



U.S. Department of Energy  
~~Office of Environmental Protection~~

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

DEC 08 2009

09-ESQ-528

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-09-012

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-09-012 attached, for the Washington State Department of Ecology (Ecology) review and approval. The form describes a requested Class 1 modification to the Reference.

Modification Notification Form 24590-PTF-PCN-ENV-09-012 submits Piping and Instrumentation Diagrams (P&ID) for the Pretreatment Facility Pulse Jet Ventilation and Vessel Vent Process systems to replace the permitted P&IDs currently found in Appendix 8.2 of the Reference.

Ecology comments resulting from review of this modification notification form and the associated information have been resolved.

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,

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

ESQ:GMN

Attachment

cc: See page 2

Ms. Jane A. Hedges  
09-ESQ-528

-2-

DEC 08 2009

cc w/attach:

J. Brown, BNI  
B. L. Curn, BNI  
B. G. Erlandson, BNI  
T. C. Feigenbaum, BNI  
P. A. Fisher, BNI  
S. K. Murdock, BNI  
Administrative Record (WTP H-0-8)  
BNI Correspondence  
Environmental Portal, LMSI

cc electronic:

R. K. Biyani, Ecology  
K. A. Elsethagen, Ecology (1 hard copy)  
E. A. Fredenburg, Ecology  
T. R. Williams, Ecology  
S. A. Thompson, FHI  
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  
09-ESQ-528

Hanford Facility RCRA Permit Modification Notification  
Form 24590-PTF-PCN-ENV-09-012

Quarter Ending 12/31/2009

24590-PTF-PCN-ENV-09-012

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**Hanford Facility RCRA Permit Modification Notification Form**

**Part III, Operating Unit 10**

**Waste Treatment and Immobilization Plant**

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Index

Page 2 of 3: Hanford Facility RCRA Permit, Part III, Operating Unit 10, Waste Treatment and Immobilization Plant  
Replace Piping and Instrumentation Diagrams (P&ID) for the PTF Pulse Jet Ventilation (PJV) System and  
Vessel Vent Process (PVP) System in Appendix 8.2 of the Dangerous Waste Permit.

Submitted by Co-Operator:

Reviewed by ORP Program Office:

Donna M Busche 11/18/09  
D. M. Busche Date

G. A. Girard 12/7/09  
G. A. Girard Date

Quarter Ending 12/31/2009

24590-PTF-PCN-ENV-09-012

<b>Hanford Facility RCRA Permit Modification Notification Form</b>					
Unit:		Permit Part:			
<b>Waste Treatment and Immobilization Plant</b>		<b>Part III, Operating Unit 10</b>			
<u>Description of Modification:</u>					
<p>The purpose of this Class 1 prime modification is to update P&amp;IDs for the PTF PJV System and PVP System in Appendix 8.2 of the Dangerous Waste Permit. The permit P&amp;IDs incorporated into the DWP are being replaced with source P&amp;IDs as indicated in the Table below. The new drawings (Rev 0) are the result of converting one source drawing into multiple sheets in an effort to provide clearer representation of the PVP system, including additional details for instrumentation and controls. The following source P&amp;IDs are submitted to replace the permitted P&amp;IDs currently in Appendix 8.2:</p>					
Appendix 8.2					
Replace:	24590-PTF-M6-PJV-P0004 Rev 0	With:	24590-PTF-M6-PJV-00004 Rev 3		
	24590-PTF-M6-PVP-P0004 Rev 0		24590-PTF-M6-PVP-00004001 Rev 0		
			24590-PTF-M6-PVP-00004002 Rev 0		
<p>The reference P&amp;IDs have been revised. They incorporate changes provided in applicable document change forms (e.g., DCN, SCN, SDDR, FCN, FCR, etc.) and changes associated with the resolution to comments on change documents since the issuance of the last revision of the permitted drawing. This modification requests Ecology approval and incorporation into the permit, the specific changes to these P&amp;IDs that are indicated by change history notes, clouds, and revision triangles. Revisions are the result of ongoing design changes. The following identifies the significant types of changes on the attached drawings:</p> <ul style="list-style-type: none"> <li>• Converted PVP P&amp;ID from a single sheet to two-sheet drawings</li> <li>• Incorporated changes from change documents identified in Revision Description/Notes on each P&amp;ID</li> <li>• Modified, deleted, added notes and references</li> <li>• Modified, identified, and added support/utility system lines, valves, instruments and controls</li> <li>• Revised, identified, and added slope symbols and/or the slope requirement</li> <li>• P&amp;ID 24590-PTF-M6-PJV-00004: Deleted spare nozzles on PWD-RK-00020; deleted/modified vacuum breakers</li> <li>• P&amp;ID 24590-PTF-M6-PVP-00004001: Added fire separation areas and revised label for the non-contact cooling water drain line (Grid E2)</li> </ul>					
<p>The following is a list of outstanding change documents that have not been incorporated into this modification. These change documents have been provided to Ecology in accordance with Permit Condition III.10.C.9.h :</p> <ul style="list-style-type: none"> <li>• 24590-PTF-M6N-M80T-00055, -00059, -00068; 24590-PTF-M6PR-10-00004; 24590-PTF-M6LN-PJV-00001 on P&amp;ID 24590-PTF-M6-PJV-00004</li> <li>• 24590-PTF-M6N-PVP-00060, -00061 on P&amp;ID 24590-PTF-M6-PVP-00004001 and 24590-PTF-M6N-PVP-00060 on P&amp;ID 24590-PTF-M6-PVP-00004002</li> </ul>					
WAC 173-303-830 Modification Class:		Class 1	Class <sup>1</sup> 1	Class 2	Class 3
Please mark the Modification Class:			X		
<p>Enter relevant WAC 173-303-830, Appendix I Modification citation number:</p> <p>Enter wording of WAC 173-303-830, Appendix I Modification citation:</p> <p>In accordance with WAC 173-303-830(4)(d)(i), this modification notification is requested to be reviewed and approved as a Class <sup>1</sup>1 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."</p>					

Quarter Ending 12/31/2009

24590-PTF-PCN-ENV-09-012

<p>Modification Approved/Concur: <input type="checkbox"/> Yes <input type="checkbox"/> Denied (state reason below) <u>Reason for denial:</u></p>	<p>Reviewed by Ecology:</p> <p>Kelly Elsethagen                      Date</p>
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H  
G  
F  
E  
D  
C  
B  
A

NOTES:

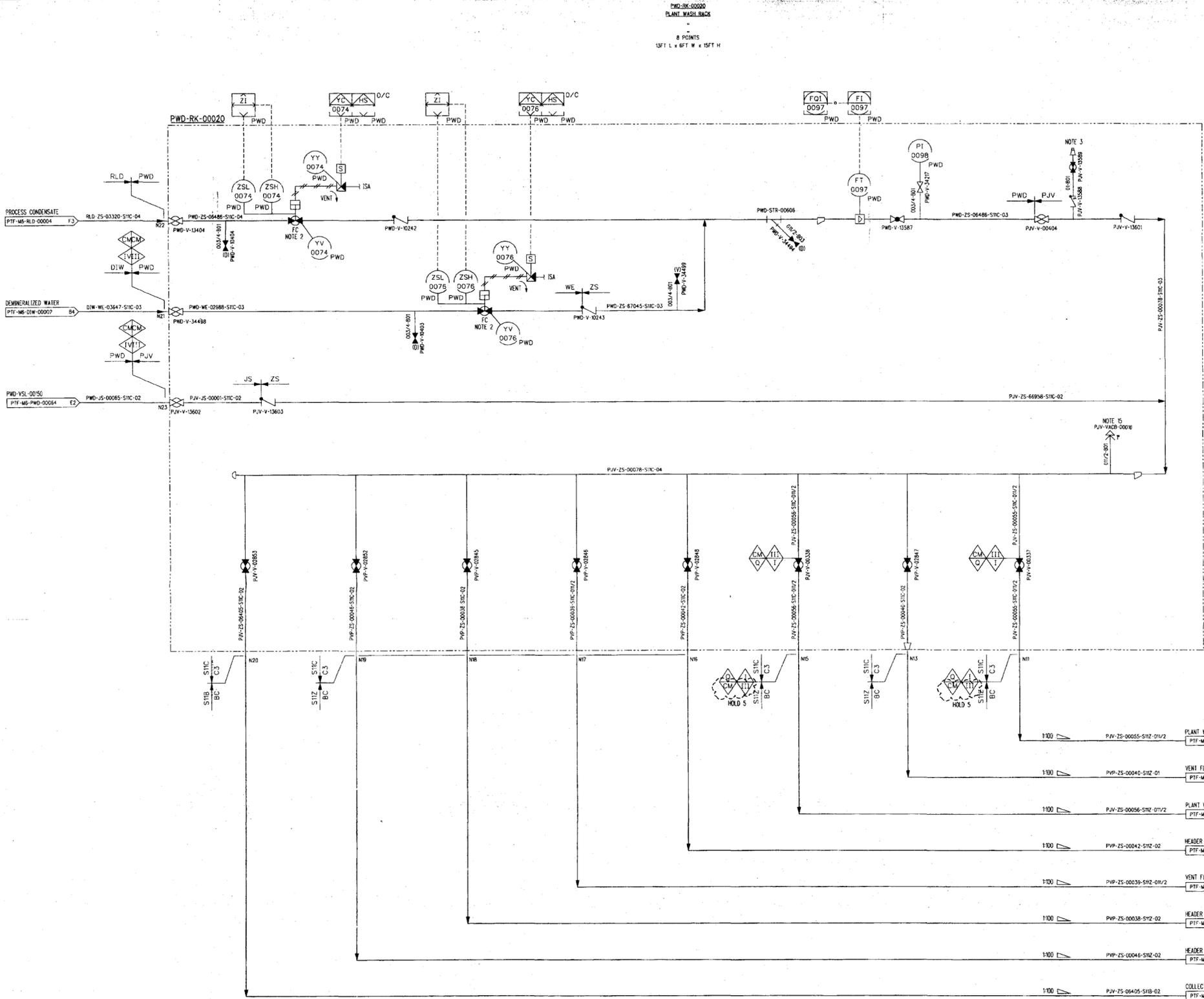
- SEE DRAWINGS 24590-WTP-M6-50-00001 THROUGH 24590-WTP-M6-50-00008 FOR GENERAL NOTES, SYMBOLS AND LEGEND, AND GENERAL SLOPE REQUIREMENTS.
- VALVES INTERLOCKED TO PREVENT MULTIPLE VALVE OPERATION.
- REAGENT/PLANT WASH/AIR SHALL BE PROVIDED AT LOCAL UTILITY STATION.
- DELETED
- THE PRESSURE BOUNDARY FOR ALL COMPONENTS ON THIS DRAWING IS QUALITY LEVEL CM AND SEISMIC CATEGORY SC-III, UNLESS OTHERWISE NOTED.
- CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
- 7-12. DELETED
- BLACK CELL PIPING TO BE SUPPORTED FOR MAXIMUM WATERFALL AND FOR THE EXPECTED DYNAMIC FORCES DURING THE TRANSITION FROM A DRY PIPE TO A LIQUID-FULL PIPE.
- REVISION 2: REVISED TO INCORPORATE 24590-WTP-FCR-P-05-0119, 24590-PTF-M6-MB0T-00026, 24590-PTF-M6-MB0T-00020, 24590-PTF-M6-MB0T-00019, 