESS SYSTEM SPARGER RACK PSA-RK-00056	
24590-PTF-M6-UFP-00022001	REV 0

ISSUED BY: RPP-WTP-PDC
DATE: 11/07/08
SCALE: NONE
SAFETY SCREEN IS REQUIRED FOR DRAWING TYPES IDENTIFIED IN 24590-WTP-SPR-SEC-002

PROJECT No: 24590
SITE: HANFORD
AREA: 200E
BUILDING No: 11
ISSUE DATE: 11/07/08
ORIGINATOR: AP
CHECKER: AP
APPROVER: AP
REVIEWER: AP
CONTRACT No: DE-AC27-01R14136
P&ID - PTF
ULTRAFILTRATION PROCESS
SYSTEM
SPARGER RACK
PSA-RK-00056
24590-PTF-M6-UFP-00022001
REV 0
SCALE: NONE
SAFETY SCREEN IS REQUIRED FOR DRAWING TYPES IDENTIFIED IN 24590-WTP-SPR-SEC-002



- NOTES:**
- SEE DRAWING 24590-WTP-M6-50-00001 THROUGH 24590-WTP-M6-50-00008 FOR GENERAL NOTES, SYMBOLS AND LEGEND, AND GENERAL SLOPE REQUIREMENTS.
 - CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
 - THE PRESSURE BOUNDARY FOR ALL COMPONENTS ON THIS DRAWING IS QUALITY LEVEL D AND SEISMIC CATEGORY SC-I. BULGE ENCLOSURE INCLUDING DRAIN, VENTILATION AND WASH LINES IS QUALITY LEVEL CM AND SEISMIC CATEGORY SC-II, UNLESS OTHERWISE NOTED.
 - ALL LINES SHOWN ON THIS DRAWING SHALL BE FREE DRAINING, EXCEPT BLACK CELL LINES WHICH ARE SELF-DRAINING, UNLESS OTHERWISE NOTED.
 - CONNECTION PROVIDED FOR REAGENTS, PLANT WASH, AND SERVICE AIR.
 - ON/OFF VALVES FOR PLANT SERVICE AIR, AND PROCESS CONDENSATE HEADERS ARE INTERLOCKED FOR PROPER PROCESS SEQUENCING.
 - PLANT SERVICE AIR HEADER PRESSURE LOW IS INTERLOCKED TO CLOSE ITS AIR PURGE VALVES.

HOLD/OPEN ITEMS:
NONE

- REFERENCES:**
- THE REQUIRED OPERATIONAL SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS, AND OPERATOR INTERFACE POINTS ARE FULLY DESCRIBED IN THE UFP SYSTEM LOGIC DIAGRAMS (FUTURE), AND THE UFP SYSTEM DESCRIPTION (FUTURE REVISION).

DWG NO.	TITLE
24590-PTF-M6-UFP-0003001	ULTRAFILTRATION PROCESS SYSTEM UFP-BULGE-00005
24590-PTF-M6-UFP-0003002	ULTRAFILTRATION PROCESS SYSTEM UFP-BULGE-00005
24590-PTF-M6-UFP-0003003	ULTRAFILTRATION PROCESS SYSTEM UFP-BULGE-00005

REV	DESCRIPTION	ORG	CHKD	RVWD	APVD	DATE
0	ISSUED FOR CONSTRUCTION					11/16/08

REVISION HISTORY	
ORIGINATOR	John M. Bauer 11/16/08
CHECKER	[Signature] 11/16/08
APPROVER	[Signature] 11/16/08
REVIEWER	[Signature] 11/16/08

ISSUED BY	RPM-WTP PDC
DATE	11/16/08
BY	[Signature]
CHECKER	[Signature]
APPROVER	[Signature]
REVIEWER	[Signature]

24590-PTF-M6-UFP-00031002

PSLL-1904
PTF-M6-UFP-0003001 C2

YV-0224 ROSETTLER
PTF-M6-UFP-0003001 FC

PLANT SERVICE AIR
PTF-M6-UFP-0003001 G2

WASH LIQUIDS
PTF-M6-UFP-0003003 D2

WASH LIQUIDS
PTF-M6-UFP-0003003 C2

UFP-PMP-00042B/4.3B
PTF-M6-UFP-0003003 EB

UFP-PMP-00042A/4.3A
PTF-M6-UFP-0003003 EB

UFP-VSL-00001M/B
PTF-M6-UFP-0003007 C2

NOTES:

