Exhibit No. 10P

Liberty – Exhibit 10P
Dr. Brian Mushimba
Surrebuttal Testimony
File Nos. EO-2022-0040 & EO-2022-0193

Exhibit No.: _____
Issue: Riverton 11
Witness: Dr. Brian Mushimba
Type of Exhibit: Surrebuttal Testimony
Sponsoring Party: The Empire District Electric Company
Case Nos.: EO-2022-0040; EO-2022-0193
Date Testimony Prepared: May 2022

Before the Public Service Commission of the State of Missouri

Surrebuttal Testimony

of

Dr. Brian Mushimba

on behalf of

The Empire District Electric Company

May 2022

DENOTES CONFIDENTIAL
20 CSR 4240-2.135(2)(A)7

PUBLIC VERSION

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FOR THE SURREBUTTAL TESTIMONY OF BRIAN MUSHIMBA
THE EMPIRE DISTRICT ELECTRIC COMPANY
BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION
CASE NOS. EO-2022-0040 and EO-2022-0193

SUBJECT **PAGE**

SURREBUTTAL TESTIMONY OF BRIAN MUSHIMBA
THE EMPIRE DISTRICT ELECTRIC COMPANY
BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION
CASE NOS. EO-2022-0040 and EO-2022-0193

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Dr. Brian Mushimba. My business address is 602 South Joplin Avenue, Joplin, Missouri.

Q. By whom are you employed and in what capacity?

A. I am employed by Liberty Utilities Service Corp. as Senior Director, Generation Operations - Central Region, which includes The Empire District Electric Company ("Liberty" or the "Company").

Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of Liberty.

Q. Please describe your educational and professional background.

A. I have an engineering degree from the University of Arizona. I have additional engineering training at the graduate level that culminated into a Ph.D. in engineering. I have over 20 years of experience in electric operations, managing power generating assets and working on power plant equipment to enhance reliability and availability. My resume is attached as **Surrebuttal Schedule BM-1**. My resume describes my career progression from the time I joined the industry as an Electrical Controls Engineer at Siemens, one of the largest electro-mechanical equipment manufacturers in the electricity industry, where I practiced engineering in power plants from first principles for several years before being promoted to engineering management roles. I further worked as a Maintenance and Engineering Manager in manufacturing plants before I

took on larger engineering and technical leadership roles, at a director level, overseeing the effective operations of several power stations across several regions. Two years ago, I joined Liberty in my current position.

Q. Have you previously testified before the Missouri Public Service Commission ("Commission") or any other regulatory agency?

A. No, however I have previously testified before the Oklahoma Corporation Commission.

Q. What is the purpose of your Surrebuttal Testimony in this proceeding?

A. To address the Direct Testimony of Commission Staff ("Staff") witness Jordan T. Hull. Specifically, I rebut Mr. Hull's recommendation for disallowance of $2,761,666.37 in costs relating to operation and tuning of Riverton 11, based on his assertion that the Company acted imprudently by not tuning Riverton 11 for winter temperatures. My testimony summarizes the prudence standard in Missouri, describes evidence that demonstrates that the Company operated Riverton 11 prudently, and explains the reasons why Mr. Hull's testimony does not warrant any disallowance in Liberty's Storm Uri securitization petition relating to Riverton 11. Particularly, I describe the conditions that must exist for Riverton Unit 11 to perform unit specific tuning on emergency fuel oil in extreme winter ambient conditions.

II. PRUDENCE

Q. Has the Company described the standard of prudence in Missouri in this proceeding?

A. Yes. The prudence standard in Missouri is discussed in detail in the Surrebuttal Testimony of Company witness John Reed.

Q. Please summarize Mr. Reed's definition of the Missouri prudence standard.

A. Mr. Reed explains at p. 7 of his Surrebuttal Testimony that the standard is comprised of four features. *First*, prudence relates to the analysis of the quality of a utility's decisions and actions, not end results. *Second*, determinations regarding the recovery of costs incurred by a utility on behalf of its customers begin with a presumption of prudence. Any party recommending a disallowance of recovery on the basis of prudence must overcome the burden of that presumption by identifying serious concerns about the prudence of the utility's decisions or actions before a disallowance can be considered. *Third*, hindsight is excluded from the analysis of prudence. The reasonableness of a utility's actions or decisions can be measured only on the basis of information that was available to it at the time. *Fourth*, a finding of imprudence requires the definition of a range of prudent behavior that encompasses more than one set of prudent actions.

Q. What observations do you have in regard to Mr. Hull's assertions as they relate to Liberty's decisions and actions?

A. Mr. Hull's contention that the Company should have planned more effectively for Winter Storm Uri, an extraordinary event, is predicated on the Company being able to predict that it would occur, and when. Yet he fails to explain why that should be the case. Similarly, Mr. Hull never defines the range of reasonable behavior by explaining the reasons why the Company's failure to tune Riverton 11 was so egregious that no reasonable utility would have behaved similarly. And nearly all of Mr. Hull's assertions require the benefit of hindsight while his recommended disallowances are calculated against a standard that would have required perfect decision-making in real time.

Q. Does Mr. Reed raise any other concerns about Mr. Hull's recommended disallowances?

A. He does. At p. 19 of his Surrebuttal Testimony, Mr. Reed explains that even if Mr. Hull's Rebuttal Testimony had demonstrated imprudence, which it does not, the disallowance that would follow would need to be based on a determination of the difference between the costs that the Company actually incurred and the costs that it would have incurred had its behavior been "minimally prudent." In other words, the extra costs that would have been incurred because of the Company's imprudent behavior (as opposed to all the costs incurred around the time of the alleged imprudence).

Q. Does Mr. Hull perform a calculation that includes his view of costs that Liberty would have incurred had its behavior been "minimally prudent"?

A. No.

Q. What conclusion is supported in this case?

A. Even if one were to ignore the extensive evidence showing that the Company's actions and decision-making during and around Storm Uri were reasonable, and also ignore the factual and logical flaws that beset Mr. Hull's assertions, both of which I describe in the remainder of my testimony, no disallowance would be supported because Mr. Hull fails to demonstrate that *any* of the Company's actions or decisions were unreasonable given the information that was available to Liberty.

III. RIVERTON 11

Q. What type of unit is Riverton Unit 11?

A. Riverton Unit 11 is a 1966 Westinghouse W191 dual fuel turbine that was purchased used by The Empire District Electric Company and placed into service in 1988 at the Riverton generating station in Riverton, Kansas.

Q. Staff witness Hull recommends a disallowance because the Company failed to tune Riverton Unit 11 at extreme cold temperatures. Can you explain what "tune Riverton 11" means and how it relates to this issue?

A. Tuning a generation turbine in a complex task of adjustment or modification of the internal combustion of the engine of the unit to yield optimal performance and efficiency at given ambient temperatures. It's an iterative process that ensures that at a given ambient temperature, the fuel-oxygen ratio and the subsequent combustion is optimal and the resultant energy output is maximized while controlling undesirable byproducts of the combustion, such as emissions.

Q. Can Liberty tune Riverton 11 during extreme cold weather?

A. Yes, so long as the unit is generating on natural gas and the Company operates within the air permit restriction related to natural gas emissions. However, tuning a unit is an iterative process that increases the risk of an operational trip and extreme cold weather is generally not an opportune time to risk tripping a unit when generation is likely needed for grid reliability.

Q. Are there any governmental limitations on tuning on emergency fuel oil?

A. Yes. Regarding tuning on emergency fuel oil, the Company's air permit from the Kansas Department of Health and Environment ("KDHE") restricts any operations on emergency fuel oil subject to the following two restrictions:

> 1) The natural gas delivery system must break down and the required natural gas supply becomes unavailable to The Empire District Electric Company **AND** 2) The power requirements from the Riverton station cannot be assumed by power generating equipment other than Unit # 10 and Unit # 11.

These are conditions 6. a.) and 6 b.) of the Company's Air Emission Source Class I Operating Permit 0210002 ("Air Permit"). A copy of the Company's Air Permit is provided in **Surrebuttal Schedule BM-2.**

Q. Does the KDHE Air Permit allow Unit 11 to operate on fuel oil for the purpose of tuning?

A. No. There is no specific provision in the air permit that allows Unit 11 to operate on fuel oil for the sole purpose of tuning. The prohibitions in the Air Permit mean that the only time the Company would have been permitted to tune Unit 11 while operating on emergency fuel oil would have been during extreme events, such as Storm Uri. Again, this is obviously problematic in the sense that tuning in preparation for extreme events required such tuning to take place *during* extreme events. This particular issue is identified in *FERC-NERC – Regional Entity Staff Report: The February 2021 Cold Weather Outages in Texas and South Central United States*. "Key Recommendation" 7 on page 196 recommends establishing a forum consisting of state legislatures and/or regulators, in cooperation with FERC, NERC, and Regional Entities to discuss, amongst other things, "Whether there are barriers to dual-fuel capability that could be addressed by changes in state or federal rules or regulations. Dual-fuel capability can help mitigate the risk of loss of natural gas fuel supply, and issues to consider include facilitating testing to run on the alternate fuel, ensuring adequate fuel supply of the alternate fuel and obtaining the necessary air permits and air permit waivers."

Unfortunately, the Company does not have the ability to perform fuel oil tuning based on its current Air Permit. Put another way, the Company could not have performed oil tuning at Riverton 11 without violating its air permit and thus violating the law.

Q. Does tuning the unit on natural gas improve the performance of the unit when attempting to fire on emergency fuel oil?

A. No, tuning Riverton 11 on natural gas does not improve performance of the unit on emergency fuel oil. The natural gas and emergency fuel oil delivery systems are completely separate on Unit 11. In particular, the control valve for natural gas delivery is completely separate from the control valve for emergency fuel oil delivery. Each of these control valves has unique flow characteristics that must be used during the tuning process on that specific fuel type to ensure that Unit 11 operates at desired air and fuel ratios. As referenced above, this is an iterative process that is temperature and fuel dependent.

Q. Did the Company notify the Kansas Department of Health and Environment ("KDHE") of the emergency conditions that would authorize burning fuel oil? If so, when did the Company then attempt to start Riverton Unit 11?

A. Yes. KDHE was notified at 10:04 AM on the morning of February 15, 2021, and the Company attempted the first start of Riverton Unit 11 at 12:01 PM on February 15. The Company proceeded to attempt to start the unit 26 times over the course of the next 28 hours.

Q. What were the ambient conditions when the Company attempted to start Riverton Unit 11?

A. According to the Riverton Plant weather station, the temperature at 12:00 PM on 2-15-21 was –0.7 degrees Fahrenheit.

Q. Are these difficult conditions under which to start a unit?

A. Yes, trying to start a turbine on #2 diesel in sub 0 degree Fahrenheit weather is very difficult. This is because not only is the air coming into the turbine cold, but the #2

diesel is also very cold. These two conditions combine to make it extremely difficult for the igniters to create ignition of the #2 diesel. As mentioned above, 26 attempts were made, and every effort was exhausted in an attempt to start Unit 11 in very challenging ambient conditions. Plant personnel even forced control system I/O points in an attempt to operate Unit 11 outside of its normal control system parameters in an attempt to start Unit 11 in these extreme conditions.

**[redacted]

[redacted]**

Q. Did the Company operate Riverton 11 imprudently during the events of Winter Storm Uri?

A. No. Mr. Hull's testimony does not support any disallowance relating to Riverton 11. The Company followed its Air Permit and adhered to the operational conditions relating to the Riverton facilities. The consequence of not doing these things would have been violation of applicable air permits and subsequent fines.

Q. Does this conclude your Surrebuttal Testimony at this time?

A. Yes.

VERIFICATION

I, Dr. Brian Mushimba, under penalty of perjury, on this 27th day of May, 2022, declare that the foregoing is true and correct to the best of my knowledge and belief.

/s/ Dr. Brian Mushimba

BRIAN MUSHIMBA, PH.D., MBA

Liberty Utilities (602 S Joplin Ave, Joplin, MO 64801)

20+yrs of electric operations experience covering both **renewables and thermal power generation** of different configurations.

SOME TRANSFERABLE SKILLS

- Instrumentation & Controls Expert (I&C)
- Root cause Analysis (RCA)/Reliability Engineering
- Failure Mode and Effects Analysis (FMEA)
- FERC/NERC Compliance Management
- GADS Reporting & Incident Management
- CMMS plant operations management

RELEVANT EMPLOYMENT HISTORY

- 2020- Present: **Liberty, Joplin, MO, USA**
- 2016- 2020: **Ph.D. Student & Researcher**
- 2013-2016: **Eskom – Sub-Sahara Africa, Africa**
- 2012-2013: **Pratt & Whitney Power Systems – Hartford, CT, USA**
- 2006-2012: **Lafarge North America – Atlanta, GA, USA**
- 2000-2006: **Siemens Power Generation – Alpharetta, GA, USA**

PROFESSIONAL EXPERIENCE

Liberty – Joplin, MO, USA
Senior Director, Electric Operations of Central Region, USA, 2020 - Present
Responsible for managing all generation assets for Liberty in the Central Region of the USA. The generation fleet under my supervision comprise of two (2) large coal fired plants (jointly owned), two (2)combined cycle natural gas fired plants, One (1) dual-fuel peaking unit, One (1) hydro power station, one (1) solar power station and three (3) wind farms with a total nameplate generation in excess of 4,000MWs.

University of Zambia – Lusaka, Zambia
Ph.D. Student & Researcher 2016 - 2020
Conducted decarbonation studies, utilization of carbon-neutral energy sources in pyroprocessing in power generation.

Eskom – Megawatt Park, Johannesburg, South Africa
Technical Director, 2013 – 2016
Responsible for directing and controlling all electric operations and Maintenance (O&M) activities for the assigned region as well as execute the capital projects program in order to meet commercial and contractual obligations. The bulk of the work centered around developing and adopting O&M best practices in order to improve electric operations performance and also execute several multi-million-dollar Capital Projects for effective electric division performance in accordance with all contractual obligations (Power pools, markets). Eskom is the largest electricity supplier on the on the African continent.

Pratt & Whitney Power Systems – Hartford, CT, USA
Project Manager & Construction site lead, 2012 to 2013
Responsible for the strategic planning, project management and control, detailed design, procurement and delivery of a multi-million dollar EPC cogeneration project to supply a dual fuel gas turbine and Balance of Plant (BOP) equipment and processes (HRSG, NH3 skid, Absorption chillers, Gas compressors and Gas heaters) for a cogen project for a key customer in the North East **to supply 64MW of electricity & 140,000 pounds of steam per hour and hot air to two paper machines.**

Lafarge North America: Atlanta, GA

Plant Maintenance & Engineering Manager, 2006 to 2012
Responsible for a turn-around plan of badly performing plant assets in the region and developed the technical teams in maintenance and operations excellence (MOE). Responsible for ALL engineering disciplines and tasked with safely maximizing plant manufacturing equipment reliability and availability, minimizing emergency breakdowns, maximizing mean-time-between-failures (MTBF) and ensuring that equipment performed at/or close to rated capacities.

Siemens Power Generation – Atlanta, GA, USA

Electrical Controls Engineer, 2000 to 2006

As a **Turbine Controls commissioning engineer**, was responsible for preparation of electrical and control system designs for fossil fuel power generation projects. Responsible for process control specifications, field mounted electrical instrumentation specifications, electrical instrument summary schedules and commissioning/checkout documentation. Responsible for loop diagrams, schematic diagrams, wiring diagrams, arrangement diagrams and installation diagrams. Responsible for DCS **(TXP, T3000, Ovation)** plant control system configuration, check out, plant commissioning and startup.

EDUCATION

Ph.D., Environmental Engineering (Decarbonation), University of Zambia, Lusaka, Zambia
MBA, Business Administration, Salem University, Salem, WV
Graduate Level Training, Electrical Engineering Technology Courses, Pittsburg State University, Pittsburg, KS
Bachelor's Degree, Mining Engineering, University of Arizona, Tucson, AZ

AFFILIATIONS

Member, Project Management Institute (PMI)
Member, International Society of Automation (ISA)
Member, Society of Maintenance and Reliability Practitioners (SMRP)

CERTIFICATIONS & PUBLICATION

Project Management Professional (PMP:2006-2016); Project management Institute (PMI)
Certified Project Manager, Siemens, 2006 **(PM@Siemens)**
Passed Fundamentals of Engineering Exam, State of Arizona (FE/EIT), 2000-present

End

Division of Environment
Curtis State Office Building
1000 SW Jackson St., Suite 400
Topeka, KS 66612-1367

Kansas
Department of Health and Environment

Phone: 785-296-1535
Fax: 785-559-4264
www.kdheks.gov

Lee A. Norman, M.D., Secretary

Laura Kelly, Governor

August 25, 2020

Source ID No. 0210002

Mr. Ed Easson
Riverton Plant Manager
The Empire District Electric Company – Riverton Power Station
P.O. Box 127
Joplin, MO 64802

Re: Class I Air Emission Source Operating Permit Significant Modification

Dear Mr. Easson:

Enclosed is the Class I Operating Permit Significant Modification in response to the "Air Emissions Source Modification of Construction Permit" dated August 25, 2020. The construction modification was issued to reclassify the Empire District Electric Company – Riverton Power Station facility in Riverton, Cherokee County, Kansas, from a Major Source of HAP emissions to an Area Source of HAP emissions.

