EAST KENTUCKY POWER COOPERATIVE

6/12/2024

VIA DIVISION PORTAL & ELECTRONIC MAIL TO:

Michael Kennedy, Director
Division for Air Quality
300 Sower Blvd., Second Floor
Frankfort, Kentucky 40601

Re: Application for Significant Revision
East Kentucky Power Cooperative, Inc. – Green Valley LGTE Site
Permit No. V-17-046
Agency Interest No. 40578

Dear Mr. Kennedy:

East Kentucky Power Cooperative, Inc. (EKPC) operates the Green Valley Landfill Gas to Energy (LGTE) site located at 100 Addington Road, Ashland, Kentucky 41102. EKPC currently operates the LGTE site in accordance with Permit No. V-17-046, which was issued on May 17, 2020. In accordance with 401 KAR 52:020 Section 16, East Kentucky Power Cooperative, Inc. (EKPC) is submitting the attached significant permit revision for the above-referenced permit.

EKPC looks forward to working with the Division during the application process. Should you have any questions, please feel free to contact me.

Sincerely,

Jerry Purvis

Jerry Purvis, Vice President
Environmental Affairs

cc via e-mail: Rick Shewekah, DAQ
Zach Bittner, DAQ
Kevin Moore, EKPC
Robert Webb, EKPC

4775 Lexington Road
P.O. Box 707
Winchester, Kentucky 40392
www.ekpc.coop
A Touchstone Energy® Cooperative

APPLICATION FOR SIGNIFICANT REVISION

FOR

ADDITION OF FOURTH ENGINE

EAST KENTUCKY POWER COOPERATIVE, INC.

GREEN VALLEY LANDFILL

PREPARED BY:

EAST KENTUCKY POWER COOPERATIVE, INC.

P.O. BOX 707

4775 LEXINGTON ROAD

WINCHESTER, KENTUCKY 40392

June 12, 2024

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APPENDIX

1.0 INTRODUCTION

East Kentucky Power Cooperative, Inc. (EKPC) operates the Green Valley Landfill Gas To Energy Site (Green Valley) located at 100 Addington Road, Ashland, Kentucky 41102. EKPC currently operates the Landfill-Gas-To-Energy (LGTE) site in accordance with Permit No. V-17-046, which was issued on May 17, 2020. Currently permitted equipment at the facility includes three Caterpillar G3516 RICE EGU (1148 hp) Internal Combustion Engines.

EKPC leases property from the Green Valley landfill necessary for its LGTE operations and purchases gas from the landfill. However, the landfill is separately owned and operated, there is no shared control nor are there any shared employees. Each entity is subject to separate compliance requirements under the Clean Air Act. Neither the landfill nor EKPC can speak for the other, nor can either assure compliance for the other. Neither has access to the other's operational information and neither can direct compliance decisions or obligations of the other. EKPC and the landfill are not interdependent. EKPC utilizes all the gas it purchases. No landfill gas is ever purchased and returned. We understand that any landfill gas not purchased is automatically sent to the landfill flare. The LGTE engines can be operated on a number of different fuels and thus EKPC is not limited to the sole use of landfill gas.

The landfill gas is directly converted into electricity at EKPC's facility. EKPC accepts delivery of the landfill gas at the interconnection point outside the LGTE compressor room. Prior to the demarcation point, EKPC understands that the landfill uses a knockout pot, filter and blower to dewater, compress and filter the landfill gas. Additionally, EKPC owns and operates skids within its facility that filter, dewater and compress the gas to protect its engines by assuring no water is introduced in the process. EKPC performs a weekly fuel skid inspection to assure the compressor is running. Filter changes occur according to manufacturer specifications. Records of the weekly inspections are kept at the site. EKPC is therefore able to provide its own assurances that the fuel it combusts has been filtered, dewatered and compressed in compliance with the current permit condition; however, it does not have the information or authority to provide assurances as to the processes used by the landfill. The EKPC LGTE system is sealed for proper operation. There is no point where gas can be vented to the atmosphere during normal operation. The system cannot operate if air is introduced into the pipes during startup. If necessary, a manual vent to the atmosphere with a manual valve can be opened only during startup and to allow air to be purged from the lines.

2.0 DESCRIPTION OF PROPOSED PROJECT

With this application, EKPC is proposing to add an additional Caterpillar G3516 RICE (the same as Units 1 – 3) which was manufactured on or about October 2, 2006 and was previously located at EKPC's former Laurel Ridge landfill gas to energy facility. The additional engine is necessary to process the methane gas being produced by the landfill.

3.0 EMISSION CALCULATIONS AND FORMS

EKPC has attached emissions calculations for the addition of the fourth engine at Appendix A of this significant revision. Forms 7007AI, 7007EE, 7007N and 7007V are attached at Appendix B of this significant revision.

4.0 REGULATORY REQUIREMENTS

Green Valley Units 1, 2, and 3 are existing RICE that are subject to certain regulatory requirements including 401 KAR 63:002 Section 2(4)(eeee), 40 CFR 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

Pursuant to the current Title V permit, V-17-046, Green Valley is an area source of Hazardous Air Pollutants (HAPs) because it has the potential to emit less than 10 tons of any single HAP and less than 25 tons of any combustion of HAPs per year. The addition of a fourth engine at Green Valley will cause the potential to emit of a single HAP (formaldehyde) to exceed 10 tons per year. As such, the addition of the fourth engine will change Green Valley from an area source to a major source of HAPs under the NESHAP program.

With the change from an area source to a major source of HAPs, specific regulatory requirements will change but the applicable regulations will remain 401 KAR 63:002 Section 2(4)(eeee), 40 CFR 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. EKPC has proposed specific regulatory language for Sections B and G.4 of the permit at Appendix C that reflects requirements for the four engines at the facility.

5.0 CONCLUSION

EKPC submits this request for a significant permit revision in accordance with 401 KAR 52:020 Section 16(2).

APPENDIX A

EMISSION CALCULATIONS FOR NEW ENGINE

Emission Calculation Procedures

Maximum Engine Power – 1148 hp
Specific Fuel Consumption – 7897 Btu/hp-hr
Heat Input – 9.07 mmBtu/hr
Heat Content of Landfill Gas – 593 Btu/scf
Maximum Landfill Gas Combustion Rate – 0.0153 mmscf/hr
Percent Methane – 55%
Maximum Methane Combustion Rate – 0.0084 mmscf/hr
Maximum Annual Hours of Operation – 8760 hours

$PM/PM_{10}/PM_{2.5}$ Emissions – Calculated using AP-42 Table 2.4-5

SO_2 Emissions – Based on the potential SO2 emissions from S-containing constituents (see Table 1)

NOx, CO and VOC Emissions – Based on Caterpillar Specifications for Engine Model G3516 for Landfill Gas

CO_2 Emissions – Emission factor from 40 CFR 98, Subpart C, Table C-1

CH_4 and N_2O Emissions – Emission factor from 40 CFR 98, Subpart C, Table C-2

CO_2e Emissions – Based upon 40 CFR 98, Subpart A, Table A-1, Global Warming Potential multipliers of 1 for CO_2, 25 for CH_4, 298 for N_2O

HAP Emissions:

Formaldehyde – Based on the emission factor assigned by KDAQ for Permit No. V-17-046

HCl – Based on AP-42 Section 2.4 with the default chloride concentration

All Other HAPs – Two separate calculations were performed for all HAPs except formaldehyde and HCl, with emissions of certain HAPs due to incomplete combustion of the landfill gas and emissions from constituents present in the landfill gas.

For HAP emissions due to incomplete combustion, emission factors from AP-42 3.2-2 for 4-Stroke Lean-Burn engines were used.

For HAP emissions from constituents present in the landfill gas, the default HAP concentrations and molecular weights presented in AP-42 Section 2.4, Tables 2.4-1 and 2.4-2 were used along with the oxidation efficiencies in AP-42 Table 2.4-3 for IC engines. The equations presented in AP-42 Section 2.4 were used with these values for each HAP to calculate potential emissions.

Table 1 presents a summary of the emission calculations for criteria pollutants and GHGs. Table 2 presents a summary of the HAP emissions, while Table 3 shows the basis for the HCl emission calculations. A summary of potential emissions for the single engine being added at the Green Valley Landfill site are presented in Table 4, while combined emissions for the existing three engines along with the engine being added are presented in Table 5.