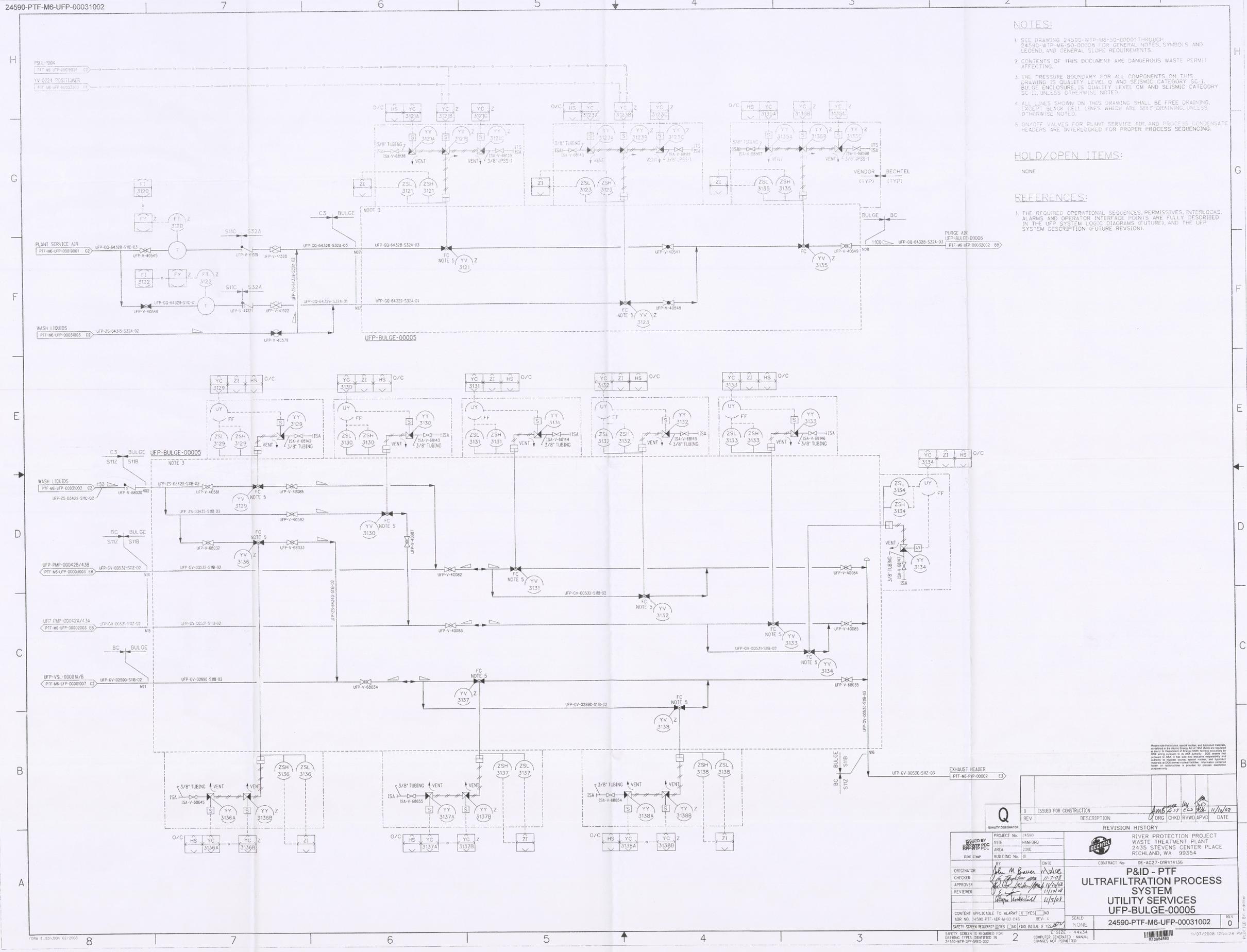
- SEE DRAWING 24590-WTP-M6-50-00001 THROUGH 24590-WTP-M6-50-00008 FOR GENERAL NOTES, SYMBOLS AND LEGEND, AND GENERAL ELOPE REQUIREMENTS.
- CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
- THE PRESSURE BOUNDARY FOR ALL COMPONENTS ON THIS DRAWING IS QUALITY LEVEL Q AND SEISMIC CATEGORY SC-I. BULGE ENCLOSURE IS QUALITY LEVEL CM AND SEISMIC CATEGORY SC-II, UNLESS OTHERWISE NOTED.
- ALL LINES SHOWN ON THIS DRAWING SHALL BE FREE DRAINING, EXCEPT BLACK CELL LINES WHICH ARE SELF-DRAINING, UNLESS OTHERWISE NOTED.
- CW/OFF VALVES FOR PLANT SERVICE AIR AND PROCESS CONDENSATE HEADERS ARE INTERLOCKED FOR PROPER PROCESS SEQUENCING.