The significant modification contains the following changes:

- Requirements of 40 CFR 63, Subpart YYYY were removed.
- Major Source of HAP emissions requirements of 40 CFR 63, Subpart ZZZZ were changed to Area Source of HAP emissions requirements.

Please review the enclosed operating permit carefully since it obligates your source to certain requirements.

For the transition period between the previous permit and the enclosed renewal permit, please comply with the following interim reporting requirements. The certification due on January 30, 2021 should cite both the March 30, 2018 permit and the enclosed permit. The semi-annual report due on January 31, 2021 shall contain two separate reports: one covering the March 30, 2018 permit requirements from July 1, 2020 to August 24, 2020, and one covering the enclosed permit requirements from August 25, 2020 to December 31, 2020. For questions on semi-annual reporting requirements for this facility please contact Air Compliance and Enforcement staff at 785-296-1542 or 785-296-0243.

Bureau of Air
Permitting Section
Curtis State Office Building, Suite 310
Topeka, KS 66612-1366

Phone: 785-296-1581
Fax: 785-559-4256
Jason.Heitman@ks.gov

As provided for in K.S.A. 65-3008b(e), an owner or operator may request a hearing within 15 days after affirmations, modification or reversal of a permit decision pursuant to subsection (b) of K.S.A. 65-3008a. In the Request for Hearing, the owner or operator shall specify the provision of this act or rule and regulation allegedly violated, the facts constituting the alleged violation and secretary's intended action. Such request must be submitted to: Director, Office of Administrative Hearings, 1020 S. Kansas Avenue, Topeka, Kansas 66612-1327. Failure to submit a timely request shall result in a waiver of the right to hearing.

The enclosed Class I Operating Permit does not relieve the permittee of the responsibility to obtain an air construction permit for future modifications that increase the facility's potential-to-emit of any regulated air pollutants as specified in K.A.R. 28-19-300, or any other modifications that may trigger other applicable air emission requirements.

Please include the source ID number listed above in all communications with KDHE in reference to this permitted facility. If you have any questions about the enclosed permit, please contact me at (785) 296-1581.

Sincerely,

Jason Heitman
Engineering Associate
Air Permitting Section

Enclosure
JH:jh
c: SEDO
OP100032 v5.1

Division of Environment
Curtis State Office Building
1000 SW Jackson St., Suite 400
Topeka, KS 66612-1367

Kansas
Department of Health and Environment

Phone: 785-296-1535
Fax: 785-559-4264
www.kdheks.gov

Lee A. Norman, M.D., Secretary

Laura Kelly, Governor

AIR EMISSION SOURCE
CLASS I OPERATING PERMIT

Source ID No.: 0210002

Initial Date: December 24, 2003 (Revised on September 30, 2004)

Renewal Date(s): July 31, 2007 (Reopened on June 24, 2008)
August 27, 2009
March 30, 2018 (Modified on August 25, 2020)

Expiration Date: March 29, 2023

Source Name: The Empire District Electric Company – Riverton Power Station

SIC Code: 4911; Electric Services

NAICS Code; 221112; Fossil fuel power generation

Source Location: 7240 Southeast Highway 66
Riverton, Cherokee County, KS 66770

Mailing Address: P.O. Box 127
Joplin, MO 64802

Contact Person: Mr. Ed Easson
Riverton Plant Manager
Telephone No. (417) 625-6113
Email: eeasson@empiredistrict.com

Bureau of Air
Permitting Section
Curtis State Office Building, Suite 310
Topeka, KS 66612-1366

Phone: 785-296-1581
Fax: 785-559-4256
Jason.Heitman@ks.gov

TABLE OF CONTENTS

I. Authority

This permit, developed in accordance with the provisions of K.A.R. 28-19-500 et seq., "Operating Permit," meets the requirements of K.A.R. 28-19-510 et seq., Class I Operating Permits and Title V of the Federal Clean Air Act.

II. Permit Intent

The purpose of this Class I Air Operating Permit is to identify the emission sources and types of regulated air pollutants emitted from the facility; the emission limitations, standards and requirements applicable to each source; and the monitoring, record keeping and reporting requirements applicable to each source as of the effective date of this permit.

At the time of permit issuance, this facility required a Class I Operating Permit because it met the definition of a major stationary source with potential to emit greater than 100 tons per year (per 40 CFR part 70.1 and 70.2) for Oxides of Nitrogen (NO_X), particulate matter (PM), particulate matter with aerodynamic diameter equal to or less than 10 µm (PM_{10}), carbon monoxide (CO) and volatile organic compounds (VOCs). It has a potential to emit greater than 75,000 tons per year for greenhouse gases.

III. Facility Description

The Empire District Electric Company – Riverton Power Station (EDEC) is a fossil fuel electricity generation facility located on Highway 66 in Riverton, Kansas. Previously, the facility operated two coal/natural gas fired boilers and four combustion turbines in Cherokee County Kansas. However, in 2012, the coal/natural gas fired boilers were modified to combust only natural gas fuel. Since the 2009 air operating permit renewal, the facility permanently retired its two (2) boiler units, permanently retired one (1) simple cycle combustion turbine, and converted one (1) simple cycle combustion turbine (unit 12) to a combined cycle combustion unit. The facility is permitted to have two (2) simple cycle combustion turbines that can be fueled by distillate No. 1 and No. 2 fuel oil during emergency conditions, as stated in the permit, and during black start testing.

Insignificant activities at the plant include space heaters, parts cleaners, lube oil and loop seal vapor extractors, emergency generators, cooling towers, diesel fuel tanks, gasoline tanks, solvent tank, and laboratory activities.

IV. Emission Source Summary

Emission Source ID	Emission Source Description	Stack/Vent ID	Control Equipment ID & Description	Applicable Regulations
EU-010	Unit # 10 natural gas fired **simple cycle combustion turbine**, 236 MMBtu/hr-based on the emission test report data, March 1989 at 16.7 MW. 16.7 MW net capabilities as per SPP 12 summer rating natural gas. The MMBtu/hr rating is temperature and atmosphere condition dependent. Allowed to use distillate fuel oil No. 1 and No. 2 for black start testing requirements per March 18, 2013 Construction Permit (C-10747)	SV-7	CE-010 Water Injection NO_X Control	K.A.R 28-19-650(a)(3) 40 CFR Part 64 (CAM)

Emission Source ID	Emission Source Description	Stack/Vent ID	Control Equipment ID & Description	Applicable Regulations
EU-011	Unit # 11 natural gas fired **simple cycle combustion turbine**, 228 MMBtu/hr – based on emission test report, March 1989 at 15.6 MW. 16 MW – net capabilities as per SPP Criteria 12 summer rating. The MMBtu/hr rating is temperature and atmospheric conditions dependent. Allowed to use distillate fuel oil No. 1 and No. 2 for black start testing requirements per March 18, 2013 Construction Permit (C-10747)	SV-8	CE-011 Water Injection NO_X Control	K.A.R 28-19-650(a)(3) 40 CFR Part 64 (CAM)
EU-012	Unit # 12 natural gas fired **combined cycle unit (CT+HRSG),** 1,963 MMBtu/hr, rated at 250 MW – net capabilities as per SPP Criteria 12 summer rating. The MMBtu/hr rating is temperature and atmospheric conditions dependent. (issued on July 11, 2013; C-10913)	SV-12	CE-012 Dry Low NO_X Burner Selective Catalytic Reduction (SCR)	K.A.R 28-19-650(a)(3) 40 CFR Part 60 Subpart KKKK K.A.R 28-19-275, Acid Rain Permit PSD Construction Permit dated August 25, 2020
TK-002	Unleaded Gasoline Storage Tank (500 Gal)	SV-TK-002	None	MACT CCCCCC
TK-004	Diesel Fuel Tank (1260 MGal)	SV-TK-004	None	K.A.R 28-19-650(a)(2)
EU-ENG02[1]	1102 HP (750 KW) diesel fired **emergency** engine. Cummins, 2015. (Emergency generator for the combined cycle unit)	None	None	MACT ZZZZ NSPS Subpart IIII K.A.R 28-19-650(a)(3) PSD Construction Permit dated August 25, 2020
EU-ENG03	260 HP **emergency** diesel fired engine. Cummins 1950's (Black start generator for turbine auxiliaries on Unit # 10)	None	None	MACT ZZZZ K.A.R 28-19-650(a)(2)
EU-ENG04	435 HP **emergency** diesel fired engine for Startup of Unit # 10 combustion turbine. Allis-Chalmers, 1980's	None	None	MACT ZZZZ K.A.R 28-19-650(a)(2)
EU-ENG05	435 HP **emergency** diesel fired engine for Startup of Unit # 11 combustion turbine. Allis-Chalmers, 1980's	None	None	MACT ZZZZ K.A.R 28-19-650(a)(2)
EU-ENG06[2]	227 HP **emergency** diesel fired fire pump. Cummins Fire Power, model CFP83-F20. Manufactured on February 2006.	None	None	MACT ZZZZ K.A.R 28-19-650(a)(3)
EU-CT01	Mechanical Draft Cooling Tower with high efficiency drift eliminator	None	None	K.A.R 28-19-650(a)(2) PSD Construction Permit dated August 25, 2020

Emission Source ID	Emission Source Description	Stack/Vent ID	Control Equipment ID & Description	Applicable Regulations
SF6	Four (4) SF6 Circuit Breakers. State-of-art totally enclosed SF6 circuit breakers with density (leak detection) alarms. (Applies to breaker ID# CB16111; CB16113; CB16157; & CB16159 in sub. #453)	None	None	K.A.R 28-19-650(a)(2) PSD Construction Permit dated August 25, 2020
FS-001	Yard Traffic From Paved Roads	None	None	None

[1] This engine was installed with Unit # 12 conversion to combined cycle under Construction PSD permit issued on July 11, 2013 and final amendment on August 25, 2020.
[2] This fire pump was approved by a construction approval issued on December 19, 2005 by KDHE and Applicability determination issued on August 28, 2008 (C-8024) resulted in 40 CFR Part 63, Subpart ZZZZ applicability because the facility signed the construction agreement on July 29, 2005.
PSD is referred as Prevention of Significant Deterioration per 40 CFR Part 52.21 adopted by reference K.A.R. 28-19-350.

V. Summary of Applicable Requirements

VI. Applicable Requirements of the Emission Sources

A. The following emission source is subject to the requirements listed below:

EU-012/SV-12/CE-012* Unit # 12, Combined Cycle Unit (CT + HRSG), 1,963 MMBtu/hr, 250 MW

(*This information is provided as a descriptor of the unit for informational purposes only. The MMBtu/hr rating is dependent on temperature and atmospheric conditions.)

1. Limitation or Standard

This unit is subject to the Title IV Acid Rain Requirements adopted by reference K.A.R 28-19-275. Where an applicable requirement is more stringent than an applicable requirement of regulations promulgated under Title IV, both provisions shall be incorporated into this permit. [40 CFR 70.6(a)(1)(ii)]. Emissions from this source shall not exceed any allowances that the source lawfully holds under Title IV of the Act or its regulations. [40 CFR 70.6(a)(4)]. As specified in 40 CFR 72.72(b)(1)(x), the acid rain permit requirements shall be a complete and segregate portion of the Operating Permit. As such, the requirements are found in **Attachment**

C (Acid Rain Permit Requirements) of this permit. This unit is subject to and must comply with all the terms and conditions of Attachment C.

2. Limitation or Standard

K.A.R. 28-19-650 (a)(3): Opacity of visible emissions from EU-012 shall not exceed 20 percent.

[Per Amended PSD Construction Permit dated August 25, 2020]

a. Monitoring

As described in the Section IX. **Opacity Limitations and Monitoring** of this permit, no monitoring is required for units combusting natural gas only.

b. Recordkeeping and Reporting

As described in the Section IX. **Opacity Limitations and Monitoring** of this permit, no recordkeeping is required for units combusting natural gas only.

3. Limitation or Standard

The owner or operator shall comply with the applicable requirements of 40 CFR Part 60, Subpart A, *General Provisions* and **Subpart KKKK,** *Standards of Performance for Stationary Combustion Turbines that Commenced Construction, Modification, or Reconstruction after February 18, 2005,* which is adopted by reference in K.A.R. 28-19-720. In addition to the requirements of 40 CFR 60 Subpart KKKK, the unit shall not exceed the following limitations, except during periods of startup, shutdown or malfunction. If a conflict exists between a federal requirement and what is summarized in Section B. 2. of this permit, the federal requirements shall take precedence.

[Per Amended PSD Construction Permit dated August 25, 2020]

NOTE: The Best Available Control Technology (BACT) Analysis limits for $PM/PM_{2.5}/PM_{10}$ and CO_2 applicable for EU-012 are listed in Section VI. C. 1. of this permit.

a. The NO_X emissions from the combined cycle unit Combustion Turbine + Heat Recovery Steam Generator (CT + HRSG) shall meet the applicable emission limits specified in 40 CFR 60.4320(a). NO_X emission limits shall not exceed the limits specified in Table 1 to Subpart KKKK of Part 60—Nitrogen Oxide Emission Limits for New Stationary Combustion Turbines. The NO_X emission limit specified in 40 CFR 60.4350(h) is 15 ppm @ 15% O_2 on a 30 unit operating day rolling average.

b. The SO_2 emissions from the combined cycle unit (CT+HRSG) shall meet the applicable emission limits specified in 40 CFR 60.4330(a) which is 110 Nanogram/joule (0.90 lb/gross MW-hr).

c. Startup and shutdown for the combined cycle unit (CT+HRSG) are defined as follows:

i. Startup: The period from when the combined cycle unit (CT+HRSG) is started until reaching 50% of the combustion turbine (CT) load. The startup periods will be readily identifiable by the monitoring system. Such periods shall not exceed 8 hours.

ii. Shutdown: The period when the combined cycle unit (CT+HRSG) is shutting down from 50% of combustion turbine (CT) load to 0% of combustion turbine (CT) load. The shutdown periods shall be readily identifiable by the monitoring system. Such periods shall not exceed 2 hours.

d. The combined cycle unit (CT+HRSG) shall operate at load conditions between 50% of combustion turbine (CT) load and 100% of combined cycle unit (including HRSG and maximum duct burner firing capacity) except during startup and shutdown.

e. The combined cycle unit (CT+HRSG) shall use only natural gas as a fuel.

f. If a conflict exists between the federal rule and the current permit limits/standards, requirements of the federal rule shall take precedent. However, the facility needs to take into consideration any applicable BACT or federally enforceable limits that is more stringent than federal rule. Under this case, the facility shall comply with the most stringent limit, as appropriate.

g. Performance Testing and Compliance

i. In accordance with 40 CFR Part 60, Subpart KKKK, all continuous monitoring systems and monitoring devices required shall be installed and operational prior to conducting performance tests under 40 CFR 60.8. Verification of operational status, at a minimum, includes completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device as required by 40 CFR 60.13.

ii. Compliance with NO_X emission limits for the combined cycle unit (CT+ HRSG) shall be demonstrated with a NO_X continuous emission monitor (CEM) that follows the requirements listed in 40 CFR 60.4340(b).

iii. The NO_X CEM shall be installed, certified, operated, maintained, and quality assured in accordance with 40 CFR 60.4345.

iv. Compliance with SO_2 emission limits shall be demonstrated in accordance with the requirements in 40 CFR 60.4330 and 40 CFR 60.4360.

h. Monitoring

i. The owner or operator shall install and operate a continuous monitoring system (CMS) capable of monitoring the startup and shut down of the unit. The CMS shall be installed, certified, operated, maintained, and quality assured in accordance with manufacturer's specifications. Installation of CMS in the Unit # 12 eliminates any applicable CAM plan for this unit.

i. Recordkeeping

i. The owner or operator of the combined cycle unit (CT+HRSG) shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the combined cycle unit (CT+HRSG); any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. These requirements are described in 40 CFR 60.7(b).

ii. Each startup and each shutdown shall be readily identifiable by the monitoring system. These records shall be kept in a permanent form suitable for inspection, in a readily available location and maintained for five years from the date of the record. Any deviation from operating limitations in this section shall be reported as described in the Section XII. **Reporting of Deviations from Permit Terms** of this permit.

j. Reporting

i. The combined cycle combustion unit (CT+HRSG) excess emissions and monitoring systems performance report and/or a summary report shall be submitted to the KDHE as required by 40 CFR 60.7(c) on a semi-annual basis. The summary report form shall contain the information and be in the format as specified in 40 CFR 60.7(d). One summary report form for NO_X and one summary report form for the sulfur content of the fuel shall be submitted. Written reports of excess emissions shall include the following information:

a) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, the date and time of commencement and completion of each time period of excess emissions, and the process operating time during the reporting period.

b) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions, the nature and cause of any malfunction (if known), the corrective action taken, or preventative measures adopted.

c) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero span checks and the nature of the system repairs and adjustments.

d) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

ii. Reports required including the periods of excess emissions as defined in 40 CFR 60.4350 shall be reported accordingly.

iii. The compliance demonstration for the SO_2 emission limit for the CT+HRSG meeting the applicable emission limit specified in 40 CFR 60.4330(a), shall be reported on annual basis. This compliance demonstration is not part of the 40 CFR 60.7(c) excess emission and monitoring during downtime reporting.

iv. A summary report shall be reported to KDHE on a semi-annual basis and shall be postmarked by July 31th and January 31th of each calendar year.

k. Notification

K.A.R. 28-19-720, which adopted by reference 40 CFR 60.7(a) and 60.8(d) requires that written notifications of the following be submitted to KDHE, **if still applicable:**

i. The date construction of the combined cycle unit (CT+HRSG) and emergency diesel generator are commenced. The notification is to be postmarked no less than 30 days after such date.

ii. The actual date of initial startup of the combined cycle unit (CT+HRSG) and emergency diesel generator. The notification is to be postmarked within 15 days after such date.

iii. The actual date the combined cycle unit (CT+HRSG) enters commercial operation and the date(s) Unit # 7 and Unit # 8 are removed from service. The notification is to be postmarked within 15 days after such date(s).

iv. The date when the initial performance testing of the combined cycle unit (CT+HRSG) is to commence. The notification is to be postmarked no less than 30 days prior to such date.

v. The date upon which demonstration of the continuous monitoring system performance commences in accordance with 40 CFR 60.13(c). Notification shall be postmarked no less than 30 days prior to such date.