Table 1

Green Valley 4th LFG Engine - Criteria Pollutant and GHG Emissions

Maximum Heat Input	9.07	mmBtu/hr
Maximum LFG Combustion Rate	0.0153	mmscf/hr
Maximum CH_4 Combustion Rate	0.0084	mmscf/hr
Maximum Engine Power	1148	hp

Pollutant	Emission Factor	Emission Factor Units	Reference	Potential Emissions lb/hr	Potential Emissions tons/yr
$PM/PM_{10}/PM_{2.5}$	48	lb/mmscf CH_4	1	0.40	1.77
SO2	8.12	lb/mmscf LFG	2	0.12	0.54
NOx	2	g/hp-hr	3	5.06	22.17
CO	4.4	g/hp-hr	3	11.14	48.78
VOC	1.11	g/hp-hr	3	2.81	12.30
CO_2	52.07	kg/mmBtu	4	1041.52	4561.86
CH_4	3.20E-03	kg/mmBtu	5	0.064	0.28
N_2O	6.30E-04	kg/mmBtu	5	0.013	0.055
CO_2e			6	1046.88	4585.32

References

1 . AP-42 Table 2.4-5

2. Based on the potential SO2 emissions from S-containing constituents (see below)

3. Caterpillar Engine Specifications for Model 3516

4. Emission factor from 40 CFR 98, Subpart C, Table C-1

5. Emission factor from 40 CFR 98, Subpart C, Table C-2

6. Based upon 40 CFR 98, Subpart A, Table A-1, Global Warming Potential multipliers of 1 for CO_2, 25 for CH_4, 298 for N_2O

SO2 Emissions

Sulfur Constituent	Default Concentration ppm	Moles S per Mole Constitutent	S Concentration ppm
Carbon Disulfide	0.58	2	1.16
Carbonyl Sulfide	0.49	1	0.49
Dimethly Sulfide	7.82	1	7.82
Ethyl Mercaptan	2.28	1	2.28
Hydrogen Sulfide	35.5	1	35.5
Methyl Mercaptan	2.49	1	2.49
Total			49.74

Pollutant	Landfill Gas Rate mmscf/hr	Molecular Weight lb/lb-mole	Potential Emissions lb/hr	Potential Emissions tons/yr
SO2	0.0153	64.05	0.1243	0.54

Table 2
Green Valley 4th LFG Engine - HAP Emissions

Maximum LFG Combustion Rate 0.0153 mmscf/hr

HAP	LFG Emission Factor lb/mmscf[1]	Combustion Emission Factor lb/mmscf[2]	Combined Emission Factor lb/mmscf	Potential Emissions lb/hr	Potential Emissions tons/year
1,1,2,2-Tetrachloroethane	3.33E-02	2.37E-02	5.70E-02	8.72E-04	3.82E-03
1,1,1-Trichloroethane (methyl chloroform)	l.14E-02	l.89E-02	3.03E-02	4.63E-04	2.03E-03
1,1-Dichloroethane (ethylidene dichloride)	4.15E-02	l.40E-02	5.55E-02	8.49E-04	3.72E-03
1,1-Dichloroethene (vinylidene chloride)	3.46E-03		3.46E-03	5.30E-05	2.32E-04
1,2-Dichloroethane (ethylene dichloride)	7.24E-03		7.24E-03	l.IIE-04	4.85E-04
1,2-Dichloropropane (propylene dichloride)	3.63E-03		3.63E-03	5.56E-05	2.43E-04
1,1,2-Trichloroethane		l.89E-02	l.89E-02	2.89E-04	l.26E-03
1,3-Butadiene		0.16	0.16	2.42E-03	l.06E-02
1,3-Dichloropropene		l.57E-02	1.57E-02	2.40E-04	l.05E-03
2-Methylnaphthalene		l.97E-02	l.97E-02	3.0lE-04	l.32E-03
2,2,4-Trimethylpentane		0.15	0.15	2.27E-03	9.93E-03
Acenaphthene		7.41E-04	7.41E-04	l.13E-05	4.97E-05
Acenaphthylene		3.28E-03	3.28E-03	5.02E-05	2.20E-04
Acetaldehyde		4.96	4.96	7.58E-02	3.32E-01
Acrolein		3.05	3.05	4.66E-02	2.04E-01
Acrylonitrile	0.12		0.12	l.82E-03	7.98E-03
Benzene	5.29E-02	0.26	0.31	4.80E-03	2.lOE-02
Benzo(b)fluoranthene		9.84E-05	9.84E-05	l.SIE-06	6.60E-06
Benzo(e)pyrene		2.46E-04	2.46E-04	3.77E-06	l.65E-05
Benzo(g,h,i)perylene		2.46E-04	2.46E-04	3.76E-06	l.65E-05
Biphenyl		0.13	0.13	l.92E-03	8.42E-03
Carbon disulfide	l.57E-02		1.57E-02	2.39E-04	l.05E-03
Carbon Tetrachloride	l.lOE-04	2.18E-02	2.19E-02	3.35E-04	1.47E-03
Carbonyl sulfide	l.04E-02		l.04E-02	l.60E-04	6.99E-04
Chlorobenzene	5.02E-03	l.80E-02	2.31E-02	3.53E-04	1.54E-03
Chloroethane (ethyl chloride)	l.44E-02		l.44E-02	2.20E-04	9.65E-04
Chloroform	6.39E-04	l.69E-02	l.75E-02	2.68E-04	l.18E-03
Chloromethane (methyl chloride)	l.09E-02		l.09E-02	l.67E-04	7.31E-04
Chrysene		4.IIE-04	4.IIE-04	6.29E-06	2.75E-05
Dichlorobenzene	5.SIE-03		5.SIE-03	8.43E-05	3.69E-04
Dichloromethane (methylene chloride)	0.22	l.19E-02	0.23	3.S0E-03	1.53E-02
Ethylbenzene	0.17	2.35E-02	0.20	3.0lE-03	l.32E-02
Ethylene Dibromide	3.35E-05	2.63E-02	2.63E-02	4.02E-04	l.76E-03
Fluoranthene		6.58E-04	6.58E-04	l.0lE-05	4.41E-05
Fluorene		3.36E-03	3.36E-03	5.14E-05	2.25E-04
Formaldehyde		40.50	40.50	0.62	2.71
HCl	3.91		3.91	5.98E-02	2.62E-01
Methanol		1.48	1.48	2.27E-02	9.93E-02
Hexane	0.20	0.66	0.86	l.31E-02	5.76E-02
Mercury (total)	2.08E-05	4.41E-02	4.41E-02	6.75E-04	2.96E-03
Methyl isobutyl ketone	6.64E-02	l.60E-02	8.23E-02	l.26E-03	5.52E-03
Naphthalene		6.17E-03	6.17E-03	9.44E-05	4.13E-04
PAH		1.42E-02	1.42E-02	2.18E-04	9.54E-04
Perchloroethylene (tetrachloroethylene)	0.11		0.11	l.69E-03	7.40E-03
Phenanthrene		8.06E-04	8.06E-04	l.23E-05	5.40E-05
Phenol		l.40E-02	l.40E-02	2.14E-04	9.38E-04
Pyrene		1.47E-03	1.47E-03	2.25E-05	9.86E-05
Styrene		0.24	0.24	3.70E-03	l.62E-02
Tetrachloroethane		8.84E-03	8.84E-03	l.35E-04	5.92E-04
Toluene	1.28	0.11	1.39	2.13E-02	9.33E-02
Trichloroethylene (trichloroethene)	6.61E-02		6.61E-02	l.0lE-03	4.43E-03
Vinyl Chloride	8.19E-02	8.84E-03	9.07E-02	l.39E-03	6.08E-03
Xylene	0.46	0.11	0.56	8.64E-03	3.78E-02
TOTAL HAP			59.0SI	0.901	3.9611

[1]Based upon HAP constituent concentrations listed in AP-42 Table 2.4-1 along with oxidation efficiencies listed for each constituent in AP-42 Table 2.4-3 (same as presented in 2012 permit renewal application), except for HCl from LFG (see Table 3)

[2]Based upon the emission factors in AP-42 Table 3.2-2 for 4-Stroke Lean-Burn engines (same as 2017 permit renewal application), except for formaldehyde which is based upon the emission factor assigned by KDAQ for Permit No. V-17-046

Table 3

Green Valley 4th LFG Engine - HCl Emissions from LFG

Pollutant	Landfill Gas Rate mmscf/hr	Default Concentration ppm[1]	Molecular Weight lb/lb-mole	Potential Emissions lb/hr	Potential Emissions tons/yr
HCl	0.0153	42	36.46	0.059750	0.26

[1]AP-42 Default Chloride Concentration from Section 2.4

Table 4
Green Valley 4th LFG Engine
Potential Emissions Summary

Pollutant	4th Engine Emissions	
	Potential Emissions lb/hr	Potential Emissions tons/yr
$PM/PM_{10}/PM_{2.5}$	0.40	1.77
SO2	0.12	0.54
NOx	5.06	22.17
CO	11.14	48.78
VOC	2.81	12.30
CO_2e	1046.88	4585.32
Formaldehyde	0.62	2.71
Total HAPs	0.90	3.96

Table 5
All 4 Engines
Potential Emissions Summary

Pollutant	Total Emissions	
	Potential Emissions lb/hr	Potential Emissions tons/yr
$PM/PM_{10}/PM_{2.5}$	1.61	7.06
SO2	0.50	2.18
NOx	20.25	88.68
CO	44.54	195.10
VOC	11.24	49.22
CO_2e	4187.51	18341.29
Formaldehyde	2.48	10.86
Total HAPs	3.61	15.83

ZBA00486 PIPs/PSPs Product Configuration Product Coverage OPT/ESC Customer Name and Address

Arrangement **No:**	260-3665		Build Date:	02Ocl2006
Mfg Model:	G3516		Factory Ship Date:	Not Applicable
Mktg Model Year:	2007		Dealer/Invoiced Ship Date:	18Ocl2006
Prod Family:	ZP	Gas Engines	Sales Date:	25Ocl2006
Sims Prod Family:	68	Gas Engines	Delivery Date:	24Jan2007
Soume Facility:	88	Lafayette Plant	Selling Dir:	0580
Principle Work:	C70	Energy Utilities	OwnerCls:	A