HOLD/OPEN ITEMS:

NONE

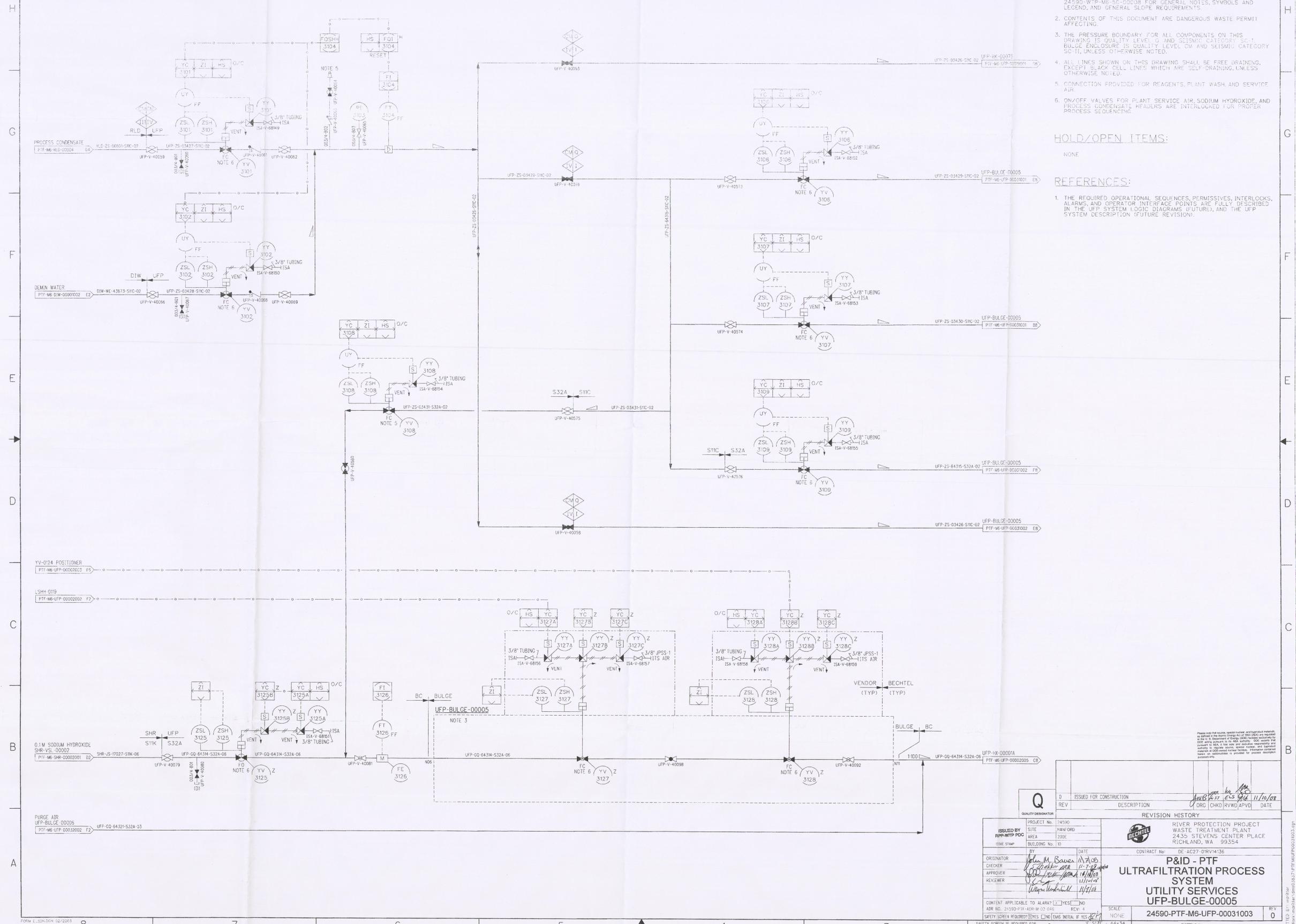
REFERENCES:

