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BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY

In the Matter of:

United States Department of Energy Portsmouth Gaseous Diffusion Plant P.O. Box 700 Piketon, Ohio 45661-0700	: : : :	**Director's Final Findings and Orders**

Babcock & Wilcox Conversion Services, LLC
1020 Monarch Street, Suite 300
Lexington, KY 40513

Fluor-B&W Portsmouth LLC
1862 Shyville Road
Suite 216
Piketon, OH 45661

Respondents

I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.

By: [signature] **Date:** 10-1-13

PREAMBLE

It is agreed by the Parties hereto as follows:

I. JURISDICTION

These Director's Final Findings and Orders (Orders) are issued to the United States Department of Energy (Respondent DOE), Babcock & Wilcox Conversion Services, LLC (Respondent BWCS) and Fluor-B&W Portsmouth LLC (Respondent FBP) (together, Respondents) pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency (Ohio EPA) under Ohio Revised Code (ORC) §§ 3734.13, and 3745.01.

II. PARTIES BOUND

These Orders shall apply to and be binding upon Respondents and successors in interest liable under Ohio law. No change in ownership or operation of the Facility,

with respect to Respondent DOE shall in any way alter Respondent DOE's obligations under these Orders.

III. DEFINITIONS

Unless otherwise stated, all terms used in these Orders shall have the same meaning as defined in ORC Chapter 3734. and the rules promulgated there under.

IV. FINDINGS

All of the findings necessary for the issuance of these Orders pursuant to ORC §§ 3734.13 and 3745.01 have been made and are outlined below. Nothing in the findings shall be considered to be an admission by Respondents of any matter of law or fact. The Director of Ohio EPA has determined the following findings:

1. Respondents are "persons" as defined in ORC § 3734.01(G) and OAC rule 3745-50-10(A).

2. On March 28, 2011, the Director issued Final Findings and Orders (March, 2011 Orders) modifying the February 21, 2008 Director issued Final Findings and Orders (2008 Orders) to, and with the consent of, Respondents DOE, BWCS and FBP, regarding the management of depleted uranium hexafluoride (DUF6) at the Portsmouth Gaseous Diffusion Plant, a former uranium enrichment facility, located in Pike County, Ohio, (Facility). All Findings contained in the March, 2011 Orders remain valid and in effect and are hereby restated and incorporated by reference herein. In part, the March, 2011 Orders allow for the management and storage by the Respondents of DUF6 cylinders in accordance with an approved DUF6 Management Plan (Plan). Respondent BWCS is a signatory to these Orders for purposes of description in the Findings, and in order to accomplish the modifications to the DUF6 Management Plan as required by Order No. 1.

3. The March, 2011 Orders and the 2008 Orders, and the Plan, specifically identify and apply to areas at the Facility known as X-745C, X-745E X-745G-1 and X-745G (Named Cylinder Storage Yards).

4. On or about March 1, 2011, through March 28, 2011, Uranium Disposition Services, LLC (UDS) began transferring DUF6 cylinders from Cylinder Storage Yard X-745C to the temporary custody and control of the United States Enrichment Corporation (USEC). The purpose of this transfer was to allow USEC to process overfilled cylinders to make them eligible for shipping under U.S. Department of Transportation rules. On March 29, 2011, Respondent BWCS assumed the operation and maintenance responsibility from UDS, including the management of Respondent DOE's DUF6 Conversion Facility, and

the Named Cylinder Storage Yards, except for X-745G. As such, from March 29, 2011 through June 1, 2011, Respondent BWCS continued transferring the cylinders to the entrance of the USEC property.

5. On October 1, 2011, sixty-three (63) DUF6 cylinders, thirty-five (35) "near normal" assay DUF6 Technetium (Tc) feed cylinders and four (4) checkweight cylinders owned and/or generated and managed by USEC and not specifically subject to the March, 2011 Orders, were transferred to the ownership of Respondent DOE, due to USEC's termination of operations at the Facility. Ohio EPA has determined that the DUF6 is a "waste" as that term is defined by OAC rules 3745-50-10 and 3745-51-02, and is subject to the waste evaluation requirements in OAC rule 3745-52-11. Ohio EPA has further determined that, based on the known physical and chemical characteristics of DUF6, the quantity of DUF6 currently stored at the Facility is likely to meet the requirements of "hazardous waste" as that term is defined by ORC § 3734.01 and OAC rules 3745-50-10 and 3745-51-03, and that no further characterization of the waste is required at this time.

6. In correspondence dated June 6, 2012, Respondent DOE informed Ohio EPA of its desire to modify the Plan to name the X-745-B and X-745F storage yards in the Plan.

7. On June 19, 2012, Ohio EPA and Respondent DOE participated in a meeting to discuss modification to the Plan. During the meeting, Ohio EPA was informed of the transferring of DUF6 cylinders as described in Finding Nos.4. and 5. of these Orders and was informed there were 333 cylinders in areas other than the Named Cylinder Storage Yards.

8. Based upon the information referenced in Findings Nos.4., 5. and 7. of these Orders, Ohio EPA determined, inter alia, Respondents established and operated a hazardous waste storage facility without a hazardous waste installation and operation permit, in violation of ORC § 3734.02(E) and (F). However, upon further review of information provided by Respondents DOE and FBP as described in subsequent Finding No. 10. of these Orders, the Director has determined that a violation of ORC 3734.02(E) and (F), as it relates to all 333 DUF6 cylinders did not occur. Therefore the violation of ORC § 3734.02(E) and (F) as it relates to those DUF6 cylinders is retracted. However, the Director has determined Respondents DOE and FBP did violate the terms and conditions of the March 2011 Orders as well as ORC § 3734.13(D), which states "no person shall violate any term or condition of any order issued under this section," by storing the DUF6 cylinders in areas other than the Named Cylinder Storage Yards.

9. In correspondence dated August 3, 2012, Ohio EPA informed Respondents DOE and FBP of the non-compliance described in Finding No. 8. of these Orders.

10. In correspondences dated August 17, 2012, Respondents DOE and FBP provided responses to Ohio EPA's correspondence referenced in Finding No. 9. of these Orders.

11. From approximately August 20, 2012, through September 15, 2012, Ohio EPA and Respondents participated in several calls and other electronic communications in order to receive information regarding the storage and management of the 333 cylinders in areas other than the Named Cylinder Storage Yards.

12. On September 10, 2012, Respondents informed Ohio EPA that all DUF6 cylinders, save for three (3) being used as check weights by Respondent FBP were moved back into the Named Cylinder Storage Yards. Check weights are used to ensure proper calibration of the scales. Additionally, Respondents provided pre- and post-inspection report data. Respondents conducted cylinder inspections prior to moving a cylinder and after moving the cylinder to ensure no releases from a cylinder had occurred or were occurring. Respondents conducted these inspections when moving the cylinders both to and from the Named Cylinder Storage Yards. The inspection data summarizes that each cylinder was intact and no releases were detected.