Engine Speed (rpm)	1200	Fuel	LANDFILL GAS
Compression Ratio	11.0:1	LHV of Fuel (BTU/SCF)	545
Aftercooler Inlet Temperature (°F)	130	Fuel System	LPG IMPCO
Jacket Water Outlet Temperature (°F)	230		
Ignition System	EIS	Minimum Fuel Pressure (psig)	1.5
Exhaust Manifold	WATER COOLED	Methane Number at Conditions Sown	130
Combustion System Type	LOW EMISSION	Rated Altitude (ft) at 77 °F Design Temperature	2500

ENGINE RATING DATA		
Engine Power (w/o fan)	bhp	1148
Generator Set Power (w/o fan)	kW	815
ENGINE DATA		
Specific Fuel Consumption (BSFC)	BTU/bhp-hr	7897
Air Flow (Wet, @ 77 °F, 28.8 in Hg)	SCFM	2097
Air Mass Flow (Wet)	lb/hr	9300
Compressor Out Pressure	in. Hg (abs)	67
Compressor Out Temperature	°F	290
Inlet Manifold Pressure	in. Hg (abs)	62.6
Inlet Manifold Temperature	°F	149
Timing	°BDTC	20
Exhaust Stack Temperature	°F	847
Exhaust Gas Flow (Wet @ stack temperature, 29.7 in. Hg)	CFM	6035
Exhaust Gas Mass Flow (Wet)	lb/hr	10495
ENGINE EMISSIONS DATA		
Nitrous Oxides (NO_x as NO_2)	g/bhp-hr	2.0
(Corrected to 15 % O_2)	ppm	143
Carbon Monoxide (CO)	g/bhp-hr	4.4
(Corrected to 15 % O_2)	ppm	352
Total Hydrocarbons (THC)	g/bhp-hr	2.7
(Corrected to 15 % O_2)	ppm	551
Non-Methane Hydrocarbons (NMHC)	g/bhp-hr	1.11
(Corrected to 15 % O_2)	ppm	34
Exha		6.3
Lamb		1.31

stO ig n %

bda

APPENDIX B

PROJECT PERMIT APPLICATION FORMS

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007AI

Administrative Information

Section AI.I: Source Information

_ Section AI.2: Applicant Information

Section AI.3: Owner Information

_ Section AI.4: Type of Application

_ Section AI.5: Other Required Information

_ Section AI.6: Signature Block

_ Section AI.7: Notes, Comments, and Explanations

Additional Documentation

Additional Documentation attached

Source Name: **East Kentucky Power Cooperative, Inc. in care of Green Valley Landfill**

KY EIS (AFS) #: **21- 089-00040**

Permit#: **V-17-046**

Agency Interest (AI) ID: **40578**

Date: **11-Jun-24**

Section AI.I: Source Information

Physical Location Address:	**Street:**	100 Addington Road				
	City:	Ashland	**County:**	Greenup	**Zip Code:**	41102
Mailing Address:	**Street or P.O. Box:**	100 Addington Road				
	City:	Ashland	**State:**	KY	**Zip Code:**	41102

Standard Coordinates for Source Physical Location

Longitude: -82.748 (decimal degrees) **Latitude:** 38.373 (decimal degrees)

Primary (NAICS) Category: Electric Power Generation **Primary NAICS #:** 221112

Classification (SIC) Category: Electric Power Generation **Primary SIC#:** 4911

Briefly discuss the type of business conducted at this site: Generation of electrical power from landfill gas combustion

Description of Area Surrounding Source: [J Rural Area D Industrial Park D Residential Area ☐ Urban Area D Industrial Area ☐ Commercial Area

Is any part of the source located on federal land? D Yes [J No

Numberof Employees:

Approximate distance to nearest residence or commercial property: **approx. 100 feet**

Property Area: **approx, 2 acres**

Is this source portable? ☐ Yes ()]No

What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?

NPDES/KPDES:	D Currently Hold	D Need	[J *N/A*
Solid Waste:	D Currently Hold	D Need	[J *N/A*
RCRA:	D Currently Hold	D Need	[J *N/A*
UST:	D Currently Hold	D Need	[J *N/A*

Type of Regulated Waste Activity:

D Mixed Waste Generator D Generator D Recycler D Other: _____

D U.S. Importer of Hazardous Waste D Transporter D Treatment/Storage/Disposal Facility [J *N/A*

Section AI.2: Applicant Information

Applicant Name: East Kentucky Power Cooperative, Inc.

Title: (if individual)

Mailing Address:
Street or P.O. Box: 4775 Lexington Road, P.O. Box 707
City: Winchester **State:** KY **Zip Code:** 40392-0707

Email: (if individual)

Phone: 859-744-4812

Technical Contact

Name: Kevin Moore

Title: Air Programs Supervisor

Mailing Address:
Street or P.O. Box: 4775 Lexington Road, P.O. Box 707
City: Winchester **State:** KY **Zip Code:** 40392-0707

Email: kevin.moore@ekpc.coop

Phone: 859-745-4157 ext. 6221

Air Permit Contact for Source

Name: Jerry Purvis

Title: Vice President, Environmental Affairs

Mailing Address:
Street or P.O. Box: 4775 Lexington Road, P.O. Box 707
City: Winchester **State:** KY **Zip Code:** 40392-0707

Email: jerry.purvis@ekpc.coop

Phone: 859-744-4812

Section AI.3: Owner Information

☑ Owner same as applicant

Name:

Title:

Mailing Address: Street or P.O. Box:

City: State: Zip Code:

Email:

Phone:

List names of owners and officers of the company who have an interest in the company of 5% or more.

Name	Position

!section AI.4: Type of Application

Current Status: [] Title V D Conditional Major D State-Origin D General Permit D Registration D None

Requested Action: *(check all that apply)*

D Name Change D Initial Registration G Significant Revision D Administrative Pennit Amendment
D Renewal Pennit D Revised Registration ☐ Minor Revision D Initial Source-wide OperatingPennit
☐ 502(b)(l0)Change D Extension Request G Addition of New Facility D Portable Plant Relocation Notice
D Revision D Off Permit Change ☐ Landfill Alternate Compliance Submittal D Modification of Existing Facilities
D Ownership Change D Closure

Requested Status: (]Title V D Conditional Major D State-Origin 0 PSD 0 NSR ☐ Other: _____

Is the source requesting a limitation of potential emissions? D Yes G No

Pollutant:	Requested Limit:	Pollutant:	Requested Limit:
D Particulate Matter		0 SingleHAP	
D Volatile Organic Compounds (VOC)		0 Combined HAPs	
D Carbon Monoxide		D Air Toxics (40 CFR 68, Subpart F)	
D Nitrogen Oxides		D Carbon Dioxide	
D Sulfur Dioxide		D Greenhouse Gases (GHG)	
D Lead		D Other	

For New Construction:

Proposed Start Date of Construction: *(MM/YYYY)* 09/2025

Proposed Operation Start-Up Date: *(MM/YYYY)* 12/2025

For Modifications:

Proposed Start Date of Modification: *(MMIYYYY)*

Proposed Operation Start-Up Date: *(MMIYYYY)*

Applicant is seeking coverage under a permit shield. D Yes G No

Identlly any non-apphcable reqmrements tor which permit shield 1s sought on a separate attachment to the application.

Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

- D DEP7007A Indirect Heat Exchangers and Turbines
- D DEP7007B Manufacturing or Processing Operations
- D DEP7007C Incinerators and Waste Burners
- ☐ DEP7007F Episode Standby Plan
- 0 DEP7007J Volatile Liquid Storage
- D DEP7007K Surface Coating or Printing Operations
- D DEP7007L Mineral Processes
- D DEP7007M Metal Cleaning Degreasers
- ['.] DEP7007N Source Emissions Profile
- D DEP7007P Perchloroethylene Dry Cleaning Systems
- D DEP7007R Emission Offset Credit
- D DEP7007S Service Stations
- D DEP7007T Metal Plating and Surface Treatment Operations
- ['.] DEP7007V Applicable Requirements and Compliance Activities
- D DEP7007Y Good Engineering Practice and Stack Height Detennination
- D DEP7007 AA Compliance Schedule for Non-complying Emission Units
- D DEP7007BB Certified Progress Report
- D DEP7007CC Compliance Certification
- D DEP7007DD Insignificant Activities
- ['.] DEP7007EE Internal Combustion Engines
- D DEP7007FF Secondary Aluminum Processing
- 0 DEP7007GG Control Equipment
- 0 DEP7007HH Haul Roads
- D Confidentiality Claim
- D Ownership Change Form
- D Secretary of State Certificate
- D Flowcharts or diagrams depicting process
- D Digital Line Graphs (DLG) files ofbuldings, roads, etc.
- D SiteMap
- D Map or drawing depicting location of facility
- ☐ Safety Data Sheet (SDS)
- D Emergency Response Plan
- D Other: _____

Section AI.6: Signature Block

I, **the undersigned, hereby certify under penalty of law, that** I **am a responsible official*, and that** I **have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information,** I **certify that the information is on knowledge and belief, true, accurate, and complete.** I **am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.**

9 ? 'P ?