B. The following emission sources are subject to the requirements listed below:

EU-010/SV-7/CE-010	Unit # 10, Simple Cycle Gas Turbine 236 MMBtu/hr – based on emission test report, March 1989 at 16.7 MW. 16.7 MW net capabilities as per SPP Criteria 12 summer rating*.
EU-011/SV-8/CE-011	Unit # 11, Simple Cycle Gas Turbine 228 MMBtu/hr – based on emission test report, March 1989 at 15.6 MW. 16 MW net capabilities as per SPP Criteria 12 summer rating*.

(*This information is provided as a descriptor of the unit for informational purposes only. The MMBtu/hr rating is dependent on temperature and atmospheric conditions.)

1. Limitation or Standard

The opacity of visible emissions shall not exceed 20 percent opacity except as provided in K.A.R 28-19-11. [K.A.R 28-19-650(a)(3)]

a. Monitoring

During periods of natural gas operation:

As described in the Section IX. **Opacity Limitations and Monitoring** of this permit, no monitoring is required at the time of permit issuance.

During periods of fuel oil operation:

Periodic monitoring will be performed as provided in the Section IX. **Opacity Limitations and Monitoring** of this permit.

b. Recordkeeping and Reporting

During periods of natural gas operation:

As described in the Section IX. **Opacity Limitations and Monitoring** of this permit, no recordkeeping is required at the time of permit issuance.

During periods of fuel oil operation:

Records of periodic monitoring will be performed as provided in the Section IX. **Opacity Limitations and Monitoring** of this permit.

2. Limitation or Standard

Operating hours for these units shall not exceed a maximum of 5,600 hours per year total time for both units, based on a rolling 365-day period, and only as peaking units and not as combined cycle units except to the extent that Unit # 10 will be used to heat feed water for the Unit # 8 indirect heater

[Per Air Emission Permit Dated June 28, 1990]

NOTE: Unit # 8 was retired in 2015. Therefore, Unit # 10 can no longer be used to heat feed water for the Unit # 8 indirect heater. However, the hours of operation limitation still apply.

a. Monitoring

The owner or operator shall calculate hours of operation for each 365-day consecutive period.

b. Recordkeeping and Reporting

The owner or operator shall record the unit number, date of operation, operating hours, water-to-fuel ratio and natural gas consumption in units compatible with determining water-to-fuel ratio. These records shall be kept in a readily available location. The owner or operator shall submit a copy of these records to the KDHE on a semi-annual basis postmarked by July 30th and January 30th of each calendar year.

3. Limitation or Standard

The owner or operator shall not allow CO emissions with a greater concentration than 140 parts per million by volume (ppmv) on a dry basis and corrected for Carbon Dioxide ($CO_{2)}$ interference. The control equipment shall be continuously operated while operating the emission unit. [K.A.R. 28-19-501(d)(1)]

[Per Air Emission Permit Dated June 28, 1990]

a. Monitoring

The owner or operator shall install and operate a continuous monitoring system to monitor and record the natural gas consumption and the ratio of water-to-fuel being fired in Unit # 10 and Unit # 11. The continuous monitoring system must be accurate within +1- 5.0%.

[Air Emission Permit Dated June 28, 1990]

4. Limitation or Standard

The owner or operator shall not allow NO_X emissions with a greater concentration than 42 parts per million by volume (ppmv) at 15% oxygen on a dry basis of NO_X. The control equipment shall be continuously operated while operating the emission unit. [K.A.R. 28-19-501(d)(1)]

[Per Air Emission Permit Dated June 28, 1990]

a. Monitoring

The owner or operator shall install and operate a continuous monitoring system to monitor and record the natural gas consumption and the ratio of water-to-fuel being fired in Unit # 10 and Unit # 11. The continuous monitoring system must be accurate within +/- 5.0%. [Air Emission Permit Dated June 28, 1990]

5. Limitation or Standard

The following provisions apply to this unit when operating on Pipeline Quality Natural Gas. The owner/operator shall conduct Compliance Assurance Monitoring (CAM) in accordance with 40 CFR 64 and in **Attachment D (CAM Plan)**.

a. Monitoring

i. The owner/operator is required to track the fuel usage and water usage on a continuous basis as defined in 40 CFR 60.13(e)(2) using a dedicated natural gas flowmeter for each combustion turbine (Unit # 10 & Unit # 11).

ii. The owner/operator shall affirm the validity of the fuel-to-water ratio by performance test, at nominal full load operation, and using natural gas as a fuel, no later than 180 days following the re-issuance of the Title V permit. Within 60 days following the successful completion of the performance test, a revised CAM Plan shall be submitted to the KDHE for approval if test results indicate that a revision is necessary.

b. Recordkeeping and Reporting

i. Records shall be maintained in accordance with the requirements of 40 CFR 64 and the CAM Plan in Attachment D. The CAM Plan and any revisions of such plan approved by the KDHE shall be maintained onsite in a form suitable for inspection.

ii. Excursions for Unit # 10 and Unit # 11 shall be documented and submitted in the semi-annual monitoring report. CAM Recordkeeping and Reporting shall begin with the first semi-annual reporting period following the approval of the CAM Plan by the KDHE. Until the submittal of an approved CAM Plan, the facility shall submit reports as required by the Class I permit issued on December 24, 2003.

iii. CAM Monitoring shall continue and be reported at each semi-annual reporting period.

6. Limitation or Standard

The use of No. 2 fuel oil in the Unit # 10 and Unit # 11 is permitted only under the following conditions:

a. The natural gas delivery system must break down and the required natural gas supply becomes unavailable to The Empire District Electric Company; and
[Construction Permit Dated June 28, 1990]

NOTE: Water injection is only required during the natural gas combustion.

b. The power requirements from the Riverton station cannot be assumed by power generating equipment other than Unit # 10 and Unit # 11.
[Construction Permit Dated June 28, 1990]

c. The owner or operator shall be permitted to use distillate fuel oils as needed to meet the black start testing requirements by any Federal or State regulatory agency. Water injection will not be required during the black start testing. None of the electricity produced during the black start test shall be sold on the bulk electrical system.
[Amended Construction Permit dated March 18, 2013]

d. Recordkeeping and Reporting

Except for black-start testing requirements, within 10 days after each occurrence of using No. 1 or 2 fuel oils in Unit # 10 and Unit # 11, The Empire District Electric Company shall notify KDHE in writing of the circumstances causing the natural gas delivery system break-down and why other Riverton generating equipment could not be substituted for Unit # 10 and Unit # 11. The Notification is to include the date, time of operation, and kilowatt-hours produced during the operation of Unit # 10 and Unit # 11 on No. 1 or No. 2 fuel oil.
[Construction Permit Dated June 28, 1990]

e. Notification

The Empire District Electric Company shall notify KDHE in writing within 10 days after each occurrence of using distillate fuel oils for testing the black start capabilities of Unit # 10 or Unit # 11 to meet any Federal or State standards. The notification shall include the date, time of testing, duration of testing, unit tested, and gallons of oil consumed during the test.
[Amended Construction Permit dated March 18, 2013]

C. The following emission sources are subject to the requirements listed below:

EU-012	Unit # 12, Combined Cycle Unit (CT+ HRSG), 1,963 MMBtu/hr - 250 MW
EU-ENG02	1102 HP (750 KW) Emergency Diesel Fired Engine
IA-021	Mechanical Draft Cooling Tower with high efficiency drift eliminators
SF_6	Four (4) Sulfur Hexafluoride (SF_6) circuit breakers (CB16111; CB16113; CB16157; & CB161559 in sub. # 453)

[Per Amended PSD Construction Permit dated August 25, 2020]

1. Limitation or Standard

a. The Best Available Control Technology (BACT) emission limitations established in this permit apply to the combined cycle unit (CT+HRSG) at all times, including startup, shutdown and malfunction, except as provided in Performance Testing and Compliance and Malfunction Section VI. C. 3. below:

b. The **BACT PM/PM_{10}/$PM_{2.5}$ emissions** shall not exceed:

i. 30.2 lb per hour (front + back half) for the EU-012 - combined cycle unit (CT + HRSG).

ii. 0.15 g/bhp-hr for the emergency diesel engine (EU-ENG02).

iii. drift rate of 0.0005 percent of inlet flow for the mechanical draft cooling tower (IA-021).

c. The **BACT Greenhouse Gas emissions (GHG)** shall not exceed:

For the combined cycle combustion turbine (EU-012) and duct burners

i. CO_2 emissions are limited to 1,021,770 tons CO_2/year on a 12-month rolling basis, and the following equation (Equation G-4 of Section 2.3 of 40 CFR Part 75, Appendix G, Revised on March 19, 2012):

$$W_{CO_2} = \left(\frac{F_c \times H \times U_f \times MW_{CO_2}}{2000} \right) \qquad (Eq.\ G\text{-}4)$$

Where:

W_{CO2} = CO_2 emitted from combustion, tons/hr.

MW CO_2 = Molecular weight of carbon dioxide, 44.0 lb/lb-mole.

F_c = Carbon based F-factor, 1040 scf/mmBtu for natural gas; 1,420 scf/mmBtu for crude, residual, or distillate oil; and calculated according to the procedures in section 3.3.5 of appendix F of 40 CFR, Part 75 for other gaseous fuels.

H = Hourly heat input in MMBtu, as calculated using the procedures in Section 5 of Appendix F of 40 CFR, Part 75.

U_f = (1/385) lb-mole/scf CO_2 at 14.7 psia and 68 °F.

ii. BACT emission limits are required for CO_2, only, since it is 99.9% of emissions.

For the emergency diesel engine (EU-ENG02)

i. CO_2 emissions are limited to 59.3 tons CO_2/year on a 12-month rolling basis and the following equation:

CO_2 (lb/MMBtu) = EF x (2.20462 lb/kg)

Where:

EF = Emission Factor for CO_2 in lb/MMBtu using specified values for Distillate Fuel Oil No. 2 from Table C-1 of 40 CFR Part 98, Subpart C, Revised on May 31, 2013)

ii. BACT emission limits are required for CO_2, only, since it is 99.9% of emissions

For the Sulfur hexafluoride Electrical Breakers (SF6)

Maintain fugitive emissions below 0.5% (by weight) of SF_6 with state-of-the-art SF_6

circuit breakers with leak detection and implementation of a Leak Detection and Repair (LDAR) program and density monitor alarm set to a threshold of 10 percent.

2. BACT Permit Conditions [Per Amended PSD Construction Permit dated August 25, 2020].

a. The high efficiency drift eliminators for the Mechanical Draft Cooling Tower are an integral part of the design and shall function any time the cooling tower is in operation.

b. Compliance with the PM/$PM_{10}$$PM_{2.5}$ BACT limit for the Mechanical Draft Cooling Tower shall be demonstrated by maintaining records of the vendor-guaranteed drift rate of 0.0005 percent of inlet flow. No chromium-based water treatment chemicals shall be used in the circulating water system and thus the requirements of 40 CFR Part 63, Subpart Q shall not apply.

c. The emergency diesel engine shall burn only low sulfur diesel fuel oil that is ≤ (less than or equal to) 15 ppm sulfur in accordance with 40 CFR 60.4207(b).

d. Compliance with the PM/PM_{10}/$PM_{2.5}$ and CO_2e BACT limit for the emergency diesel engine is established by the BACT analysis and emissions calculations submitted with the permit application.

e. Compliance with the CO_2e BACT limit for the combined cycle unit, including the combustion turbine and duct burners shall be demonstrated with an oxygen (O_2) concentration monitor in accordance with CO_2 calculations provided in 40 CFR Part 75. Calculations shall consist of CO_2 emissions only, which account for 99.9% of total CO_2e emissions.

f. Compliance with the PM/PM_{10}/$PM_{2.5}$ BACT limit for the combined cycle unit shall be demonstrated with a performance test.

g. The SF_6 Insulated Circuit Breakers shall continuously use a density (leak detection) alarm system on the SF_6 circuit breakers with a threshold of 10 percent. In the event of an alarm, the owner or operator shall immediately investigate the event and take necessary corrective action to address any problems.

h. Compliance with the CO_2e BACT limit for the SF_6 Insulated Circuit Breakers shall be demonstrated by calculating the annual mass emissions of SF_6 from the electrical breakers using an annual SF_6 leak rate of 0.5% by weight and the Global Warming Potential Factor for SF_6 from Table A-1 of 40 CFR Part 98, Subpart A (as published in 74 FR 56374 on October 30, 2009) to determine resulting emissions on a monthly basis. Reports of excess emissions shall be submitted semi-annually.

i. The facility has permanently removed Unit # 7 and Unit # 8 from service when the Unit # 12 combined cycle unit (CT+HRSG) began commercial operation.

j. If a conflict exists between the federal rule and the current permit limits/standards, requirements of the federal rule shall take precedent. However, the facility needs to take into consideration any applicable BACT or federally enforceable limits that is more stringent than federal rule. Under this case, the facility shall comply with the most stringent limit, as appropriate.

3. Performance Testing and Compliance [Per Amended PSD Construction Permit dated August 25, 2020].

a. Within 60 days after achieving a maximum production rate at which the combined cycle unit (CT+HRSG) will be operated, but not later than 180 days after initial startup of the combined cycle unit, and every 5 years thereafter, the owner or operator shall conduct performance test(s) for PM, PM_{10}, $PM_{2.5}$ to demonstrate compliance with the applicable conditions and limitations set forth in this permit and furnish KDHE a written report of the results of such performance test(s).

b. Within 60 days after achieving a maximum production rate at which the combined cycle unit (CT+HRSG) will be operated, but not later than 180 days after initial start-up of the combined cycle unit, the owner or operator shall conduct performance test for Sulfuric Acid Mist to demonstrate compliance with the estimated emission rates supplied in the permit application and furnish KDHE a written report of the results of such performance test.

c. In conducting the performance tests required by this permit, the reference test methods and procedures outlined in K.A.R. 28-19-212 and approved by KDHE, shall be used to demonstrate compliance with the limitation and conditions set forth in this permit.

d. Malfunction: The owner or operator must notify KDHE by telephone, facsimile, or electronic mail transmission within two (2) working days following the discovery of any failure of air pollution control equipment, process equipment, or of the failure of any process to operate in a normal manner which results in an increase in emission above the allowable emission limit stated in section “IX. Air Emission Limitations” of the PSD Construction Permit issued on August 25, 2020 (CSD00082 v1.1) and section VI. C. 1. of this permit, a written notification shall be submitted within ten (10) days of the event.

The written notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial malfunction, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed in section “IX. Air Emission Limitations” of the PSD Construction Permit issued on August 25, 2020 (CSD00082 v1.1) and section VI. C. 1. of this permit, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification shall not automatically absolve the owner or operator of liability for the excess emissions resulting from such event.