- THE REQUIRED OPERATIONAL SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS AND OPERATOR INTERFACE POINTS ARE FULLY DESCRIBED IN THE UFP SYSTEM LOGIC DIAGRAMS (FUTURE), AND THE UFP SYSTEM DESCRIPTION (FUTURE REVISION).



Please note that certain special materials and equipment are indicated on this drawing. It is the responsibility of the contractor to provide the necessary permits and approvals for the use of these materials and equipment. The contractor shall be responsible for obtaining all necessary permits and approvals for the use of these materials and equipment. The contractor shall be responsible for obtaining all necessary permits and approvals for the use of these materials and equipment.

Q ISSUED FOR CONSTRUCTION REV 0 DESCRIPTION: JMSZ 11/16/02 ORG: [Signature] CHKD: [Signature] RWVD: [Signature] APVD: [Signature] DATE: 11/16/02	
PROJECT No. 24590 SITE: HANFORD AREA: E30C BUILDING No. 10	
RIVER PROTECTION PROJECT WASTE TREATMENT PLANT 24525 STEVENS CENTER PLACE RICHLAND, WA 99354	
CONTRACT No. DE-AC27-01RV14356 P&ID - PTF ULTRAFILTRATION PROCESS SYSTEM UTILITY SERVICES UFP-BULGE-00005	
ORIGINATOR: John M. Bowen 11/16/02 CHECKER: [Signature] 11/17/02 APPROVER: [Signature] 11/16/02 REVIEWER: [Signature] 11/16/02	CONTENT APPLICABLE TO ALARA? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO ADR NO. 24590-PTF-ADR-M-02-046 REV: 4 SAFETY SCREEN REQUIRED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> EMS INITIAL IF YES: [Signature]
SCALE: NONE COMPUTER GENERATED: MANUAL CHANGES NOT PERMITTED	24590-PTF-M6-UFP-00031002 REV 0 11/07/2008 12:55:24 R1064591



NOTES:

- SEE DRAWING 24590-WTP-M6-50-00001 THROUGH 24590-WTP-M6-50-00008 FOR GENERAL NOTES, SYMBOLS AND LEGEND, AND GENERAL SLOPE REQUIREMENTS.
- CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
- THE PRESSURE BOUNDARY FOR ALL COMPONENTS ON THIS DRAWING IS QUALITY LEVEL 'Q' AND SEISMIC CATEGORY 'SC-II'. BULGE ENCLOSURE IS QUALITY LEVEL 'Q' AND SEISMIC CATEGORY 'SC-II', UNLESS OTHERWISE NOTED.
- ALL LINES SHOWN ON THIS DRAWING SHALL BE FREE DRAINING, EXCEPT BLACK CELL LINES WHICH ARE SELF-DRAINING, UNLESS OTHERWISE NOTED.
- CONNECTION PROVIDED FOR REAGENT'S, PLANT WASH AND SERVICE AIR.
- ON/OFF VALVES FOR PLANT SERVICE AIR, SODIUM HYDROXIDE, AND PROCESS CONDENSATE HEADERS ARE INTERLOCKED FOR PROPER PROCESS SEQUENCING.

HOLD/OPEN ITEMS:

NONE

REFERENCES:

- THE REQUIRED OPERATIONAL SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS, AND OPERATOR INTERFACE POINTS ARE FULLY DESCRIBED IN THE UFP SYSTEM LOGIC DIAGRAMS (FUTURE), AND THE UFP SYSTEM DESCRIPTION (FUTURE REVISION).

