

Commonwealth of Kentucky  
Division for Air Quality  
***STATEMENT OF BASIS / SUMMARY***

Conditional Major, Operating  
Permit: F-25-051

Kentucky Department of Military Affairs - AFRC CSMS Richmond  
503 Battlefield Memorial Hwy.  
Richmond, KY 40475

December 10, 2025  
Nathan Cox, Reviewer

SOURCE ID: 21-151-00112  
AGENCY INTEREST: 166645  
ACTIVITY: APE20250001

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## SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 9711, National Security

Single Source Det.  Yes  No      If Yes, Affiliated Source AI:

Source-wide Limit  Yes  No      If Yes, See Section 4, Table A

28 Source Category  Yes  No      If Yes, Category:

County: Madison

Nonattainment Area  N/A  PM<sub>10</sub>  PM<sub>2.5</sub>  CO  NO<sub>x</sub>  SO<sub>2</sub>  Ozone  Lead

If yes, list Classification:

PTE\* greater than 100 tpy for any criteria air pollutant  Yes  No

If yes, for what pollutant(s)?

PM<sub>10</sub>  PM<sub>2.5</sub>  CO  NO<sub>x</sub>  SO<sub>2</sub>  VOC

PTE\* greater than 250 tpy for any criteria air pollutant  Yes  No

If yes, for what pollutant(s)?

PM<sub>10</sub>  PM<sub>2.5</sub>  CO  NO<sub>x</sub>  SO<sub>2</sub>  VOC

PTE\* greater than 10 tpy for any single hazardous air pollutant (HAP)  Yes  No

If yes, list which pollutant(s): Methyl Isobutyl Ketone, Toluene, Xylenes

PTE\* greater than 25 tpy for combined HAP  Yes  No

\*PTE does not include self-imposed emission limitations.

### Description of Facility

Kentucky Department of Military Affairs - AFRC CSMS Richmond is an Army National Guard recruiting and military vehicle maintenance center for the Kentucky Department of Military Affairs tasked with providing assets to units conducting annual and inactive duty training. The facility is a tenant of Blue Grass Army Depot (BGAD), but it is a separate source under separate control.

**SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM**

Permit Number: F-25-051

Activity: APE20250001

Application Received: September 9, 2025    Application Complete Date(s): December 10, 2025

Permit Action:  Initial     Renewal     Significant Rev     Minor Rev     Administrative

Construction/Modification Requested?  Yes     No

Previous 502(b)(10) or Off-Permit Changes incorporated with this permit action  Yes     No

**APE20210001, 502(b)(10) Changes – Approval Issued 07/08/2021**

- Addition of two waste oil burners, an insignificant activity.
- Removal of a parts washer from the list of insignificant activities because the parts washer has no emissions.
- Corrected information (model, capacity, etc.) about EU02 Diesel-Fired Emergency Generator.

**Description of Action:**

**APE20250001**

- Renewal of the Conditional Major, Operating permit.

F-25-051 Emission Summary		
Pollutant	2025 Actual (tpy)	PTE F-25-051 (tpy)
CO	0.098	1.26
NOx	0.457	3.06
PT	0.065	1.94
PM <sub>10</sub>	0.061	1.76
PM <sub>2.5</sub>	0.056	1.54
SO <sub>2</sub>	0.212	8.13
VOC	1.84	204.16*
Lead	0	5.62 E-06
Greenhouse Gases (GHGs)		
Carbon Dioxide	26.7	1,702
Methane	2.97E-06	0.023
Nitrous Oxide	2.84E-06	0.002
CO <sub>2</sub> Equivalent (CO <sub>2</sub> e)	26.7	1,704
Hazardous Air Pollutants (HAPs)		
1, 6-Hexamethylene Diisocyanate	2.12E-03	0.24
Cobalt, Total	6.74E-04	0.076
Ethyl Benzene	2.48E-02	2.81
Methyl Isobutyl Ketone	4.33E-01	49.06*
Toluene	1.89E-01	21.47*
Xylenes (Total)	0.18	14.22*
Combined HAPs	0.78	88.13*

\*Emissions limited by federally-enforceable emission limitations to ensure the source remains below major source thresholds.

**SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS**

<b>Emission Unit #01 Spray Booth</b>				
<b>Pollutant</b>	<b>Emission Limit or Standard</b>	<b>Regulatory Basis for Emission Limit or Standard</b>	<b>Emission Factor Used and Basis</b>	<b>Compliance Method</b>
PM	20% opacity	401 KAR 59:010, Section 3(1)	N/A	Weekly Stack Visual Observation
	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	Material Balance & MSDS, 65% Paint PM Transfer Efficiency	Dry Filter, 99.5% C.E., Enclosure 99.8% Capture, Daily Pressure Drop Reading
VOC	90 tpy of VOC emissions	To Preclude 401 KAR 52:020	Material Balance & SDS	Monthly emission calculations and a new rolling 12-month total
Single HAP	9.0 tpy of individual HAP emissions	To Preclude 401 KAR 52:020	Material Balance & SDS	Monthly emission calculations and a new rolling 12-month total
Combined HAP	22.5 tpy of combined HAP emissions	To Preclude 401 KAR 52:020	Material Balance & SDS	Monthly emission calculations and a new rolling 12-month total
Cobalt	0.00232 tpy	401 KAR 63:020	Material Balance & SDS	Dry Filter, 99.5% C.E., Enclosure 99.8% Capture, Daily Pressure Drop Reading. Monthly emission calculations and a new rolling 12-month total
1, 6-Hexamethylene Diisocyanate	0.0734 tpy	401 KAR 63:020	Material Balance & SDS	Monthly emission calculations and a new rolling 12-month total

**Initial Construction Date:** 06/20

**Process Description:**

Paint booth where military vehicles and equipment are painted. HVLP spray guns are used. Includes a 2.3562 MMBtu/hr natural gas dryer and some sanding activities. Only 1 HVLP spray gun will be used at a time.

**Applicable Regulation:**

**401 KAR 59:010, *New process operations.*** This regulation is applicable to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulate matter, commenced on or after July 2, 1975.

<b>Emission Unit #01 Spray Booth</b>
<p><b>401 KAR 63:020</b>, <i>Potentially hazardous matter or toxic substances</i>. This regulation is applicable to each affected facility which emits or may emit potentially hazardous matter or toxic substances, provided such emissions are not elsewhere subject to the provisions of the administrative regulations of the Division for Air Quality.</p> <p><b>Comments:</b>                      The emissions from paint coating are calculated using mass balances. A transfer efficiency of 65% is assumed for calculating PM/PM<sub>10</sub> emissions. A particulate matter control efficiency of 99.5% is assumed for the spray booth filters, and a capture efficiency of 99.8% is assumed for the spray booth. Capture and control efficiencies were provided by the source in their initial application. The facility has specifically stated that they do not use hexavalent chromium in the booth.</p>

<b>Emission Unit #02, Diesel Fired Emergency Generator</b>				
<b>Pollutant</b>	<b>Emission Limit or Standard</b>	<b>Regulatory Basis for Emission Limit or Standard</b>	<b>Emission Factor Used and Basis</b>	<b>Compliance Method</b>
VOC	90 tpy of VOC emissions	To Preclude 401 KAR 52:020	48.13 lb/1000 gal AP-42 Chapter 3.3 Table 3.3-1	Monthly emission calculations and a new rolling 12-month total
Single HAP	9.0 tpy of individual HAP emissions	To Preclude 401 KAR 52:020	AP-42 Chapter 3.3 Table 3.3-2	Monthly emission calculations and a new rolling 12-month total
Combined HAP	22.5 tpy of combined HAP emissions	To Preclude 401 KAR 52:020	AP-42 Chapter 3.3 Table 3.3-2	Monthly emission calculations and a new rolling 12-month total

**Initial Construction Date:** 06/2012

**Process Description:**  
 Diesel fired emergency stationary compression ignition (CI) reciprocating internal combustion engines (RICE).  
 Model: Kohler 150REOZJF  
 Rating: 154 KW  
 Cylinders: 6  
 Displacement: 6.8 L  
 Manufacturing Date: May 2012

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

**Emission Unit #02, Diesel Fired Emergency Generator**

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

**Comments:**

Corrected information about generator (model, capacity) in APE20210001.

**SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)**

**Testing Requirements/Results**

N/A

**SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS**

**Table A - Group Requirements:**

<b>Emission and Operating Limit</b>	<b>Regulation</b>	<b>Emission Unit</b>
90 tpy of VOC emissions	401 KAR 52:030, <i>Federally-enforceable permits for nonmajor sources</i>	Source-wide
9.0 tpy of individual HAP emissions	401 KAR 52:030, <i>Federally-enforceable permits for nonmajor sources</i>	Source-wide
22.5 tpy of combined HAP emissions	401 KAR 52:030, <i>Federally-enforceable permits for nonmajor sources</i>	Source-wide
0.00232 tpy of Cobalt	401 KAR 63:020, <i>Potentially hazardous matter or toxic substances.</i>	Source-wide
0.0734 tpy of 1, 6-Hexamethylene Diisocyanate	401 KAR 63:020, <i>Potentially hazardous matter or toxic substances.</i>	Source-wide

**Table B - Summary of Applicable Regulations:**

<b>Applicable Regulations</b>	<b>Emission Unit</b>
<b>401 KAR 59:010</b> , <i>New process operations.</i>	EU 01
<b>401 KAR 60:005 Section 2(2)(dddd)</b> , 40 C.F.R. 60.4200 through 60.4219, Tables 1 through 8 (Subpart IIII) <i>Standards of Performance for Stationary Compression Ignition Internal Combustion Engines</i>	EU 02
<b>401 KAR 63:002 Section 2(4)(eeee)</b> , 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ) <i>National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.</i>	EU 02
<b>401 KAR 63:020</b> , <i>Potentially hazardous matter or toxic substances.</i>	EU 01

**Table C - Summary of Precluded Regulations:**

<b>Precluded Regulations</b>	<b>Emission Unit</b>
<b>401 KAR 52:020</b> , <i>Title V permits</i>	

**Table D - Summary of Non Applicable Regulations:**

N/A

## **SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS (CONTINUED)**

### **Air Toxic Analysis**

#### **401 KAR 63:020, *Potentially Hazardous Matter or Toxic Substances***

The Division for Air Quality (Division) has performed AERMOD on November 12, 2020 of potentially hazardous matter or toxic substances (Ethylbenzene, Methyl Ethyl Ketone, Toluene, Xylene, 1, 6-Hexamethylene Diisocyanate, Cobalt, Methyl Isobutyl Ketone) that may be emitted by the facility based upon the process rates, material formulations, stack heights and other pertinent information provided by the applicant. Based upon this information, the Division has determined that the conditions outlined in this permit will assure compliance with the requirements of 401 KAR 63:020.

### **Single Source Determination**

N/A

**SECTION 5 – PERMITTING HISTORY**

<b>Permit</b>	<b>Permit Type</b>	<b>Activity #</b>	<b>Complete Date</b>	<b>Issuance Date</b>	<b>Summary of Action</b>	<b>PSD/Syn Minor</b>
F-20-037	Initial	APE20200001	10/1/2020	4/4/2021	Initial Construction	N/A

**SECTION 6 – PERMIT APPLICATION HISTORY**  
None

## **APPENDIX A – ABBREVIATIONS AND ACRONYMS**

AAQS	– Ambient Air Quality Standards
BACT	– Best Available Control Technology
Btu	– British thermal unit
CAM	– Compliance Assurance Monitoring
CO	– Carbon Monoxide
Division	– Kentucky Division for Air Quality
ESP	– Electrostatic Precipitator
GHG	– Greenhouse Gas
HAP	– Hazardous Air Pollutant
HF	– Hydrogen Fluoride (Gaseous)
MSDS	– Material Safety Data Sheets
mmHg	– Millimeter of mercury column height
NAAQS	– National Ambient Air Quality Standards
NESHAP	– National Emissions Standards for Hazardous Air Pollutants
NO <sub>x</sub>	– Nitrogen Oxides
NSR	– New Source Review
PM	– Particulate Matter
PM <sub>10</sub>	– Particulate Matter equal to or smaller than 10 micrometers
PM <sub>2.5</sub>	– Particulate Matter equal to or smaller than 2.5 micrometers
PSD	– Prevention of Significant Deterioration
PTE	– Potential to Emit
SO <sub>2</sub>	– Sulfur Dioxide
TF	– Total Fluoride (Particulate & Gaseous)
VOC	– Volatile Organic Compounds