13. The Director has determined that based upon information described in Finding No. 12. of these Orders, the cylinders did not have any releases while in storage in the areas other than the Named Cylinder Storage Yards and no further injunctive relief with regard to those areas is required at this time. The Director determined this by the pre and post-inspection reports of the movement of the cylinders.

V. ORDERS

Respondents shall achieve compliance with Chapter 3734. of the ORC and the regulations promulgated thereunder according to the following compliance schedule:

1. Within ten (10) days after the effective date of these Orders, Respondents must submit for review and approval by Ohio EPA, a modified DUF6 cylinder Management Plan (Plan) in accordance with the protocol set forth in the February 21, 2008 Director's Final Findings and Orders. The submittal shall be, in all material aspects, identical to the agreed upon draft Plan attached to these Orders as Attachment A.

2. Respondent FBP shall pay Ohio EPA the amount of $40,200.00 in settlement of Ohio EPA's claims for civil penalties, which may be assessed pursuant to ORC Chapter 3734., in accordance with the following provisions:

a. In lieu of paying $20,100.00 of civil penalty to Ohio EPA, Respondent FPB shall within 30 days after the effective date of this Order fund a supplemental environmental project (SEP) by making a one-time contribution in the amount of $20,100.00 to the Pike County Residential Septic System Repair /Replacement Household Sewage Treatment System (HSTS) grant program. These funds shall be used by the HSTS for the purposes of establishing programs in conjunction with their respective local health departments for providing loan assistance to private individuals in Pike County to upgrade household sewage treatment systems. Within 45 days after the effective date of these Orders, Respondent FBP shall submit to Ohio EPA documentation demonstrating that the $20,100.00 payment has been made in accordance with this Order. The documentation shall be submitted in accordance with Section X. of these Orders.

b. In lieu of paying the remaining $20,100.00 of civil penalty to Ohio EPA, Respondent FBP shall fund a supplemental environmental project (SEP) by making a contribution in the amount of $20,100.00 to the Ohio EPA Clean Diesel School Bus Program (Fund 5CD). Respondent FBP shall make the payment within 30 days after the effective date of these Orders by tendering an official check made payable to "Treasurer, State of Ohio" for $20,100.00 The official check shall be submitted to Brenda Case, or her successor, Ohio EPA, Office of Fiscal Administration, Department L-2711, Columbus, Ohio 43260-2711, together with a letter identifying Respondent FBP. A copy of this check shall be submitted in accordance with Section X. of these Orders, and an additional copy of this check shall be sent to Manager, Compliance and Enforcement Section, Ohio EPA, Division of Air Pollution Control, P.O. Box 1049, Columbus, Ohio 43216-1049.

3. Should Respondent FBP fail to fund either or both SEPs described in Orders 2.a. and 2.b. within the required time frame established in Order No. 2. of these Orders, Respondent FBP shall pay to Ohio EPA within 7 days of failing to comply with Order No. 2. the amount of $20,100.00 if one SEP is not funded or $40,200.00 if both SEPs are not funded. Payment shall be made by an official check made payable to "Treasurer, State of Ohio" for the amount not funded. The official check shall be submitted to Ohio EPA, Office of Fiscal Administration, P.O. Box 1049, Columbus, Ohio 43216-1049, together with a letter identifying Respondent FBP and Facility. A copy of this check shall be submitted in accordance with Section X. of these Orders, and an additional copy of this check shall be sent to Supervisor, Processing/Records Management Unit, Division of Materials and Waste Management, Ohio EPA, P.O. Box 1049, Columbus, Ohio 43216-1049.

VI. TERMINATION

Respondents' obligations under these Orders shall terminate when Respondents certify in writing and demonstrate to the satisfaction of Ohio EPA that Respondents have performed all obligations under these Orders and Ohio EPA's Division of Materials and Waste Management acknowledges, in writing, the termination of these Orders. If Ohio EPA does not agree that all obligations have been performed, then Ohio EPA will notify Respondents of the obligations that have not been performed, in which case Respondents shall have an opportunity to address any such deficiencies and seek termination as described above.

The certification shall contain the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate and complete."

This certification shall be submitted by Respondents to Ohio EPA and shall be signed by a responsible official of each Respondent. For purposes of these Orders, a responsible official is a [e.g., corporate officer] who is in charge of a principal business function of each Respondent.

VII. OTHER CLAIMS

Nothing in these Orders shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership or corporation, not a Party to these Orders, for any liability arising from, or related to, the operation of Respondents' Facility.

VIII. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to these Orders shall be undertaken in accordance with the requirements of all applicable local, state and federal laws and regulations. These Orders do not waive or compromise the applicability and enforcement of any other statutes or regulations applicable to Respondents.

IX. MODIFICATIONS

These Orders may be modified by agreement of the Parties hereto. Modifications shall be in writing and shall be effective on the date entered in the journal of the Director of Ohio EPA.

X. NOTICE

All documents required to be submitted by Respondents pursuant to these Orders shall be addressed to:

Ohio Environmental Protection Agency
Southeast District Office
Division of Materials Waste Management
2195 Front Street
Logan, Ohio 43138
Attn: DMWM Manager

and Ohio EPA Central Office at the following addresses:

For mailings, use the post office box number:

Ohio Environmental Protection Agency
Lazarus Government Center
Division of Materials and Waste Management
P.O. Box 1049
Columbus, Ohio 43216-1049
Attn: Manager, Compliance Assurance Section

For deliveries to the building:

Scott J. Nally, Director
Ohio Environmental Protection Agency
Lazarus Government Center
Division of Materials and Waste Management
50 West Town Street, Suite 700
Columbus, Ohio 43215
Attn: Manager, Compliance Assurance Section

or to such persons and addresses as may hereafter be otherwise specified in writing by Ohio EPA.

XI. RESERVATION OF RIGHTS

Nothing contained in these Orders, including Section VII, shall be construed to prevent the Director from seeking legal or equitable relief to enforce the terms of these Orders or from taking other administrative, legal or equitable action as deemed appropriate and necessary, including seeking penalties against the Respondents for

noncompliance with these Orders. Nothing contained herein shall be construed to prevent Ohio EPA from exercising its lawful authority to require the Respondents to perform additional activities at the Facility, including closure or corrective action pursuant to ORC Chapter 3734. or any other applicable law in the future. Nothing herein shall restrict the Respondents from raising any defenses with respect to such actions.

