

**Commonwealth of Kentucky  
Energy and Environment Cabinet  
Department for Environmental Protection  
Division for Air Quality  
300 Sower Boulevard, 2<sup>nd</sup> Floor  
Frankfort, Kentucky 40601  
(502) 564-3999**

**Draft**

**AIR QUALITY PERMIT  
Issued under 401 KAR 52:030**

**Permittee Name:** Mission Conversion Services Alliance  
**Mailing Address:** 1020 Monarch Street, Suite 300  
Lexington, Kentucky 40513

**Source Name:** Depleted Uranium Hexafluoride Conversion  
Facility  
**Mailing Address:** 5509 Hobbs Road  
Kevil, Kentucky 42053

**Source Location:** U.S. Department of Energy Paducah Site

**Permit ID:** F-26-016  
**Agency Interest #:** 49944  
**Activity ID:** APE20260001  
**Review Type:** Conditional Major, Operating  
**Source ID:** 21-145-00091

**Regional Office:** Paducah Regional Office  
130 Eagle Nest Drive  
Paducah, Kentucky 42003  
(270) 898-8468

**County:** McCracken

**Application  
Complete Date:** March 27, 2026  
**Issuance Date:**  
**Expiration Date:**

---

**For Michael J. Kennedy, P.E.  
Director  
Division for Air Quality**

## TABLE OF CONTENTS

SECTION	ISSUANCE	PAGE
A. PERMIT AUTHORIZATION	Renewal	1
B. EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS	Renewal	2
C. INSIGNIFICANT ACTIVITIES	Renewal	19
D. SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS	Renewal	20
E. SOURCE CONTROL EQUIPMENT REQUIREMENTS	Renewal	21
F. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS	Renewal	23
G. GENERAL PROVISIONS	Renewal	26
H. ALTERNATE OPERATING SCENARIOS	Renewal	31
I. COMPLIANCE SCHEDULE	Renewal	31

Permit	Permit Type	Activity #	Complete Date	Issuance Date	Summary of Action
F-26-016	Renewal	APE20260001	3/27/2026		Renewal Permit

## **SECTION A - PERMIT AUTHORIZATION**

Pursuant to a duly submitted application the Kentucky Energy and Environment Cabinet (Cabinet) hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit was issued under the provisions of Kentucky Revised Statutes (KRS) Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:030, Federally-enforceable permits for non-major sources.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

## SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

### Emission Unit 01 (U001) – Conversion Facility Building

#### Description:

Four Parallel process lines are used to convert depleted uranium hexafluoride (DUF<sub>6</sub>), stored in cylinders by DOE, to uranium oxide powder, hydrofluoric acid (HF), and calcium fluoride (CaF<sub>2</sub>). The process takes the material through vaporization, conversion, HF recovery, and off-gas scrubbing. The resultant high purity HF is collected and marketed. The remaining low-level depleted uranium oxide powder is loaded into emptied UF<sub>6</sub> cylinders for beneficial reuse or disposition. CaF<sub>2</sub> is generated during the regeneration of potassium hydroxide (KOH).

Emission unit 01 (U001) is the Building Exhaust System stack of the Conversion Building. U001 collects five air exhaust streams: Vaporization Area HVAC System (HV-001), HVAC System (FN-053), Conversion Area HVAC System (HV-003), Evacuation Header System (EVH), and Process Off-gas Scrubber (POS) System Exhaust, which includes eight primary scrubbers that feed one secondary scrubber.

The Building Exhaust System removes a percentage of air from each of the three process area HVAC systems (HV-001, FN-053, and HV-003). The Building Exhaust System is also directly connected to several process exhaust blowers located throughout the building. All air to be exhausted travels to the exhaust room plenum where it is pulled through a bank of HEPA filters by a centrifugal fan and exhausted from the building through a steel stack located on the Conversion Building Roof.

Maximum Capacity: 30,891 tons of DUF<sub>6</sub> processed/yr

#### Individual Equipment Descriptions:

##### *Process Line 1:*

Control For Oxide Powder: Containment, In Process Filters, HVAC Collection, Pre-filters, Final HEPA Bank

Control for HF: Process Off-gas System (POS) Primary Caustic Scrubber, POS Secondary Scrubber (common to lines 1-4), Final HEPA Bank

##### *Process Line 2:*

Control For Oxide Powder: Containment, In Process Filters, HVAC Collection, Pre-filters, Final HEPA Bank

Control for HF: Process Off-gas System (POS) Primary Caustic Scrubber, POS Secondary Scrubber (common to lines 1-4), Final HEPA Bank

##### *Process Line 3:*

Control For Oxide Powder: Containment, In Process Filters, HVAC Collection, Pre-filters, Final HEPA Bank

Control for HF: Process Off-gas System (POS) Primary Caustic Scrubber, POS Secondary Scrubber (common to lines 1-4), Final HEPA Bank

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)***Process Line 4:*

Control For Oxide Powder: Containment, In Process Filters, HVAC Collection, Pre-filters, Final HEPA Bank

Control for HF: Process Off-gas System (POS) Primary Caustic Scrubber, POS Secondary Scrubber (common to lines 1-4), Final HEPA Bank

*Evacuation Header System:*

Control: HEPA Filter, Final HEPA Bank

*Oxide Handling System:*

Control: Vented Hood, Pre-filter, HEPA Filter, Final HEPA Bank

**APPLICABLE REGULATIONS:**

**401 KAR 53:010**, *Ambient air quality standards*, applies to fluoride emissions.

**401 KAR 59:010**, *New process operations*

**40 CFR 61, Subpart H**, *National Emission Standards for Emissions of Radionuclides Other Than Radon from Department of Energy Facilities*

**STATE-ORIGIN REQUIREMENTS:**

**401 KAR 63:020**, *Potentially hazardous matter or toxic substances*

**1. Operating Limitations:**

- a. The Conversion Building shall be maintained at a negative pressure relative to the outside ambient pressure.