Authorized Signature

6/12/2024

Date

Jerry Purvis

Type or Printed Name of Signatory

Vice President, Environmental Affairs

Title of Signatory

*Responsible official as defined by 401 KAR 52:001.

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007EE

Internal Combustion Engines

Section EE.I: General Information
_ Section EE.2: Operating Information
_ Section EE.3: Design Information
Section EE.4: Fuel Information
Section EE.5: Emission Factor Information
_ Section EE.6: Notes, Comments, and Explanations

Additional Documentation

_ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG

_ Attach EPA certification of the engine

Source Name: **East Kentucky Power Cooperative, Inc. in care of Green Valley Landfill**

KY EIS (AFS) #: **21- 089-00040**

Permit#: **V-17-046**

Agency Interest (AI) ID: **40578**

Date: **6/11/2024**

Section EE.I: General Information

Emission Unit#	Emission Unit Name	Control Device ID	Stack ID	Manufacturer	Model Number	Model Year	Date of Manufacture	Proposed/Actual Date of Construction Commencement *(MMIYYYY)*	Date Reconstructed/ Modified	List Applicable Regulations
EU0l-04	Caterpillar G3516 RICEEGU	*NIA*	04	Caterpillar	3516	2007	*101212006*	*0912025*	*NIA*	40 CFR 63, Subpart ZZZZ

Section EE.2: Operating Information

Emission Unit#	Engine Purpose (Identify ifNon-Ernergency, Ernergency,Fire/Water Pump, Black-start engine for combustion turbine, Engine Testing)	Hours Operated	Is this engine a rental? *(Yes/No)*	Rental Time Period *(hrs)*	Alternate Operating Scenarios (Describe any operating scenarios in which the engine may be used in a different configuration)
EU0l-04	Non-Emergency	8760	No	*NIA*	*NIA*

Section EE.3: Design Information

Emission Unit#	Engine Type (Identify all that apply: Commercial, Institutional, Stationary, Non-Road)	Ignition Type (Identify if either Compression or Spark Ignition)	Engine Family (Identify all that apply: 2-stroke, 4-stroke, Rich Bum, Lean Burn)	Maximum Engine Power *(bhp)*	Maximum Engine Speed *(rpm)*	Total Displacement *(L)*	Number of Cylinders
EU0l-04	Stationary, Non-Road	Spark	4-Stroke Lean Burn	1148	1200	67.4	16

Section EE.4: Fuel Information

Emission Unit#	Identify if Primary, Secondary, or Tertiary Fuel	Fuel Type (Identify if Diesel, Gasoline, Natural Gas, Liquefied Petrnleum Gas (LPG), Landfill/Digester Gas, or Other)	Fuel Grade	Percent Time Used *(%)*	Maximum Fuel Consumption	Heat Content	Sulfur Content *(%)*	SCC Code	SCC Units
EU0l-04	Primary	Lanfill Gas	Landfill Gas - Filtered, Dewatered, Compressed	100	0.0153 million scf/hr	593 Btu/scf	approx. 50 ppmv	20100802	mmscf

Section EE.5: Emission Factor Information

Emission factors expressed here are based on the potential to emit.

Emission Unit#	Fuel	Pollutant	Emission Factor	Emission Factor Units	Source of Emission Factor
EU0l-04	Landfill Gas	PM/PM10/PM2.5	26.35	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	SO2	8.12	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	NOx	330.83	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	CO	727.84	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	VOC	183.61	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	CO2	68073.31	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	CH4	4.18	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	N2O	0.82	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	CO2e	68423.34	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	I, 1,2,2-Tetrachloroethane	5.70E-02	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	1,1,1-Trichloroethane (methyl chloroform)	3.03E-02	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	I,1-Dichloroethane (ethylidene dichloride)	5.55E-02	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	1,1-Dichloroethene (vinylidene chloride)	3.46E-03	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	1,2-Dichloroethane (ethylene dichloride)	7.24E-03	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	1,2-Dichloropropane (propylene dichloride)	3.63E-03	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	1,1,2-Trichloroethane	l.89E-02	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	1,3-Butadiene	0.16	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	1,3-Dichloropropene	l.57E-02	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	2-Methylnaphthalene	1.97E-02	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	2,2,4-Trimethylpentane	0.15	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Acenaphthene	7.41E-04	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Acenaphthylene	3.28E-03	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Acetaldehyde	4.96	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Acrolein	3.05	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Acrylonitrile	0.12	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Benzene	0.31	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Benzo(b)fluoranthene	9.84E-05	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Benzo(e)pyrene	2.46E-04	lb/mmscf	See Application Tables 1 through 3

Emission Unit#	Fuel	Pollutant	Emission Factor	Emission Factor Units	Source of Emission Factor
EU0l-04	Landfill Gas	Benzo(g,h,i)perylene	2.46E-04	lb/mmscf	See Application Tables I through 3
EU0l-04	Landfill Gas	Biphenyl	0.13	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Carbon disulfide	l .57E-02	lb/mmscf	See Application Tables I through 3
EU0l-04	Landfill Gas	Carbon Tetrachloride	2.19E-02	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Carbonyl sulfide	l .04E-02	lb/mmscf	See Application Tables I through 3
EU0l-04	Landfill Gas	Chlorobenzene	2.31E-02	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Chloroethane (ethyl chloride)	1.44E-02	lb/mmscf	See Application Tables I through 3
EU0l-04	Landfill Gas	Chloroform	I.75E-02	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Chloromethane (methyl chloride)	l.09E-02	lb/mmscf	See Application Tables I through 3
EU0l-04	Landfill Gas	Chrysene	4.llE-04	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Dichlorobenzene	5.SIE-03	lb/mmscf	See Application Tables I through 3
EU0l-04	Landfill Gas	Dichloromethane (methylene chloride)	0.23	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Ethylbenzene	0.20	lb/mmscf	See Application Tables I through 3
EU0l-04	Landfill Gas	Ethylene Dibromide	2.63E-02	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Fluoranthene	6.58E-04	lb/mmscf	See Application Tables I through 3
EU0l-04	Landfill Gas	Fluorene	3.36E-03	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Formaldehyde	40.50	lb/mmscf	See Application Tables I through 3
EU0l-04	Landfill Gas	HCl	3.91	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Methanol	1.48	lb/mmscf	See Application Tables I through 3
EU0l-04	Landfill Gas	Hexane	0.86	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Mercury (total)	4.41E-02	lb/mmscf	See Application Tables I through 3
EU0l-04	Landfill Gas	Methyl isobutyl ketone	8.23E-02	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Naphthalene	6.l 7E-03	lb/mmscf	See Application Tables I through 3
EU0l-04	Landfill Gas	PAH	1.42E-02	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Perchloroethylene (tetrachloroethylene)	0.11	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Phenanthrene	8.06E-04	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Phenol	I .40E-02	lb/mmscf	See Application Tables I through 3
EU0l-04	Landfill Gas	Pyrene	l .47E-03	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Styrene	0.24	lb/mmscf	See Application Tables I through 3
EU0l-04	Landfill Gas	Tetrachloroethane	8.84E-03	lb/mmscf	See Application Tables 1 through 3
EU0l-04	Landfill Gas	Toluene	1.39	lb/mmscf	See Application Tables I through 3
EU0l-04	Landfill Gas	Trichloroethylene (trichloroethene)	6.61E-02	lb/mmscf	See Application Tables I through 3

Emission Unit#	Fuel	Pollutant	Emission Factor	Emission Factor Units	Source of Emission Factor
EU0I-04	Landfill Gas	Vinyl Chloride	9.07E-02	lb/mmscf	See Application Tables I through 3
EU0I-04	Landfill Gas	Xylene	0.56	lb/mmscf	See Application Tables I through 3

Division for Air Quality

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DEP7007N

Source Emissions Profile

_ Section N.1: Emission Summary
Section N.2: Stack Information
_ Section N.3: Fugitive Information
_ Section N.4: Notes, Comments, and Explanations

Additional Documentation

_ Complete DEP7007 AI

Source Name: East Kentucky Power Cooperative, Inc. in care of Green Valley Landfill

KY EIS (AFS) #: 21- 089-00040

Permit#: V-17-046

Agency Interest (AI) ID: 40578

Date: 6/11/2024

N.1: Emission Summary

Emission Unit#	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (/b!SCC Units}	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons!y,)	Controlled Potential (tons/yr)
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	PM/PM10/PM2.5	26.35	See application Tables 1 through 3	N/A	N/A	0.40	0.40	1.77	1.77
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	SO2	8.12	See application Tables 1 through 3	N/A	N/A	0.12	0.12	0.54	0.54
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	NOx	330.83	See application Tables 1 through 3	N/A	N/A	5.06	5.06	22.17	22.17
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	CO	727.84	See application Tables 1 through 3	N/A	N/A	11.14	11.14	48.78	48.78
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	VOE	183.61	See application Tables 1 through 3	N/A	N/A	2.81	2.81	12.30	12.30
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	CO2	68073.31	See application Tables 1 through 3	N/A	N/A	1041.52	1041.52	4561.86	4561.86
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	CH4	4.18	See application Tables 1 through 3	N/A	N/A	0.064	0.064	0.28	0.28