The following criteria will be used by KDHE to evaluate whether emissions from a malfunction are excluded in determining compliance with the emission rate contained herein:

i. The excess emissions were caused by a sudden, unavoidable breakdown of technology, beyond the control of the owner or operator;

ii. The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned for, and could not have been avoided by better operation and maintenance practices;

iii. To the maximum extent practicable, the air pollution control equipment or processes were maintained and operated in a manner consistent with good practices for minimizing emissions;

iv. Repairs were made in an expeditious fashion when the operator knew or should have known that applicable emission limitations were being exceeded. Off-shift labor and overtime must have been utilized, to the extent practicable, to ensure that such repairs were made as expeditiously as practicable.

v. The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;

vi. All possible steps were taken to minimize the impact of the excess emissions on ambient air quality;

vii. All emission monitoring systems were kept in operation if at all possible;

viii. The owner or operator's actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs, or other relevant evidence;

ix. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

x. The owner or operator properly and promptly notified the appropriate regulatory authority.

d. Stack parameters for all equipment listed in the Section VI.C. (i.e., EU-012, EU-ENG02, IA-021, and SF_6), which may include, but not limited to stack heights, stack diameters, exhaust temperatures, emission rates, and exit velocities, shall be consistent with data provided for the dispersion modeling analysis. Actual operational conditions shall be consistent with data provided for the dispersion modeling analysis.

4. Recordkeeping [Per Amended PSD Construction Permit dated August 25, 2020].

a. As required under 40 CFR 60.7(f), the owner or operator shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records, with certain exceptions specified under 40 CFR 60.7(f).

b. Reports of excess emissions shall be submitted semi-annually in accordance with the requirements in 40 CFR 60.7(c).

c. Records shall be kept on site for two (2) years in accordance with 40 CFR 60.7(f).

5. Reporting [Per Amended PSD Construction Permit dated August 25, 2020].

a. Items required to be reported semi-annually shall be submitted to KDHE and postmarked by the 30th day following the end of each calendar half.

b. Items required to be reported annually shall be submitted to KDHE and postmarked by the 30th day following the end of each calendar year.

c. If significant changes are made, or modeling parameters are not representative of site conditions, the owner or operator shall document compliance with the applicable NAAQS and allowable PSD increment consumption and submit documentation of compliance to KDHE prior to making the change(s). KDHE has final authority in determining what constitutes a significant change. If modeling indicates a potential NAAQS or increment exceedance, then mitigation shall be required.

6. Notification [Per Amended PSD Construction Permit dated August 25, 2020].

Notification of the performance tests shall include a performance test protocol which includes a description of the test and applicable test methods. Notification of the date(s) for performance testing shall be submitted to KDHE, postmarked at least 30 days prior to such date(s). Performance testing shall also be coordinated with the KDHE Bureau of Air, Compliance and Enforcement Section at 785-296-0243 at least 30 days prior to the date(s) of the test.

D. The following emission sources are subject to the requirements listed below:

EU-ENG02 1102 HP (750 KW) Emergency Diesel Fired Engine

[Per Amended PSD Construction Permit dated August 25, 2020]

1. Limitation or Standard

The emergency diesel fired engine (EU-ENG02) is subject to 40 CFR 60, Subpart A, *General Provisions*, and **Subpart IIII,** *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*. If a conflict exists between a federal requirement and what is summarized in Section D. 1. of this permit, the federal requirement shall take precedence.

a. Pursuant to 40 CFR 60.4205(b), the owner or operator of the emergency diesel engine, shall comply with the applicable emission standards. In accordance with 40 CFR 60.4205(b), which references 40 CFR 89.112 and 40 CFR 89.113, the emergency diesel engine's NMHC+ NO_X emissions shall not exceed 6.4 g/kW-hr (4.8 g/hp-hr), CO emissions shall not exceed 3.5 g/kW-hr (2.6 g/hp-hr), and PM emissions shall not exceed 0.2 g/kW-hr (0.15 g/hp-hr) over the life of the engine. The emergency diesel engine shall be certified by the manufacturer to meet these emission limits per 40 CFR 60.4202(a)(2). The owner or operator shall also meet the requirements of 40 CFR 60.4206.

b. Per 40 CFR 63.6590(c), stationary RICE engines meeting requirements and regulations of 40 CFR Part 60 Subpart IIII, for compression ignition engines, are considered to meet the requirements of 40 CFR Part 63, Subpart ZZZZ.

c. If a conflict exists between the federal rule and the current permit limits/standards, requirements of the federal rule shall take precedent. However, the facility needs to take into consideration any applicable BACT or federally enforceable limits that is more stringent than federal rule. Under this case, the facility shall comply with the most stringent limit, as appropriate.

d. 40 CFR Part 60 Subpart IIII - Requirements for the emergency diesel engine shall be followed:

i. For the emergency diesel engine, 40 CFR 60.4218 identifies the 40 CFR 60 Subpart A requirements that are applicable.

ii. The owner or operator shall comply with applicable diesel fuel requirements of 40 CFR 60.4207(b).

iii. For the emergency diesel engine, the provisions of 40 CFR 60.4211(f)[1] apply. Maintenance checks and readiness testing is limited to 100 hours per year, of

[1] On May 1, 2015, the U.S. Court of Appeals for the District of Columbia Circuit issued a decision vacating paragraphs 40 CFR 60.4211(f)(2)(ii)-(iii), which was then mandated by the court to be effective on May 4, 2016 upon EPA's request.

which up to 50 hours per year may be for non-emergency situations. There is no time limit on the use of the emergency diesel engine in emergency situations.

iv. The owner or operator shall comply with applicable requirements of 40 CFR Part 60 Subpart IIII. If a conflict exists between the federal rule and the permit, the requirements of the federal rule shall take precedence.

e. Monitoring

If the emergency diesel engine does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter prior to startup of the engine, as specified in 40 CFR 60.4209.

f. Performance Testing and Compliance

For the emergency diesel engine, the owner or operator must install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions. The owner or operator must not change emission-related settings in a way that is not permitted by the manufacturer, or thereafter demonstrate compliance as specified at 40 CFR 60.4211(g)(3).

g. Recordkeeping and Reporting

i. Records shall be kept on site for two (2) years in accordance with 40 CFR 60.7(f).

ii. For the emergency diesel engine, the owner or operator must keep records of the emergency and non-emergency operations of the engine through a non-resettable hour meter if it does not meet the standards applicable to the non-emergency engines in the applicable model year. The times of operation and the reasons for operation must be recorded, as specified in 40 CFR 60.4214(b).

E. The following emission sources are subject to the requirements listed below:

EU-ENG03	260 HP Emergency Diesel Fired Engine, Cummins, 1950's
EU-ENG04	435 HP Emergency Diesel Fired Engine, 1980s, Startup for Unit # 10 turbine
EU-ENG05	435 HP Emergency Diesel Fired Engine, 1980s, Startup for Unit # 11 turbine
EU-ENG06	227 HP Emergency Diesel Fired Fire Pump, (February 2006), Cummins Fire Power

1. Limitation or Standard

These engines are subject to 40 CFR 63, Subpart A, *General Provisions*, and **Subpart ZZZZ**, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*. If a conflict exists between a federal requirement and what is summarized in Section E. 1. of this permit, the federal requirement shall take precedence.

The following requirements are applicable for the emergency diesel fired engines less than 500 HP, located at the area source of HAP emissions:

a. Operate and maintain engines according to the manufacturer's emission-related written instructions. [40 CFR 63.6625(e)]

b. Install a non-resettable hour meter on each engine. [40 CFR 63.6625(f)]

c. Per 40 CFR 63.6625(i), if you own or operate a stationary compression ignition engine, subject to work, operation or management practices in Table 2d, the operator/owner have the option of utilizing an oil analysis program to order to extend the specified oil change requirement in Table 2d of this subpart. The analysis program at minimum should analyze the following three parameters: Total Base Number, viscosity, and percent water content. The owner or operator shall comply with the condemning limits specified in 40 CFR 63.6625(i). If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

d. The owner/operator shall comply with the applicable requirements in the Table 2c of this subpart as specified below:

   i. Per 40 CFR 63.6625(h), minimize each engine's time spent at idle and each engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which the emission standards are applicable at all times other than startup in Table 2d [40 CFR 63, Subpart ZZZZ, Table 2d]

   ii. Change oil and filter every 500 hours of operation or annually, whichever comes first or use oil analysis program to extend oil change frequencies. [40 CFR 63, Subpart ZZZZ, Table 2d]

   iii. For the emergency diesel engines inspect air cleaners every 1,000 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63, Subpart ZZZZ, Table 2d]

   iv. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63, Subpart ZZZZ, Table 2d]

   v. The affected engines shall comply with the general requirements to comply with this subpart as specified in 40 CFR 63.6605(a) and (b).

e. <u>Continuous Compliance Requirements</u>

   i. The owner/operator of the engines must demonstrate continuous compliance with each emission limitation, operating limitation, and other applicable requirements in Table 2d and according to methods specified in Table 6 of this subpart, as applicable. [40 CFR 63.6640(a)]

   ii. The owner/operator shall report each instance of deviation in which you did not meet the emission or operating limitation in Table 2d of this subpart, as applicable. The reporting of the deviations must be done according to requirements in 40 CFR 63.6650. The owner/operator must conduct a performance test to demonstrate continuous compliance, if there is a change of

catalyst and re-establish operating parameters values for the engines. [40 CFR 63.6640(b)]

iii. The owner/operator shall report of each instances of deviation in which the engines do not meet the requirements in Table 8 (General Provisions of Part 63) for stationary RICE located at the area source for HAP emissions for engines less than 500 HP per 40 CFR 63.6640(e).

iv. The owner/operator shall comply with the General Provisions listed in Table 8 of this subpart that are applicable for stationary emergency engines located at an area source for HAP emissions for engines less than 500 HP. [40 CFR 63.6665]

v. In order for the engines to be considered as emergency stationary RICE, the owner/operator must operate the engines per requirements of 40 CFR 63.6640(f)(1) through (4)[2]. This includes 100 hours per calendar year maximum to operate the engine for maintenance, checks, testing, and voltage deviation periods. Per 40 CFR 63.6640(f)(4) the emergency engines can be operated up to 50 hours per calendar year in non-emergency situations for engines located at an area source for HAP emissions. The 50 hours of operation will be counted as part of the 100 hours per calendar year for maintenance, checks, testing, and voltage deviation periods. Except as provided in paragraphs (f)(4)(i) and (ii) of 40 CFR 63.6640, non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

vi. Beginning January 1, 2015, if you own or operate an existing emergency compression ignition (CI) RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available more than 15 hours per calendar year for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii)[2]or that operates per 40 CFR 63.6640(f)(4)(ii), you must use the diesel fuel that meets the requirements in 40 CFR 80.510(b) for non-road diesel fuel, except that any existing diesel fuel purchased prior to January 1, 2015, may be used until depleted. [40 CFR 63.6604(b)]

vii. There is no time limit on use of emergency stationary RICE in emergency situations. [40 CFR 63.6640(f)(1)].

f. <u>Recordkeeping and Reporting</u>

i. The owner or operator shall keep records of the hours of operation of each engine that are recorded through the non-resettable hour meter. The owner or operator shall also document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. [40 CFR 63.6655(f)]

[2] On May 1, 2015, the U.S. Court of Appeals for the District of Columbia Circuit issued a decision vacating paragraphs 40 CFR 63.6640(f)(2)(ii)-(iii), which was then mandated by the court to be effective on May 4, 2016 upon EPA's request.

ii. The owner or operator shall maintain records of maintenance. [40 CFR 63.6655(e)]

iii. Each record shall be kept for a minimum of five (5) years from the date of the record. [40 CFR 63.6660]

F. The following emission sources are subject to the requirements listed below:

Unit # 7: Boiler # 39, retired unit as of June 30, 2014
Unit # 8: Boiler # 40, retired unit as of June 30, 2015
Unit # 12 (EU-012) Combined cycle combustion unit (currently active)

1. Limitation or Standard

The owner or operator shall comply with the applicable requirements of 40 CFR 97 for the Transport Rule (TR) NO_X Annual Trading Program found at 40 CFR 97 Subpart AAAAA; for the TR SO_2 Group 2 Trading Program found at 40 CFR 97 Subpart DDDDD, and NO_X Ozone Season Group 2 Trading Program found at 40 CFR 97 Subpart EEEEE, as provided in **Attachment E (Cross State Air Pollution Rule).**

a. Monitoring, Recordkeeping and Reporting

Conduct monitoring, maintain records and submit reports in accordance with 40 CFR 97, as outlined in Attachment E (Cross State Air Pollution Rule).

G. The following emission sources are subject to the requirements listed below:

TK-004 Diesel Fuel Tank (1,260 MGal)

1. Limitation or Standard

The opacity of visible emissions shall not exceed 40 percent except as provided in K.A.R. 28-19-11. [K.A.R. 28-19-650(a)(2)]

a. Monitoring

As described in the Section IX. **Opacity Limitations and Monitoring** of this permit, no monitoring is required at the time of permit issuance.

b. Recordkeeping and Reporting

As described in the Section IX. **Opacity Limitations and Monitoring** of this permit, no recordkeeping is required at the time of permit issuance.

H. The following emission sources are subject to the requirements listed below:

TK-002 Unleaded Gasoline Storage Tank (500 Gal)

1. Limitation or Standard

The Unleaded Gasoline Storage Tank (TK-002) is subject to 40 CFR 63, Subpart A, *General Provisions*, and **Subpart CCCCCC**, *National Emissions Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities.* If a conflict exists between a

federal requirement and what is summarized in Section H. 1. of this permit, the federal requirement shall take precedence.

The following requirements are applicable for the Unleaded Gasoline Storage Tank (TK-002), located at the area source of HAP emissions:

a. The facility must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

   i. Minimize gasoline spills;

   ii. Clean up spills as expeditiously as practicable;

   iii. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

   iv. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

b. The facility is not required to submit notifications or reports as specified in 40 CFR 63.11125, 40 CFR 60.11126, or Subpart A of 40 CFR Part 63, but must have records available within 24 hours of a request by the Administrator to document gasoline throughput.

c. The facility must comply with the requirements of 40 CFR Part 63, Subpart CCCCCC, by the applicable dates specified in 40 CFR 63.11113.

d. Portable gasoline containers that meet the requirements of 40 CFR Part 59, Subpart F, are considered acceptable for compliance with paragraph a. iii.

Since monitoring/recordkeeping requirements are required in **Section VI. Applicable Requirements**, the facility is required to submit a semi-annual report every six months. Refer to **Section XIV. G., Compliance Certification** for the submittal dates of required reports.

VII. Opacity Summary

All emission units other than those listed below are subject to 20% opacity:

Emission Source Description	Stack/Vent ID	Emission Source ID	Opacity Requirement
260 HP Emergency Diesel Fired Engine. Cummings 1950's engine for Black Start	SV-ENG03	EU-ENG03	40%
435 HP Diesel Fired Engine for Startup of Unit # 10 combustion turbine. Allis-Chalmers, 1980's.	SV-ENG04	EU-ENG04	40%
435 HP Diesel Fired Engine for Startup of Unit # 11 combustion turbine, Allis-Chalmers, 1980's.	SV-ENG05	EU-ENG05	40%
Diesel Fuel Tank (1,260 MGal)	SV-TK-004	TK-004	40%
Unleaded Gasoline Storage Tank (500 Gal)	SV-TK-002	TK-002	40%
Diesel Fuel Tank (500 Gal)	SV-IA-003	IA-003	40%

Portable Space Heaters indirect fired (0.4 MMBtu/Hr Average)	None	IA-004	<40%
Degreasing Solvent Usage	None	IA-005	40%
Laboratory Activities	None	IA-006	40%
Waste Oil Storage Drums	None	IA-007	40%
High Pressure Washer (#2 Diesel indirect fired Heater, 0.05 MMBtu/hr average)	None	IA-008	<40%
Unit #10 Lube Oil Vapor Extractor	SV-IA-018	IA-018	40%
Unit #11 Lube Oil Vapor Extractor	SV-IA-018	IA-019	40%
Diesel Fuel Tank (500 Gal)	None	IA-020	40%
Mechanical Draft Cooling Tower with high efficiency drift eliminator	None	EU-CT01	40%

VIII. Facility-Wide Applicable Requirements

The permittee shall comply with the following when required by the relevant regulation:

A. K.A.R. 28-19-30 through K.A.R. 28-19-32, Indirect Heating Equipment Emissions

Except as provided in K.A.R. 28-19-32, aggregated emissions of particulate matter from indirect heating equipment shall not exceed those specified in table H-1 of K.A.R. 28-19-31(a), or for equipment having intermediate heat input between 10 MMBtu/hr and 10,000 MMBtu/hr, the allowable emission rate may be determined by the equation provided at K.A.R. 28-19-31(a).