**Compliance Demonstration Method:**

For any facility that is a source of radioactive emissions, the term "as low as reasonably achievable" (ALARA) means that the emission of radionuclides will be kept as low as is reasonably achievable taking into account the state of technology, the economics of improvements in relation to benefits to the public health and safety, other societal and socioeconomic considerations, and in relation to the utilization of sources of radiation in the public interest. Therefore, in accordance with the principals of ALARA, and to demonstrate compliance with this operating limitation, the negative pressure of the Conversion Building necessary to provide containment for the process shall be continuously monitored and alarmed for excursions outside operating parameters established during initial performance testing. Refer to **4. Specific Monitoring Requirements (f)**.

- b. The Conversion Building stack control equipment parameter monitors shall be in continuous operation during operation of exhaust equipment.

**Compliance Demonstration Method:**

Refer to **4. Specific Monitoring Requirements (f)** and **(g)**.

## **SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **2. Emission Limitations:**

- a. Emissions of radionuclides to the ambient air from Department of Energy (DOE) facilities shall not exceed those amounts that would cause any member of the public to receive in any year an effective dose equivalent of 10 mrem/yr. [40 CFR 61.92]

#### **Compliance Demonstration Method:**

To determine compliance with the standard, radionuclide emissions shall be determined and effective dose equivalent values to members of the public calculated using EPA approved sampling procedures, computer models CAP-88 or AIRDOS-PC, or other procedures for which EPA has granted prior approval. [40 CFR 61.93(a)] Refer to **4. Specific Monitoring Requirements**, **5. Specific Recordkeeping Requirements**, and **6. Specific Reporting Requirements**.

- b. The permittee shall not cause, suffer, allow, or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than twenty (20) percent opacity. [401 KAR 59:010, Section 3(1)(a)]

#### **Compliance Demonstration Method:**

Refer to **4. Specific Monitoring Requirements (h)** and **5. Specific Recordkeeping Requirements (f)**.

- c. For emissions from a control device or stack, the permittee shall not cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility which is in excess of the quantity specified in 401 KAR 59:010, Appendix A: [401 KAR 59:010, Section 3(2)]
- i. For process weight rates  $\leq 0.50$  ton/hour:  $E = 2.34$
- ii. For process weight rates  $> 0.50$  ton/hr and  $\leq 30$  tons/hr:  $E = 3.59P^{0.62}$
- Where:  $E$  = rate of emission in lb/hr, and  
 $P$  = process weight rate in tons/hr.

#### **Compliance Demonstration Method:**

Compliance with the mass emission standard is assumed based on the potential to emit for the emission unit.

- d. Refer to **Section D** for site-wide gaseous and total fluoride limits.

### **3. Testing Requirements:**

Performance testing using the reference methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet. [401 KAR 50:045, Section 1, and 401 KAR 59:005, Section 2(2)]

### **4. Specific Monitoring Requirements:**

- a. Radionuclide emission rates from new point sources (stacks or vents) as defined in 40 CFR 61, Subpart A shall be measured in accordance with the following requirements, or other procedures for which EPA has granted prior approval: [40 CFR 61.93(c)]
- i. Effluent flow rate measurements shall be made using the following methods: [40 CFR 61.93(c)(1)]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- 1) ANSI/HPS N13.1-1999 "Sampling and Monitoring Releases of Airborne Radioactive Substances from the Stacks and Ducts of Nuclear Facilities" (incorporated by reference—see 40 CFR 61.18) shall be used to determine velocity and volumetric flow rates for stacks and large vents. [40 CFR 61.93(c)(1)(i)]
  - 2) ANSI/HPS N13.1-1999 shall be used to measure flow rates through pipes and small vents. [40 CFR 61.93(c)(1)(ii)]
  - 3) The frequency of the flow rate measurements shall depend upon variability of the effluent flow rate. For variable flow rates, continuous or frequent flow rate measurements shall be made. For relatively constant flow rates only periodic measurements are necessary. [40 CFR 61.93(c)(1)(iii)]
- ii. Radionuclide shall be directly monitored or extracted, collected and measured using the following methods: [40 CFR 61.93(c)(2)]
- 1) ANSI/HPS N13.1-1999 shall be used to select monitoring or sampling sites. [40 CFR 61.93(c)(2)(i)]
  - 2) The effluent stream shall be directly monitored continuously with an in-line detector or representative samples of the effluent stream shall be withdrawn continuously from the sampling site following the guidance presented in ANSI/HPS N13.1-1999. The requirements for continuous sampling are applicable to batch processes when the unit is in operation. Periodic sampling (grab samples) may be used only with EPA's prior approval. Such approval may be granted in cases where continuous sampling is not practical and radionuclide emission rates are relatively constant. In such cases, grab samples shall be collected with sufficient frequency so as to provide a representative sample of the emissions. [40 CFR 61.93(c)(2)(ii)]
  - 3) Radionuclides shall be collected and measured using procedures based on the principles of measurement described in appendix B, Method 114 of 40 CFR Part 61. Use of methods based on principles of measurement different from those described in appendix B, Method 114 of 40 CFR Part 61 must have prior approval from the Administrator. EPA reserves the right to approve measurement procedures. [40 CFR 61.93(c)(2)(iii)]
  - 4) A quality assurance program shall be conducted that meets the performance requirements described in ANSI/HPS N13.1-1999. [40 CFR 61.93(c)(2)(iv)]
- b. When it is impractical to measure the effluent flow rate at a source in accordance with the requirements of 40 CFR 61.93(c) or to monitor or sample an effluent stream at a source in accordance with the site selection and sample extraction requirements of 40 CFR 61.93(c), the permittee may use alternative effluent flow rate measurement procedures or site selection and sample extraction procedures provided that: [40 CFR 61.93(d)]
- i. It can be shown that the requirements of 40 CFR 61.93(c) are impractical for the effluent stream. [40 CFR 61.93(d)(1)]
  - ii. The alternative procedure will not significantly underestimate the emissions. [40 CFR 61.93(d)(2)]
  - iii. The alternative procedure is fully documented. [40 CFR 61.93(d)(3)]
  - iv. The permittee has received prior approval from EPA. [40 CFR 61.93(d)(4)]
- c. Radionuclide emission measurements in conformance with the requirements of 40 CFR 61.93(c) shall be made at all release points that have a potential to discharge radionuclides into the air in quantities that could cause an effective dose equivalent in excess of 1% of