24590-PTF-M6-MB0T-00007, AND 24590-PTF-M6-MB0T-00007 FOR THIS DRAWING WERE FURTHER REVISED AS NOTED DELETED EXTRA SPARES AND NOZZLES N1 TO N10 FOR THE RACK REVISED QUALITY LEVELS AND SEISMIC CATEGORIES, AND OTHER CHANGES AS SHOWN ON THE DRAWING DELETED, REVISED AND ADDED NOTES AND REFERENCE. SYSTEM REQUIRES DESIGN REVERIFICATION.
- BRANCH TO BE CONNECTED TO HORIZONTAL RUN OF HEADER PIPE.
- REVISION 3: MAJOR REVISION NO REVISION CLOUDS REQUIRED. REVISED TO INCORPORATE 24590-PTF-M6-PJV-00031, DELETED VACUUM BREAKERS FROM INDIVIDUAL WASH LINES AND ADDED VACUUM BREAKER TO MAIN HEADER, ADDED CHEMICAL INJECTION LINE AND VALVES, UPDATED OFF SHEET CONNECTIONS, REVISED/ADDED/DELETED NOTES, HOLDS, AND REFERENCES, UPDATED SEISMIC CATEGORIES AND QUALITY LEVELS OF WASH LINES, REVISED LAYOUT TO MEET DRAFTING STANDARDS.