Records shall be maintained of any recalculations and evaluations. These records shall include the design rate capacity of the unit, emission factors used in calculations and potential/allowable emission rates.

B. K.A.R. 28-19-55 through K.A.R. 28-19-58, Air Pollution Emergency Episode Plans

The permittee shall comply with the requirements of K.A.R. 28-19-55 through 28-19-58, Air Pollution Emergency Episode Plans, and shall maintain on site an emergency episode plan if the KDHE requires an emergency episode plan be developed pursuant to K.A.R. 28-19-58.

C. K.A.R. 28-19-210, Calculation of Actual Emissions

The following applies to emission control equipment not otherwise addressed in this permit:

If the owner or operator uses air emission control equipment, not otherwise addressed in this permit, to calculate actual emissions, the air emission control equipment shall be maintained in accordance with the manufacturer's recommendation. The owner or operator shall keep a written log recording the date and type of action taken when performing preventive or other maintenance on the air emission control equipment.

D. K.A.R. 28-19-517, Annual Emissions Inventory and Fees

1. Annual Emissions Inventory:

   The owner or operator shall submit all operating or relevant information to estimate emissions for the preceding year to the KDHE This information shall be submitted on or before the date specified at K.A.R. 28-19-517 or amendments thereto.

2. Annual Emissions Fee:

The owner or operator of a permitted emissions unit or stationary source is required to pay fees to the permitting authority consistent with the fee schedule set out in the regulations pursuant to K.A.R. 28-19-517(b).

3. Submittal:

Each annual emissions inventory and each annual emissions fee shall be submitted on forms provided or approved by the KDHE as specified in K.A.R. 28-19-517(c). At the time of permit issuance, the due date for submittal of this information is on or before April 1 of each year.

4. Late Fee and refund:

Each owner or operator who fails to submit the annual emission inventory and pay the annual emissions fee by the due date specified shall pay a late fee as specified in K.A.R. 28-19-517(d) and any overpayment of $100.00 or more made by the owner or operator of a stationary source may be refunded.

E. K.A.R. 28-19-645, Open Burning

The permittee is prohibited from conducting open burning, except as allowed by K.A.R. 28-19-647 and K.A.R. 28-19-648.

F. K.A.R. 28-19-735, Which Adopts by Reference 40 CFR Part 61 Subpart A, General Provisions, and Subpart M, NESHAP for Asbestos

The permittee shall comply with the National Emission Standard for Hazardous Air Pollutants (NESHAP) 40 CFR Part 61 Subpart A, General Provisions, and Subpart M, National Emission Standard for Asbestos, adopted by K.A.R. 28-19-735 and K.A.R. 28-50-1 et seq., when conducting any renovation or demolition activities at the facility.

G. 40 CFR Part 68, Chemical Accident Prevention Provisions

Chemical Accident Prevention Provisions, 40 CFR Part 68, is applicable to an owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined in 40 CFR 68.115.

If the stationary source is subject to 40 CFR Part 68, but is not required to comply with those requirements as of the effective date of this operating permit, the stationary source shall be in compliance with the requirements of 40 CFR Part 68 no later than the latest of the following dates:

1. Three years after the date on which a regulated substance is first listed in 40 CFR 68.130; or
2. The date on which a regulated substance is first present above a threshold quantity in a process.

H. 40 CFR Part 82, Protection of Stratospheric Ozone

The permittee shall comply with 40 CFR Part 82, Protection of Stratospheric Ozone. Affected controlled substances include, but are not limited to, chlorofluorocarbons, hydrochlorofluorocarbon refrigerants, halons, carbon tetrachloride, and methyl chloroform (specific affected controlled substances are listed in 40 CFR Part 82, Subpart A, appendices A {Class I} and B {Class II}).

The following subparts and sections of 40 CFR Part 82 are conditions of this permit:

Subpart A - Production and Consumption Controls

Subpart B - Servicing of Motor Vehicle Air Conditioners
Subpart E - Labeling of Products Using Ozone-Depleting Substances: Section; 82.106 Warning statement requirements, 82.108 Placement of warning statement, 82.110 Form of label bearing warning statement, and 82.112 Removal of label bearing warning statement
Subpart F - Recycling and Emissions Reduction: Sections; 82.156 Required practices, 82.158 Standards for recycling and recovery equipment, 82.161 Technician certification, and 82.166 Reporting and recordkeeping requirements
Subpart G - Significant New Alternatives Policy Program

IX. Opacity Limitations and Monitoring

Except as otherwise provided in K.A.R. 28-19-9, K.A.R. 28-19-11, and K.A.R. 28-19-650(c) or as otherwise identified in the Applicable Requirements portion of this permit, K.A.R. 28-19-650(a)(3) limits visible air emissions from each emission unit to 20%. K.A.R. 28-19-31(b)(2) limits visible air emissions from any indirect heating equipment to less than 20%.

Except as otherwise provided in the applicable requirements portion of this permit, emissions from the following or similar activities do not require routine periodic monitoring: emissions vented inside an enclosed building or structure, from cooling towers, and from evaporative VOC sources; and emissions from turbines, reciprocating internal combustion engines, burners in indirect heating applications, and space heaters when burning natural gas, propane/LPG, or refinery gas.

Routine periodic monitoring requirements: Except as otherwise provided in the applicable requirements portion of this permit or as provided above, the owner or operator shall perform a qualitative assessment at least once per calendar month, with at least one week between assessments. The monthly qualitative assessment shall include each activity at the facility, which is operating at the time scheduled. For each activity from which the opacity of visible emissions appears to exceed the limit, the permittee shall take appropriate action to correct process operating parameters, after which the permittee shall perform an additional qualitative assessment for that unit. If, at the end of ten operating days from the date of the possible exceedance, opacity of visible emissions appears to continue to exceed the limit, the owner or operator shall notify the agency, within seven days of the end of the ten operating day period, and shall schedule a test utilizing EPA Method 9, of visible emissions from the unit appearing to exceed the limit, within 30 days of the end of the ten operating day period.

The person responsible for making qualitative opacity assessments shall be knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting and wind, and the presence of uncombined water in the plume.[3] The permittee shall keep records of each qualitative assessment, which shall include the time and date of the assessment, a description of the emission point from which any unusual emissions emanated, the steps taken to correct any abnormal emissions, and the name of the person conducting the assessment.

The KDHE Bureau of Air does not consider a qualitative assessment in which emissions appear to exceed the applicable opacity limits to be a violation or deviation subject to reporting in accordance with Section **XIII. Reporting of Deviations from Permit Terms**. A Method 9 evaluation that shows opacity exceeding the emission limit would be subject to reporting in accordance with Section **XIII. Reporting of Deviations from Permit Terms**.

[3] For basic information about opacity observations, refer to 40 CFR Part 60 Appendix A, Method 9.

X. Requirements Which Will Become Applicable During the Permit Term

The owner or operator, in accordance with the provisions of K.A.R. 28-19-511(b)(16)(C)(ii) and K.A.R. 28-19-512(a)(23) shall comply in a timely manner with those applicable requirements that become effective during the permit term.

XI. Permit Shield

Compliance with the conditions of this permit shall be deemed in compliance with the applicable requirements of the Kansas air quality program as of the date of permit issuance. This shield applies only to:

A. Applicable requirements included, and specifically identified in the permit; and

B. Applicable requirements that the KDHE has specifically identified in writing as not being applicable to the emissions unit or stationary sources and the determination or a concise summary thereof is included in the permit.

Nothing in this permit shall alter or affect:

A. The liability of a permittee for any violation of an applicable requirement occurring prior to or at the time of issuance of this permit;

B. U.S. EPA's ability to obtain information under Section 114 of the Clean Air Act

C. The provisions of Section 303, Emergency orders, of the Clean Air Act, including the authority of the administrator of the U.S. EPA under that section or the air pollution emergency provisions of the Kansas air quality program regulations, K.A.R. 28-19-55 through 28-19-58; or

D. The applicable requirements of the acid rain program, consistent with section 408(a) of the Act. [K.A.R. 28-19-512(b)]

XII. Testing, Monitoring, Recordkeeping and Reporting

Testing, monitoring, recordkeeping and reporting requirements sufficient to assure compliance with the terms and conditions of the permit are required. [K.A.R. 28-19-512(a)(21)]

In addition to any testing, monitoring, recordkeeping, or reporting requirement contained in Section **VI. Applicable Requirements**, monitoring and reporting may be required under the provisions of K.A.R. 28-19-12, Measurement of Emissions, or as required by any other provision of the Federal Clean Air Act.

Records to support all monitoring and copies of all reports required by the permit must be maintained for a period of at least five years from the date of the activity. [K.A.R. 28-19-512(a)(10)(G)]

Summary reports of any routine, continuous, or periodic monitoring must continue to be submitted at six-month intervals for the duration of the permit. The reporting periods and due dates for these reports are identified in Section **XIV. G., Compliance Certification**. All instances of deviations from permit requirements, **including perceived opacity exceedances,** shall be clearly identified in the report. All reports shall be certified by a responsible official. [K.A.R. 28-19-512(a)(11)(A)]

Submission of quarterly or semi-annual reports required by any applicable requirement which duplicate the reporting required in the previous paragraph will satisfy the reporting requirements of the previous paragraph if noted on the submitted report. [K.A.R. 28-19-512(a)(9)]

Records of required monitoring shall include:

A. The date, place, and time of sampling or measurement;

B. The date(s) analyses were performed;

C. The company or entity which performed the analyses;

D. The analytical techniques or methods used;

E. The results of the analyses;

F. The operating conditions that existed at the time of sampling or measurement; and

G. The retention of records of all required monitoring data and support information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
[K.A.R. 28-19-512(a)(10)]

XIII. Reporting of Deviations from Permit Terms

Unless a different time period is specified in this permit, deviations from the requirements of this permit shall be reported to the KDHE as follows:

A. Deviations which result in emissions exceeding those allowed in this permit shall be reported the next business day following the discovery of the release, with follow-up written notice within five business days following discovery of the release. The report shall include the probable cause of such deviations and any corrective actions or preventive measures taken.

B. Deviations which do not result in emissions exceeding those allowed in this permit shall be reported in writing within ten business days following discovery of the deviation.

Oral notification shall be made to the air program compliance staff in the KDHE central office in Topeka. Written notifications shall also be made to the KDHE central office through KEIMS at https://www.kdheks.gov/bar/keims-BOA.html . [K.A.R. 28-19-512(a)(11)]

XIV. General Provisions

A. K.A.R. 28-19-11, Enforcement Discretion Due to Startup, Shutdown, Malfunctions, or Scheduled Maintenance

An emission source having emissions that are in excess of the applicable emission limitation and standard specified at K.A.R 28-19-30 through 32, K.A.R. 28-19-650, and result from startup, shutdown, malfunctions, or scheduled maintenance of control or processing equipment and appurtenances may be exempt from enforcement action at the secretary's discretion if both of the following conditions are met:

1. The person responsible for the operation of the emission source notifies the KDHE of the occurrence and nature of the excess emissions resulting from startup, shutdown, malfunctions, or scheduled maintenance, in writing, within ten (10) days of discovery of the excess emissions.

2. Reasonable action is taken regarding the occurrence specified in paragraph (1)(a) to initiate and complete any necessary repairs and place the equipment back in operation as quickly as possible.

Emissions that are in excess of the applicable emission source emission limitation and standard specified at K.A.R 28-19-30 through 32, K.A.R. 28-19-650, and result from startup, shutdown, or malfunctions shall be evaluated by the secretary for potential enforcement action based on the frequency and severity of the excess emissions.

Emissions that are in excess of the applicable emission source emission limitation and standard and result from scheduled maintenance of control or processing equipment and appurtenances shall be evaluated by the secretary for potential enforcement action based on the following: (1) the severity of the excess emissions; (2) any prior approval for scheduled maintenance by the secretary; and (3) demonstration that the scheduled maintenance cannot be accomplished by maximum reasonable effort, including off-shift labor where required, during periods of shutdown of any related control or processing equipment.

Any exemption granted under this regulation may be rescinded if the secretary obtains additional information and deems enforcement action necessary based upon this information.

Lack of enforcement for excess emissions under this regulation shall not preclude the taking of enforcement action by USEPA or through private citizen lawsuits.

B. K.A.R. 28-19-752a, Hazardous Air Pollutants; Limitations Applicable to Construction of New Major Sources or Reconstruction of Existing Major Sources

This regulation shall continue in effect for an emissions unit or stationary source until a standard has been promulgated which is applicable to such source pursuant to section 112(d) of the Federal Clean Air Act.

This regulation shall apply whenever construction of a new major source or reconstruction of an existing major source of hazardous air pollutants is proposed.

C. Permit Term and Renewal

This permit has a term of five years unless otherwise stated in this permit. A complete application, as defined in K.A.R. 28-19-518, and any applicable fee must be submitted to the KDHE not less than six months and not more than 18 months prior to the expiration date. This operating permit shall not expire on the expiration date if a complete and timely application has been filed with the KDHE. [K.A.R. 28-19-512(a)(8) and K.A.R. 28-19-514]

D. Severability

The provisions of this permit are severable, and if any portion of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstance, and the remainder of this permit, shall not be affected thereby.
[K.A.R. 28-19-512(a)(13)]

E. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege.
[K.A.R. 28-19-512(a)(14)(D)]

F. Compliance

The owner or operator shall comply with all conditions of the permit and shall continue to comply with applicable requirements with which the owner or operator is in compliance, in accordance with K.A.R. 28-

19-511(b)(16)(C)(i). Any permit noncompliance shall constitute a violation of the Kansas Air Quality Act and shall be grounds for enforcement action, for permit revocation or amendment, or for denial of a permit renewal application. All permit terms and conditions are federally enforceable.

It shall not be a defense for a permittee in an enforcement action to contend that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

This permit may contain provisions which require that data from specific test methods, monitoring, or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Sec. 51.212; 40 CFR Sec.52.12; 40 CFR Sec. 60.11; 40 CFR Sec. 61.12; and incorporation of 40 CFR Sec. 52.33, that allow the use of any credible evidence to establish compliance with applicable requirements. At the issuance of this permit, the State of Kansas has incorporated these provisions in its air quality regulations K.A.R. 28-19-212(c) and (d), K.A.R. 28-19-350, K.A.R. 28-19-720 and K.A.R. 28-19-735.
[K.A.R. 28-19-512(a)(14)]

G. Compliance Certification

The permittee shall annually submit to the Air Compliance and Enforcement Section of the KDHE, and a copy to the Air Branch-Enforcement and Compliance Assurance Division of the U.S. EPA, Region VII, a certification of compliance (Form CR-02, "Annual Certification"). The annual certification shall be submitted through KEIMS at https://www.kdheks.gov/bar/keims-BOA.html. **The due date of the certification will continue to be January 30th of each year.**

The semi-annual summary reports required by Section **XII. Testing, Monitoring, Recordkeeping and Reporting** shall be submitted by the dates specified below for each subsequent reporting period:

Calendar:

- The report covering the period from July 1 to December 31 shall be submitted by January 31 of each year, and
- The report covering the period from January 1 to June 30 shall be submitted by July 31 of each year.

The certification shall include the permit term or condition that is the basis of the certification; the current compliance status; whether compliance was continuous or intermittent; the method or methods used for determining the compliance, currently and over the reporting period; and such other facts as the KDHE may require to determine the compliance status of the source. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate and complete.
[K.A.R. 28-19-512(a)(26) and K.A.R. 28-19-512(a)(27)]

H. Emergency

An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

An emergency shall constitute an affirmative defense to an action brought for noncompliance with such technology-based emission limitation if the conditions below are met. The affirmative defense of

emergency shall be demonstrated through properly signed, contemporaneous operating logs or relevant evidence that:

1. An emergency occurred and that the permittee can identify the cause or causes of the emergency;

2. The permitted facility was at the time being properly operated;

3. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in the permit; and

4. The permittee submitted notice of the emergency, containing a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken, to the KDHE within two working days of the time when emission limitations were exceeded due to the emergency.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof.

These emergency provisions are in addition to any emergency or upset provisions contained in any applicable requirement. Whenever these emergency provisions conflict with the provisions of K.A.R. 28-19-11, these emergency provisions shall control.
[K.A.R. 28-19-512(d)]

I. Inspection and Entry

Upon presentation of credentials and other documents as may be required by law, representatives of the KDHE, including authorized contractors of the KDHE, shall be allowed by the permittee to:

1. enter upon the premises where a regulated facility or activity is located or conducted or where records are kept under conditions of this document;

2. have access to and copies of, at reasonable times, any records that must be kept under conditions of this document;

3. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this document; and

4. as authorized by the Kansas Air Quality Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

[K.A.R. 28-19-512(a)(22)]

J. Permit Amendment, Modification, Reopening, and Changes Not Requiring a Permit Action

The permit may be modified, revoked, reopened, reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation, reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

The permitting authority will reopen and revise or revoke this permit as necessary to remedy deficiencies in the following circumstances:

1. Additional requirements under the Clean Air Act become applicable to the source three or more years prior to the expiration date of this permit. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit.

