GENERAL NOTES:

22. FOR 241-AZ-154 AND U301-B ONLY:
BUTTERFLY VALVE SHALL BE KEYSTONE K-LOK 362-154 WITH 316 SST BODY AND DISC AND 316 SST OR 17-4 PH SST STEM. STEM PACKING SHALL BE TEFLON. RESILIENT SEAT SHALL BE EPDM. STEM BUSHING SHALL BE RTFE/FIBERGLASS EPOXY. THE VALVE SHALL B E FURNISHED WITH MANUAL HANDLE. VALVE SHALL MEET REQUIREMENTS OF ASME B31.1 AND SHALL BE GIVEN A SHELL AND CLOSURE TEST IN ACCORDANCE WITH ASME 16.34 DOCUMENTATION OF TEST PROCEDURE(S) AND TEST RESULTS SHALL BE SUBMITTED. THE COMPLETED ASSEMBLY SHALL BE LEAK TESTED IN ACCORDANCE WITH ASME AG-1 SECTION SA-4533. THE TEST SHALL CONSIST OF A QUALITATIVE LEAK TEST AT 1 PSIG AND CHECK FOR LEAKS WITH A SOAP SOLUTIONS OR EQUIVALENT ON THE OUTSIDE OF THE ASSEMBLY. DOCUMENTATION OF A TEST PROCEDURE(S) AND TEST RESULTS SHALL BE SUBMITTED.
FLANGE BOLTS ARE BASED ON USE PF A LUGGED BODY BUTTERFLY VALVE. IF A WAFER BODY BUTTERFLY VALVE IS USED THEN EIGHT EA. 5/8"-11UNC X 4-3/4"LG BOLTS AND NUTS ARE REQUIRED PER MANUFACTURERS RECOMMENDATIONS.

23. BREATHER FILTER OPTIONS:
THREE OPTIONS ARE AVAILABLE SUB ASSEMBLY # 110, 120, & 130. (SEE SHT 4 OF THIS DRAWING). SUB ASSEMBLY #120 AND #130 ARE AVAILABLE FOR INSTALLATION ON A TRIAL BASIS AT TANKS 241-SX-112 AND 241-SX-114.

24. RADIAL BREATHER FILTERS SHALL BE FLANDERS MODEL 0-007-1-12-RF-NU-00-E3-Z04059* (* IS A VARIABLE LETTER DESIGNATOR REPRESENTING THE CURRENT VENDOR DRAWING REVISION AND SHALL BE PURCHASED IN ACCORDANCE WITH RPP-SPEC-28675 (CURRENT REVISION) "AG-1, SECTION FK SPECIAL HEPA FILTERS (RADIAL AND AXIAL) PROCUREMENT SPECIFICATIONS".

25. AXIAL BREATHER FILTERS SHALL BE FLANDERS MODEL 0-007-D-12-N2-NU-00-00-Z08061 AND SHALL BE PURCHASED IN ACCORDANCE WITH RPP-SPEC-28675 (CURRENT REVISION) "AG-1, SECTION FK SPECIAL HEPA FILTERS (RADIAL AND AXIAL) PROCUREMENT SPECIFICATIONS".

26. MCMASTER CARR PARTS SUGGESTED OR ENGINEER APPROVED EQUIVALENT.

27. FOR NEW OR NON CONTAMINATED FLANGES, PRIOR TO TRANSPORTATION AND/OR STORAGE, THE OPEN FLANGE CONNECTION SHALL BE SEALED USING A PVC BLIND FLANGE, OR OTHER ENGINEERING APPROVED METHOD. ALL SEALING DEVISES MUST BE REMOVED PRIOR TO INSTALLATION.

28. BREATHER FILTER RISERS MAY BE THERMALLY PROTECTED WITH OPTIONAL JACKETED INSULATION BLANKETING. INSULATION TO BE INSTALLED FROM GRADE UP TO THE TOP OF THE FLANGED FILTER MOUNTING SUB ASSEMBLY. INSULATION JACKETS TO BE STANDARD TEMPMAT CANVAS JACKET WITH 2" TEFLON COATED FIBERGLASS FILLER. PROVIDE WITH WEATHER FLAP. LACING ANCHORS, AND WIRE. RECOMMENDED VENDOR: ADVANCED THERMAL CORP. INSULATION TO HAVE A MINIMUM R-VALUE OF 0.24 BTU-IN/H FT^2 F. EQUIVILENT SUBSTITUTE ACCEPTABLE.

