

PARTS LIST/MATERIAL LIST

| QTY REQ | | | | | | | | | | | PART/DASH NUMBER | NOMENCLATURE/DESCRIPTION | MATERIAL/REFERENCE | SHT | ITEM NO. |
|---------|------|------|------|------|------|------|------|------|------|-----|------------------------------|---|---|-----|----------|
| -190 | -180 | -170 | -160 | -150 | -140 | -130 | -120 | -110 | -100 | -90 | | | | | |
| | | | | | | | | | | | | ASSEMBLY | 12"x12"x4" 45" SCH 40S ASTM A403 WP403L-WX/304 | 5 | 1 |
| | | | | | | | | | | | | ASSEMBLY | 4"x4"x4" 45" SCH 40S ASTM A403 WP403L-WX/304 | 5 | 2 |
| | | | | | | | | | | | | ASSEMBLY | 6"x6"x4" 45" SCH 40S ASTM A403 WP403L-WX/304 | 5 | 3 |
| | | | | | | | | | | | | ASSEMBLY | BREATHER FILTER ASSEMBLY FOR EXISTING 4"-150# FLANGE | 6 | 4 |
| | | | | | | | | | | | | ASSEMBLY | BREATHER FILTER ASSEMBLY W/4" VALVE FOR EXISTING 4"-150# FLANGE | 6 | 5 |
| | | | | | | | | | | | | ASSEMBLY | BREATHER FILTER ASSEMBLY WITH OPT. 4" STRAIGHT PIPE | 6 | 6 |
| | | | | | | | | | | | | ASSEMBLY | 40CFM BREATHER FILTER ASSY-C | 10 | 7 |
| | | | | | | | | | | | SEE H-2-90718 AND NOTE 22 | ASSEMBLY | 241-U-301B MOUNTING DETAIL | 10 | 8 |
| | | | | | | | | | | | SEE H-2-90718 AND NOTE 22 | ASSEMBLY | 241-AZ-154 MOUNTING DETAIL | 10 | 9 |
| | | | | | | | | | | | | WYE LATERAL | 12"x12"x4" 45" SCH 40S ASTM A403 WP403L-WX/304 | 5 | 10 |
| | | | | | | | | | | | | WYE LATERAL | 4"x4"x4" 45" SCH 40S ASTM A403 WP403L-WX/304 | 5 | 11 |
| | | | | | | | | | | | | WYE LATERAL | 6"x6"x4" 45" SCH 40S ASTM A403 WP403L-WX/304 | 5 | 12 |
| | | | | | | | | | | | | FLANGE, BLIND 12"150# RF | ASTM A182 GR F 304L/304 | 5 | 13 |
| | | | | | | | | | | | | FLANGE, BLIND 4"150# RF | ASTM A182 GR F 304L/304 | 5 | 14 |
| | | | | | | | | | | | | FLANGE, BLIND 6"150# RF | ASTM A182 GR F 304L/304 | 5 | 15 |
| | | | | | | | | | | | | GASKET 12"x1/8" THK FOR 12" 150# FLANGE | GARLOCK "BLUE GARD" 3000 COM. FIBER NON ASBESTOS | 5 | 16 |
| | | | | | | | | | | | | GASKET 4"x1/8" THK FOR 4" 150# FLANGE | GARLOCK "BLUE GARD" 3000 COM. FIBER NON ASBESTOS | 5 | 17 |
| | | | | | | | | | | | | GASKET 6"x1/8" THK FOR 6" 150# FLANGE | GARLOCK "BLUE GARD" 3000 COM. FIBER NON ASBESTOS | 5 | 18 |
| | | | | | | | | | | | | BOLT, HEX, OR HVY HEX HEAD 7/8"-9UNC-2Ax5 1/2" LG | ASTM A193 GR B7 OR B16 OR ALT ASTM A193 GR BB | 5 | 19 |
| | | | | | | | | | | | | BOLT, HEX, OR HVY HEX HEAD 7/8"-9UNC-2Ax3 1/4" LG | ASTM A193 GR B7 OR B16 OR ALT ASTM A193 GR BB | 5 | 20 |