2. It is determined by the KDHE that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.

3. It is determined by the KDHE that it is necessary to revise or revoke this permit in order to assure compliance with applicable requirements.

This document is subject to periodic review and amending as deemed necessary to fulfill the intent and purpose of the Kansas Air Quality Statutes and the Kansas Air Quality Regulations.

No permit revision shall be required under any approved economic incentives, pollution prevention incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit.
[K.A.R. 28-19-513]

K. Duty to Provide Information

Unless a different time frame is specified in this permit, the permittee shall furnish to the KDHE any information that the KDHE may request in writing within 60 days of the request, unless the KDHE specifies another time period. Submittal of confidential business information must be in accordance with the KDHE procedures. [K.A.R. 28-19-518(c) and K.A.R. 28-19-512(a)(14)(E)]

L. Duty to Supplement

The permittee, upon becoming aware that any relevant facts were omitted from or incorrect information was included in any submittal, shall promptly submit such supplementary facts or corrected information. [K.A.R. 28-19-518(e)]

M. Other Permits and Approvals; Applicability

A construction permit or approval must be obtained from the KDHE prior to commencing any construction or modification of equipment or processes which results in potential emission increases equal to or greater than the thresholds specified at K.A.R. 28-19-300.

This document does not relieve the permittee of the obligation to obtain any approvals, permits, licenses, or documents of sanction which may be required by other federal, state, or local government agencies. [K.A.R. 28-19-512(a)(29)]

N. Submissions

Written notification of malfunctions, exceedances, and deviations shall be submitted through KEIMS. Questions regarding submission may be sent to the following email address: KDHE.BOAKEIMS@ks.gov.

EPA regulations codified in 40 CFR Part 60, 62, and 63 require affected sources to electronically submit performance test reports, notification reports, and periodic reports to EPA, as specified in the affected regulations. As a result, the EPA has developed the Compliance and Emissions Data Reporting Interface (CEDRI), which is accessed through the EPA's **Central Data Exchange (CDX)** (*https://cdx.epa.gov/*). The CDX Web is the application used by EPA programs and various stakeholders to manage environmental data transmitted to EPA in order to meet EPA's electronic reporting requirements. **The source must begin submitting required reports via CEDRI no later than 90 days after the form becomes available in CEDRI.** However, if the reporting form is not available in CEDRI at the time that the report is due, the source must submit the report to the Administrator [address listed in 40 CFR 63.13]:

Kansas Compliance Officer
Air Branch
Enforcement and Compliance Assurance Division
U.S. EPA, Region 7
11201 Renner Blvd.
Lenexa, Kansas 66219

All other reports, notifications, information, and other correspondence (including submission of the Annual Certification Form CR-02) shall be submitted through the Kansas Environmental Information Management System (KEIMS):

http://www.kdheks.gov/bar/keims-BOA.html

A copy of each Annual Certification Form CR-02 shall be submitted to~~:~~

Kansas Compliance Officer
Air Branch
Enforcement and Compliance Assurance Division
U.S. EPA, Region 7
11201 Renner Blvd.
Lenexa, Kansas 66219

The Annual Certification shall be certified by a responsible official. This certification shall state that, based on the information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete.
[K.A.R. 28-19-512(a)(21) and K.A.R. 28-19-512(a)(27)]

When specified in the permit, contact the SEDO office at:

Southeast District Office
308 West 14th Street
Chanute, Kansas 66720
(620) 860-7235

Permit Writer

Jason Heitman
Engineering Associate
Air Permitting Section

JH:jh
c: SEDO
OP100032 v5.1 (modifies OP100032 v5.0, O-12086)

ATTACHMENT A

List of Acronyms and Symbols

SID: 0210002

0P100032v5.1

List of Acronyms and Symbols

Acronym or Symbol	Description
2SLB	2-stroke lean burn
4SLB	4-stroke lean burn
4SRB	4-stroke rich burn
µm	micrometer (or micron, 10^{-6} meter)
acfm	actual cubic feet per minute
ANSI	American National Standards Institute
AP-42	compilation of air pollutant emission factors (U.S. EPA)
AQI	Air Quality Index
ASTM	American Society for Testing and Materials (now ASTM International)
BACT	best available control technology
BOA	KDHE Bureau of Air
Btu	British thermal unit
CAA	Clean Air Act (1970)
CAAA	Clean Air Act Amendments (1990)
CAS	Chemical Abstracts Service
CBSA	Core-Based Statistical Area
CD	compliance demonstration (form)
CDE	control device efficiency
CE	capture efficiency
CEM	continuous emission monitor(ing)
CEMS	continuous emission monitoring system
CFC	chlorofluorocarbon
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CISWI	commercial/industrial solid waste incinerator
CMS	continuous monitoring system
CO	carbon monoxide
COM	continuous opacity monitor(ing)
COMS	continuous opacity monitoring system
CPM	continuous parameter monitor(ing)
CPMS	continuous parameter monitoring system
CR	certification (form)
CSAPR	Cross-State Air Pollution Rule
CTG	Control Techniques Guideline (U.S. EPA)
DDGS	distillers dry grain solubles
dscf	dry standard cubic foot
dscm	dry standard cubic meter
DSI	dry sorbent injection

E10	10% ethanol blend (10% ethanol, 90% gasoline by volume)
EF	emission factor
EG	emission guideline
EGU	electric generating unit
EI	emissions inventory
EM	emission calculations (form)
EPA	Environmental Protection Agency (or U.S. EPA)
EU	emission unit
FE	fugitive emission
FESOP	federally enforceable state operating permit
FGD	flue gas desulfurization
FGR	flue gas recirculation
FIP	federal implementation plan
g	gram
GDF	gasoline dispensing facility
GDV	gasoline delivery vessel
GEP	good engineering practice
GI	general information (form)
GOP	General Operating Permit
gph	gallons per hour
gpm	gallons per minute
gr	grain (1/7000 lb avoirdupois)
HAP	hazardous air pollutant
HC	hydrocarbon
HCFC	hydrochlorofluorocarbon
HMIWI	hospital/medical/infectious waste incinerator
HON	hazardous organic NESHAP
hp	horsepower
IA	insignificant activity
ICE	internal combustion engine
JCDHE	Johnson County Department of Health and Environment
K.A.R.	Kansas Administrative Regulation
KDHE	Kansas Department of Health and Environment
K.S.A.	Kansas Statutes Annotated
kW	kilowatt
LAER	lowest achievable emission rate
LFGE	landfill gas-to-energy
LNB	low NO_x burner
MACT	maximum achievable control technology
MATS	Mercury and Air Toxics Standards (rule)
MBtu	thousand Btu
ME	monitoring equipment (form)
Mg	megagram (10^6 grams, 1 metric ton, 1 tonne)

MMBtu	million Btu
MOD	modification (form)
MON	miscellaneous organic NESHAP
MSDS	material safety data sheet
MSW	municipal solid waste
MWC	municipal waste combustor
MWI	medical waste incinerator
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NCDO	North Central District Office (KDHE)
NEDO	Northeast District Office (KDHE)
NESHAP	national emission standard(s) for hazardous air pollutants
NMOC	non-methane organic compound
NO_x, NOX	nitrogen oxides
NSPS	new source performance standard
NSR	new source review
NWDO	Northwest District Office (KDHE)
OAQPS	Office of Air Quality Planning and Standards (U.S. EPA)
OM&M	operation, maintenance, and monitoring
OSHA	Occupational Safety and Health Administration (U.S. Dept. of Labor)
P2	pollution prevention
PAL	plant-wide applicability limitation
PCB	polychlorinated biphenyl
PCD	pollution control device
PM	particulate matter
PM_{10}, PM10	PM with an aerodynamic diameter of less than or equal to 10 μm
$PM_{2.5}$, PM2.5	PM with an aerodynamic diameter of less than or equal to 2.5 μm
PMD	portable monitoring device
ppmv	parts per million, volumetric basis
ppmw	parts per million, weight basis
PSD	prevention of significant deterioration
psia	pounds per square inch, absolute
psig	pounds per square inch, gauge or gage
PTE	potential to emit, potential-to-emit
QA/QC	quality assurance / quality control
RACM	reasonably available control measure(s)
RACT	reasonable available control technology
RATA	relative accuracy test audit
RICE	reciprocating internal combustion engine
RMP	risk management plan
RTO	regenerative thermal oxidizer
RVP	Reid vapor pressure (psia at 100 °F)
SBEAP	(Kansas) Small Business Environmental Assistance Program

SCDO	South Central District Office (KDHE)
scfm	standard cubic feet per minute
SCR	selective catalytic reduction
SEDO	Southeast District Office (KDHE)
SEP	supplemental environmental project
SIC	Standard Industrial Classification (code)
SIP	state implementation plan
SLEIS	State and Local Emissions Inventory System (emissions inventory database)
SNCR	selective non-catalytic reduction
SOCMI	synthetic organic chemical manufacturing industry
SO_x, SOX	sulfur oxides (typically measured as sulfur dioxide, SO_2)
SPP	Southwest Power Pool (electric grid operator for Kansas)
SWDO	Southwest District Office (KDHE)
TCO	thermal catalytic oxidizer
TDF	tire-derived fuel
THC	total hydrocarbons
TO	thermal oxidizer
TOC	total organic carbon; total organic compounds
TOG	total organic gases
tph	tons per hour
tpy	tons per year
TR	Transport Rule
TRS	total reduced sulfur
TSP	total suspended particulate(s)
ULSD	ultra low sulfur diesel
U.S. EPA, USEPA	United States Environmental Protection Agency
USC	United States Code
VOC	volatile organic compound
VOL	volatile organic liquid
VRU	vapor recovery unit
WDEH	Wichita Department of Environmental Health
WDF	waste-derived fuel
WDGS	wet distiller's grains with solubles
WTE	waste to energy
WYCO-KCK	Unified Government of Wyandotte County and Kansas City, Kansas Health Department

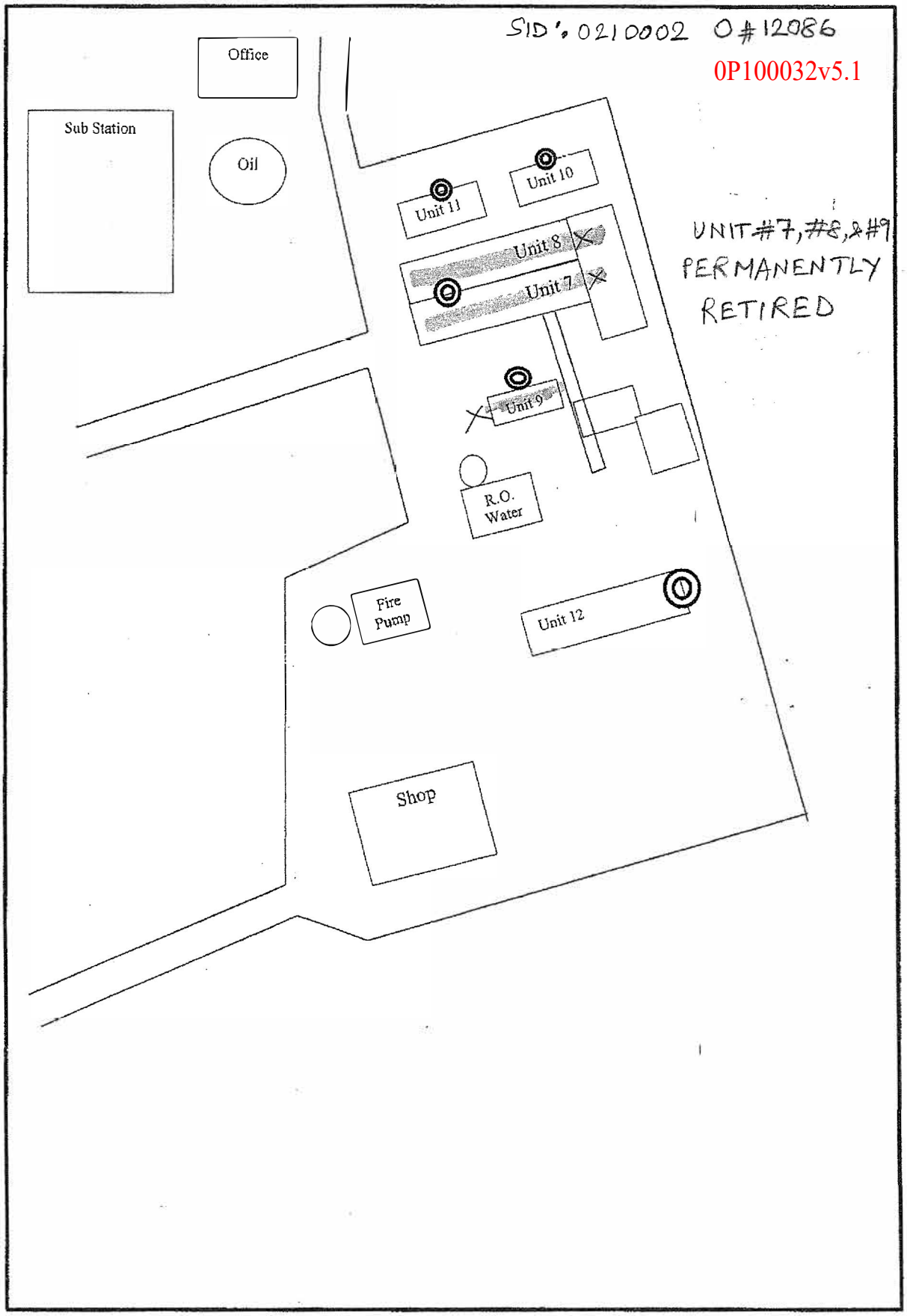
ATTACHMENT B

Site Diagram

SID: 0210002

OP100032v5.1

Current Riverton Plant Configuration



Revised 10-25-13

ATTACHMENT C

ACID RAIN PERMIT REQUIREMENTS

for

The Empire District Electric Company- Riverton Power Station

SID: 0210002
OP100032v5.1

I. SO_2 Allocations and NO_X Emission Limits for each affected unit

SO2 Allowances from 40 CFR Part 73, Table 2					
Unit	**Allowances**				
	2020*	**2021***	**2022***	**2023***	**2024***
Boiler #39 (retired)**	1,039	1,039	1,039	1,039	1,039
Boiler #40 (retired)**	1,766	1,766	1,766	1,766	1,766
EU-012	0	0	0	0	0

***** The number of allowances allocated to Phase II affected units by U.S. EPA may change in future revisions to 40 CFR part 73 Table 2. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitates a revision to the unit SO_2 allowance allocations identified in this permit (See 40 CFR 72.84).

****** Unit No. Boiler #39 was permanently retired effective June 30, 2014. Unit No. Boiler #40 was permanently retired effective June 30, 2015.

Based on 40 CFR 72.8(c), a unit that was issued a written exemption under this section and that is permanently retired shall be exempt from the Acid Rain Program, except for the provisions of 40 CFR 72.2 through 72.6, 40 CFR 72.10 through 72.13, and subpart B of 40 CFR Part 73, and shall be subject to the requirements of 40 CFR 72.8(d) in lieu of the requirements set forth in the written exemption. The permitting authority shall amend under 40 CFR 72.83 the operating permit covering the source at which the unit is located, if the source has such a permit, to add the provisions and requirements of the exemption under 40 CFR 72.8(c) and (d).

In accordance with 40 CFR 72.8(d), a unit exempt under this section shall not emit any sulfur dioxide (SO_2) and nitrogen oxides (NO_X) starting on the date that the exemption (January 1, 2016) takes effect. The owner or operator shall comply with all the requirements of 40 CFR 72.8(d), "Special Provisions" section, to demonstrate that the unit was permanently retired.

NO_x Emission Limits from 40 CFR Part 76	
Unit	**NO_x Emission Limit (Annual Average)**
39***	0.46 lbs/MMBtu
40***	0.40 lbs/MMBtu

*** Pursuant to 40 CFR 72.40(d)(1), the Kansas Department of Health and Environment, Bureau of Air has terminated the approved NO_X emissions averaging plan for Unit No. 39 effective July 30, 2014, after the facility has submitted a withdrawal notification before October 1, 2014, and for Unit No. 40 effective July 30, 2015, after the facility has submitted a withdrawal notification before October 1, 2015, in accordance with 40 CFR 76.11(d)(3). The designated representative of Westar Energy, Inc. has also submitted a signed and certified revised Acid Rain NO_X Compliance Plan.

Under the revised NO_X Compliance Plan, these unit's NO_X emissions shall not exceed the applicable standard annual average emission limitation. The owner or operator shall also determine the annual average NO_X emission rate, in lb/mmBTU, using the methods and procedures in 40 CFR Part 75, as specified in 40 CFR 76.7.