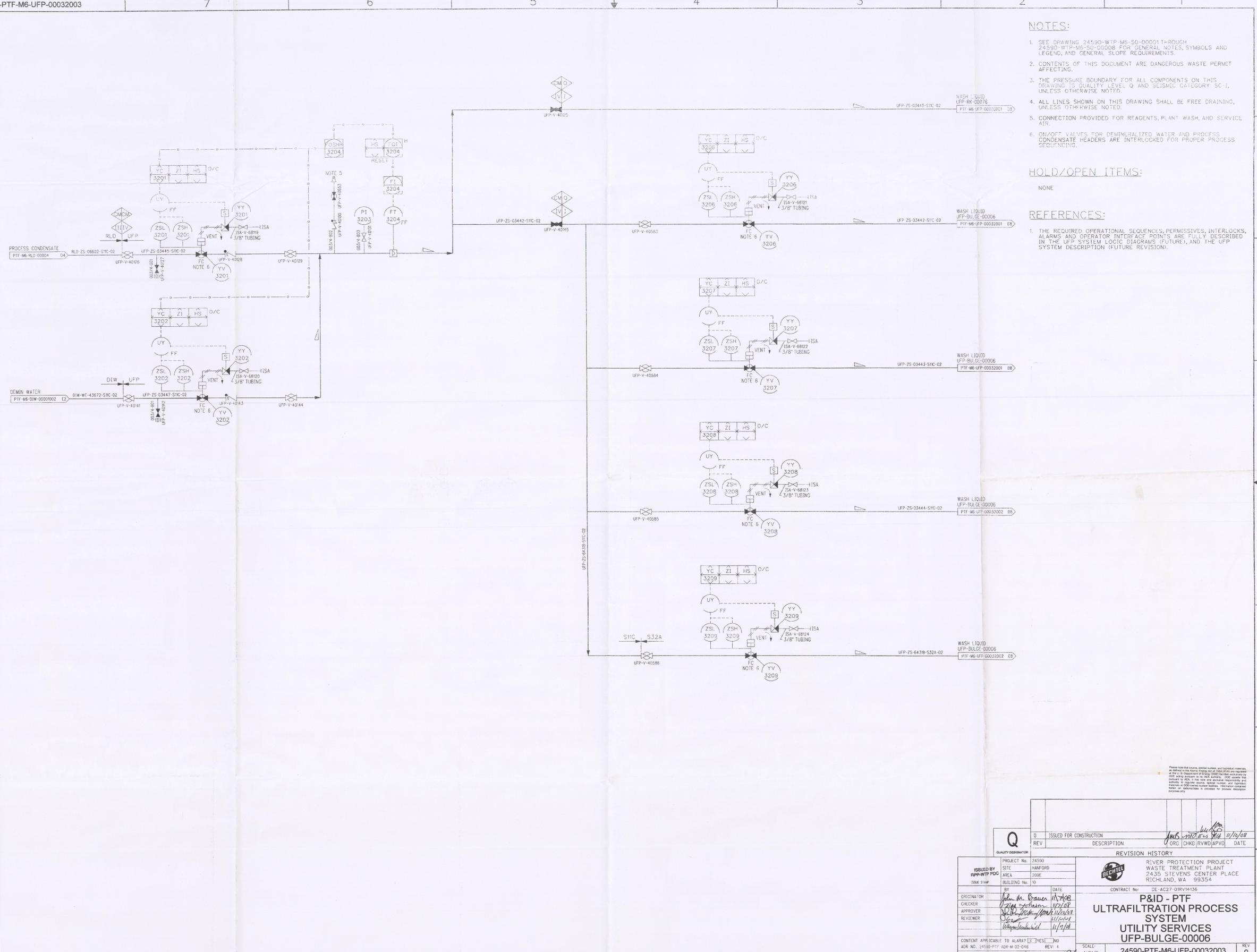
PLEASE READ THESE SPECIAL NOTES AND SIGNATURES CAREFULLY. THIS DRAWING IS THE PROPERTY OF BECHTEL CORPORATION. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF BECHTEL CORPORATION. BECHTEL CORPORATION IS NOT RESPONSIBLE FOR ANY DAMAGE TO PERSONS OR PROPERTY ARISING FROM THE USE OF THIS DRAWING.