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

the standard. All radionuclides that could contribute greater than 10% of the potential effective dose equivalent for a release point shall be measured. With prior EPA approval, DOE may determine these emissions through alternative procedures. For other release points that have a potential to release radionuclides into the air, periodic confirmatory measurements shall be made to verify the low emissions. [40 CFR 61.93(e)]

- d. To determine whether a release point is subject to the emission measurement requirements of 40 CFR 61.93(c), it is necessary to evaluate the potential for radionuclide emissions for that release point. In evaluating the potential of a release point to discharge radionuclides into the air for the purposes of this section, the estimated radionuclide release rates shall be based on the discharge of the effluent stream that would result if all pollution control equipment did not exist, but the facilities operations were otherwise normal. [40 CFR 61.93(f)]
- e. Environmental measurements of radionuclide air concentrations at critical receptor locations may be used as an alternative to air dispersion calculations in demonstrating compliance with the standard if the permittee meets the following criteria: [40 CFR 61.93(g)]
  - i. The air at the point of measurement shall be continuously sampled for collection of radionuclides. [40 CFR 61.93(g)(1)]
  - ii. Those radionuclides released from the facility that are the major contributors to the effective dose equivalent must be collected and measured as part of the environmental measurement program. [40 CFR 61.93(g)(2)]
  - iii. Radionuclide concentrations that would cause an effective dose equivalent of 10% of the standard shall be readily detectable and distinguishable from background. [40 CFR 61.93(g)(3)]
  - iv. Net measured radionuclide concentrations shall be compared to the concentration levels in Table 2 appendix E of 40 CFR 61 to determine compliance with the standard. In the case of multiple radionuclides being released from a facility, compliance shall be demonstrated if the value for all radionuclides is less than the concentration level in Table 2 of appendix E of 40 CFR 61, and the sum of the fractions that result when each measured concentration value is divided by the value in Table 2 of appendix E of 40 CFR 61 for each radionuclide is less than 1. [40 CFR 61.93(g)(4)]
  - v. A quality assurance program shall be conducted that meets the performance requirements described in appendix B, Method 114 of 40 CFR 61. [40 CFR 61.93(g)(5)]
  - vi. Use of environmental measurements to demonstrate compliance with the standard is subject to prior approval of EPA. Applications for approval shall include a detailed description of the sampling and analytical methodology and show how the above criteria will be met. [40 CFR 61.93(g)(6)]
- f. Monitoring Requirements for Radionuclides (Uranium): [401 KAR 52:030, Section 10]
  - i. The permittee shall continuously monitor the optimal operating parameters for the HVAC system established during initial performance testing, as well as the building pressure relative to the outside ambient pressure.
  - ii. The permittee shall monitor the pressure drop across each HEPA Filter a minimum of once per week during the operation of the facility.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- iii. The permittee shall continuously monitor the pressure drop across the Final HEPA Filter Exhaust Bank during the operation of the facility.
- iv. The permittee shall install, calibrate, maintain and operate, according to the manufacturer's specifications, a continuous emissions monitoring device to determine the level of Uranium exiting the Conversion Building stack and interlock systems to shutdown processes when leaks or other problems occur. The permittee shall also meet the requirements of 40 CFR 61.93, Emission monitoring and test procedures.
- g. Monitoring Requirements for HF and Total Fluorides: [401 KAR 52:030, Section 10]
  - i. The permittee shall continuously monitor the critical operating parameters (scrubber liquor recirculation flow rate and pH) for the caustic scrubbers, as established during initial performance testing.
  - h. The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack no less than weekly while the affected facility is operating. If visible emissions from the stack are observed (not including condensed water in the plume), the permittee shall determine the opacity using U.S. EPA Reference Method 9. In lieu of determining the opacity using U.S. EPA Reference Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume). [401 KAR 52:030, Section 10]
  - i. The permittee shall monitor the following: [401 KAR 52:030, Section 10]
    - i. The daily throughput of DUF<sub>6</sub> into the facility;
    - ii. The daily throughput of Uranium Oxide out of the facility;
    - iii. The daily hours of operation;
  - j. Refer to **Section F** for general monitoring requirements.