Emission Unit#	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (/b/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/y,y	Controlled Potential (tonsly,y
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	N2O	0.82	See application Tables 1 through 3	N/A	N/A	0.013	0.013	0.055	0.055
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	CO2e	68423.34	See application Tables 1 through 3	N/A	N/A	1046.88	1046.88	4585.32	4585.32
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	1,1,2,2-Tetrachloroethane	5.?0E-02	See application Tables 1 through 3	N/A	N/A	8.72E-04	8.72E-04	3.82E-03	3.82E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	1,1,1-Trichloroethane (methyl chloroform)	3.03E-02	See application Tables 1 through 3	N/A	N/A	4.63E-04	4.63E-04	2.03E-03	2.03E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	1,1-Dichloroethane (ethylidene dichloride)	5.55E-02	See application Tables 1 through 3	N/A	N/A	8.49E-04	8.49E-04	3.72E-03	3.72E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	1,1-Dichloroethene (vinylidene chloride)	3.46E-03	See application Tables 1 through 3	N/A	N/A	5.30E-05	5.30E-05	2.32E-04	2.32E-04
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	1,2-Dichloroethane (ethylene dichloride)	7.24E-03	See application Tables 1 through 3	N/A	N/A	1.11E-04	1.11E-04	4.85E-04	4.85E-04
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	1,2-Dichloropropane (propylene dichloride)	3.63E-03	See application Tables 1 through 3	N/A	N/A	5.56E-05	5.56E-05	2.43E-04	2.43E-04
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	1,1,2-Trichloroethane	1.89E-02	See application Tables 1 through 3	N/A	N/A	2.89E-04	2.89E-04	1.26E-03	1.26E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	1,3-Butadiene	0.16	See application Tables 1 through 3	N/A	N/A	2.42E-03	2.42E-03	1.06E-02	1.06E-02
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	1,3-Dichloropropene	1.57E-02	See application Tables 1 through 3	N/A	N/A	2.40E-04	2.40E-04	1.05E-03	1.05E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	2-Methylnaphthalene	1.97E-02	See application Tables 1 through 3	N/A	N/A	3.01E-04	3.01E-04	1.32E-03	1.32E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	2,2,4-Trimethylpentane	0.15	See application Tables 1 through 3	N/A	N/A	2.27E-03	2.27E-03	9.93E-03	9.93E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Acenaphthene	7.41E-04	See application Tables 1 through 3	N/A	N/A	1.13E-05	1.13E-05	4.97E-05	4.97E-05

Emission Unit#	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (/b/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/y,y	Controlled Potential (tonsly,y
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Acenaphthylene	3.28E-03	See application Tables 1 through 3	N/A	N/A	5.02E-05	5.02E-05	2.20E-04	2.20E-04
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Acetaldehyde	4.96	See application Tables 1 through 3	N/A	N/A	7.58E-02	7.58E-02	0.33	0.33
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Acrolein	3.05	See application Tables 1 through 3	N/A	N/A	4.66E-02	4.66E-02	0.20	0.20
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Acrylonitrile	0.12	See application Tables 1 through 3	N/A	N/A	1.82E-03	1.82E-03	7.98E-03	7.98E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Benzene	0.31	See application Tables 1 through 3	N/A	N/A	4.80E-03	4.80E-03	2.10E-02	2.10E-02
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Benzo(b)fluoranthene	9.84E-05	See application Tables 1 through 3	N/A	N/A	1.51E-06	1.51E-06	6.60E-06	6.60E-06
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Benzo(e}pyrene	2.46E-04	See application Tables 1 through 3	N/A	N/A	3.77E-06	3.77E-06	1.65E-05	1.65E-05
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Benzo(g,h,i)perylene	2.46E-04	See application Tables 1 through 3	N/A	N/A	3.76E-06	3.76E-06	1.65E-05	1.65E-05
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Biphenyl	0.13	See application Tables 1 through 3	N/A	N/A	1.92E-03	1.92E-03	8.42E-03	8.42E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Carbon disulfide	1.57E-02	See application Tables 1 through 3	N/A	N/A	2.39E-04	2.39E-04	1.05E-03	1.05E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Carbon Tetrachloride	2.19E-02	See application Tables 1 through 3	N/A	N/A	3.35E-04	3.35E-04	1.47E-03	1.47E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Carbonyl sulfide	1.04E-02	See application Tables 1 through 3	N/A	N/A	1.60E-04	1.60E-04	6.99E-04	6.99E-04
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Chlorobenzene	2.31E-02	See application Tables 1 through 3	N/A	N/A	3.53E-04	3.53E-04	1.54E-03	1.54E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Chloroethane (ethyl chloride}	1.44E-02	See application Tables 1 through 3	N/A	N/A	2.20E-04	2.20E-04	9.65E-04	9.65E-04

Emission Unit#	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (/b/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/y,y	Controlled Potential (tonsly,y
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Chloroform	1.75E-02	See application Tables 1 through 3	N/A	N/A	2.68E-04	2.68E-04	1.18E-03	1.18E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Chloromethane (methyl chloride)	1.09E-02	See application Tables 1 through 3	N/A	N/A	1.67E-04	1.67E-04	7.31E-04	7.31E-04
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Chrysene	4.11E-04	See application Tables 1 through 3	N/A	N/A	6.29E-06	6.29E-06	2.75E-05	2.75E-05
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Dichlorobenzene	5.51E-03	See application Tables 1 through 3	N/A	N/A	8.43E-05	8.43E-05	3.69E-04	3.69E-04
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Dichloromethane (methylene chloride)	2.29E-01	See application Tables 1 through 3	N/A	N/A	3.50E-03	3.50E-03	1.53E-02	1.53E-02
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Ethylbenzene	0.20	See application Tables 1 through 3	N/A	N/A	3.01E-03	3.01E-03	1.32E-02	1.32E-02
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Ethylene Dibromide	2.63E-02	See application Tables 1 through 3	N/A	N/A	4.02E-04	4.02E-04	1.76E-03	1.76E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Fluoranthene	6.58E-04	See application Tables 1 through 3	N/A	N/A	1.01E-05	1.01E-05	4.41E-05	4.41E-05
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Fluorene	3.36E-03	See application Tables 1 through 3	N/A	N/A	5.14E-05	5.14E-05	2.25E-04	2.25E-04
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Formaldehyde	40.50	See application Tables 1 through 3	N/A	N/A	0.62	0.62	2.71	2.71
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	HCl	3.91	See application Tables 1 through 3	N/A	N/A	5.98E-02	5.98E-02	0.26	0.26
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Methanol	1.48	See application Tables 1 through 3	N/A	N/A	2.27E-02	2.27E-02	9.93E-02	9.93E-02
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Hexane	0.86	See application Tables 1 through 3	N/A	N/A	1.31E-02	1.31E-02	5.76E-02	5.76E-02
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Mercury (total)	4.41E-02	See application Tables 1 through 3	N/A	N/A	6.75E-04	6.75E-04	2.96E-03	2.96E-03

Emission Unit#	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (/b/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/y,y	Controlled Potential (tonsly,y
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Methyl isobutyl ketone	8.23E-02	See application Tables 1 through 3	N/A	N/A	1.26E-03	1.26E-03	5.52E-03	5.52E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Naphthalene	6.17E-03	See application Tables 1 through 3	N/A	N/A	9.44E-05	9.44E-05	4.13E-04	4.13E-04
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	PAH	1.42E-02	See application Tables 1 through 3	N/A	N/A	2.18E-04	2.18E-04	9.54E-04	9.54E-04
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Perchloroethylene (tetrachloroethylene)	0.11	See application Tables 1 through 3	N/A	N/A	1.69E-03	1.69E-03	7.40E-03	7.40E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Phenanthrene	8.06E-04	See application Tables 1 through 3	N/A	N/A	1.23E-05	1.23E-05	5.40E-05	5.40E-05
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Phenol	1.40E-02	See application Tables 1 through 3	N/A	N/A	2.14E-04	2.14E-04	9.38E-04	9.38E-04
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Pyrene	1.47E-03	See application Tables 1 through 3	N/A	N/A	2.25E-05	2.25E-05	9.86E-05	9.86E-05
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Styrene	0.24	See application Tables 1 through 3	N/A	N/A	3.70E-03	3.70E-03	1.62E-02	1.62E-02
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Tetrachloroethane	8.84E-03	See application Tables 1 through 3	N/A	N/A	1.35E-04	1.35E-04	5.92E-04	5.92E-04
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Toluene	1.39	See application Tables 1 through 3	N/A	N/A	2.13E-02	2.13E-02	9.33E-02	9.33E-02
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Trichloroethylene (trichloroethene)	6.61E-02	See application Tables 1 through 3	N/A	N/A	1.01E-03	1.01E-03	4.43E-03	4.43E-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Vinyl Chloride	9.07E-02	See application Tables 1 through 3	N/A	N/A	1.39E-03	1.39E-03	6.0BE-03	6.0BE-03
EU01-04	Caterpillar G3516 RICE EGU	04	Caterpillar G3516 RICE EGU	N/A	N/A	04	0.0153	Xylene	0.56	See application Tables 1 through 3	N/A	N/A	8.64E-03	8.64E-03	3.78E-02	3.78E-02