HOLD/OPEN ITEMS:

- 1-4. DELETED
- QUALITY LEVEL DESIGNATION AND SEISMIC CATEGORY CLASSIFICATION ON HOLD PENDING APPROVAL OF AUTHORIZATION BASIS AMENDMENT REQUEST 24590-WTP-SE-08-0120 (FUTURE).

REFERENCES:

- THE REQUIRED BATCH SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS AND OPERATOR INTERFACE POINTS ARE FULLY DESCRIBED IN THE SOFTWARE LOGIC DIAGRAMS (FUTURE)



These notes are for general information only and do not constitute a contract. The user of this drawing is responsible for ensuring that the drawing is used in accordance with the applicable codes and standards. The user is also responsible for ensuring that the drawing is used in accordance with the applicable codes and standards. The user is also responsible for ensuring that the drawing is used in accordance with the applicable codes and standards.

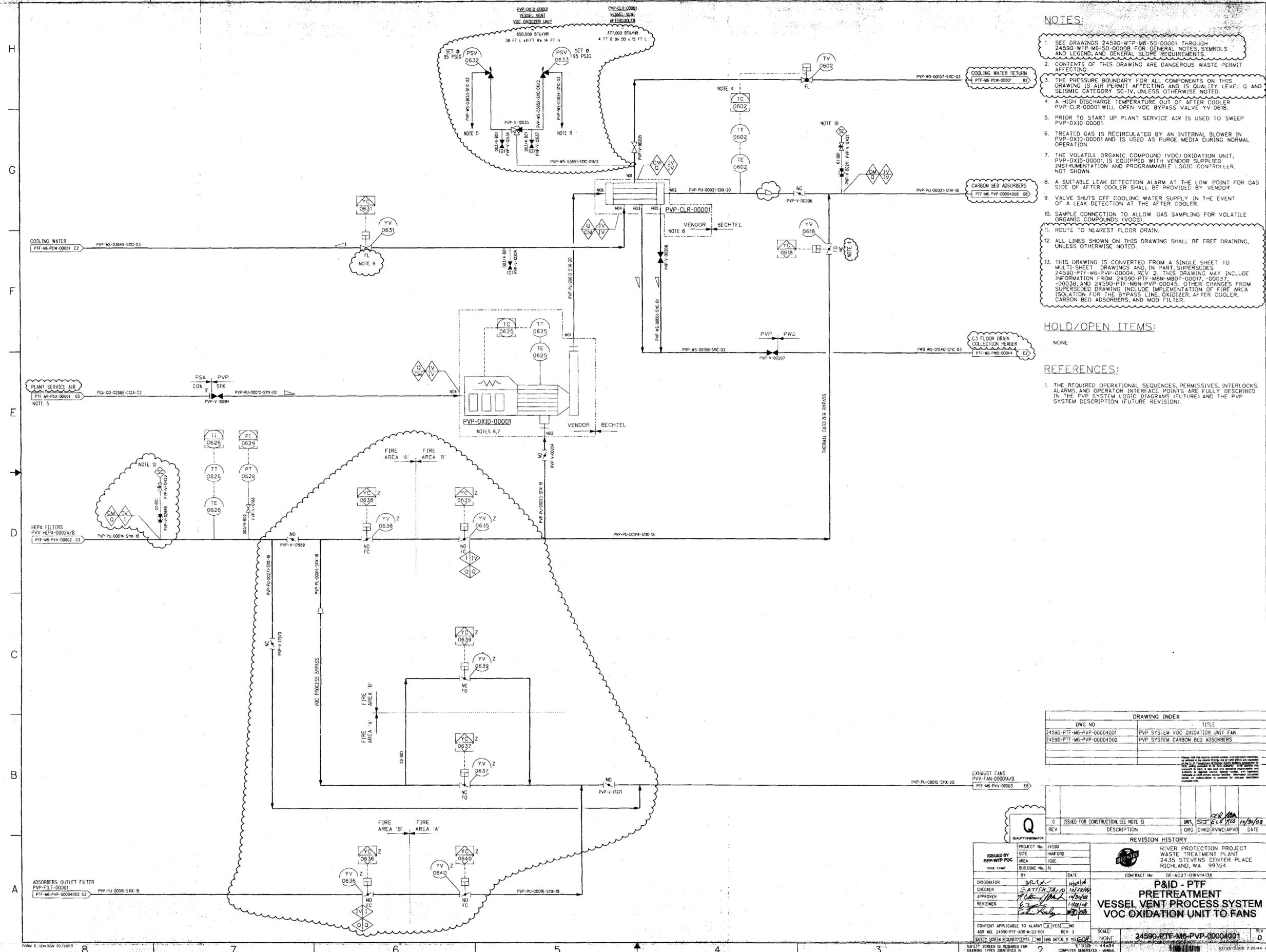
REV	DESCRIPTION	ORG	CHKD	RYWJ	APVD	DATE
3	REVISED PER NOTE 16	JU	APP	RES	JU	5/26/06
2	REVISED PER NOTE 14	JD	RV	RES	JU	5/26/06
0	ISSUED FOR CONSTRUCTION	RW	AM	JJ	RV	05/01/03

QUALITY DETERMINATOR		REVISION HISTORY	
PROJECT No.	24590	PROJECT	RIVER PROTECTION PROJECT
SITE	HANFORD	SITE	WASTE TREATMENT PLANT
AREA	2006	AREA	24.35 STEVENS CENTER PLACE
BUILDING No.		BUILDING No.	99354
BY		CONTRACT No.	DE-AC27-08R14136
DATE			

ORIGINATOR	DATE	APPROVER	DATE
RYAN McCLAGHRY	04/28/03	ROBERT VOKE	05/01/03
ANTONIO MOLINA	04/28/03	JOHN JULYK	04/30/03

CONTENT APPLICABLE TO ALL REV'S	YES	NO
SAFETY SCREEN REQUIRED/PROVIDES		
DRAWING TYPES IDENTIFIED IN		
SAFETY SCREEN REQUIRED/PROVIDES		