**5. Specific Recordkeeping Requirements:**

- a. The permittee must maintain records documenting the source of input parameters including the results of all measurements upon which they are based, the calculations and/or analytical methods used to derive values for input parameters, and the procedure used to determine effective dose equivalent. This documentation should be sufficient to allow an independent auditor to verify the accuracy of the determination made concerning the facility's compliance with the standard. These records must be kept at the site of the facility for at least five years and, upon request, be made available for inspection by the Administrator, or his authorized representative. [40 CFR 61.95]
- b. If compliance with the radiological dose limits is accomplished through environmental measurements of radionuclide air concentrations at critical receptor locations, the permittee shall record results of sampling at critical receptor locations, maintenance and accuracy checks of instrumentation used, and all other parameters used to demonstrate compliance under this alternate method. [401 KAR 52:030, Section 10]
- c. The permittee shall maintain records of established operating parameter limits for scrubbers, HEPA filters, Final HEPA Exhaust Filter Bank, and the HVAC system. [401 KAR 52:030, Section 10]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- d. The permittee shall maintain records of the monitoring data for established critical parameters for the control devices, i.e. records of caustic flow rate, caustic concentration for each operating scrubber, records of pressure drop across each operating Pollution Control Pre-filter, HEPA Filter and of the Final HEPA Exhaust Bank, any POS Primary Caustic Scrubber or the POS Secondary Scrubber or air emission control HVAC alarm or interlock process shutdowns, and all results of stack monitoring. [401 KAR 52:030, Section 10]
- e. The critical level to alarm and/or trip process shutdown for each device established during preliminary emissions testing, and excursions that alarm or cause shutdown shall be kept on record for inspection. [401 KAR 52:030, Section 10]
- f. The permittee shall maintain records of the qualitative visual observations made as specified in 4. **Specific Monitoring Requirements (h)**, including the date, time, initials of observer, whether any emissions were observed (yes/no), any corrective action taken, and any U.S. EPA Reference Method 9 readings conducted. [401 KAR 52:030, Section 10]
- g. The permittee shall maintain records of the following: [401 KAR 52:030, Section 10]
  - i. The daily throughput of DUF<sub>6</sub> into the facility;
  - ii. The daily throughput of Uranium Oxide out of the facility;
  - iii. The daily hours of operation;
  - iv. In-stack monitoring data for Uranium Oxide;
  - v. Annual effective dose calculations, including inputs and assumptions.
- h. Refer to **Section F** for general recordkeeping requirements.

**6. Specific Reporting Requirements:**

- a. Compliance with 40 CFR 61.92 shall be determined by calculating the highest effective dose equivalent to any member of the public at any offsite point where there is a residence, school, business or office. The permittee shall submit an annual report to both EPA headquarters and the appropriate regional office by June 30 which includes the dose calculations required by 40 CFR 61.93(a) for the previous calendar year. [40 CFR 61.94(a)]
- b. In addition to the requirements of 40 CFR 61.94(a), an annual report shall include the following information: [40 CFR 61.94(b)]
  - i. The name and location of the facility. [40 CFR 61.94(b)(1)]
  - ii. A list of the radioactive materials used at the facility. [40 CFR 61.94(b)(2)]
  - iii. A description of the handling and processing that the radioactive materials undergo at the facility. [40 CFR 61.94(b)(3)]
  - iv. A list of the stacks or vents or other points where radioactive materials are released to the atmosphere. [40 CFR 61.94(b)(4)]
  - v. A description of the effluent controls that are used on each stack, vent, or other release point and an estimate of the efficiency of each control device. [40 CFR 61.94(b)(5)]
  - vi. Distances from the points of release to the nearest residence, school, business or office and the nearest farms producing vegetables, milk, and meat. [40 CFR 61.94(b)(6)]
  - vii. The values used for all other user-supplied input parameters for the computer models (e.g., meteorological data) and the source of these data. [40 CFR 61.94(b)(7)]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- viii. A brief description of all construction and modifications which were completed in the calendar year for which the report is prepared, but for which the requirement to apply for approval to construct or modify was waived under 40 CFR 61.96 and associated documentation developed by the DOE to support the waiver. EPA reserves the right to require that DOE send to EPA all the information that normally would be required in an application to construct or modify, following receipt of the description and supporting documentation. [40 CFR 61.94(b)(8)]
  - ix. Each report shall be signed and dated by a corporate officer or public official in charge of the facility and contain the following declaration immediately above the signature line: "I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment. See, 18 U.S.C. 1001." [40 CFR 61.94(b)(9)]
  - c. If the facility is not in compliance with the emission limits of 40 CFR 61.92 in the calendar year covered by the report, then the facility must commence reporting to the U.S. EPA and the Division's regional office on a monthly basis the information listed in 40 CFR 61.94(b), for the preceding month. These reports will start the month immediately following the submittal of the annual report for the year in noncompliance and will be due 30 days following the end of each month. This increased level of reporting will continue until the U.S. EPA has determined that the monthly reports are no longer necessary. In addition to all the information required in 40 CFR 61.94(b), monthly reports shall also include the following information: [40 CFR 61.94(c)]
    - i. All controls or other changes in operation of the facility that will be or are being installed to bring the facility into compliance. [40 CFR 61.94(c)(1)]
    - ii. If the facility is under a judicial or administrative enforcement decree, the report will describe the facilities performance under the terms of the decree. [40 CFR 61.94(c)(2)]
  - d. Excursions outside established operating parameter limits for scrubbers, HEPA filters, Final HEPA Exhaust Filter Bank, and the HVAC system shall be reported according to **Section F.8.** [401 KAR 52:030, Section 10]
  - e. Refer to **Section F** for general reporting requirements.
- 7. Specific Control Equipment Operating Conditions:**
- a. As established in **1. Operating Limitations (a)**, the HVAC system must be functioning and maintain a negative building pressure during process operation. If the HVAC system (exhaust fan) is inoperable, the process operation must be shut down or stopped. [401 KAR 52:030, Section 10]
  - b. All scrubbers and HEPA filters must be fully operational during the operation of any process line with which it is directly associated. Repair and preventative maintenance of any one POS primary scrubber is allowed for an operating process line as long as the POS secondary scrubber is operating as designed. Repair and maintenance of the secondary scrubber is allowed if the primary scrubbers are operating for each currently operating process line. [401 KAR 52:030, Section 10]

## SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- c. The POS Primary Scrubbers and the common POS Secondary Scrubber shall be installed, maintained, and operated in accordance with manufacturer's specifications; and always operated within the caustic flow rate and caustic concentration ranges necessary for emissions compliance as established during initial emissions testing. This includes the following: [401 KAR 52:030, Section 10]

**Table 01-1**

<b>KyEIS Control ID#</b>	<b>Control Equipment Description</b>
US001	Primary Scrubber
US002	Primary Scrubber
US003	Primary Scrubber
US004	Primary Scrubber
US005	Primary Scrubber
US006	Primary Scrubber
US007	Primary Scrubber
US008	Primary Scrubber
US009	Secondary Scrubber

### **Compliance Demonstration Method:**

The critical level to alarm and/or trip process shutdown for each listed device was established during preliminary emissions testing. The established levels and excursions that alarm or cause shutdown shall be kept on record for inspection. Records that note the date and time when the Operating Limitations, described are not met (e.g. excursions in flow rates and pressures outside established ranges for compliance) shall be included in semi-annual reports. The permittee shall also meet the requirements of 40 CFR 61.93, Emission monitoring and test procedures.