Section N.2: Stack Information

UTM Zone:

Stack ID	Identify all Emission Units (with Process ID) and Control Devices that Feed to Stack	Stack Physical Data			Stack UTM Coordinates		Stack Gas Stream Data		
		Equivalent Diameter *(ft)*	Height *(ft)*	Base Elevation *(ft)*	Northing *(m)*	Easting *(m)*	Flowrate *(acfm)*	Temperature *(• F)*	Exit Velocity *(ft/sec)*
04	EU01-04	0.5	25	870	4248680	347307	6035	887	512.3

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007V

Applicable Requirements and Compliance Activities

Section V.1: Emission and Operating Limitation(s)

Section V.2: Monitoring Requirements

Section V.3: Recordkeeping Requirements

Section V.4: Reporting Requirements

Section V.5: Testing Requirements

Section V.6: Notes, Comments, and Explanations

Additional Documentation

_ Complete DEP7007AI

Source Name: **East Kentucky Power Cooperative, Inc. in care of Green Valley Landfill**

KY EIS (AFS) #: **21- 089-00040**

Permit#: **V-17-046**

Agency Interest (AI) ID: **40578**

Date: **6/11/2024**

Section V.1: Emission and Operating Limitation(s)

Emission Unit#	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
EU01-04	Caterpillar G3516 RICE EGU	401 KAR 52:020, Section 10	N/A	N/A	N/A	The permittee shall purchase or combust in the engine only treated landfill gas that has been filtered, de-watered, and compressed	Purchasing and combusting only treated landfill gas

Emission Unit#	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
EU01–04	Caterpillar G3516 RICE EGU	401 KAR52:020, Section 10	N/A	N/A	N/A	The permittee shall Use the treated landfill gas only as a fuel and venting of treated landfill gas from the treatment system to the ambient air is not allowed	Use of the treated landfill gas only as a fuel and piping configuration that does not allow treated landfill gas to be vented to the ambient air
EU01-04	Caterpillar G3516 RICE EGU	40 CFR 63.6600(c)	N/A	N/A	N/A	The permittee does not need to comply with the emission limitations in 40 CFR 63, Subpart ZZZZ Tables 1a, 2a, 2c, and 2d or operating limitations in 40 CFR 63, Subpart ZZZZ Tables 1b and 2b	Complying with applicable requirements other than the emission limitations in 40 CFR 63, Subpart ZZZZ Tables 1a, 2a, 2c and 2d or the operating limitations in 40 CFR 63, Subpart ZZZZ Tables 1band 2b
EU01-04	Caterpillar G3516 RICE EGU	40 CFR 63.6605(a) and (b)	N/A	N/A	N/A	The permittee shall be in compliance with the emission limitations, operating limitations, and other requirements at all times.	Monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source
EU01-04	Caterpillar G3516 RICE EGU	40 CFR 63.6625(c)	N/A	N/A	N/A	The permittee shall operate the RICE in a manner which reasonably minimizes HAP emissions	Proper engine operation and maintenance

Emission Unit#	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
EU01-04	Caterpillar G3516 RICE EGU	40 CFR 63.6625(h)	N/A	N/A	N/A	The permittee shall minimize each engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup apply	Proper engine operation and maintenance including minimizing startup time to less than 30 minutes

Section V.2: Monitoring Requirements

Emission Unit#	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Monitored	Description of Monitoring
EU01-04	Caterpillar G3516 RICE EGU	N/A	40 CFR 63.6625(c)	Landfill Gas Flow Rate	Monitor the volumetric flow rate of landfill gas into the site daily with a fuel meter

Section V.3: Recordkeeping Requirements

Emission Unit#	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Recorded	Description of Recordkeeping
EU01-04	Caterpillar G3516 RICE EGU	N/A	40 CFR 63.6625(c)	Fuel Use	Maintaining records of daily fuel use for landfill gas-to-energy as monitored using the installed fuel meter
EU01-04	Caterpillar G3516 RICE EGU	N/A	401 KAR 52:020, Section 10	Treated landfill gas	Maintaining records demonstrating that the fuel used was treated landfill gas that had been filtered, de-watered, and compressed
EU01-04	Caterpillar G3516 RICE EGU	N/A	40 CFR 63.10(b)(1) and 40 CFR 63.6660(a)	Required records	Keeping records in a form suitable and readily available for expeditious review
EU01-04	Caterpillar G3516 RICE EGU	N/A	40 CFR 63.6660(b)	Required records	Keeping each record for five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record
EU01-04	Caterpillar G3516 RICE EGU	N/A	40 CFR 63.10(b)(1) and 40 CFR 63.6660(c)	Required records	Keeping each record readily accessible in hard copy or electronic form for at least five years after the date of each occurrence, measurement, maintenance, corrective action, report, or record

Section V.4: Reporting Requirements

Emission Unit#	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Reported	Description of Reporting
EU01-04	Caterpillar G3516 RICE EGU	N/A	40 CFR 63.6645(a)	Notifications	Timely submittal of the notirications/reports specified in 40 CFR 63.7(b) and (c), 40 CFR 63.B(e), (1)(4), and (1)(6), and 40 CFR 63.9(b) through (e), (g), and (h) that apply to the stationary RICE
EU01-04	Caterpillar G3516 RICE EGU	N/A	40 CFR 63.6650(a), (c),and (g)	Annual Compliance Reports	Timely submittal of the annual compliance reports according to the requirements in 40 CFR 63.6650(a) and 40 CFR 63.6650(b). The reports will contain applicable items listed under 40 CFR 63, Subpart *ZZII*, Table 7(2); and 40 CFR 63.6650(c) and 40 CFR 63.6650(9)
EU01-04	Caterpillar G3516 RICE EGU	N/A	40 CFR 63.6650(b)(8) and (9)	Annual Compliance Reports	Unless the Division approves a different schedule, each annual compliance report will cover the annual reporting period from January 1 through December 31,and willl be postmarked or delivered no later than January 31

Section V.5: Testing Requirements

Emission Unit#	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Tested	Description of Testing
EU01-04	Caterpillar G3516 RICE EGU	As required by the Cabinet	401 KAR 50:045	As required by the Cabinet	If requested by the Cabinet, testing shall be performed in accordance with applicable regulations and test methods for pollutant(s) specified by the Cabinet

APPENDIX C

PROPOSED PERMIT LANGUAGE

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

Emission Units 01 Internal Combustion Engine (EU01-1)
Internal Combustion Engine (EU01-2)
Internal Combustion Engine (EU01-3)
Internal Combustion Engine (EU01-4)

Description:

Model:	Four Caterpillar G3516 RICE EGU
Rated Capacity:	1148 hp
Fuel:	Landfill Gas
Construction Commenced:	06/03/03: EU01-1 EU01-2 EU01-3 10/02/2006: EU01-4

APPLICABLE REGULATION:
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 Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

NON-APPLICABLE REGULATIONS:
401 KAR 60:005 Section 2(2)(eeee), 40 C.F.R. 60.4230 to 60.4248, Tables 1 to 4 (Subpart JJJJ), Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

1. Operating Limitations:
   a. The permittee shall:
      i. Purchase or combust in the engine only treated landfill gas that has been filtered, de-watered, and compressed; and
      ii. Use the treated landfill gas only as a fuel, and venting of treated landfill gas from the treatment system to the ambient air is not allowed [401 KAR 52:020 Section 10].
      Compliance Demonstration Method:
      Compliance shall be demonstrated according to 5. Recordkeeping Requirements (b).
   b. The permittee does not need to comply with the emission limitations in 40 CFR 63, Subpart ZZZZ Tables 1a, 2a, 2c, and 2d or operating limitations in 40 CFR 63, Subpart ZZZZ Tables 1b and 2b [40 CFR 63.6600(c)].
   c. The permittee shall be in compliance with the emission limitations, operating limitations, and other requirements at all times. At all times these sources, including associated air pollution control equipment and monitoring equipment, shall be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by this standard are achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of

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

operation and maintenance procedures, review of operation and maintenance records, and inspection of the source [40 CFR 63.6605(a) and (b)].

d. The permittee shall operate the RICE in a manner which reasonably minimizes HAP emissions [40 CFR 63.6625(c)].

e. The permittee shall minimize each engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup apply [40 CFR 63.6625(h)].

2. Emission Limitations:

N/A

3. Testing Requirements:

a. Testing shall be conducted as required by the Cabinet [401 KAR 50:045].

b. Refer to Section G – General Conditions (5) for additional requirements.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the volumetric flow rate of landfill gas into the site daily with a fuel meter [40 CFR 63,6625(c)].

b. Refer to Section F -Monitoring, Recordkeeping, and Reporting Requirements for additional requirements.

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain records of daily fuel use for landfill gas-to-energy as monitored using the installed fuel meter [40 CFR 63.6655(c)].

b. The permittee shall maintain records demonstrating that the fuel used was treated landfill gas that had been filtered, de-watered, and compressed [401 KAR 52:020, Section 10].

c. The permittee shall keep records in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1) [40 CFR 63.6660(a)].

d. As specified in 40 CFR 63.10(b)(1), the permittee shall keep each record for five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record [40 CFR 63.6660(b)].

e. The permittee shall keep each record readily accessible in hard copy or electronic form for at least five years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to 40 CFR 63.10(b)(1) [40 CFR 63.6660(c)].

f. Refer to Section F- Monitoring, Recordkeeping, and Reporting Requirements for additional requirements.