In addition to the described NO_X Compliance Plan, this unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_X Compliance Plan and requirements covering excess emissions.

II. Standard Requirements

A. Permit Requirements

1. The designated representative of each affected source and each affected unit at the source shall:

   a. Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and

   b. Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;

2. The owners and operators of each affected source and each affected unit at the source shall:

   a. Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and

   b. Have an Acid Rain Permit.

B. Monitoring Requirements

1. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.

2. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.

3. The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

C. Sulfur Dioxide Requirements

1. The owners and operators of each source and each affected unit at the source shall:

a. Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) or in the compliance subaccount of another affected unit at the same source, not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and

b. Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.

2. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.

3. An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:

a. Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or

b. Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).

4. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.

5. An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.

6. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.

7. An allowance allocated by the Administrator under the Acid Rain Program does not constitute property right.

D. Nitrogen Oxides Requirements

1. The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

E. Excess Emissions Requirements

1. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.

2. The owners and operators of an affected unit that has excess emissions in any calendar year shall:

a. Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and

b. Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

F. Recordkeeping and Reporting Requirements

1. Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:

   a. The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;

   b. All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.

   c. Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,

   d. Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.

   e. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

G. Liability

1. Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.

2. Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.

3. No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.

4. Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.

5. Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.

6. Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans) and 40 CFR 76.11 (NO_x averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one affected unit shall not be liable for any violation by any other affected unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.

7. Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

H. Effect on Other Authorities

1. No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

   a. Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;

   b. Limiting the number of allowances a unit can hold; *provided*, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;

   c. Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;

   d. Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,

   e. Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

III. <u>Reporting Requirements</u>

A. The following reports shall be submitted to the Air Permit Section of KDHE:

1. Pursuant to 40 CFR Part 75.14, coal and oil fired units are required to have a continuous opacity monitoring system (COMS), unless exempt as per 40 CFR 75.14 (b), (c), (d), and (e), and in 40 CFR 75.18. As required by 40 CFR Part 75.65, excess emission of opacity

shall be reported to KDHE. The format for these semiannual reports shall be as specified in 40 CFR 60.7. An excess emission is determined from one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period. An excess emission is defined as any 6-minute period in excess of the opacity limit specified for that emission unit, except for one 6-minute period per hour of not more than the opacity limit plus 35% (27% opacity if the limit is 20% or 54% opacity if the limit is 40%). This standard applies at all times except during periods of startup, shutdown, and malfunction. These reports shall be submitted as specified under periodic monitoring in the Testing, Monitoring, Record keeping, and Reporting section of the operating permit.

2. Any revisions to the Acid Rain permit shall be made in accordance with 40 CFR Part 72, Subpart H, ' 72.80 through ' 72.85. Permit modification requests shall be submitted to KDHE.

3. Changes to the Designated Representative of Alternate Designated Representative shall be made in accordance with 40 CFR 72.23. A copy of the complete certificate of representation shall be submitted to KDHE within thirty (30) days of submittal to the Administrator of the EPA.

ATTACHMENT D

COMPLIANCE ASSURANCE MONITORING (CAM) PLAN

for

The Empire District Electric Company
Riverton Generating Station

Affected Units
Simple Cycle Combustion Turbines# 10 and#11

Class I Operating Permit Renewal

SID: 0210002; OP100032v5.1

Introduction

The Empire District Electric Co- Riverton Generating Station. (EDE) Units #10 and #11 are simple-cycle natural gas fired nominal 16 MW (net capabilities as per SPP Criteria 12 summer rating) combustion turbines with each having a nominal heat input of 227.5 MMBtu/hr.

40 CFR Part 64 established Compliance Assurance Monitoring (CAM) regulations that require certain emission sources which rely on add-on pollution control devices to develop a plan to provide reasonable assurance that the emission source is in continuous compliance with emission limitations that are otherwise applicable. This CAM plan has been developed for inclusion in Riverton's Title V operating permit renewal application and it applies only to the afore-mentioned Units #10 and #11.

This CAM plan satisfies the requirements specified in 40 CFR Part 64 and follows the guidance suggested by the EPA in the "Technical Guidance Document: Compliance Assurance Monitoring, Revised Draft of August 1998".

Emissions Unit: UNITS #10 (EU-010) AND #11 (EU-011) Simple Cycle Combustion Turbines

1. NITROGEN OXIDES (NOX) CONTROL TECHNOLOGY

1.1. Water Injection

The units rely on the water-injection control system provided by the original equipment manufacturer - Westinghouse - to limit oxides of nitrogen (NO_X) emissions while combusting the primary fuel (natural gas). Following the requirements of KDHE after installing new fuel flow meters and new programmable logic controller (PLC), the water injection-to fuel being combusted characterization curve was tested on February 22, 2012 for unit #11 and unit #10 was tested on September 7, 2012 in accordance with Method 20 of Appendix A-7, 40 CFR Subpart 60 to assure that NO_X emission rates are less than the emission limitation described in the EDE's Air Emission Permit amended June 28, 1990.

The PLC computes, using the water injection-to fuel being combusted characteristic curve, a water injection demand signal and positions the injection skid water control valve accordingly. In turn, injection water is sprayed into the combustion zone(s) of the turbine through a piping network. The injection water serves to reduce combustion-zone temperature and therefore limits the formation of NO_X during combustion. The actual injection water flow is measured.

Outputs from the PLC are directed to a PC in the control room which displays the control variables continuously. Reports are able to be generated showing hourly averages.

1.2. Applicable Regulations, Emissions limitations, and Monitoring of Operations

1.2.1. APPLICABLE REGULATIONS

Units #10 and #11 were constructed by Westinghouse in 1967 and 1968 when controlling NO_x emissions from these types of combustion turbines was not required. These units were purchased as used turbines by EDE and installed at the Riverton Generating Station. In order to comply with the Best Available Control Technology (BACT) requirements of K.A.R. 28-19-17d, water injection systems were installed to control NO_X during natural gas combustion.

1.2.2. EMISSIONS LIMITATIONS

The emission limitation for NO_X is established in the Riverton Air Emission Permit amended June 28, 1990 as 42 parts per million by volume (ppmv) at 15% oxygen on a dry basis.

1.2.3. MONITORING OF OPERATIONS

Monitoring requirements for Units #10 and #11 are established Riverton Air Emission Permit amended June 28, 1990 as follows:

i. The owner or operator shall install and operate a continuous monitoring system to monitor and record the natural gas consumption and the ratio of water-to-fuel being fired in the Unit No.'s 10 and 11. The continuous monitoring system must be accurate within +/- 5.0%. This requirement does not apply to combusting fuel oil for emergency use.

ii. The continuous monitoring system (CMS) is distinguished from a predicted emission monitoring system (PEMS), in that the output is not expressed in the units of the emission standard. Rather, the system determines a water injection flow rate that is characterized, on the basis of the performance tests, to yield a predicted stack emission rate less than the limitation established in Riverton Air Emission Permit amended June 28, 1990.

1.3. Compliance Demonstration, Test Methods and Procedures

1.3.1. COMPLIANCE DEMONSTRATION

Compliance with the emission limitation is demonstrated by maintaining the water injection/fuel being combusted ratio. The CAM plan testing frequency is given in the Riverton operating permit.

1.3.2. TEST METHODS AND PROCEDURES

Test methods used to establish the predictive water injection/fuel being combusted characteristic curve are in accordance with EPA Method 20.

Procedures pertaining to the notification and completion of the performance tests that are used to establish the predictive water injection/fuel being combusted characteristic curve are in accordance with EPA Method 20.

1.4. Input/output devices, Indicators, Reporting and Recordkeeping

1.4.1. INPUT/OUTPUT DEVICES

Injection water flow is measured by state approved water flow meters. Verification of the accuracy of this device will be determined in the periodic calibration and lineup of devices related to the water-injection control systems. This procedure, in an abbreviated form, is attached as Attachment "A-1".

All the computations associated with positioning the water injection control valve are determined by the on-board PLC, which receives all inputs, processes, and provides all output data.

Compliance with the emission limitation is demonstrated by maintaining the hourly water injection/fuel being combusted that is determined during the testing. An alarm signal output is transmitted to the control room to indicate a departure from the normal operation of the water injection system.

Output from the PLC is displayed on a computer monitor in the control room and the daily operation log sheet of the units will be printed on a printer located in the control room. Output data includes the measured water flow rate, fuel flow date, and the ambient temperature. This information is recorded and an hourly average is calculated.

1.4.2. INDICATORS

EDE establishes, as indicators of continuous compliance, the following:

i. EDE will maintain and operate the installed components of the water injection system and the PLC as a combined Continuous Monitoring System (CMS).

ii. EDE will affirm the validity of the water injection/fuel being combusted ratio characterization curve, via performance testing, at nominal full load operation, and using natural gas as a fuel, no later than 180 days following each normal re-issuance of the initial Title V operating permit.

iii. EDE will perform water injection system calibration lineup verification as necessary; said frequency will be no less than once each 5,600 hours of fired operation for both units, or once during the term of each Title V permit renewal cycle (whichever occurs first).

iv. A spare calibrated water flow meter will be maintained on-site in the event of a malfunction of any water flow meter for units 10 or 11.

v. Actual water injection/fuel being combusted ratio data will be maintained at a level equal to or greater than the computed water injection/fuel being combusted ratio necessary to meet the permitted NOx limit as determined by the NOx stack testing for the permit renewal cycle.

vi. In the event the PLC, or the water injection system malfunctions, and fails to operate as required, EDE will investigate and evaluate the reason for such malfunction and will perform required repairs as expeditiously as possible, including the use of overtime where such action can correct the malfunction.

vii. In each case of a monitoring system malfunction, EDE will, in accordance with §64.7(c) evaluate the performance of the generating unit and other available data collected to assure that no part of the operation has been substantially altered which would reasonably result in a period of excess emissions.

viii. Failure or malfunction of monitoring equipment is not, without other information to the contrary, and as determined in a case-by-case basis, an acknowledgement of excess emissions.

1.4.3. REPORTING AND RECORDKEEPING

EDE will submit monitoring reports to the permitting authority in accordance with 40 CFR 70.6(a)(3)(iii).

EDE will comply with the recordkeeping requirements specified in 40 CFR 70.6(a) (3)(ii) and K.A.R 28-19-512(a)(10)(G). The recordkeeping will include "...records of the monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this part." The recordkeeping requirement identified in these regulations is a period of five years following the date of any sample, measurement, report, or application.

ATTACHMENT E

CROSS-STATE AIR POLLUTION RULE (CSAPR)

TRADING PROGRAM TITLE V REQUIREMENTS

The Empire District Electric Company -Riverton Power Station

Class I Operating Permit Renewal

SID: 0210002; OP100032v5.1

Cross-State Air Pollution Rule (CSAPR) Trading Program Title V Requirements

Description of CSAPR Monitoring Provisions

The CSAPR subject units, and the unit-specific monitoring provisions, at this source are identified in the following tables. These units are subject to the requirements for the CSAPR NO_X Annual Trading Program, CSAPR SO_2 Group 2 Trading Program, and CSAPR NO_X Ozone Season Group 2 Trading Program.

Affected Units: **Unit No. 7 (Boiler # 39, retired unit as of June 30, 2014)** **Unit No. 8 (Boiler # 40, retired unit as of June 30, 2015)** **Unit No. 12 (EU-012, combined cycle combustion turbine, currently active)**					
Parameter	Continuous emission monitoring system or systems (CEMS) requirements pursuant to 40 CFR Part 75, Subpart B (for SO_2 and NO_X monitoring) and 40 CFR Part 75, Subpart H (for NO_X mass emissions monitoring)	Excepted monitoring system requirements for gas- and oil-fired units pursuant to 40 CFR Part 75, Appendix D	Excepted monitoring system requirements for gas- and oil-fired peaking units pursuant to 40 CFR Part 75, Appendix E	Low Mass Emissions excepted monitoring (LME) requirements for gas- and oil-fired units pursuant to 40 CFR 75.19	EPA-approved alternative monitoring system requirements pursuant to 40 CFR Part 75, Subpart E
SO_2					
NO_X	X				
Heat input					

1. The above description of the monitoring used by a unit does not change, create an exemption from, or otherwise affect the monitoring, recordkeeping, and reporting requirements applicable to the unit under 40 CFR 97.430 through 97.435 for the CSAPR NO_X Annual Trading Program, 40 CFR 97.730 through 97.735 for the CSAPR SO_2 Group 2 Trading Program, and 40 CFR 97.830 through 97.835 for the CSAPR NO_X Ozone Season Group 2 Trading Program, as applicable. The monitoring, recordkeeping and reporting requirements applicable to each unit are included below in the standard conditions for the applicable CSAPR trading programs.

2. Owners and operators must submit to the Administrator a monitoring plan for each unit in accordance with 40 CFR 75.53, 75.62 and 75.73, as applicable. The monitoring plan for each unit is available at the EPA's website at https://www.epa.gov/airmarkets/clean-air-markets-monitoring-plans-part-75-sources.

3. Owners and operators that want to use an alternative monitoring system must submit to the Administrator a petition requesting approval of the alternative monitoring system in accordance with 40 CFR Part 75, Subpart E and 40 CFR 75.66 and 97.435 for the CSAPR NO_X Annual Trading Program, 40 CFR 97.735 for the CSAPR SO_2 Group 2 Trading Program, and/or 40 CFR 97.835 for the CSAPR NO_X Ozone Season Group 2 Trading Program, as applicable. The Administrator's response approving or disapproving any petition for an alternative monitoring system is available on the EPA's website at https://www.epa.gov/airmarkets/part-75-petition-responses.

4. Owners and operators that want to use an alternative to any monitoring, recordkeeping, or reporting requirement under 40 CFR 97.430 through 97.434 for the CSAPR NO_X Annual Trading Program, 97.730 through 97.734 for the CSAPR SO_2 Group 2 Trading Program, and/or 40 CFR 97.830 through 97.834 for the CSAPR NO_X Ozone Season Group 2 Trading Program, as applicable, must submit to the Administrator a petition requesting approval of the alternative in accordance with 40 CFR 75.66 and 97.435 for the CSAPR NO_X Annual Trading Program, 97.735 for the CSAPR SO_2 Group 2 Trading Program, and/or 40 CFR 97.835 for the CSAPR NO_X Ozone Season Group 2 Trading Program, as applicable. The Administrator's response approving or disapproving any petition for

an alternative to a monitoring, recordkeeping, or reporting requirement is available on EPA's website at https://www.epa.gov/airmarkets/part-75-petition-responses.

5. The descriptions of monitoring applicable to the unit included above meet the requirement of 40 CFR 97.430 through 97.434 for the CSAPR NO_X Annual Trading Program, 97.730 through 97.734 for the CSAPR SO_2 Group 2 Trading Program, and 40 CFR 97.830 through 97.834 for the CSAPR NO_X Ozone Season Group 2 Trading Program, as applicable, and therefore minor permit modification procedures, in accordance with 40 CFR 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B), may be used to add to or change this unit's monitoring system description.

40 CFR Part 97, Subpart AAAAA – CSAPR NO_X Annual Trading Program

40 CFR 97.406 Standard requirements:

(a) Designated representative requirements

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.413 through 97.418.

(b) Emissions monitoring, reporting, and recordkeeping requirements

(1) The owners and operators, and the designated representative, of each CSAPR NO_X Annual source and each CSAPR NO_X Annual unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.430 through 97.435.

(2) The emissions data determined in accordance with 40 CFR 97.430 through 97.435 shall be used to calculate allocations of CSAPR NO_X Annual allowances under 40 CFR 97.411(a)(2) and (b) and 97.412 and to determine compliance with the CSAPR NO_X Annual emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.430 through 97.435 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

(c) NO_X emissions requirements

(1) CSAPR NO_X Annual emissions limitation

(i) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NO_X Annual source and each CSAPR NO_X Annual unit at the source shall hold, in the source's compliance account, CSAPR NO_X Annual allowances available for deduction for such control period under 40 CFR 97.424(a) in an amount not less than the tons of total NO_X emissions for such control period from all CSAPR NO_X Annual units at the source.

(ii) If total NO_X emissions during a control period in a given year from the CSAPR NO_X Annual units at a CSAPR NO_X Annual source are in excess of the CSAPR NO_X Annual emissions limitation set forth in paragraph (c)(1)(i) above, then:

(A) The owners and operators of the source and each CSAPR NO_X Annual unit at the source shall hold the CSAPR NO_X Annual allowances required for deduction under 40 CFR 97.424(d); and

(B) The owners and operators of the source and each CSAPR NO_X Annual unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and

each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart AAAAA and the Clean Air Act.