- d. All HEPA filters and the Final HEPA filter exhaust bank shall be installed, maintained, and operated in accordance with manufacturer's specifications; and always operated within the pressure drop range necessary for emissions compliance as established during initial emissions testing. This includes the following: [401 KAR 52:030, Section 10]

**Table 01-2**

<b>KyEIS Control ID#</b>	<b>Control Equipment Description</b>
UH001	HEPA Filter (FL-011): Recirculation Filter – Vaporization Area
UH002	HEPA Filter (FL-012): Recirculation Filter Cylinder Prep/Filling Area
UH003	HEPA Filter (FL-013 & 014): Recirculation Filter – Conversion Area
UH004	HEPA Filter (FL-047-048): Vaporization Exhaust
UH005	HEPA Filter (FL-025-028): Powder Transfer Room
UH006	HEPA Filter (FL-037 & 038): Welding Hood & Cylinder Prep Area

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

	Exhaust
UH007	HEPA Filter (FL-001): Conversion Building Main Exhaust Filter Bank
UH008	HEPA Filter (FL-039A & 039B): Oxide Powder Hopper Filters
UH009	HEPA Filter (FL-054): Conversion Units Cooling Jacket
UH010	HEPA Filter (FL-830, FL-120A & B): Stabilization & Vaporization Exhaust

**Compliance Demonstration Method:**

The established operating parameters for each control device shall be kept on record for inspection and excursions outside those parameters shall be recorded and reported according to **Section F**.

- e. Refer to **Section E**.

## **SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **Emission Unit 02 (U002) – HF Loading Area**

#### **Description:**

The aqueous hydrogen fluoride co-product from the conversion process is collected in six HF receiver tanks located in the Conversion Building. The HF is pumped from these tanks to the HF Storage Tanks, each of which is located in a secondary containment sump just outside the Conversion Building, for subsequent load out for transportation. The air displaced in filling of the storage tanks or transport vehicles is vented back through a caustic scrubber before it is released to the atmosphere through U002. No radioactive materials enter this process or exit through U002.

#### **Individual Equipment Descriptions:**

- 6 HF Storage Tanks;
- HF service designed lines and equipment;
- Leak detection instrumentation

Construction Commenced: 9/26/2005

Maximum Capacity: 3,328,800 gal 66% HF/yr, combined

Controls: Caustic Scrubber (US010)

#### **APPLICABLE REGULATIONS:**

**401 KAR 53:010**, *Ambient air quality standards*, applies to fluoride emissions.

**401 KAR 59:010**, *New process operations*

#### **1. Operating Limitations:**

- a. The HF Storage Area caustic scrubber shall be in continuous operation during the filling and/or emptying of the HF storage tanks. [401 KAR 53:010]
- b. The HF Loading Area leak monitors shall be in continuous operation during operation of the caustic scrubber. [401 KAR 53:010]

#### **2. Emission Limitations:**

- a. The permittee shall not cause, suffer, allow, or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than twenty (20) percent opacity. [401 KAR 59:010, Section 3(1)(a)]
- b. For emissions from a control device or stack, the permittee shall not cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility which is in excess of the quantity specified in 401 KAR 59:010, Appendix A: [401 KAR 59:010, Section 3(2)]
  - i. For process weight rates  $\leq 0.50$  ton/hour:  $E = 2.34$
  - ii. For process weight rates  $> 0.50$  ton/hr and  $\leq 30$  tons/hr:  $E = 3.59P^{0.62}$

Where: E = rate of emission in lb/hr, and  
P = process weight rate in tons/hr.

#### **Compliance Demonstration Method:**

Compliance with the opacity standard and mass emission standard is assumed when the process and associated control equipment are operated according to the requirements of this permit.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

c. Refer to **Section D** for site-wide gaseous and total fluoride limits.

**3. Testing Requirements:**

Performance testing using the reference methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet. [401 KAR 50:045, Section 1, and 401 KAR 59:005, Section 2(2)]

**4. Specific Monitoring Requirements:**

a. The permittee shall continuously operate HF Storage Area tank leak monitors during operation of the caustic scrubber (US010). [401 KAR 52:030, Section 10]

b. The permittee shall monitor the caustic scrubber (US010) to ensure the equipment operates within the parameters and ranges established as optimal during initial testing. [401 KAR 52:030, Section 10]

c. If visible emissions from the stack are observed (not including condensed water in the plume), the permittee shall determine the opacity using U.S. EPA Reference Method 9. In lieu of determining the opacity using U.S. EPA Reference Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume). [401 KAR 52:030, Section 10]

d. Monitoring devices shall be calibrated or replaced according to the manufacturer's specifications, or a minimum of annually. [401 KAR 52:030, Section 10]

e. The permittee shall monitor the following: [401 KAR 52:030, Section 10]

- i. The monthly throughput in gallons; and
- ii. The monthly hours of operation.

f. Refer to **Section F** for general monitoring requirements.

**5. Specific Recordkeeping Requirements:**

a. The permittee shall maintain records of established critical parameters for the control devices, including the caustic flow rate and caustic concentration for the scrubber. [401 KAR 52:030, Section 10]

b. The permittee shall maintain records of any visual observations made as specified in **4. Specific Monitoring Requirements (c)**, including the date, time, initials of observer, whether any emissions were observed (yes/no), any corrective action taken, and any U.S. EPA Reference Method 9 readings conducted. [401 KAR 52:030, Section 10]

c. The permittee shall maintain records of the following: [401 KAR 52:030, Section 10]

- i. The monthly throughput in gallons;
- ii. The monthly hours of operation;
- iii. All continuous monitoring data;
- iv. Any HF Loading Area alarms or interlock causing a process shutdown to occur;
- v. Dates and times of any instances when the leak monitors fail to operate when the scrubber is in operation;
- vi. Calibration or replacement of monitoring equipment.

d. Refer to **Section F** for general recordkeeping requirements.