6. Specific Reporting Requirements:

a. The permittee shall submit all the notifications in 40 CFR 63.7(b) and (c), 40 CFR 63.8(e), (f)(4), and (f)(6), and 40 CFR 63.9(b) through (e), (g), and (h) that apply to the stationary RICE [40 CFR 63.6645(a)(3)].

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

b. The permittee shall submit annual compliance reports according to the requirements in 40 CFR 63.6650(a) and 40 CFR 63.6650(b). The reports shall contain applicable items listed under 40 CFR 63, Subpart ZZZZ, Table 7(2); and 40 CFR 63.6650(c) and 40 CFR 63.6650(g) [40 CFR 63.6650(a), (c), and (g)].
c. Unless the Division approves a different schedule, each annual compliance report shall cover the annual reporting period from January 1 through December 31, and shall be postmarked or delivered no later than January 31 [40 CFR 63.6650(b)(8) and (9)].
d. Refer to Section F – Monitoring, Recordkeeping, and Reporting Requirements for additional requirements.

SECTION C -INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, 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.

Description	Generally Applicable Regulation
1. Storage Tank for Lube Oil (1000 gal)	N/A
2. Storage Tank for Waste Oil (1000 gal)	N/A

SECTION D -SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, 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.

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, the 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 Title V Permits* incorporated by reference in 401 KAR 52:020, 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 [Sections 1b-IV-2 and 1a-8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020, Section 3(1)h, 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 Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

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

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 52:020, Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported 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 Title V Permits* incorporated by reference in 401 KAR 52:020, 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 semi-annual report required by F.6.

9. Pursuant to 401 KAR 52:020, Title V permits, 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 and the U.S. EPA in accordance with the following requirements:
   a. Identification of the term or condition;
   b. Compliance status of each term or condition of the permit;

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

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 certifications shall be sent to the following addresses:

Division for Air Quality
Ashland Regional Office
1550 Wolohan Drive, Suite 1
Ashland, KY 41102
(606) 929-5285

U.S. EPA Region 4
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St. SW
Atlanta, GA 30303-8960

10. In accordance with 401 KAR 52:020, Section 22, 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.

SECTION G -GENERAL PROVISIONS

1. General Compliance Requirements

a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020, 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 termination, revocation and reissuance, revision or denial of a permit [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, 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-6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

c. This permit may be revised, revoked, reopened, and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:

i. 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 52:020, Section 12;

ii. 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.

iii. 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;

iv. New requirements become applicable to a source subject to the Acid Rain Program.

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 [Section 1a-7 and 8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION G -GENERAL PROVISIONS (CONTINUED)

e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:020, Section 3(1)(c)].

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 52:020, 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-14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, 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-4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, 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-15 of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, 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-10 of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, 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 52:020, Section 11(3)(2)].

l. This permit does not convey property rights or exclusive privileges [Section 1a-9 of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, 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 [401 KAR 52:020, Section 11(3) 4].

SECTION G -GENERAL PROVISIONS (CONTINUED)

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 [401 KAR 52:020, Section 11(3) 1.].

p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic 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 52:020, 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:
   i. Applicable requirements that are included and specifically identified in this permit; and
   ii. 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 52:020, Section 12].

b. The authority to operate granted 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 52:020, Section 8(2)].

3. Permit Revisions

a. A minor permit revision procedure 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 52:020, 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.

SECTION G -GENERAL PROVISIONS (CONTINUED)

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements
   The permittee is authorized to construct the addition of one G3516, 1148 HP engine at this landfill gas-t-energy facility.

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 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.

   b. The permittee shall comply with all applicable requirements and conditions of the Acid Rain Permit and the Phase II permit application (including the Phase II NOx compliance plan and averaging plan, if applicable) incorporated into the Title V permit issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.

7. Emergency Provisions
   a. Pursuant to 401 KAR 52:020, Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:

SECTION G -GENERAL PROVISIONS (CONTINUED)

i. An emergency occurred and the permittee can identify the cause of the emergency;
ii. The permitted facility was at the time being properly operated;
iii. 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
iv. Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.1-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
v. This requirement does not relieve the source of other local, state or federal notification requirements.

b. Emergency conditions listed in General Condition G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(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:
i. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
ii. 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.
iii. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
iv. 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 82.155.
v. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156 and 40 CFR 82.157.
vi. 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*.

SECTION G -GENERAL PROVISIONS (CONTINUED)

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.

EAST KENTUCKY POWER COOPERATIVE

November 6, 2024

VIA DIVISION PORTAL & ELECTRONIC MAIL TO:

Michael Kennedy, Director
Division for Air Quality
300 Sower Blvd., Second Floor
Frankfort, Kentucky 40601

Re: Application for Permit Renewal
East Kentucky Power Cooperative, Inc.
Green Valley Landfill Gas to Energy Site
Permit V-17-046
Agency Interest No. 40578

Dear Mr. Kennedy:

East Kentucky Power Cooperative, Inc. (EKPC) operates the Green Valley Landfill Gas to Energy site located at 100 Addington Road, Ashland, KY. EKPC currently operates the Landfill Gas to Energy site in accordance with Permit V-17-046.

The current permit was originally issued on May 17, 2020 and scheduled to expire on May 17, 2025. EKPC is submitting the enclosed application for renewal of the permit pursuant to 401 KAR 52:020, Section 12, and Section G(2)(a) of the permit.

EKPC looks forward to working with the Division during the renewal process. Should you have any questions, please feel free to contact me.

Sincerely,

Jerry Purvis

Jerry Purvis,
Vice President
Environmental Affairs

4775 Lexington Road
P.O. Box 707
Winchester, Kentucky 40392
www.ekpc.coop
A Touchstone Energy Cooperative

cc via e-mail: Rick Shewekah, DAQ
Zach Bittner, DAQ
Troy Lovell, EKPC
Mike Curtis, EKPC
Kevin Moore, EKPC
Robert Webb, EKPC

4775 Lexington Road
P.O. Box 707
Winchester, Kentucky 40392
www.ekpc.coop

APPLICATION FOR RENEWAL OF
TITLE V OPERATING PERMIT
V-17-046

EAST KENTUCKY POWER COOPERATIVE, INC.
GREEN VALLEY LANDFILL GAS TO ENERGY SITE
AGENCY INTEREST NO. 40578
SOURCE ID. NO. 21-089-00040

Prepared by:

EAST KENTUCKY POWER COOPERATIVE, INC.
P. O. Box 707
4775 Lexington Road
Winchester, Kentucky 40392-0707

1.0 INTRODUCTION

East Kentucky Power Cooperative, Inc. (EKPC) operates the Green Valley Landfill Gas To Energy Site (Bavarian) located at 100 Addington Road, Ashland, KY 41102. EKPC currently operates the Landfill-Gas-To-Energy (LGTE) site in accordance with Permit No. V-17-046, which will expire on May 17, 2025. The current permit was originally issued on May 17, 2020.

EKPC leases property from the Green Valley County landfill necessary for its LGTE operations and purchases gas from the landfill. However, the landfill is separately owned and operated, there is no shared control nor are there any shared employees. Each entity is subject to separate compliance requirements under the Clean Air Act. Neither the landfill nor EKPC can speak for the other, nor can either assure compliance for the other. Neither has access to the other's operational information and neither can direct compliance decisions or obligations of the other. EKPC and the landfill are not interdependent. EKPC utilizes all the gas it purchases. No landfill gas is ever purchased and returned. We understand that any landfill gas not purchased is automatically sent to the landfill flare. The LGTE engines can be operated on a number of different fuels and thus EKPC is not limited to the sole use of landfill gas.

The landfill gas is directly converted into electricity at EKPC's facility. EKPC accepts delivery of the landfill gas at the interconnection point outside the LGTE compressor room. Prior to the demarcation point, EKPC understands that the landfill uses a knockout pot, filter and blower to dewater, compress and filter the landfill gas. Additionally, EKPC owns and operates skids within its facility that filter, dewater and compress the gas to protect its engines by assuring no water is introduced in the process. EKPC performs a weekly fuel skid inspection to assure the compressor is running. Filter changes occur according to manufacturer specifications. Records of the weekly inspections are kept at the site. EKPC is therefore able to provide its own assurances that the fuel it combusts has been filtered, dewatered and compressed in compliance with the current permit condition; however, it does not have the information or authority to provide assurances as to the processes used by the landfill. The EKPC LGTE system is sealed for proper operation. There is no point where gas can be vented to the atmosphere during normal operation. The system cannot operate if air is introduced into the pipes during startup. If necessary, a manual vent to the atmosphere with a manual valve can be opened only during startup and to allow air to be purged from the lines.

EKPC submits this application for renewal of the permit pursuant to 401 KAR 52:020 Section 12 and Section G of the permit. Pursuant to 401 KAR 52:020 Section 4(2)(c), this renewal application is timely and provides "only the information that is new or different from the most recent source-wide permit application."