| | | | | | | | | | | | | NUT, HEX, OR HVY HEX 7/8"-9UNC-2B | ASTM A194 GR 2 OR 2H OR ALT ASTM A194 GR BB | 5 | 21 |
| | | | | | | | | | | | | BOLT, HEX, OR HVY HEX HEAD 3/4"-10UNC-2Ax4" LG | ASTM A193 GR B7 OR B16 OR ALT ASTM A193 GR BB | 5 | 22 |
| | | | | | | | | | | | | BOLT, HEX, OR HVY HEX HEAD 3/4"-10UNC-2Ax3 1/4" LG | ASTM A193 GR B7 OR B16 OR ALT ASTM A193 GR BB | 5 | 23 |
| | | | | | | | | | | | | NUT, HEX, OR HVY HEX 3/4"-10UNC-2B | ASTM A194 GR 2 OR ALT ASTM A194 GR BB | 5 | 24 |
| | | | | | | | | | | | | BOLT, HEX, OR HVY HEX HEAD 5/8"-11UNC-2Ax2" LG | ASTM A193 GR B7 OR B16 OR ALT ASTM A193 GR BB | 5 | 25 |
| | | | | | | | | | | | | BOLT, HEX, OR HVY HEX HEAD 5/8"-11UNC-2Ax1 3/4" LG | ASTM A193 GR B7 OR B16 OR ALT ASTM A193 GR BB | 5 | 26 |
| | | | | | | | | | | | | BOLT, HEX, OR HVY HEX HEAD 5/8"-11UNC-2Ax1" LG | ASTM A193 GR B7 OR B16 OR ALT ASTM A193 GR BB | 5 | 27 |
| | | | | | | | | | | | | NUT, HEX, OR HVY HEX 5/8"-11UNC-2B | ASTM A194 GR 2 OR 2H OR ALT ASTM A194 GR BB | 5 | 28 |
| | | | | | | | | | | | | BOLT, HEX, OR HVY HEX HEAD 1"-9UNC-2Ax4 1/4" LG | ASTM A193 GR B7 OR B16 OR ALT ASTM A193 GR BB | 5 | 29 |
| | | | | | | | | | | | | BOLT, HEX, OR HVY HEX HEAD 1 1/4"-9UNC-2Ax4 3/4" LG | ASTM A193 GR B7 OR B16 OR ALT ASTM A193 GR BB | 5 | 30 |
| | | | | | | | | | | | | NUT, HEX, OR HVY HEX 1"-7UNC-2B | ASTM A194 GR 2 OR 2H OR ALT ASTM A194 GR BB | 5 | 32 |
| | | | | | | | | | | | | NUT, HEX, OR HVY HEX 1 1/4"-9UNC-2B | ASTM A194 GR 2 OR 2H OR ALT ASTM A194 GR BB | 5 | 33 |
| | | | | | | | | | | | | PIPE PLUG 1/2", HEX HEAD, THD | ASTM A182 GR F 304L/304 | 3 | 34 |
| | | | | | | | | | | | | VALVE, 4" BUTTERFLY | SEE GENERAL NOTES #2 | 3 | 36 |
| | | | | | | | | | | | | NUT, WINCED 3/8"-16UNC WASHER 3/8" LOCK SPRING (OPTIONAL) | ANY 300 GRADE SST EXPANDED METAL | 3 | 37 |
| | | | | | | | | | | | | FLANDERS 40 CFM RADIAL HEPA FILTER | SEE NOTE 24 | 3 | 38 |
| | | | | | | | | | | | | WEATHER COVER FOR FLANDERS, RADIAL FILTER | SST EXPANDED METAL 5 1/2" HOLE IN CENTER 1"-2" FOLD ON EDGES | 3 | 39 |
| | | | | | | | | | | | | 40 CFM BREATHER FILTER BIRD SCREEN | ANY 300 GRADE SST EXPANDED METAL | 3 | 40 |
| | | | | | | | | | | | | 4" 45' ELBOW SUB ASSEMBLY SCH 40S | ASTM A403 WP304L-S/304 | 3 | 41 |
| | | | | | | | | | | | | 4" MOUNTING ASSEMBLY | ASTM A403 WP304L-S/304 | 4 | 42 |
| | | | | | | | | | | | | 4" PIPE SPOOL ASSEMBLY | ASTM A182 GR F 304L/304 | 4 | 43 |
| | | | | | | | | | | | | 18" FLANGE ADAPTER (ALTERED) | ASTM A182 GR F 304L/304 WITH PART. #S 30,32 | 5 | 44 |