## **SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **6. Specific Reporting Requirements:**

- a. For control and monitoring equipment, any excursions outside of established operating ranges or failure of the equipment to perform as required shall be reported to the Paducah Regional Office in accordance with **Section F.8**.
- b. Refer to **Section F** for general reporting requirements.

### **7. Specific Control Equipment Operating Conditions:**

- a. The HF Storage Area caustic scrubber shall be maintained and operated in accordance with manufacturer's specifications, and always operated within the caustic flow rate and caustic concentration ranges necessary for emissions compliance as established during initial emissions testing. [401 KAR 52:030, Section 10]
- b. Refer to **Section E**.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****Emission Unit 03 (U003) - Standby Diesel Generator**

**Description:** An emergency stationary engine.

Fuel: Diesel

Rated Capacity: 755 HP

Construction Commenced: 2007

Controls: None

**APPLICABLE REGULATIONS:**

**401 KAR 60:005, Section 2(2)(dddd), 40 C.F.R. 60.4200 to 60.4219, Tables 1 to 8 (Subpart III), *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines***

**401 KAR 63:002, Section 2(4)(eeee), 40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines***

**1. Operating Limitations:**

- a. The permittee must meet the requirements of 40 CFR part 63 by meeting the requirements of 40 CFR part 60 subpart III, for compression ignition engines. No further requirements apply for such engines under 40 CFR part 63. [40 CFR 63.6590(c)(1)]
- b. The permittee must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4205 over the entire life of the engine. [40 CFR 60.4206]
- c. The permittee must use diesel fuel that meets the requirements of 40 CFR 1090.305 for nonroad diesel fuel. [40 CFR 60.4207(b)]
- d. The permittee must operate the emergency stationary ICE according to the requirements in 40 CFR 60.4211(f)(1) through (3). In order for the engine to be considered an emergency stationary ICE under 40 CFR 60, Subpart III, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 60.4211(f)(1) through (3), is prohibited. If the permittee does not operate the engine according to the requirements in 40 CFR 60.4211(f)(1) through (3), the engine will not be considered an emergency engine under 40 CFR 60, Subpart III and must meet all requirements for non-emergency engines. [40 CFR 60.4211(f)]
  - i. There is no time limit on the use of emergency stationary ICE in emergency situations. [40 CFR 60.4211(f)(1)]
  - ii. The permittee may operate the emergency stationary ICE for the purpose specified in 40 CFR 60.4211(f)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR 60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by 40 CFR 60.4211(f)(2). [40 CFR 60.4211(f)(2)]
    - 1) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. [40 CFR 60.4211(f)(2)(i)]

- iii. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in 40 CFR 60.4211(f)(2). Except as provided in 40 CFR 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 60.4211(f)(3)]
  - 1) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: [40 CFR 60.4211(f)(3)(i)]
    - A. The engine is dispatched by the local balancing authority or local transmission and distribution system operator; [40 CFR 60.4211(f)(3)(i)(A)]
    - B. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region. [40 CFR 60.4211(f)(3)(i)(B)]
    - C. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines. [40 CFR 60.4211(f)(3)(i)(C)]
    - D. The power is provided only to the facility itself or to support the local transmission and distribution system. [40 CFR 60.4211(f)(3)(i)(D)]
    - E. The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator. [40 CFR 60.4211(f)(3)(i)(E)]

**2. Emission Limitations:**

The permittee must comply with the emission standards for new nonroad CI engines in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power for the 2007 model year and later emergency stationary CI ICE. [40 CFR 60.4205(b)]

**Compliance Demonstration Method:**

- A. The permittee must do all of the following, except as permitted under 40 CFR 60.4211(g): [40 CFR 60.4211(a)]
  1. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; [40 CFR 60.4211(a)(1)]
  2. Change only those emission-related settings that are permitted by the manufacturer; and [40 CFR 60.4211(a)(2)]
  3. Meet the requirements of 40 CFR part 1068, as they apply. [40 CFR 60.4211(a)(3)]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- B. The permittee must comply by purchasing an engine certified to the emission standards in 40 CFR 60.4205(b), for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in 40 CFR 60.4211(g). [40 CFR 60.4211(c)]
- C. If the permittee does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows: [40 CFR 60.4211(g)]
  - 1. The permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the permittee must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the permittee changes emission-related settings in a way that is not permitted by the manufacturer. The permittee must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards. [40 CFR 60.4211(g)(3)]

**3. Testing Requirements:**

Pursuant to 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

**4. Specific Monitoring Requirements:**

- a. If the emergency stationary CI internal combustion engine does not meet the standards applicable to non-emergency engines, the permittee must install a non-resettable hour meter prior to startup of the engine. [40 CFR 60.4209(a)]
- b. The permittee shall monitor the following: [401 KAR 52:030, Section 10]
  - i. The monthly fuel usage in gallons;
  - ii. The monthly and 12-month rolling hours of operation; and
  - iii. The purpose of operation.
- c. Refer to **Section F** for general monitoring requirements.

**5. Specific Recordkeeping Requirements:**

- a. The permittee must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The permittee must record the time of operation of the engine and the reason the engine was in operation during that time. [40 CFR 60.4214(b)]
- b. The permittee shall maintain records of the following: [401 KAR 52:030, Section 10]
  - i. The monthly fuel usage in gallons;
  - ii. The monthly and 12-month rolling hours of operation; and
  - iii. The purpose of operation.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

c. Refer to **Section F** for general recordkeeping requirements.