2.0 CHANGES SINCE LAST SOURCE WIDE APPLICATION

No changes to the emission units covered by this permit are proposed in this renewal application. However, EKPC notes that an Application for a Significant Revision for Green Vally was submitted to the Division on June 12, 2024 proposing to add an additional Caterpillar G3516 RICE that was

manufactured on or about October 2, 2006 and was previously located at EKPC's former Laurel Ridge landfill gas to energy facility. EKPC has received a notice of administrative completeness and the application is pending review by the Division. EKPC requests the June 12, 2024 application be incorporated in this permit renewal.

3.0 EMISSION CALCULATIONS

EKPC has reviewed emission calculations for the unit at the site during the last permitting process and has determined that no changes to emission factors or other components of the emission calculations have occurred since the last source wide permit application, except for the emissions addressed in the June 12, 2024 application. Thus no changes are proposed.

4.0 CONCLUSION

EKPC is submitting this application for renewal of the existing Title V permit for the Green Valley Landfill-Gas-To-Energy Site in accordance with 401 KAR 52:020 Section 12 and Section G of the permit. The existing permit expires on May 17, 2025. This renewal application is being submitted at least six months in advance of the expiration date for the current permit. Pursuant to 401 KAR 52:020 Section 4(2)(c), this renewal permit application provides "only the information that is new or different from the most recent source-wide permit application." Therefore, this submittal is timely and complete such that the terms and conditions of the previous permit shall remain in effect until the renewal permit has been issued should the renewal permit not be issued before the expiration of the previous permit as specified in 401 KAR 52:020 Section 12(6)(a)-(b) and Section G of the permit.

5.0 ATTACHMENT

A DEP 7007AI Form is attached hereto and incorporated herein.

ATTACHMENT A

FORMS

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007AI

Administrative Information

___ Section AI.1: Source Information

___ Section AI.2: Applicant Information

___ Section AI.3: Owner Information

___ Section AI.4: Type of Application

___ Section AI.5: Other Required Information

___ Section AI.6: Signature Block

___ Section AI.7: Notes, Comments, and Explanations

Additional Documentation

___ Additional Documentation attached

Source Name: **East Kentucky Power Cooperative, Inc. in care of Green Valley Landfill**

KY EIS (AFS) #: **21-** **089-00040**

Permit #: **V-17-046**

Agency Interest (AI) ID: **40578**

Date:

Section AI.1: Source Information

Physical Location Address:	**Street:**	100 Addington Road				
	City:	Ashland	**County:**	Greenup	**Zip Code:**	41102
Mailing Address:	**Street or P.O. Box:**	100 Addington Road				
	City:	Ashland	**State:**	Greenup	**Zip Code:**	41102

Standard Coordinates for Source Physical Location

Longitude: 38.3731 (decimal degrees) **Latitude:** 84.7478 (decimal degrees)

Primary (NAICS) Category: Electric Power Generation **Primary NAICS #:** 221112

#

Classification (SIC) Category: Electric Power Generation **Primary SIC #:** 4911

Briefly discuss the type of business conducted at this site: Generation of electrical power from landfill gas combustion

Description of Area Surrounding Source: ☑ Rural Area ☐ Industrial Park ☐ Residential Area ☐ Urban Area ☐ Industrial Area ☐ Commercial Area

Is any part of the source located on federal land? ☐ Yes ☑ No

Number of Employees: 1

Approximate distance to nearest residence or commercial property: approx. 100 feet **Property Area:** approx. 2 acres **Is this source portable?** ☐ Yes ☑ No

What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?

NPDES/KPDES:	☐ Currently Hold	☐ Need	☑ N/A
Solid Waste:	☐ Currently Hold	☐ Need	☑ N/A
RCRA:	☐ Currently Hold	☐ Need	☑ N/A
UST:	☐ Currently Hold	☐ Need	☑ N/A

Type of Regulated Waste Activity: ☐ Mixed Waste Generator ☐ Generator ☐ Recycler ☐ Other: _____

☐ U.S. Importer of Hazardous Waste ☐ Transporter ☐ Treatment/Storage/Disposal Facility ☑ N/A

Section AI.2: Applicant Information

Applicant Name: East Kentucky Power Cooperative

Title: (if individual)

Mailing Address:
Street or P.O. Box: 4775 Lexington Road, P.O. Box 707
City: Winchester **State:** KY **Zip Code:** 40392-0707

Email: (if individual)

Phone: 859-744-4812

Technical Contact

Name: Kevin Moore

Title: Manager, Air Quality

Mailing Address:
Street or P.O. Box: 4775 Lexington Road, P.O. Box 707
City: Winchester **State:** KY **Zip Code:** 40392-0707

Email: kevin.moore@ekpc.coop

Phone: 859-745-4157 ext. 6221

Air Permit Contact for Source

Name: Jerry Purvis

Title: Vice President, Environmental Affairs

Mailing Address:
Street or P.O. Box: 4775 Lexington Road, P.O. Box 707
City: Winchester **State:** KY **Zip Code:** 40392-0707

Email: jerry.purvis@ekpc.coop

Phone: 859-744-4812

Section AI.3: Owner Information

☑ **Owner same as applicant**

Name: _____

Title: _____

Mailing Address: **Street or P.O. Box:** _____

City: _____ **State:** _____ **Zip Code:** _____

Email: _____

Phone: _____

List names of owners and officers of the company who have an interest in the company of 5% or more.

Name	Position

Section AI.4: Type of Application

Current Status: ☑ Title V ☐ Conditional Major ☐ State-Origin ☐ General Permit ☐ Registration ☐ None

Requested Action: *(check all that apply)*

☐ Name Change	☐ Initial Registration	☐ Significant Revision	☐ Administrative Permit Amendment
☑ Renewal Permit	☐ Revised Registration	☐ Minor Revision	☐ Initial Source-wide OperatingPermit
☐ 502(b)(10)Change	☐ Extension Request	☐ Addition of New Facility	☐ Portable Plant Relocation Notice
☐ Revision	☐ Off Permit Change	☐ Landfill Alternate Compliance Submittal	☐ Modification of Existing Facilities
☐ Ownership Change	☐ Closure		

Requested Status: ☑ Title V ☐ Conditional Major ☐ State-Origin ☐ PSD ☐ NSR ☐ Other: _____

Is the source requesting a limitation of potential emissions? ☐ Yes ☑ No

Pollutant:	Requested Limit:	Pollutant:	Requested Limit:
☐ Particulate Matter		☐ Single HAP	
☐ Volatile Organic Compounds (VOC)		☐ Combined HAPs	
☐ Carbon Monoxide		☐ Air Toxics (40 CFR 68, Subpart F)	
☐ Nitrogen Oxides		☐ Carbon Dioxide	
☐ Sulfur Dioxide		☐ Greenhouse Gases (GHG)	
☐ Lead		☐ Other	

For New Construction:

Proposed Start Date of Construction: *(MM/YYYY)* _____ **Proposed Operation Start-Up Date:** *(MM/YYYY)* _____

For Modifications:

Proposed Start Date of Modification: *(MM/YYYY)* _____ **Proposed Operation Start-Up Date:** *(MM/YYYY)* _____

Applicant is seeking coverage under a permit shield. ☑ **Yes** ☐ **No**

Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.

Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

- ☐ DEP7007A Indirect Heat Exchangers and Turbines
- ☐ DEP7007B Manufacturing or Processing Operations
- ☐ DEP7007C Incinerators and Waste Burners
- ☐ DEP7007F Episode Standby Plan
- ☐ DEP7007J Volatile Liquid Storage
- ☐ DEP7007K Surface Coating or Printing Operations
- ☐ DEP7007L Mineral Processes
- ☐ DEP7007M Metal Cleaning Degreasers
- ☐ DEP7007N Source Emissions Profile
- ☐ DEP7007P Perchloroethylene Dry Cleaning Systems
- ☐ DEP7007R Emission Offset Credit
- ☐ DEP7007S Service Stations
- ☐ DEP7007T Metal Plating and Surface Treatment Operations
- ☐ DEP7007V Applicable Requirements and Compliance Activities
- ☐ DEP7007Y Good Engineering Practice and Stack Height Determination
- ☐ DEP7007AA Compliance Schedule for Non-complying Emission Units
- ☐ DEP7007BB Certified Progress Report
- ☐ DEP7007CC Compliance Certification
- ☐ DEP7007DD Insignificant Activities
- ☐ DEP7007EE Internal Combustion Engines
- ☐ DEP7007FF Secondary Aluminum Processing
- ☐ DEP7007GG Control Equipment
- ☐ DEP7007HH Haul Roads
- ☐ Confidentiality Claim
- ☐ Ownership Change Form
- ☐ Secretary of State Certificate
- ☐ Flowcharts or diagrams depicting process
- ☐ Digital Line Graphs (DLG) files of buldings, roads, etc.
- ☐ Site Map
- ☐ Map or drawing depicting location of facility
- ☐ Safety Data Sheet (SDS)
- ☐ Emergency Response Plan
- ☐ Other: _____

Section AI.6: Signature Block

I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.

Jerry Purvis	11/7/2024
Authorized Signature	**Date**
Jerry Purvis	Vice President, Environmental Affairs
Type or Printed Name of Signatory	**Title of Signatory**

*Responsible official as defined by 401 KAR 52:001.

Section AI.7: Notes, Comments, and Explanations