Nothing in these Orders shall be construed to limit the authority of Ohio EPA to seek penalties for violations of these Orders. Nothing in these Orders shall be construed to limit the authority of Ohio EPA to seek relief for violations not addressed in these Orders. Nothing herein shall restrict the right of the Respondents to raise any administrative, legal or equitable claim or defense with respect to such further actions which Ohio EPA may seek to require of the Respondents. Nothing in these Orders shall be construed as a waiver of Respondent DOE's jurisdiction over source, by-product, or special nuclear materials under the Atomic Energy Act of 1954, as amended, 42 U.S.C. § 2201, *et seq.* Nothing in the preceding sentence alters the Respondents' duty to comply with these Orders.

It is the position of Ohio EPA that the federal Anti-Deficiency Act, 31 U.S.C. § 1341, as amended, does not apply to any obligations set forth in these Orders, and obligations hereunder are unaffected by the Respondent DOE's failure to obtain adequate funds or appropriations from Congress. It is Respondent DOE's position that the obligations set forth in these Orders are subject to the provisions of the Anti-Deficiency Act and are subject to the availability of funding. The Parties agree that it is premature to raise and resolve the validity of such positions at this time.

XII. WAIVER

In order to resolve disputed claims, without admission of fact, violation or liability, Respondents consent to the issuance of these Orders and agree to comply with these Orders. Respondents agree that these Orders are lawful and reasonable and that the times provided for compliance herein are reasonable. Respondents, by acceptance of these Orders, agree to comply with all conditions of these Orders and acknowledge that the Respondents' failure to do so may result in further legal action by Ohio EPA.

Respondents hereby waive the right to appeal the issuance, terms and conditions, and service of these Orders, and Respondents hereby waive any and all rights Respondents may have to seek administrative or judicial review of these Orders either in law or equity.

Notwithstanding the preceding, Ohio EPA and Respondents agree that if these Orders are appealed by any other party to the Environmental Review Appeals

Commission, or any court, Respondents retain the right to intervene and participate in such appeal. In such an event, Respondents shall continue to comply with these Orders notwithstanding such appeal and intervention unless these Orders are stayed, vacated or modified.

XIII. EFFECTIVE DATE

The effective date of these Orders is the date these Orders are entered into the Ohio EPA Director's journal.

XIV. SIGNATORY AUTHORITY

Each undersigned representative of a Party to these Orders certifies that he or she is fully authorized to enter into these Orders and to legally bind such Party to these Orders.

IT IS SO ORDERED AND AGREED:

Ohio Environmental Protection Agency

Scott J. Nally
Director

October 1, 2013
Date

IT IS SO AGREED:

United States Department of Energy

W E Murphie
Signature

9/11/13
Date

W. E. Murphie
Printed or Typed Name

Manager, PPPO
Title

IT IS SO AGREED:

Babcock & Wilcox Conversion Services, LLC

Signature

9-12-13
Date

George E. Dials
Printed or Typed Name

President and Project Manager
Title

IT IS SO AGREED:

Fluor-B&W Portsmouth LLC

Signature

9-13-13
Date

DENNIS J. CARR
Printed or Typed Name

PRESIDENT AND SITE PROJ. DIRECTOR
Title

Attachment A to Director's Final Findings and Orders

August 20, 2004
(Document revised on August 26 2013, includes update based on the January 11, 2012 Addendum 1)

DEPLETED URANIUM HEXAFLUORIDE (DUF_6) MANAGEMENT PLAN

This DUF_6 Management Plan addresses the management of Portsmouth Department of Energy (DOE)-managed DUF_6 cylinders and both the ANSI-compliant and non-compliant DUF_6 cylinders shipped from Oak Ridge Operations. The requirements in this management plan do not apply to the NIST-certified cylinder check-weights. When these cylinder check-weights are no longer certified as a check-weight and are not in the process of re-certification, they will be subject to the requirements of this plan. Check-weight cylinders shall be stored indoors in designated areas.

I. DUF_6 Cylinder Surveillance Program. The cylinder surveillance program consists of inspections, ultrasonic thickness testing and radiological surveys for DUF_6 cylinders located in outside storage areas X-745-C, X-745-E and X-745-G1; inside storage areas X-344, and X-345. (See attached map for the location of all designated storage areas) The addition of a new DUF_6 storage location requires prior written approval by the Ohio Environmental Protection Agency (Ohio EPA). No cylinder less than 30 inches in diameter shall be stored in outdoor storage areas.

A. Inspections. The inspections shall be documented on a checklist which shall include the size, type, cylinder identification number, location, and physical description of all DUF_6 cylinder defect criteria. All accessible areas of all cylinders shall be visually inspected, using the following criteria:

1. DUF_6 Cylinder Defect Criteria

a. General Cylinder Criteria

- Hole in cylinder
- Visible leakage/contamination on cylinder or ground
- Bulge-protruding one-half inch or more
- Gouge-greater than one-sixteenth inch of metal moved
- Dent-greater than one-sixteenth inch deep
- Bent stiffening ring-cracked weld or separation of ring from body
- Severe corrosion-local or extensive pitting and/or scaling that is evident on one-third or more of the bottom shell and scaling consisting of layered flakes over four (4) square inches in area

b. Cylinder Body Contact Point

- Dent caused by lifting lug contact-greater than one-sixteenth inch deep
- Concrete saddle-cracking, chipping, corrosion or sinking
- Wood saddle/resting block-cracking, splitting, rotting, or sinking

c. Valve End of Cylinder

- Evidence of DUF_6 reaction products on valve
  The reaction that occurs when DUF_6 leaks through a valve-packing gland or around a valve boss creates solid UO2F2. This is the same reaction that

occurs with a breach in the cylinder wall. The basic chemical equation represented is as follows: $UF6+2H2O \rightarrow UO2F2+4HF+heat$. The UO2F2 is a yellow solid whose exact coloring depends on the degree of hydration. DUF_6 reacts with most metals to form a fluoride of the metal and a poorly volatile or non-volatile lower valence uranium fluoride. For the breaches that have been experienced within the DOE Complex, the color will range from a bright yellow, to green, to deep blue or purple color.