**6. Specific Reporting Requirements:**

a. If the emergency stationary CI ICE operates for the purpose specified in 40 CFR 60.4211(f)(3)(i), the permittee must submit an annual report according to the requirements in 40 CFR 60.4214(d)(1) through (3). [40 CFR 60.4214(d)]

b. Refer to **Section F** for general reporting requirements.

**SECTION C - INSIGNIFICANT ACTIVITIES**

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:030, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

<u>Description</u>	<u>Generally Applicable Regulation</u>
1. Storage Tanks	401 KAR 63:010
2. Haul Roads and Off-loading Areas	401 KAR 63:010
3. Cylinder Storage Area	None
4. 4 Gas Reformation Units (H2GEN)	401 KAR 63:010
5. PRISM Hydrogen Generator Unit	401 KAR 63:010
6. Safety-Kleen Model 16 Parts Washer	401 KAR 63:010
7. Autoclaving of PCB Contaminated Cylinders	401 KAR 63:020
8. Cold Box Cylinder Evacuation Process	401 KAR 63:020

## SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.
2. *Radionuclide, Uranium Oxide, CaF<sub>2</sub> solids, HF, opacity, and PM* emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.
3. Emissions of radionuclides to the ambient air from Department of Energy (DOE) facilities shall not exceed those amounts that would cause any member of the public to receive in any year an effective dose equivalent of 10 mrem/yr. [40 CFR 61.92]
4. Source-wide emissions of HF shall not exceed 9.0 tons per year, on a rolling 12-month basis. [To preclude 401 KAR 52:020]

### Compliance Demonstration Method:

The permittee is assumed to be in compliance when all control devices for HF are operated properly and when complying with the requirements in this permit.

5. Source-wide gaseous fluoride emissions shall not cause or contribute to an exceedance of the following ambient air quality standards: [401 KAR 53:010]

Primary Standards:	Annual Average:	400 $\mu\text{g}/\text{m}^3$ (0.5 ppm)
	Maximum 24 Hour Average:	800 $\mu\text{g}/\text{m}^3$ (1.0 ppm)

Secondary Standards:	Maximum monthly average:	0.82 $\mu\text{g}/\text{m}^3$ (1.0 ppb)
	Maximum weekly average:	1.64 $\mu\text{g}/\text{m}^3$ (2.0 ppb)
	Maximum 24-hour average:	2.86 $\mu\text{g}/\text{m}^3$ (3.5 ppb)
	Maximum 12-hour average:	3.68 $\mu\text{g}/\text{m}^3$ (4.5 ppb)

### Compliance Demonstration Method:

Based upon the emission rates of gaseous fluorides determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with the ambient standards in 401 KAR 53:010 for gaseous fluorides when complying with the requirements in this permit.

6. Source-wide total fluoride emissions shall not cause or contribute to an exceedance, more than once annually, of the following ambient air quality standards: [401 KAR 53:010]

Dry weight basis (as fluoride ion) in and on forage for consumption by grazing ruminants:

Secondary Standards:	Growing Season:	40 ppm
	Two-Month Average:	60 ppm
	One-month average:	80 ppm

**SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)****Compliance Demonstration Method:**

Based upon the emission rates of total fluorides determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with the ambient standards in 401 KAR 53:010 for total fluorides when complying with the requirements in this permit.

7. For all emissions of any air contaminant into the open air other than from a stack or air pollution control equipment exhaust, including during load out activities for all products and co-products, permittee shall meet the requirements of 401 KAR 63:010:
  - A. The permittee shall not cause, suffer, or allow any material to be handled, processed, transported, or stored; a building or its appurtenances to be constructed, altered, repaired, or demolished; or a road to be used without taking reasonable precaution to prevent particulate matter from becoming airborne. Reasonable precautions shall include, as applicable: [401 KAR 63:010, Section 3(1)]
    - i. Use, if possible, of water or suitable chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land; [401 KAR 63:010, Section 3(1)(a)]
    - ii. Application and maintenance of asphalt, oil, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can create airborne dusts; [401 KAR 63:010, Section 3(1)(b)]
    - iii. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling. Adequate containment methods shall be employed during sandblasting or other similar operations. [401 KAR 63:010, Section 3(1)(c)]
    - iv. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne; [401 KAR 63:010, Section 3(1)(d)]
    - v. The maintenance of paved roadways in a clean condition; or [401 KAR 63:010, Section 3(1)(e)]
    - vi. The prompt removal of earth or other material from a paved street to which earth or other material has been transported by trucking or earth moving equipment or erosion by water. [401 KAR 63:010, Section 3(1)(f)]
  - B. The permittee shall not cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate, as determined by Reference Method 22 of Appendix A in 40 C.F.R. Part 60, for: [401 KAR 63:010, Section 3(2)]
  - C. If dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in a manner and amount as to cause a nuisance or to violate any administrative regulation, the secretary may, based on the cause, type, or amount of a fugitive emission, order that the building or equipment in which processing, handling, and storage are done be tightly closed and ventilated in a way that all air and gases and air or gas-borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air. [401 KAR 63:010, Section 3(3)].