GENERAL NOTES:

- RADIAL FILTER:**
RADIAL FILTER SHALL MEET CRITERIA ESTABLISHED IN ASME AG-1 SECTION FK, "SPECIAL HEPA FILTERS"
BODY AND DISC AND 316 SST OR 17-4 PH SST STEM. STEM PACKING SHALL BE TEFLON. RESILIENT SEAT SHALL BE
RADIAL FILTER ASSEMBLY LEAKAGE REQUIREMENTS ESTABLISHED IN ASME AG-1, SA-4500 "PRESSURE BOUNDARY LEAKAGE"
SHALL BE MET. PRIOR TO INSTALLATION, PRESSURIZE THE RADIAL FILTER ADAPTER, ATTACHED BUTTERFLY VALVE, AND/OR OTHER
NEW DUCTING, TO THE NORMAL OPERATING PRESSURE OF 10" W.G. TO LOCATE AND SEAL ALL AUDIBLE/VISUAL LEAKS USING
SOAP BUBBLE TEST.
- BUTTERFLY VALVE:**
BUTTERFLY VALVE SHALL BE KEYSTONE K-LOK 362-173, K-LOK 362-215, OR K-LOK 362-708 OR EQUIVALENT WITH 316SST
BUNA-N(NBR/NITRILE). BUSHING SHALL BE RTFE. STEM BEARING SHALL BE 316 SST/NITRIDE. THE VALVE SHALL MEET
REQUIREMENTS OF ASME B31.1 AND SHALL BE GIVEN A SHELL AND CLOSURE TEST IN ACCORDANCE WITH ASME B.16.64.
DOCUMENTATION OF TEST PROCEDURES AND TEST RESULTS SHALL BE SUBMITTED.
* EPDM SEAT MAY BE SUBSTITUTED PER REF RPP-RPT-229780 USING K-LOK-362-154.
- RADIAL FILTER ASSEMBLY (EXCLUDING RADIAL FILTER AND BUTTERFLY VALVE)**
PRESSURE RETAINING WELD JOINTS AND SEAMS SHALL BE A CONTINUOUS SEAL WELD. AS A MINIMUM, JOINTS AND SEAMS SHALL
BE WIRE BRUSHED AND BUFFED TO REMOVE ALL HEAT DISCOLORATION, BURRS, AND SHARP EDGES. WELD JOINTS AND SEAMS
THAT ARE A PORTION OF ANY GASKET SEALING SURFACE SHALL BE GROUND SMOOTH AND FLUSH WITH THE ADJACENT BASE.

WELDING PROCEDURES, WELDERS, AND WELDER OPERATIONS, SHALL BE QUALIFIED IN ACCORDANCE WITH THE ASME BOILER AND
PRESSURE VESSEL CODE SECTION IX. ALL PRODUCTION WELDS SHALL BE VISUALLY INSPECTED IN ACCORDANCE WITH SECTION 5
AND 6 OF AWS D9.1 OR MANUFACTURERS EQUIVALENT STANDARDS AS APPROVED BY BUYER.