- Bent valve body
- Bent/separated skirt
- Scale in skirt
- Weep hole in skirt plugged
- Packing nut missing/cracked
- Port cap missing/cracked
- Bent or sheared valve stems
- Cracked bent valve protector
- Identification (I.D.) plate missing
- I.D. plate loose/cracked welds
- New nameplate attached to skirt/valve/plug (as applicable)

d. Plug End of Cylinder

- Evidence of DUF_6 reaction products on plug
- Bent or damaged plug
- Bent/separated skirt
- Scale in skirt
- Weep hole in skirt plugged

2. Inspection Frequency (See Table 1)

a. All DUF_6 cylinders in storage shall be visually inspected at least every four (4) years to identify any defects listed in paragraph I.A.1.

b. DUF_6 cylinders determined to have at least one of the following defects shall be visually inspected annually:

- Severe corrosion of cylinder surfaces
- Severe corrosion of skirt areas
- Heavy rust scale on cylinder body
  Note: heavy means rust flaking off of the cylinder and over four (4) square inches in area
- Rust/scale in skirt
- Weep hole in skirt is plugged in the valve end of the cylinder
- Weep hole is plugged in the plug end of the cylinder

c. Valves with evidence of leakage (i.e., buildup of DUF_6 reaction products, discoloration around valve/plug) shall be:

1) Bagged upon discovery;

2) Sampled with a radiological swipe within seven (7) days of being identified, and;

3) Based upon the results of the radiological swipe, managed accordingly:

a) If the results demonstrate the buildup is not DUF_6 reaction products, the valve may be unbagged and placed back into the appropriate inspection schedule.

b) If the results demonstrate the buildup is DUF_6 reaction products, within seven (7) days of confirmation of buildup materials the valve stem, packing nut, and/or port cap will be re-torqued.

1. The valve will be placed in the monthly inspection rotation of the suspect leaking valve program. Torquing of the valve stem, packing nut, and or port cap can be raised in increments during the monthly inspections up to maximum torque recommended by the valve technical specifications as listed in procedure BWCS-X-CYP-2521, "*UF6 Field Cold Pressure Check and Minor Valve Repair*". If after the maximum recommended torque is applied the valve continues to show evidence of DUF_6 reaction products buildup a valve repair/replacement assessment evaluation will be conducted.

2. Interim actions shall be taken until such time valve repair/replacement occurs including, but not limited to, leaving the valve bagged and taped to preclude any contamination buildup from being spread by the elements, biweekly inspections, putty application around the leaking area (after the attempts to stop the leak as described in I.A.2.c.3), wooden plugging (normally utilized for emergency response situation), covering and taping.

3. If 90 days after the action in I.A.2.c.3.b.1 is completed the valve shows no evidence of DUF_6 reaction products buildup and this is confirmed with a radiological swipe sample, then the valve may be unbagged and returned to the appropriate inspection schedule.

c) The valve repair/replacement assessment evaluation includes determining the location of the valve leak, determining if a valve repair can be made (replacing packing nut, port cap gasket and port cap) and determining if a repair/replacement can be made in the field by the DUF_6 contractor or requires a valve replacement to be performed by the D&D contractor. The assessment will be completed within fourteen (14) days and the Ohio EPA will be notified if the repair can be made in the field or whether the cylinder will be removed from the storage yard for repair. The date of receipt of such notification by Ohio EPA, shall initiate the repair time periods as described below.

1. Valve repair/replacement that can be performed in the field by the DUF_6 contractor shall be completed within one hundred eighty (180) days of re-discovery of DUF_6 reaction products unless an extension is requested and granted. A

written request for an extension may be submitted to Ohio EPA. The written request will describe the status of completion and the reason(s) for the requested extension, and the length of additional time requested for completion. The denial of the request in whole or in part shall be subject to the dispute resolution provisions of the February 2008 DFF&O, as amended.

2. When the DOE DUF6 Contractor is not able in the field to accomplish a cylinder valve repair or a repair of a cylinder valve by replacement, the D&D Contractor shall accomplish the valve repair or repair by replacement within a 360-day time period. The 360-day time period may be subject to a requested/approved extension of time to accomplish the repair.

   a. Request/Approval: The DOE D&D Contractor may request Ohio EPA to approve an extension of the 360 day time to accomplish difficult cylinder valve repairs. The D&D Contractor will provide the reasons for the request (e.g., weather, or autoclave and/or cold box availability). The denial of the request in whole or in part shall be subject to the dispute resolution provisions of the February 2008 DFF&O, as amended.

Note: Swipe samples exceeding 1000dpm/100cm^2 may indicate the presence of DUF6 reaction products. The area will be boundaried and posted and decontamination activities will be completed in accordance with written procedures. The valve or plug will be evaluated for repair or replacement.

d. If a breached cylinder is noted during any inspections, required by this DUF_6 Management Plan or at any other time, the cylinder shall be inspected daily and interim steps will be taken to minimize impacts to worker/public safety and the environment, pending evaluation and determination of appropriate action, e.g. patching. In the event the interim steps prevent further release of reaction products, the cylinder will be subject to weekly inspections.

Note: A breached cylinder means a cylinder with a defect in the cylinder shell that has created the presence of reaction products on the cylinder shell.

1) The following actions will be undertaken by the DUF_6 contractor based on the nature and extent of the breach:
   a) Ohio EPA will be notified of the discovery of a cylinder breach pursuant to Section IX, below.
   b) Ensuring that tarps are in place to prevent precipitation from coming in contact with the cylinder and a catch pan placed beneath the cylinder to prevent material from dropping to the pavement;
   c) Perform a putty patch repair or strong back patch repair (metal gasket strapped on cylinder) as required;

d) Ensuring that contamination boundaries are in place;

Note: A contamination boundary is an area established using a yellow and magenta rope or tape at the perimeter of an area determined by survey to be where no contamination has spread;

e) Determining Hydrogen Fluoride (HF) content in air;

Note: HF content in the air is determined by hand-held HF detectors using a HF detection tube (such as Draeger Model 21/31, or equivalent) which are calibrated instruments to read out in concentration of HF;

f) Collecting DUF_6 reaction products for weighing (accountability);

g) Determining loose surface radiological contamination levels per 10 CFR 835 of pad areas adjacent to the breach. Levels of loose uranium contamination shall not exceed 1000dpm/100cm^2 as specified in 10 CFR 835 Appendix D (10 CFR 835.1101 and 1102 to Appendix D limits), or the area shall be controlled; and

h) Determining radiation levels at the breach.

Note: Determining radiation levels at the breach shall be accomplished by utilizing calibrated radiation instruments to determine contact readings and general area radiation dose levels in mrem/hr.

i) Upon identification of a cylinder breach that requires repair, in addition to the actions listed in Section I.A.2.d.1.a. through I.A.2.d.1.h. discussed above, the following actions will be taken:

1) Within fourteen (14) days, the nature and extent of the breach will be determined through an examination using recognized national industrial standards and practices (ANSI and ASME) such as Nondestructive Ultrasonic Thickness (UT) examinations to assess cylinder wall thickness as outlined in Section I. B., Ultrasonic Thickness Testing, of this plan. The DUF_6 Contractor NDE (nondestructive examination) inspectors are trained and certified as level II UT evaluators in accordance with SNT-TC-1A (See Section X for training qualifications). Qualified inspectors shall inspect the individual cylinder(s) discovered to be breached and recommend the appropriate cylinder disposition or repair in accordance with the current criteria from ASME Section VIII of the Boiler and Pressure Vessel code, which provides acceptance criteria for inspection and provides guidelines for repairing defects and acceptable techniques. These guidelines are referenced in the most current version of ANSI N14.1.