## **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS**

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

## **SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS**

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
  - a. Date, place (as defined in this permit), and time of sampling or measurements;
  - b. Analyses performance dates;
  - c. Company or entity that performed analyses;
  - d. Analytical techniques or methods used;
  - e. Analyses results; and
  - f. Operating conditions during time of sampling or measurement.
2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five (5) years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [401 KAR 52:030, Section 3(1)(f)1a, and Section 1a-7 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].
3. In accordance with the requirements of 401 KAR 52:030, Section 3(1)f, the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
  - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
  - b. To access and copy any records required by the permit;
  - c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.
4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].
6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:030, Section 22. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported

## **SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)**

in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1, the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
  - a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
  - b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
8. The permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken shall be submitted to the Regional Office listed on the front of this permit. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. Where the underlying applicable requirement does not identify a specific time frame for reporting deviations, prompt reporting, as required by Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26 shall be defined as follows:
  - a. For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in an applicable regulation) that continue for more than an hour in excess of permit requirements, the report must be made within 24 hours of the occurrence.
  - b. For emissions of any regulated air pollutant, excluding those listed in F.8.a., that continue for more than two hours in excess of permit requirements, the report must be made within 48 hours.
  - c. All deviations from permit requirements, including those previously reported, shall be included in the semiannual report required by F.6.
9. Pursuant to 401 KAR 52:030, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit in accordance with the following requirements:
  - a. Identification of each term or condition;
  - b. Compliance status of each term or condition of the permit;
  - c. Whether compliance was continuous or intermittent;
  - d. The method used for determining the compliance status for the source, currently and over the reporting period.
  - e. For an emissions unit that was still under construction, or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
  - f. The certification shall be submitted by January 30th of each year. Annual compliance

**SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)**

certifications shall be sent to: Division for Air Quality, Paducah Regional Office, 130 Eagle Nest Drive, Paducah, KY, 42003.

10. In accordance with 401KAR 52:030, Section 3(1)(d), the permittee shall provide the Division with all information necessary to determine its subject emissions within 30 days of the date the Kentucky Emissions Inventory System (KYEIS) emissions survey is mailed to the permittee. If a KYEIS emissions survey is not mailed to the permittee, then the permittee shall comply with all other emissions reporting requirements in this permit.
11. The Cabinet may authorize the temporary use of an emission unit to replace a similar unit that is taken off-line for maintenance, if the following conditions are met:
  - a. The owner or operator shall submit to the Cabinet, at least ten (10) days in advance of replacing a unit, the appropriate Forms DEP7007AI to DD that show:
    - (1) The size and location of both the original and replacement units; and
    - (2) Any resulting change in emissions;
  - b. The potential to emit (PTE) of the replacement unit shall not exceed that of the original unit by more than twenty-five (25) percent of a major source threshold, and the emissions from the unit shall not cause the source to exceed the emissions allowable under the permit;
  - c. The PTE of the replacement unit or the resulting PTE of the source shall not subject the source to a new applicable requirement;
  - d. The replacement unit shall comply with all applicable requirements; and
  - e. The source shall notify Regional office of all shutdowns and start-ups.
  - f. Within six (6) months after installing the replacement unit, the owner or operator shall:
    - (1) Re-install the original unit and remove or dismantle the replacement unit; or
    - (2) Submit an application to permit the replacement unit as a permanent change.

## SECTION G - GENERAL PROVISIONS

### 1. General Compliance Requirements

- a. The permittee shall comply with all conditions of this permit. A noncompliance shall be a violation of 401 KAR 52:030, Section 3(1)(b), and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to the termination, revocation and reissuance, revision, or denial of a permit [Section 1a-2 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].
- b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-5 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].
- c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:030, Section 18. The permit will be reopened for cause and revised accordingly under the following circumstances:
  - (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:030, Section 12;
  - (2) The Cabinet or the United States Environmental Protection Agency (U. S. EPA) determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
  - (3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

- d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 6 and 7 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].
- e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:030, Section 3(1)(c)].

**SECTION G - GENERAL PROVISIONS (CONTINUED)**

- f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:030, Section 7(1)].
- g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-11 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].
- h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].
- i. All emission limitations and standards contained in this permit shall be enforceable as a practical matter. All emission limitations and standards contained in this permit are enforceable by the U.S. EPA and citizens except for those specifically identified in this permit as state-origin requirements. [Section 1a-12 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].
- j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].
- k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:030, Section 11(3)].
- l. This permit does not convey property rights or exclusive privileges [Section 1a-8 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].
- m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.
- n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry.
- o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders.
- p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic

**SECTION G - GENERAL PROVISIONS (CONTINUED)**

Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

- q. Pursuant to 401 KAR 52:030, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
  - (1) Applicable requirements that are included and specifically identified in this permit; and
  - (2) Non-applicable requirements expressly identified in this permit.

**2. Permit Expiration and Reapplication Requirements**

- a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six (6) months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:030, Section 12].
- b. The authority to operate granted through this permit shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:030, Section 8(2)].

**3. Permit Revisions**

- a. Minor permit revision procedures specified in 401 KAR 52:030, Section 14(3), may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the State Implementation Plan (SIP) or in applicable requirements and meet the relevant requirements of 401 KAR 52:030, Section 14(2).
- b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

**4. Construction, Start-Up, and Initial Compliance Demonstration Requirements**

No construction authorized by permit F-26-016.

**5. Testing Requirements**

- a. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test

**SECTION G - GENERAL PROVISIONS (CONTINUED)**

protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.

- b. Pursuant to 401 KAR 50:045, Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.
- c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

**6. Acid Rain Program Requirements**

- a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

**7. Emergency Provisions**

- a. Pursuant to 401 KAR 52:030, Section 23(1), an emergency shall constitute an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or other relevant evidence that:
  - (1) An emergency occurred and the permittee can identify the cause of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
  - (4) The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two (2) working days of the time when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and the corrective actions taken.
  - (5) Notification of the Division does not relieve the source of any other local, state or federal notification requirements.
- b. Emergency conditions listed in General Provision G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:030,

**SECTION G - GENERAL PROVISIONS (CONTINUED)**

Section 23(3)].

- c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:030, Section 23(2)].

8. Ozone depleting substances

- a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
  - (1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
  - (2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
  - (3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
  - (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166.
  - (5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
  - (6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
- b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

9. Risk Management Provisions

- a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to U.S. EPA using the RMP\* eSubmit software.
- b. If requested, submit additional relevant information to the Division or the U.S. EPA.

**SECTION H - ALTERNATE OPERATING SCENARIOS**

N/A

**SECTION I - COMPLIANCE SCHEDULE**

N/A