RADIAL HEPA FILTER ASSEMBLY SHALL BE LEAK TESTED USING CRITERIA FOUND IN ASME AG-1, SECTION SA-4533, "EXCEPTIONS
TO LEAKAGE REQUIREMENTS". BUTTERFLY VALVE AND ASSOCIATED FASTENED DUCTING SHALL BE PRESSURIZED TO 10 INCHES
WATER GAUGE (NORMAL OPERATION PRESSURE DIFFERENTIAL (NOPD)) TO LOCATE AND SEAL ALL AUDIBLE LEAKS.
- WEATHER COVER:**
FOR FABRICATION OF WEATHER COVER USE FILTER MANUFACTURER'S RECOMMENDED WEATHER COVER. FASTEN WEATHER COVER
TO RADIAL FILTER USING FILTER MANUFACTURER'S RECOMMENDED FASTENER.
- BIRD SCREEN COVER:**
FOR FABRICATION OF BIRD SCREEN SEE H-14-021360 SHT 3 ITEM #40.
- TORQUE VALUES:**
FOR FABRICATION OF ASSEMBLY, USE TORQUE VALUES SPECIFIED IN TORQUE GUIDELINES WHEN USING GARLOCK BLU 3000
GASKET CHART ON PAGE 2. FOR INSTALLATION OF ASSEMBLY ON TANK RISERS USE TORQUE VALUES SPECIFIED IN 2-MISC-049
TABLE 7
APPROPRIATE SIZE WASHERS CAN BE USED FOR SPACING TO ENSURE PROPER THREAD ENGAGEMENT.
- REDUCING FLANGES**
SEE H-2-85349 SH 1 & 2 OR H-14-021360 FOR 6" TO 4" REDUCING FLANGE DETAILS.
SEE H-2-85349 SH 1 & 2 OR H-14-021360 FOR 12" TO 6" REDUCING FLANGE DETAILS.
SEE H-2-85349 SH 1 & 2 OR H-14-021360 FOR 12" TO 4" REDUCING FLANGE DETAILS.
- FOR FILTER ASSEMBLIES INSTALLED PRIOR TO 6-15-06 SEE DWGS H-2-90718.
- UNLESS OTHERWISE NOTED DIMENSIONAL TOLERANCES SHALL BE FRACTIONS OF ± 1/8"; ANGLES ± 5°.
- USE TEFLON TAPE ON ALL THREADED PIPE JOINTS.
- WELD AND INSPECT PER ANSI B31.3 (LATEST EDITION). FOLLOWING ALL WELDS FINAL PASS PREFORM
VIZUAL TEST.
- ORIENT VALVE OPERATOR AS REQUIRED TO AVOID OPERATING INTERFERENCE WITH OTHER COMPONENTS.
- NOT USED
- NOT USED
- RETIGHTEN THREADED CONNECTIONS 24 HOURS AFTER INITIAL INSTALLATION WHEN USING ASTM A193 GR B8 BOLTS AND
ASTM 194 GR8 HEAVY HEX NUTS.
- HEPA FILTER HOUSING; NOT USED WITH RADIAL AND AXIAL FILTERS.
- NOT USED.
- INSTALLATION OF RADIAL FILTERS ON ASSY WITH SEAL LOOPS ARE OPTIONAL. SEE TE-06-011.
- REMOVE ALL BURRS AND SHARP EDGES.
- OPTIONAL VINYL EDGING MAY BE ADDED TO THE EDGES AND AROUND THE INSIDE HOLE OF THE BIRD
SCREENS IN ORDER TO COVER THE CUT EDGES ON THE BIRD SCREEN. (SEE PN 56)
- IDENTIFY FILTER DRAWING NUMBER USING 1/2" MIN LETTERS, COLOR BLACK LABELS SHALL BE MADE OF
VINYL LABELING MATL. LOCATE APPROX. AS SHOWN.

DATE JUN 14 2011
RELEASE
BY 8

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|--|----------|---------------------------|
| NAME | DATE | U.S. DEPARTMENT OF ENERGY |
| Office of River Protection | | |
| PIPING ATMOSPHERIC BREATHING AIR FILTER INSTALLATION | | |
| REV NO | REV DATE | REV DESCRIPTION |
| F | 2411C | 8900 |
| H-14-021360 | | 1 |
| SCALE | NONE | DATE 8/22/91 |
| BY | 1 | OF 10 |

| DWG NO | TITLE | REF NUMBER | TITLE | DESCRIPTION | DATE | BY | CHKD | APP'D |
|--------|---|------------|-------|-------------|------|----|------|-------|
| 1 | INC ECN-11-000326, ECN-727262-RO, ECN-727266-RO | | | | | | | |