2) When the DOE DUF6 Contractor is not able in the field to repair a breached cylinder, the DOE will notify the Ohio EPA of the need for the D&D Contractor to repair the breached cylinder. The date of receipt of such notification by Ohio EPA shall initiate a 360-day time period in which the D&D Contractor shall accomplish the cylinder

repair. The 360-day time period may be subject to a requested/approved extension of time to accomplish the repair.

a. Request/Approval: The DOE D&D Contractor may request Ohio EPA to approve an extension of the 360 day time to accomplish the repair of breached cylinder(s). The D&D Contractor will provide the reasons for the request (e.g., weather, or autoclave and/or cold box availability). The denial of the request in whole or in part shall be subject to the dispute resolution provisions of the February 2008 DFF&O, as amended.

3) Breached cylinders will be repaired in the cylinder storage yards, the X-344 transfer facility, X-700, X-705, X-342 or a process building, depending on the type of repair required and condition of the cylinder. All repairs shall be done using established procedures for the appropriate method of repair. Any cylinder removed from a designated storage area for repair shall be returned to a designated storage area within thirty (30) days after completion of the repair. The inspection provisions of this Plan will not be applicable if the cylinder under repair is in an autoclave.

e. All DUF_6 cylinders shall be visually inspected before movement. The pre-move inspection shall consist of the following:

1) Lifting lug weld (if lug is to be used for lifting the cylinder) – examining for cracked weld, bent lug, elongated lug lifting hole.

2) The cylinder in general – examining for deep cracks, gouges, and cuts in shell (See Section I.A.1.).

3) Areas immediately next to saddle contact points – examining for evidence of DUF_6 reaction products or severe corrosion.

4) Areas of previous lifting lug-to-cylinder contact points – examining for evidence of DUF_6 reaction products.

f. All DUF_6 cylinders shall be visually inspected once they are lifted. This visual inspection of the contact points and all previously inaccessible areas shall be conducted to determine and assess whether there is evidence of DUF_6 reaction products, cracks, gouges, cuts, and/or severe corrosion.

g. All DUF_6 cylinders shall be visually inspected using the DUF_6 cylinder defect criteria (See Section I.A.1.) immediately after movement of the cylinder.

h. Annually, the cylinders found to have types of defects listed below (h.1. through h.3.) (these cylinders are annotated in the Cylinder Information Database (CID)) will be known as the lot size for purposes of ultrasonic thickness testing. The number of cylinders sampled will be based upon the ANSI standard ASQ Z 1.4 – 2008 (or most current version) for lot selection using the current number of cylinders in the lot. When using this standard, the parameters of a General Inspection Level I with an acceptable quality level of one percent (1%) will be used. If the failure rate (a failure being any defect on a cylinder having a shell thickness less than 0.0625 inches) listed in the standard is exceeded, the sample size will be redefined (with failed

cylinders being part of the re-sampling lot) and additional ultrasonic testing will occur according to the standard. Ultrasonic thickness testing shall be performed at or near the location of the defect. Initial testing shall begin within thirty (30) days of Ohio EPA's approval of the August 2013 revision to this plan. This ultrasonic thickness testing shall be performed annually in addition to the 150 cylinders selected for the Attachment A requirements. This will provide a representation of all cylinders having these types of defects. The data will be evaluated within thirty (30) days of the test.

1) Stiffening ring cracked weld-separating material from the cylinder (listed in Section I.A.) Where the material is separated from the cylinder, a UT inspection will be performed at the area of most metal removal from the body of the cylinder. If the UT inspection shows that there is a thickness less than .0625 inches the cylinder will be scheduled for repair. If the thickness is greater than .0625 inches the cylinder will remain on the annual UT list and will not require a repair. It should be noted that there must be metal pulled away from the cylinder body. A cracked weld noted that does not affect the body of the cylinder will only constitute an annual visual inspection.

2) Dents and gouges (listed in Section I.A.) A UT inspection will only be performed on dents and gouges that are greater than 1/16 inch deep. Dents and gouges must be sharp in nature to fall into this category and this can be determined during visual inspections. A repair will be required if the wall thickness has been reduced to less than.0625 inches. If the thickness is greater than .0625 inches the cylinder will remain on the annual UT list and will not require a repair.

3) Severe corrosion-local or extensive pitting and/or scaling that is evident on one-third or more of the bottom shell and/or scaling consisting of layered flakes over four (4) square inches in area (listed in section I.A.) A UT inspection will be performed at the deepest point of corrosion. A repair will be required if the wall thickness has been reduced to less than.0625 inches. If the thickness is greater than .0625 inches the cylinder will remain on the annual UT list and will not require a repair.

4) Ohio EPA will be notified within seven (7) days of a repair required for a defect listed in h.1. through h.3. and the repair will be performed by the DUF_6 contractor and shall be completed within one hundred eighty (180) days of discovery unless an extension is requested and granted. A written request for an extension may be submitted to Ohio EPA. The written request will describe the status of completion and the reason(s) for the requested extension, and the length of additional time requested for completion. The denial of the request in whole or in part shall be subject to the dispute resolution provisions of the February 2008 DFF&O, as amended.

B. Ultrasonic Thickness Testing

1. The following locations on the 10- and 14- ton DUF_6 storage cylinders shall be evaluated with ultrasonic thickness (UT) probe measurements:

   a. Two measurements at the 12 o'clock position (top of cylinder)

b. Two measurements at the 3 o'clock position (side of cylinder)
c. One measurement near the center of the head, valve end
d. One measurement directly beneath the valve,
e. One measurement near the center of the head, plug end
f. One measurement directly beneath the plug
g. Five measurements at the area exhibiting the most severe corrosion (Typically expected to be at the 6 o'clock position)
h. Five measurements as close as possible to skirt/head interface.

2. 150 cylinders shall be inspected (on an annual basis) using UT measurement techniques. Selection of cylinders for measurement will be conducted per Attachment A to this Plan, as agreed upon by Ohio EPA and DOE.

   These data will be analyzed and the number of cylinders whose wall thickness is measured by UT shall be adjusted (e.g., increased, decreased, or the selections of candidate cylinders for measurement otherwise changed) based on the results of the analysis.