SCALE	REV
NONE	3



- 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 DRAWING ARE DANGEROUS WASTE PERMIT AFFECTING.
  - THE PRESSURE BOUNDARY FOR ALL COMPONENTS ON THIS DRAWING IS AIR PERMIT AFFECTING AND IS QUALITY LEVEL Q AND SEISMIC CATEGORY SC-IV, UNLESS OTHERWISE NOTED.
  - A HIGH DISCHARGE TEMPERATURE OUT OF AFTER COOLER PVP-CLR-00001 WILL OPEN VOC BYPASS VALVE YV-0618.
  - PRIOR TO START UP, PLANT SERVICE AIR IS USED TO SWEEP PVP-OXID-00001.
  - TREATED GAS IS RECIRCULATED BY AN INTERNAL BLOWER IN PVP-OXID-00001 AND IS USED AS PURGE MEDIA DURING NORMAL OPERATION.
  - THE VOLATILE ORGANIC COMPOUND (VOC) OXIDATION UNIT, PVP-OXID-00001, IS EQUIPPED WITH VENDOR SUPPLIED INSTRUMENTATION AND PROGRAMMABLE LOGIC CONTROLLER, NOT SHOWN.
  - A SUITABLE LEAK DETECTION ALARM AT THE LOW POINT FOR GAS SIDE OF AFTER COOLER SHALL BE PROVIDED BY VENDOR.
  - VALVE SHUTS OFF COOLING WATER SUPPLY IN THE EVENT OF A LEAK DETECTION AT THE AFTER COOLER.
  - SAMPLE CONNECTION TO ALLOW GAS SAMPLING FOR VOLATILE ORGANIC COMPOUNDS (VOC'S).
  - ROUTE TO NEAREST FLOOR DRAIN.
  - ALL LINES SHOWN ON THIS DRAWING SHALL BE FREE DRAINING, UNLESS OTHERWISE NOTED.
  - THIS DRAWING IS CONVERTED FROM A SINGLE SHEET TO MULTI-SHEET DRAWINGS AND, IN PART, SUPERSEDES 24590-PTF-M6-PVP-00004, REV 2. THIS DRAWING MAY INCLUDE INFORMATION FROM 24590-PTF-M6-M601-00017, -00037, -00038, AND 24590-PTF-M6-PVP-00045. OTHER CHANGES FROM SUPERSEDED DRAWING INCLUDE IMPLEMENTATION OF FIRE AREA ISOLATION FOR THE BYPASS LINE, OXIDIZER, AFTER COOLER, CARBON BED ADSORBERS, AND MOD FILTER.