29. THE TERM "EXISTING RISER" IS INCLUSIVE OF ALL CURRENT RISER CONFIGRATIONS, I.E. TANK RISERS, SPOOL PIECES, AND ANY OTHER EXISTING RISER CONFIGURATION"

TORQUE GUIDELINES USING GARLOCK BLU 3000 RING GASKET

NOMINAL PIPE SIZE (IN)	NUMBER OF BOLTS (#)	BOLT SIZE (IN)	RECOMMENDED TORGUE WHEN USING ASTM A193 GR B7 OR B16 (CS) WITHIN ± 5FT-LBS	RECOMMENDED TORGUE WHEN USING ASTM A193 GR 8 (SS) WITHIN ± 5FT-LBS
4	8	5/8	120	85
6	8	3/4	200	100
8	8	3/4	200	100
10	12	7/8	320	160
12	12	7/8	320	160
14	12	1	490	245
20	20	1-1/8	710	355
24	20	1-1/4	1000	500

PARTS LIST/MATERIAL LIST

ASTM A182 GR F 304L/304

QTY REQD -190	-180	-170	-160	-150	-140	-130	-120	-110	-100	-090	-080	-070	-060	-050	-040	-030	-020	-010	PART/DASH NUMBER	NOMENCLATURE/DESCRIPTION	MATERIAL/REFERENCE	SHT	ITEM NO
																		1		18" SPLIT FLANGE ADAPTER (ALTERED)	ASTM A182 GR F 304L/304 WITH PART. #"S 30,32	5	45
																		1		20" FLANGE ADAPTER (ALTERED)	ASTM A182 GR F 304L/304 WITH PART. #"S 30,32	5	46
																		1		20" SPLIT FLANGE ADAPTER (ALTERED)	ASTM A182 GR F 304L/304 WITH PART. #"S 30,32	5	47
																		1		24" FLANGE ADAPTER (ALTERED)	ASTM A182 GR F 304L/304 WITH PART. #"S 31,33	5	48
																				FLANGE, 6" SO 150 # RF	ASTM A182 GR F 304L/304	7	49
																				FLANGE, 4" SO, 150# RF	ASTM A182 GR F 304L/304	7	50
																				PIPE, 6" SCH 40S	ASTM A312 304L/304	7	51
																				PIPE, 4" SCH 40S	ASTM A312 304L/304	7	52
																				6" 40CFM FILTER FLANGE ADAPTER ASSEMBLY	ASTM A403WP304-S/304	7	53
																				NOT USED	NOT USED		54
																				PIPE 4" SCH 40, x 2'-6" L	ASTM A312 TP 304/304L	10	55
																			23.	BIRD SCREEN VINYL EDGING	STANPRO, PART #75001624	4	56
																				GASKET 8"x1/8" THK FOR 8" 150# FLANGE	GARLOCK "BLUE GARD" 3000 COM. FIBER NON ASBESTOS	7	57
							1	1											23.	FLANDERS 15 CFM ROUND AXIAL HEPA FILTER	SEE NOTE 25	4	58
								1											23.	2" 90° MALE/FEMALE ELBOW, ANY GRADE SST		4	59
								1											23.	2" MALE/MALE 90° ELBOW ANY GRADE SST		4	60
								1											MCMASTER-CARR #9806K341 23. 26.	2" SCH 80 WEATHER GUARD NYLON SUCTION STRAINER WITH #4 STAINLESS STEEL MESH 2" MALE NPT.		4	61
							1												MCMASTER-CARR #44365K14 23. 26.	AXIAL FILTER WEATHER CAP. ZINC PLATED STEEL SUCTION STRAINER 2" FEMALE NPT WITH TOP ROUND PERFORATIONS		4	62
																				NOT USED	NOT USED		63
																				241-U-302B MOUNTING DETAIL		10	64
																				241-AZ-154 MOUNTING DETAIL		10	65
								X											23.	SUB ASSEMBLY	RADIAL BREATHER FILTER WITH WEATHER COVER	4	110
							X													SUB ASSEMBLY	AXIAL BREATHER FILTER WITH GOOSE NECK	4	120
						X														SUB ASSEMBLY	AXIAL BREATHER FILTER WITH WEATHER CAP	4	130
																				ELBOW, 4" 45°, SCH. 40 STD RADIUS	ASTM A403 WP304/304L	7	131

JUN 22 2010
DATE:
STA: 14
HANFORD RELEASE
ID: 3

DWG NO	TITLE
DRAWING TRACEABILITY LIST	

REF NUMBER	TITLE
REFERENCES	
NEXT USED ON	

REV NO	DESCRIPTION	REV BY DATE	DRAFT CHECK	ENGR	COMPANY
1	INC ECN-726884-R0, 727126-R0, 727248-R0	KMR 5/10	5/10	G.J. GAUCK	WRPS

REVISIONS

	NAME	DATE	COMPANY
DRAWN BY	SEE REVISION 0		
ENGINEER			

U.S. DEPARTMENT OF ENERGY
Office of River Protection

PIPING
ATMOSPHERIC BREATHING
AIR FILTER INSTALLATION

SIZE	BLDG NO	INDEX NO	DWG NO	REV
F	241G	8900	H-14-021360	1

SCALE NONE | EDT 822910 | SHEET 2 OF

DOE_TB_F.DWG (01-01)

2175

DWG NO H-14-021360 | SH 2 OF | REV 1