C. Radiological Surveys. Dose-rate surveys of all DUF_6 cylinder storage yards shall be conducted. In addition, all DUF_6 cylinders shall be radiologically surveyed. The scope and frequency of the surveys are noted below:

1. A dose-rate survey of the cylinder yards shall be performed annually using a dose-rate instrument per 10 CFR 835 (10 CFR 835.101 (c), and 402) to ensure the established dose-rate boundary has not changed from the previous year. Boundaries will be established in accordance with 10 CFR 835 (10 CFR 835.603). The boundaries shall delineate the areas that exceed 5 mR/hr or more conservatively as directed by management.

2. A radiological swipe survey of the valve and plug areas for cylinders shall be done annually to determine levels of removable surface uranium contamination. The levels for loose uranium contamination (1000dpm/100cm^2) found in 10 CFR 835 Appendix D (10 CFR 835.1101 and 1102 to Appendix D limits) shall be employed in making the determination of whether additional actions or controls are necessary. Decontamination, reposting, boundary control, or whatever other actions are necessary will be taken to ensure compliance with requirements specified by 10 CFR 835 (10 CFR 835 Subpart F and G) for the applicable area classification.

II. The DUF_6 Cylinder Maintenance Program shall consist of the following:

A. During annual radiological surveys or during scheduled visual inspections cylinders with accumulated loose rust in the skirt area and plugged weep holes will be noted. These maintenance issues will be entered into the Cylinder Information Database (CID) within 10 working days of detection. A skirt and weep hole cleaning campaign will be conducted annually to remove accumulated loose rust and clear plugged weep holes. Replacing of valve port cap and packing nuts will be performed on an as-needed basis in accordance with paragraph I.A.2.c.3.c. Any other discrepancies discovered during maintenance activities and during routine inspection of the yards shall be entered into the Cylinder Information Database (CID) within ten (10) working days. A schedule to repair these discrepancies will be provided to Ohio EPA within thirty (30) days of entering the discrepancy into the CID. All required maintenance actions (except breached cylinders as discussed in paragraph 1.A.2.d.. and evidence of DUF_6 reaction products on valves as discussed in paragraph I.A. 2.c.), shall be scheduled for completion prior to the cylinder being transferred to the Conversion Facility (CF) for processing. In certain circumstances as determined by an Engineering Evaluation

set forth in BWCS-U-OPS-0101 "Cylinder Preheat Inspection", cylinders may go through the Cylinder Transfer System (CTS) autoclaves or undergo processing in the Cylinder Evacuation Room (CER). In the event the CTS and CER conversion processes are used, no repair of cylinder defects except for a breach is necessary and will not be conducted.

Note: In most cases a repair would not be necessary prior to cylinder processing in CTS or CER.

Note: The CID database is a computerized tracking system for the documentation of cylinder activities at PORTS and other DOE sites. Data is submitted by the respective facility managers resulting from the work performed at their cylinder yards.

B. On-going inventory control shall consist of identification tag replacement and accountability of nuclear materials by cylinder and location. Inventory of nuclear materials is managed through an established computerized database. Any discrepancies discovered during the course of this activity and during routine inspection shall be entered in the CID system within ten (10) working days.

C. Cylinder maintenance shall be done in the cylinder storage yards, except for breached cylinders as discussed in paragraph I.A.2.d.

III. DUF_6 Cylinder Storage Yard Surveillance and Maintenance Program

A. All DUF_6 storage yards shall be monitored for DUF_6 releases using (1) annual radiological surveys of all cylinders and yards, (2) monthly radiological surveys on valves/plugs suspected to be leaking, (3) existing environmental monitoring programs (i.e., soil sampling, surface water monitoring, and sediment sampling), and (4) annual and quadrennial visual inspections. Monthly surface water run-off samples for total uranium analysis shall be collected at the established collection basin for X-745E Yard and a depression on the south side of the X-745C Yard and at appropriate locations in X-745G Yard and for any new or additional storage yards. These sampling locations are designated on the map attached to and included in this Plan. The analytical methods are in-house procedures for alpha, beta and total uranium. The alpha/beta procedure is the same as SW-846, method 9310 except for the calibration standards. The total uranium is an Inductively Coupled Plasma/Mass Spectrometry (ICP/MS) procedure capable of detecting down to 1 ppb Uranium.

B. In the event that a breached cylinder is discovered, soil and sediment located in the surface water runoff areas of the pad shall be sampled for radiological constituents. USEPA approved analytical methods for radiological analysis will be used. Soil and sediment sample results and any corrective actions shall be documented. Rate and extent of any contamination found shall be defined and remediated in a manner that controls, minimizes or eliminates contamination to the extent necessary to protect human health and the environment. These procedures shall include the following:

1. Soil showing visible contamination shall be excavated immediately.

2. A statistically valid sampling plan that considers the soil type, properties of the spilled material, area affected, volume of the spill and other factors shall be developed.

3. This sampling plan shall guide the confirmatory sampling and any additional excavation and remediation.

4. Background for soils shall be determined by samples taken adjacent to the cylinder yard in locations approved by the Ohio EPA and outside the spill area.

5. Excavation of any soil or sediment contamination is required as expeditiously as possible and shall continue until the sampling analyses show results less than the mean plus two sigma of the background.

6. Any soil or sediment excavated as required by this plan shall be containerized and evaluated according to OAC rule 3745-52-11.

7. Remediation of any ground water contamination resulting from the spill shall be in accordance with the provisions of Section VII of the Ohio Consent Decree and applicable portions of the U.S. EPA Administrative Consent Order and the Ohio Hazardous Waste Installation and Operation Permit ("Permit"). Notwithstanding references to the Ohio Consent Decree, the U.S. EPA Administrative Consent Order, and the Ohio Hazardous Waste Installation and Operation Permit, nothing herein is intended to infer that BWCS is a party to or a permittee under those documents.

8. If a DUF_6 cylinder breaches during the pendency of the Order, the provisions of this Section shall apply until all work required by this Section is completed.

9. If the monthly surface water sampling reveals any single analyte result greater than the standard deviation above the current (as of August 2013) maximum established for that location a thorough inspection of the associated cylinder yard will be initiated and Ohio EPA will be notified within 24 hours as required by paragraph IX.A. of this Plan.

C. The storage yards/areas shall be marked as DUF_6 storage areas, and generally maintained free of vegetation, cracks and settlement of the surfacing material, free of standing water and equipped with adequate lighting. Routine maintenance activities for the storage yards shall consist of: (1) identifying and controlling vegetation, (2) identifying and repairing water retention areas, (3) identifying and replacing or repairing signage (i.e., radiological postings), (4) identifying and replacing damaged barricades and (5) identifying and repairing defective lighting. All cracks in and settlement of the surfacing materials shall be addressed on an annual basis, as described in paragraph III.E., below. Any discrepancies from the standard above found, including cracks in and settlement of the surfacing materials, shall be entered into the work order system within ten (10) working days, and repair shall be accomplished within (90) days, except for those repairs performed pursuant to paragraph III.E..