ISSUED BY RUP-WTP PDC	PROJECT No. 24590	DATE	11/10/03
ISSUE STAMP	SITE RANFORD	AREA 2302	
ORIGINATOR John M. Bauer	BUILDING No. 10	CONTRACT No. DE-AC27-DIRV14-136	
CHECKER John M. Bauer	RIVER PROTECTION PROJECT WASTE TREATMENT PLANT 2455 STEVENS CENTER PLACE RICHLAND, WA 99354		
APPROVER John M. Bauer	P&ID - PTF UTILITY SERVICES UFP-BULGE-00005		
REVIEWER Wesley Winkler	24590-PTF-M6-UFP-00031003		
CONTENT APPLICABLE TO ALABAMA? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	SCALE: NONE	REV. 4	REV. 0
ADN NO. 24590-P11-ADR-M-02-045	COMPUTER GENERATED - MANUAL CHANGES NOT PERMITTED	11/07/2008 10:47:21 AM	

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7 6 5 4 3 2 1

8 7 6 5 4 3 2 1



- NOTES:**
- SEE DRAWING 24590-WTP-M6-50-00001 THROUGH 24590-WTP-M6-50-00008 FOR GENERAL NOTES, SYMBOLS AND LEGEND, AND GENERAL SLOPE REQUIREMENTS.
 - CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
 - THE PRESSURE BOUNDARY FOR ALL COMPONENTS ON THIS DRAWING IS QUALITY LEVEL Q AND SEISMIC CATEGORY SC-1, UNLESS OTHERWISE NOTED.
 - ALL LINES SHOWN ON THIS DRAWING SHALL BE FREE DRAINING, UNLESS OTHERWISE NOTED.
 - CONNECTION PROVIDED FOR REAGENTS, PLANT WASH, AND SERVICE AIR.
 - ON/OFF VALVES FOR DEMINERALIZED WATER AND PROCESS CONDENSATE HEADERS ARE INTERLOCKED FOR PROPER PROCESS SEQUENCING.

HOLD/OPEN ITEMS:
NONE

- REFERENCES:**
- THE REQUIRED OPERATIONAL SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS AND OPERATOR INTERACT POINTS ARE FULLY DESCRIBED IN THE UFP SYSTEM LOGIC DIAGRAMS (FUTURE), AND THE UFP SYSTEM DESCRIPTION (FUTURE REVISION).

Please note that names, grades, titles, and telephone numbers are subject to change without notice. It is the responsibility of the user to verify the accuracy of the information provided in this drawing. The user shall be responsible for any errors or omissions in this drawing. The user shall be responsible for any errors or omissions in this drawing. The user shall be responsible for any errors or omissions in this drawing.

<p>Q</p> <p>ISSUED FOR CONSTRUCTION</p> <p>REV: 0</p>		<p>REVISION HISTORY</p> <p>PROJECT No: 24590</p> <p>SITE: RIVER PROTECTION PROJECT</p> <p>AREA: WASTE TREATMENT PLANT</p> <p>BUILDING No: 2435 STEVENS CENTER PLACE</p> <p>2435 STEVENS CENTER PLACE</p> <p>RICHLAND, WA 99354</p>	
<p>ISSUED BY: RHP-WTP DDC</p> <p>DATE: 11/16/08</p>		<p>CONTRACT No: DE-AC27-07R14136</p> <p>P&ID - PTF ULTRAFILTRATION PROCESS SYSTEM UTILITY SERVICES UFP-BULGE-00006</p>	
<p>ORIGINATOR: John M. Brown 11/16/08</p> <p>CHECKER: [Signature] 11/17/08</p> <p>APPROVER: [Signature] 11/17/08</p> <p>REVIEWER: [Signature] 11/17/08</p>		<p>SCALE: 1"=4'-3"</p> <p>11/07/2008 11:21:04 AM</p>	
<p>CONTENT APPLICABLE TO ALARMS: YES [] NO [X]</p> <p>ADR NO: 24590-PTF-AEM-M-02-048</p> <p>SAFETY SCREENS REQUIRED: YES [] NO [X]</p>		<p>24590-PTF-M6-UFP-00032003</p> <p>REV: 0</p>	

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