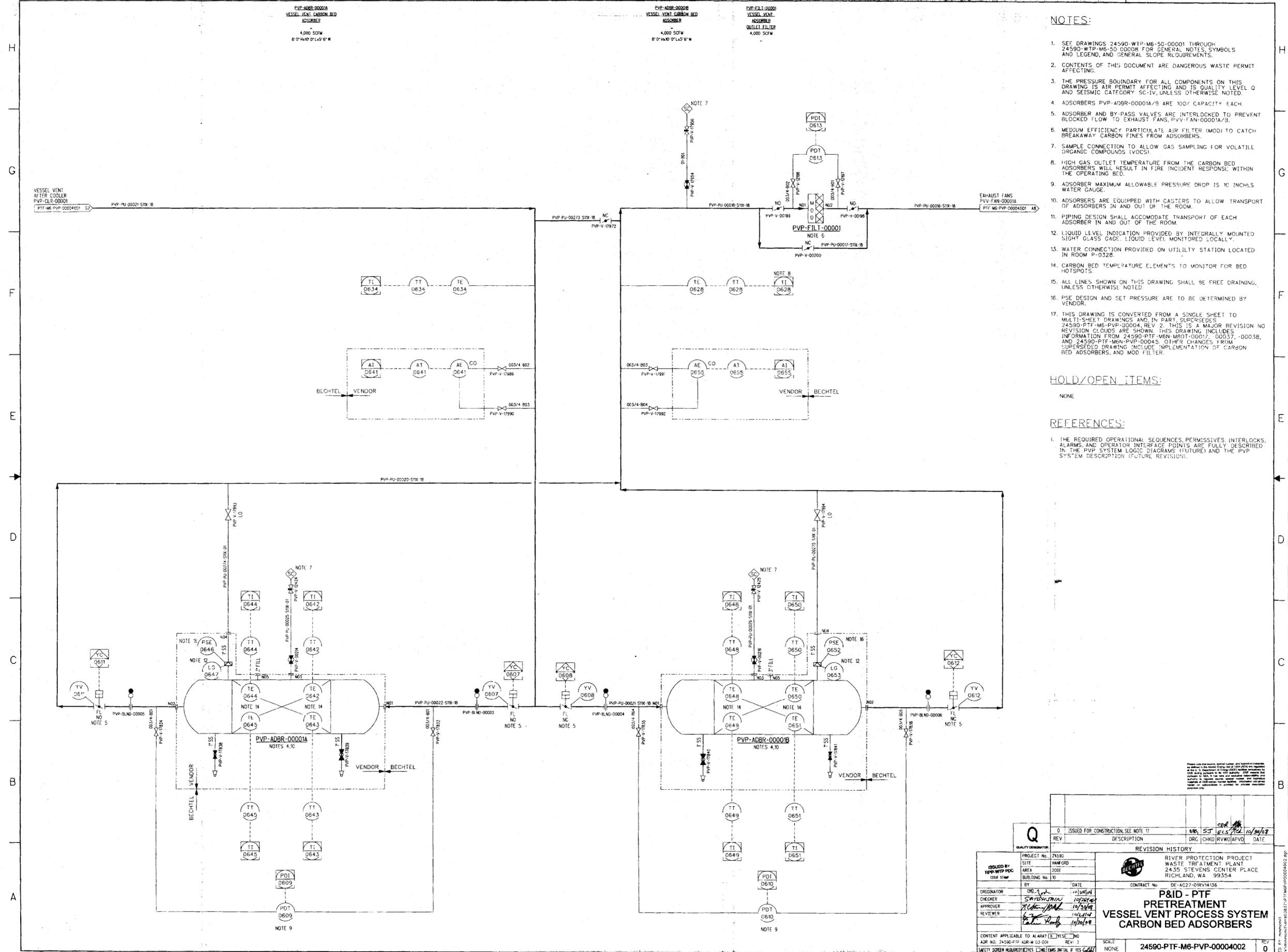
- HOLD/OPEN ITEMS:**
- NONE
- REFERENCES:**
- THE REQUIRED OPERATIONAL SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS, AND OPERATOR INTERFACE POINTS ARE FULLY DESCRIBED IN THE PVP SYSTEM LOGIC DIAGRAMS (FUTURE) AND THE PVP SYSTEM DESCRIPTION (FUTURE REVISION).

DRAWING INDEX	
DWG NO	TITLE
24590-PTF-M6-PVP-00004001	PVP SYSTEM VOC OXIDATION UNIT FAN
24590-PTF-M6-PVP-00004002	PVP SYSTEM CARBON BED ADSORBERS

REV	DESCRIPTION	ORG	CHKD	RVD	APVD	DATE
0	ISSUED FOR CONSTRUCTION SEE NOTE 13	SM	ST	EL	PL	10/30/08

REVISION HISTORY	
ISSUED BY	DATE
SM	10/30/08
ST	10/30/08
EL	10/30/08
PL	10/30/08

PROJECT NO:	24590
SITE:	446 ORD
ISSUE NO:	13
ORIGINATOR:	SM
CHECKER:	SATISH JAIN
APPROVER:	[Signature]
REVIEWER:	[Signature]
CONTENT APPLICABLE TO ALABAMA:	YES
ADR NO. 24590-PTF-ADR-M-03-001	REV 3
SAFETY SCREEN REQUIRED (YES/NO):	NO
SCALE:	NONE
COMPUTER GENERATED:	NO
CHANGES NOT PERMITTED:	NO



NOTES:

- SEE DRAWINGS 24590-WTP-M6-50-00001 THROUGH 24590-WTP-M6-50-00004 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 AIR PERMIT AFFECTING AND IS QUALITY LEVEL Q AND SEISMIC CATEGORY SC-IV, UNLESS OTHERWISE NOTED.
- ADSORBERS PVP-ADBR-00001A/B ARE 100% CAPACITY EACH.
- ADSORBER AND BY-PASS VALVES ARE INTERLOCKED TO PREVENT BLOCKED FLOW TO EXHAUST FANS, PVP-FAN-00001A/B.
- MEDIUM EFFICIENCY PARTICULATE AIR FILTER (MOD) TO CATCH BREAKAWAY CARBON FINES FROM ADSORBERS.
- SAMPLE CONNECTION TO ALLOW GAS SAMPLING FOR VOLATILE ORGANIC COMPOUNDS (VOCs).
- HIGH GAS OUTLET TEMPERATURE FROM THE CARBON BED ADSORBERS WILL RESULT IN FIRE INCIDENT RESPONSE WITHIN THE OPERATING BED.
- ADSORBER MAXIMUM ALLOWABLE PRESSURE DROP IS 10 INCHES WATER GAUGE.
- ADSORBERS ARE EQUIPPED WITH CASTERS TO ALLOW TRANSPORT OF ADSORBERS IN AND OUT OF THE ROOM.
- PIPING DESIGN SHALL ACCOMMODATE TRANSPORT OF EACH ADSORBER IN AND OUT OF THE ROOM.
- LIQUID LEVEL INDICATION PROVIDED BY INTEGRALLY MOUNTED SIGHT GLASS GAGE, LIQUID LEVEL MONITORED LOCALLY.
- WATER CONNECTION PROVIDED ON UTILITY STATION LOCATED IN ROOM P-0328.
- CARBON BED TEMPERATURE ELEMENTS TO MONITOR FOR BED HOTSPOTS.
- ALL LINES SHOWN ON THIS DRAWING SHALL BE FREE DRAINING, UNLESS OTHERWISE NOTED.
- PSE DESIGN AND SET PRESSURE ARE TO BE DETERMINED BY VENDOR.
- THIS DRAWING IS CONVERTED FROM A SINGLE SHEET TO MULTI-SHEET DRAWINGS AND IN PART SUPERSEDES 24590-PTF-M6-PVP-00004, REV. 2. THIS IS A MAJOR REVISION NO. REVISION CLOUDS ARE SHOWN. THIS DRAWING INCLUDES INFORMATION FROM 24590-PTF-M6N-M601-00017, 00037, 00038, AND 24590-PTF-M6N-PVP-00045. OTHER CHANGES FROM SUPERSEDED DRAWING INCLUDE IMPLEMENTATION OF CARBON BED ADSORBERS, AND MOD FILTER.

HOLD/OPEN ITEMS:

NONE

REFERENCES:

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

REVISION HISTORY

REV	DESCRIPTION	ORG	CHKD	RVW	APVD	DATE
0	ISSUED FOR CONSTRUCTION, SEE NOTE 17	URS	ST	JCS	PL	10/24/02

QUALITY CONTROL

ISSUED BY	DATE
PVP-WTP POC	10/24/02

ORIGINATOR: *URS* DATE: 10/24/02  
 CHECKER: *SATYAN* DATE: 10/24/02  
 APPROVER: *PL* DATE: 10/24/02  
 REVIEWER: *PL* DATE: 10/24/02

CONTRACT NO: DE-AC27-01RV14136

**P&ID - PTF  
 PRETREATMENT  
 VESSEL VENT PROCESS SYSTEM  
 CARBON BED ADSORBERS**

CONTENT APPLICABLE TO ALARA?  YES  NO  
 ADP NO. 24590-PTF-ADM-M 03-001 REV: 3  
 SAFETY SCREEN REQUIRED FOR DRAWING TYPES IDENTIFIED IN 24590-WTP-OPS-SEC-001  YES  NO

SCALE: NONE  
 24590-PTF-M6-PVP-00004002  
 REV: 0

10/28/2008 02:44:16  
 44,434  
 COMPUTER GENERATED MANUAL CHANGES NOT PERMITTED