D. During the annual radiological survey of the cylinder yards, identify and document cylinder movement that may have been the result of cracks and/or settling of concrete pads. Provide documentation to engineering for evaluation and if required, implement corrective measures (i.e., repair the concrete pad, limit stacking height, provide additional mechanical support, or relocate cylinders that cannot be stabilized by lowering the stack height or by additional mechanical support).

E. On an annual basis, repairs will be made to accessible cracks in and settlement of surfacing materials in the cylinder yard concrete pads utilizing caulk, pourable grout, vinyl concrete patch or other suitable materials. For purposes of the Management Plan, accessible cracks are those that can be easily reached and repaired without moving cylinders. The areas repaired will be documented in the annual report.

IV. Design and Construction of New Storage Yards

A. The new storage yards, at a minimum, shall be constructed and maintained in accordance with DOE Orders and Section III of this Plan. New storage yards may require additional sample locations which will be evaluated and approved by Ohio EPA; in the event that additional sample locations are added, the attached map will be updated with those new and/or additional locations. Concrete saddles shall be utilized for cylinder storage. Prior to utilizing any new yard for storage of DUF_6, U.S. DOE shall provide notice to Ohio EPA, and allow the inspection of the yard by Ohio EPA. A new yard or area may not be utilized for storage of DUF_6 until written approval is received from Ohio EPA.

B. DUF_6 cylinders shall be stored by cylinder type (i.e., fourteen and ten ton). Fourteen and ten ton cylinders shall be stored with aisle spacing of about four feet. Cylinder center-to-center shall measure about sixty inches. Full DUF_6 cylinders exceeding 12-inches in diameter shall be stacked no more than two high. See attached drawing.

V. Inside Storage of Small Diameter DUF_6 Cylinders

The Small Diameter DUF_6 Cylinders surveillance program consists of inspections and radiological surveys.

A. Storage. The storage of small-diameter (less than 30-inch) cylinders containing DUF_6 will be indoors in designated areas. Cylinder location is available through the Cylinder Information Database (CID).

1. Some of the small diameter cylinders may be placed in various containers such as drums or boxes for the convenience of storage. All containers will be clearly labeled as DUF_6.

   There are no stacking limits on small diameter DUF_6 cylinders, except as provided in paragraph V.A.3, below. The cylinders will be stored in a manner that will make them easily assessable for inspection.

2. The storage areas shall be maintained free of standing water.

3. Full cylinders exceeding 12 inches in diameter shall be stacked no more than two high.

B. Surveillance. The surveillance of small-diameter (less than 30-inch) cylinders containing DUF_6 will be conducted in the following manner.

1. The small-diameter cylinders shall be inspected on the same inspection frequency criteria applicable to the large diameter cylinders (large diameter means 30-inch and 48-inch diameter). See Table 1.

2. The small-diameter cylinders defect codes are applicable and are the same as for the large-diameter cylinders, identified in paragraph I.A.1. of this Plan.

3. The small-diameter cylinder inspections shall be documented on the appropriate checklist.

4. The small-diameter cylinder inspection data is maintained in the Cylinder Information Database (CID).

C. Radiological Surveys. The radiological survey of the small-cylinders shall be performed in the following manner.

1. The radiological surveys of these small-diameter cylinders shall be conducted on an annual basis. The surveys will be made on the outermost packaging for overpacked cylinders.

2. The surveys and limits are based on the most current version of 10 CFR 835 (10 CFR 835.401, 1101 and 1102 to 835.202 limits and Appendix D limits). The applicable radiological uranium contamination limits are 1000dpm/100cm^2 as specified in Appendix D of 10 CFR 835 (10 CFR 835.1101 and 1102 to Appendix D limits).

3. The area where the small-diameter cylinders are stored will be surveyed according to 10 CFR 835 (10 CFR 835.401 to 835.202 limits) for dose rates and posted accordingly. The dose-rate to post the area is 5 mR/hr or more conservatively as management determines.

D. Small Cylinder Processing: At the appropriate time, transfer of DUF_6 from small diameter cylinders to larger cylinders for processing at the DUF_6 conversion facility will be completed in the X-342, X-344, or X-705 Buildings.

VI. Inside Storage of DUF_6 Samples

A. The storage of samples of DUF_6, in small sample cylinders and containers, will be indoors. Containers used for sampling include 1s, 2s, 99s, hoke tubes, etc.

B. No other controls for samples contained in these cylinders and containers beyond standard laboratory operating practices and nuclear materials control are necessary.

VII. Contingency Plan

A. In the event of an emergency involving DUF_6, the Portsmouth Emergency Plan response procedures shall apply and the following actions taken:

1. Evacuate the area immediately.

2. Notify supervision and the Plant Shift Superintendent (PSS) immediately.

B. Appropriate personnel such as code inspectors, health physicists and metallurgists shall be summoned to evaluate the breach after the area is determined by the incident commander to be safe to enter.

C. Notification shall be made to the Ohio EPA within 24 hours verbally, and in writing within 5 working days (see Section IX Reporting).

D. Breaches shall be evaluated on a case-by-case basis and corrective actions taken as appropriate.

VIII. Records

A. Procedures and/or checklists shall be used to implement the surveillance and maintenance requirements. All Procedures and checklists shall be made available to Ohio EPA upon request.

B. All DUF_6 cylinder and cylinder storage area surveillance and maintenance activities shall be logged/recorded.

C. Records for activities (i.e., logs and checklists) required by this exhibit shall be maintained at the facility until cylinder disposition.

D. Computerized records may be used in lieu of logs and checklists.

IX. Reporting

A. All records, (i.e., logs and checklists) required by the DUF_6 Management Plan and requested by Ohio EPA shall be provided. Within 24 hours of discovery, identification of a breached cylinder and/or releases from DUF_6 cylinders shall be reported to Ohio EPA verbally, detailing all pertinent information known at the time. Within 5 working days of the incident, a written report shall be submitted to the Ohio EPA documenting the details of the release, environmental monitoring that has been completed, corrective actions completed to-date and any further actions to be taken. Recorded information shall include cylinder yard, section, row, position, breach size, possible causes, amount and location of product released and nameplate information (e.g., cylinder number, model).

B. Within 30 days of receiving a written request by Ohio EPA, U.S. DOE and the Operating Contractor shall provide to Ohio EPA a report that documents the surveillance and program improvement activities for the past quarter that were conducted in accordance with the DUF_6 Management Plan. Nothing in this paragraph shall limit any statutory or regulatory authority that Ohio EPA may otherwise have to request information from inspection of DUF_6 at PORTS.

C. As part of the annual report submitted to Ohio EPA on or before the 31st day of December of each year for the previous federal fiscal year provide a summary of repairs to cylinder yards or storage areas, DUF_6 cylinders repaired, non-production related transfers of DUF_6 cylinders, the number of DUF_6 cylinders processed, the amount of Hydrofluoric Acid produced and the amount of Uranium Oxide produced and the status and disposition of these materials.

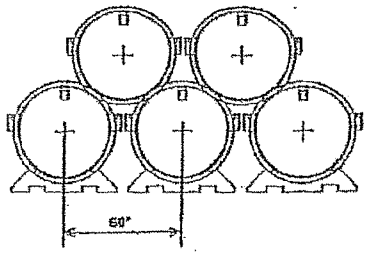
X. Training

DOE shall ensure that all personnel directly involved in handling and inspection of cylinders are trained, in order to comply with DOE procedures and the DUF_6 Management Plan. Classroom instruction and on-the-job training shall be used. Refresher training shall occur for all involved personnel on an annual basis. Training shall be specific to the job performed, and shall include, if applicable, safe operation of cylinder handling equipment, lifting and moving of cylinders, and emergency response procedures. Inspectors shall also be trained on proper inspection procedures, including identification, description, measurement, and recording of all inspection criteria in this Plan. Training records shall be maintained at the facility.

All NDE (nondestructive examination) inspectors shall be trained and certified in accordance with the provisions of the ASME Code and American Society of Nondestructive Testing Recommended Practice, SNT-TC-1A for Ultrasonic Thickness Testing. All records of training and certification shall be retained at the site and shall be available to Ohio EPA upon request.

XI. Other

At the request of U.S. DOE, any Contractor with responsibility for compliance with the DUF_6 Management Plan, or Ohio EPA, the parties shall meet in January of each year, or at any other agreed upon time, to discuss improvements to U.S. DOE's DUF_6 management program. All environmental remediation activities related to DUF_6 storage yards, except for releases remediated pursuant to Para. III.B.7 above, are unaffected by and not changed by this plan.

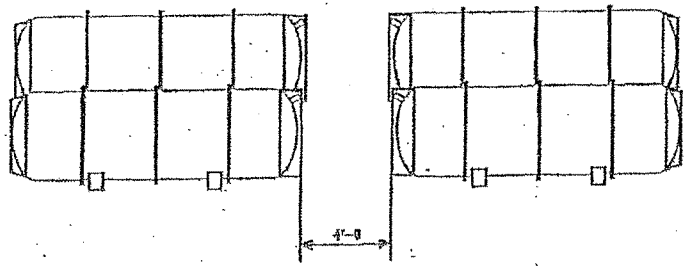


END VIEW

NOTES:

1. 14 AND 10 TON CYLINDERS WILL BE STACKED NO MORE THAN TWO HIGH AND WILL BE SPACED ON CONCRETE SADDLES TO PROVIDE APPROXIMATELY 60 INCHES FROM THE CENTER OF ONE CYLINDER HEAD TO THE CENTER OF THE ADJACENT CYLINDER HEAD.

2. WHEN STACKED IN ROWS, THERE WILL BE APPROXIMATELY 4 FEET OF AISLE SPACE BETWEEN THE ENDS OF CYLINDERS (SKIRTED CYLINDERS SHOWN) NON SKIRTED CYLINDERS WILL ALSO HAVE APPROXIMATELY 4 FEET OF AISLE SPACE AS MEASURED BETWEEN THE ELIPTICAL HEADS.



SIDE VIEW

PORTSMOUTH RESTACKING CONFIGURATION

Table 1. PORTS DUF_6 Cylinder Inspection Frequency

Criteria	Daily	Weekly	Biweekly	Monthly	Annually	Quad
Radiological Survey					X	
Ultrasonic Testing/ Inspection (150 cylinders)					X	
Nominal DUF_6 Cylinders						X
DUF_6 Cylinders with the following defects -severe pitting corrosion -heavy rust/scale on cylinder -rust/scale in skirt of valve end -rust/scale in scale of plug end					X	
DUF_6 Cylinders with evidence of valve leakage * Biweekly for valves under interim actions			*X	X		
Breached Cylinder * Daily until mitigated and weekly after mitigation complete.	*X	X				

Attachment A to the DUF_6 Management Plan

Portsmouth Deplete Uranium Hexafluoride (DUF_6)
Cylinder Ultrasonic Testing Program

The Deplete Uranium Hexafluoride (DUF_6) Management Plan, Attachment A to the Ohio EPA Director's Final Findings and Orders, requires in Section I.B.2 annual inspection of 150 DUF_6 cylinders using ultrasonic measurement techniques, as defined in Section I.B.1. Ohio EPA and the Department of Energy agree that the sample populations and sampling program for these required inspections will be as follows:

Portsmouth cylinders receiving ongoing annual tests – The following DUF_6 cylinders having received repeated annual tests (41, see Table) will continue to be tested on a biennial basis starting FY 2013:

000186	002252	006559	007650	008444	008851	100321	114310
000277	005444	006811	007691	008539	008895	111339	114541
000390	005749	006975	007725	008542	009064	111400	114555
000673	006350	007001	008027	008770	018414	111894	115218
001255	006503	007415	008434	008828	018715	113079	115219
							120555

Portsmouth ANSI non-compliant cylinders – The six patched breached cylinders and seven cylinders receiving repeat tests outlined in the table below will be retested annually. **NOTE:** Patched breached cylinders may not permit testing at the exact locations indicated in 1.B.1 due to the location of the patch.

Breached	006780	007953	101244	114798	114951	116797	
Repeats	006943	006948	009131	012027	018762	100861	101256

Approximately 100 of the Portsmouth ANSI non-compliant Model "A", "T" and older Model "O" and "OM" DUF_6 cylinders, estimated to be approximately 6000, will receive ultrasonic testing annually. The remaining cylinders tested will be selected from ANSI-compliant DUF_6 cylinders to complete 150 cylinders tested annually.

Any cylinders determined to have a wall thickness less than 0.0625 inches along the bottom third of the cylinder will be tested annually.

ANSI Non-Compliant Cylinders - Cylinders whose visual inspection indicates one or more of the following defects: A-03 Bulge of ½ inch or more, A-04 Gouge or cut over 1/16 inch deep, A-05 Dent over 1/16 inch deep, A-09 Severe pitting corrosion, or A-10 Heavy rust scale on cylinder over 1/8 inch thick and over 2 inches in diameter will be tested annually. This sampling arrangement may be modified periodically as deemed necessary and as agreed upon by Ohio EPA and the Portsmouth/Paducah Project Office.