(2) CSAPR NO_X Annual assurance provisions

(i) If total NO_X emissions during a control period in a given year from all CSAPR NO_X Annual units at CSAPR NO_X Annual sources in a State (and Indian country within the borders of such State) exceed the State assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO_X emissions during such control period exceeds the common designated representative's assurance level for the State and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR NO_X Annual allowances available for deduction for such control period under 40 CFR 97.425(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.425(b), of multiplying—

(A) The quotient of the amount by which the common designated representative's share of such NO_X emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the State (and Indian country within the borders of such State) for such control period, by which each common designated representative's share of such NO_X emissions exceeds the respective common designated representative's assurance level; and

(B) The amount by which total NO_X emissions from all CSAPR NO_X Annual units at CSAPR NO_X Annual sources in the State (and Indian country within the borders of such State) for such control period exceed the State assurance level.

(ii) The owners and operators shall hold the CSAPR NO_X Annual allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after the year of such control period.

(iii) Total NO_X emissions from all CSAPR NO_X Annual units at CSAPR NO_X Annual sources in a State (and Indian country within the borders of such State) during a control period in a given year exceed the State assurance level if such total NO_X emissions exceed the sum, for such control period, of the State NO_X Annual trading budget under 40 CFR 97.410(a) and the State's variability limit under 40 CFR 97.410(b).

(iv) It shall not be a violation of 40 CFR Part 97, Subpart AAAAA or of the Clean Air Act if total NO_X emissions from all CSAPR NO_X Annual units at CSAPR NO_X Annual sources in a State (and Indian country within the borders of such State) during a control period exceed the State assurance level or if a common designated representative's share of total NO_X emissions from the CSAPR NO_X Annual units at CSAPR NO_X Annual sources in a State (and Indian country within the borders of such State) during a control period exceeds the common designated representative's assurance level.

(v) To the extent the owners and operators fail to hold CSAPR NO_X Annual allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,

(A) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B) Each CSAPR NO_X Annual allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart AAAAA and the Clean Air Act.

(3) Compliance periods

(i) A CSAPR NO_X Annual unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.

(ii) A CSAPR NO_X Annual unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.

(4) Vintage of CSAPR NO_X Annual allowances held for compliance

(i) A CSAPR NO_X Annual allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a CSAPR NO_X Annual allowance that was allocated or auctioned for such control period or a control period in a prior year.

(ii) A CSAPR NO_X Annual allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a CSAPR NO_X Annual allowance that was allocated or auctioned for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements

Each CSAPR NO_X Annual allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR Part 97, Subpart AAAAA.

(6) Limited authorization

A CSAPR NO_X Annual allowance is a limited authorization to emit one ton of NO_X during the control period in one year. Such authorization is limited in its use and duration as follows:

(i) Such authorization shall only be used in accordance with the CSAPR NO_X Annual Trading Program; and

(ii) Notwithstanding any other provision of 40 CFR Part 97, Subpart AAAAA, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right

A CSAPR NO_X Annual allowance does not constitute a property right.

(d) Title V permit requirements

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO_X Annual allowances in accordance with 40 CFR Part 97, Subpart AAAAA.

(2) A description of whether a unit is required to monitor and report NO_X emissions using a continuous emission monitoring system (pursuant to 40 CFR Part 75, Subpart H), an excepted monitoring system (pursuant to 40 CFR Part 75, Appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), or an alternative monitoring system (pursuant to 40 CFR Part 75, Subpart E) in accordance with 40 CFR 97.430 through 97.435 may be added to, or changed in, a title V permit using minor permit modification procedures in accordance with 40 CFR 70.7(e)(2) and 71.7(e)(1), provided that the requirements applicable to the described monitoring and reporting (as added or changed, respectively) are already incorporated in such permit. This paragraph explicitly provides that the addition of, or change to, a unit's description as described in the prior sentence is eligible for minor permit modification procedures in accordance with 40 CFR 70.7(e)(2)(i)(B) and 71.7(e)(1)(i)(B).

(e) Additional recordkeeping and reporting requirements

(1) Unless otherwise provided, the owners and operators of each CSAPR NO_X Annual source and each CSAPR NO_X Annual unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(i) The certificate of representation under 40 CFR 97.416 for the designated representative for the source and each CSAPR NO_X Annual unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.416 changing the designated representative.

(ii) All emissions monitoring information, in accordance with 40 CFR Part 97, Subpart AAAAA.

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR NO_X Annual Trading Program.

(2) The designated representative of a CSAPR NO_X Annual source and each CSAPR NO_X Annual unit at the source shall make all submissions required under the CSAPR NO_X Annual Trading Program, except as provided in 40 CFR 97.418. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR Parts 70 and 71.

(f) Liability

(1) Any provision of the CSAPR NO_X Annual Trading Program that applies to a CSAPR NO_X Annual source or the designated representative of a CSAPR NO_X Annual source shall also apply to the owners and operators of such source and of the CSAPR NO_X Annual units at the source.

(2) Any provision of the CSAPR NO_X Annual Trading Program that applies to a CSAPR NO_X Annual unit or the designated representative of a CSAPR NO_X Annual unit shall also apply to the owners and operators of such unit.

(g) Effect on other authorities

No provision of the CSAPR NO_X Annual Trading Program or exemption under 40 CFR 97.405 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO_X Annual source or CSAPR NO_X Annual unit from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, or the Clean Air Act.

(h) Effect on units in Indian country

Notwithstanding the provisions of paragraphs (a) through (g) above, paragraphs (a) through (g) shall be deemed not to impose any requirements on any source or unit, or any owner, operator, or designated representative with regard to any source or unit, in Indian country within the borders of the State.

40 CFR Part 97, Subpart DDDDD – CSAPR SO_2 Group 2 Trading Program

40 CFR 97.706 Standard requirements:

(a) Designated representative requirements

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.713 through 97.718.

(b) Emissions monitoring, reporting, and recordkeeping requirements

(1) The owners and operators, and the designated representative, of each CSAPR SO_2 Group 2 source and each CSAPR SO_2 Group 2 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.730 through 97.735.

(2) The emissions data determined in accordance with 40 CFR 97.730 through 97.735 shall be used to calculate allocations of CSAPR SO_2 Group 2 allowances under 40 CFR 97.711(a)(2) and (b) and 97.712 and to determine compliance with the CSAPR SO_2 Group 2 emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.730 through 97.735 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

(c) SO_2 emissions requirements

(1) CSAPR SO_2 Group 2 emissions limitation

(i) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR SO_2 Group 2 source and each CSAPR SO_2 Group 2 unit at the source shall hold, in the source's compliance account, CSAPR SO_2 Group 2 allowances available for deduction for such control period under 40 CFR 97.724(a) in an amount not less than the tons of total SO_2 emissions for such control period from all CSAPR SO_2 Group 2 units at the source.

(ii) If total SO_2 emissions during a control period in a given year from the CSAPR SO_2 Group 2 units at a CSAPR SO_2 Group 2 source are in excess of the CSAPR SO_2 Group 2 emissions limitation set forth in paragraph (c)(1)(i) above, then:

(A) The owners and operators of the source and each CSAPR SO_2 Group 2 unit at the source shall hold the CSAPR SO_2 Group 2 allowances required for deduction under 40 CFR 97.724(d); and

(B) The owners and operators of the source and each CSAPR SO_2 Group 2 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart DDDDD and the Clean Air Act.

(2) CSAPR SO_2 Group 2 assurance provisions

(i) If total SO_2 emissions during a control period in a given year from all CSAPR SO_2 Group 2 units at CSAPR SO_2 Group 2 sources in a State (and Indian country within the borders of such State) exceed the State assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such SO_2 emissions during such control period exceeds the common designated representative's assurance level for the State and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR SO_2 Group 2 allowances available for deduction for such control period under 40 CFR 97.725(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.725(b), of multiplying—

(A) The quotient of the amount by which the common designated representative's share of such SO_2 emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the State (and Indian country within the borders of such State) for such control period, by which each common designated representative's share of such SO_2 emissions exceeds the respective common designated representative's assurance level; and

(B) The amount by which total SO_2 emissions from all CSAPR SO_2 Group 2 units at CSAPR SO_2 Group 2 sources in the State (and Indian country within the borders of such State) for such control period exceed the State assurance level.

(ii) The owners and operators shall hold the CSAPR SO_2 Group 2 allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after the year of such control period.

(iii) Total SO_2 emissions from all CSAPR SO_2 Group 2 units at CSAPR SO_2 Group 2 sources in a State (and Indian country within the borders of such State) during a control period in a given year exceed the State assurance level if such total SO_2 emissions exceed the sum, for such control period, of the State SO_2 Group 2 trading budget under 40 CFR 97.710(a) and the State's variability limit under 40 CFR 97.710(b).

(iv) It shall not be a violation of 40 CFR Part 97, Subpart DDDDD or of the Clean Air Act if total SO_2 emissions from all CSAPR SO_2 Group 2 units at CSAPR SO_2 Group 2 sources in a State (and Indian country within the borders of such State) during a control period exceed the State assurance level or if a common designated representative's share of total SO_2 emissions from the CSAPR SO_2 Group 2 units at CSAPR SO_2 Group 2 sources in a State (and Indian country within the borders of such State) during a control period exceeds the common designated representative's assurance level.

(v) To the extent the owners and operators fail to hold CSAPR SO_2 Group 2 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,

(A) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B) Each CSAPR SO_2 Group 2 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of

such control period shall constitute a separate violation of 40 CFR Part 97, Subpart DDDDD and the Clean Air Act.

(3) Compliance periods

(i) A CSAPR SO_2 Group 2 unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.730(b) and for each control period thereafter.

(ii) A CSAPR SO_2 Group 2 unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.730(b) and for each control period thereafter.

(4) Vintage of CSAPR SO_2 Group 2 allowances held for compliance

(i) A CSAPR SO_2 Group 2 allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a CSAPR SO_2 Group 2 allowance that was allocated or auctioned for such control period or a control period in a prior year.

(ii) A CSAPR SO_2 Group 2 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a CSAPR SO_2 Group 2 allowance that was allocated or auctioned for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements

Each CSAPR SO_2 Group 2 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR Part 97, Subpart DDDDD.

(6) Limited authorization

A CSAPR SO_2 Group 2 allowance is a limited authorization to emit one ton of SO_2 during the control period in one year. Such authorization is limited in its use and duration as follows:

(i) Such authorization shall only be used in accordance with the CSAPR SO_2 Group 2 Trading Program; and

(ii) Notwithstanding any other provision of 40 CFR Part 97, Subpart DDDDD, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right

A CSAPR SO_2 Group 2 allowance does not constitute a property right.

(d) Title V permit requirements

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR SO_2 Group 2 allowances in accordance with 40 CFR Part 97, Subpart DDDDD.

(2) A description of whether a unit is required to monitor and report SO_2 emissions using a continuous emission monitoring system (pursuant to 40 CFR Part 75, Subpart B), an excepted monitoring system (pursuant to 40 CFR Part 75, Appendices D and E), a low mass emissions excepted monitoring

methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR Part 75, Subpart E) in accordance with 40 CFR 97.730 through 97.735 may be added to, or changed in, a title V permit using minor permit modification procedures in accordance with 40 CFR 70.7(e)(2) and 71.7(e)(1), provided that the requirements applicable to the described monitoring and reporting (as added or changed, respectively) are already incorporated in such permit. This paragraph explicitly provides that the addition of, or change to, a unit's description as described in the prior sentence is eligible for minor permit modification procedures in accordance with 40 CFR 70.7(e)(2)(i)(B) and 71.7(e)(1)(i)(B).

(e) Additional recordkeeping and reporting requirements

(1) Unless otherwise provided, the owners and operators of each CSAPR SO_2 Group 2 source and each CSAPR SO_2 Group 2 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(i) The certificate of representation under 40 CFR 97.716 for the designated representative for the source and each CSAPR SO_2 Group 2 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.716 changing the designated representative.

(ii) All emissions monitoring information, in accordance with 40 CFR Part 97, Subpart DDDDD.

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR SO_2 Group 2 Trading Program.

(2) The designated representative of a CSAPR SO_2 Group 2 source and each CSAPR SO_2 Group 2 unit at the source shall make all submissions required under the CSAPR SO_2 Group 2 Trading Program, except as provided in 40 CFR 97.718. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in Parts 70 and 71.

(f) Liability

(1) Any provision of the CSAPR SO_2 Group 2 Trading Program that applies to a CSAPR SO_2 Group 2 source or the designated representative of a CSAPR SO_2 Group 2 source shall also apply to the owners and operators of such source and of the CSAPR SO_2 Group 2 units at the source.

(2) Any provision of the CSAPR SO_2 Group 2 Trading Program that applies to a CSAPR SO_2 Group 2 unit or the designated representative of a CSAPR SO_2 Group 2 unit shall also apply to the owners and operators of such unit.

(g) Effect on other authorities

No provision of the CSAPR SO_2 Group 2 Trading Program or exemption under 40 CFR 97.705 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR SO_2 Group 2 source or CSAPR SO_2 Group 2 unit from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, or the Clean Air Act.

(h) Effect on units in Indian country

Notwithstanding the provisions of paragraphs (a) through (g) above, paragraphs (a) through (g) shall be deemed not to impose any requirements on any source or unit, or any owner, operator, or designated representative with regard to any source or unit, in Indian country within the borders of the State.

40 CFR Part 97, Subpart EEEEE – CSAPR NO_X Ozone Season Group 2 Trading Program

40 CFR 97.806 Standard requirements:

(a) Designated representative requirements

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.813 through 97.818.

(b) Emissions monitoring, reporting, and recordkeeping requirements

(1) The owners and operators, and the designated representative, of each CSAPR NO_X Ozone Season Group 2 source and each CSAPR NO_X Ozone Season Group 2 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.830 through 97.835.

(2) The emissions data determined in accordance with 40 CFR 97.830 through 97.835 shall be used to calculate allocations of CSAPR NO_X Ozone Season Group 2 allowances under 40 CFR 97.811(a)(2) and (b) and 97.812 and to determine compliance with the CSAPR NO_X Ozone Season Group 2 emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.830 through 97.835 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

(c) NO_X emissions requirements

(1) CSAPR NO_X Ozone Season Group 2 emissions limitation

(i) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NO_X Ozone Season Group 2 source and each CSAPR NO_X Ozone Season Group 2 unit at the source shall hold, in the source's compliance account, CSAPR NO_X Ozone Season Group 2 allowances available for deduction for such control period under 40 CFR 97.824(a) in an amount not less than the tons of total NO_X emissions for such control period from all CSAPR NO_X Ozone Season Group 2 units at the source.

(ii) If total NO_X emissions during a control period in a given year from the CSAPR NO_X Ozone Season Group 2 units at a CSAPR NO_X Ozone Season Group 2 source are in excess of the CSAPR NO_X Ozone Season Group 2 emissions limitation set forth in paragraph (c)(1)(i) above, then:

(A) The owners and operators of the source and each CSAPR NO_X Ozone Season Group 2 unit at the source shall hold the CSAPR NO_X Ozone Season Group 2 allowances required for deduction under 40 CFR 97.824(d); and

(B) The owners and operators of the source and each CSAPR NO_X Ozone Season Group 2 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart EEEEE and the Clean Air Act.

(2) CSAPR NO_X Ozone Season Group 2 assurance provisions

(i) If total NO_X emissions during a control period in a given year from all base CSAPR NO_X Ozone Season Group 2 units at base CSAPR NO_X Ozone Season Group 2 sources in a State (and Indian country within the borders of such State) exceed the State assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO_X emissions during such control period exceeds the common designated representative's assurance level for the State and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR NO_X Ozone Season Group 2 allowances available for deduction for such control period under 40 CFR 97.825(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.825(b), of multiplying—

(A) The quotient of the amount by which the common designated representative's share of such NO_X emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the State (and Indian country within the borders of such State) for such control period, by which each common designated representative's share of such NO_X emissions exceeds the respective common designated representative's assurance level; and

(B) The amount by which total NO_X emissions from all base CSAPR NO_X Ozone Season Group 2 units at base CSAPR NO_X Ozone Season Group 2 sources in the State (and Indian country within the borders of such State) for such control period exceed the State assurance level.

(ii) The owners and operators shall hold the CSAPR NO_X Ozone Season Group 2 allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after the year of such control period.

(iii) Total NO_X emissions from all base CSAPR NO_X Ozone Season Group 2 units at base CSAPR NO_X Ozone Season Group 2 sources in a State (and Indian country within the borders of such State) during a control period in a given year exceed the State assurance level if such total NO_X emissions exceed the sum, for such control period, of the State NO_X Ozone Season Group 2 trading budget under 40 CFR 97.810(a) and the State's variability limit under 40 CFR 97.810(b).

(iv) It shall not be a violation of 40 CFR Part 97, Subpart EEEEE or of the Clean Air Act if total NO_X emissions from all base CSAPR NO_X Ozone Season Group 2 units at base CSAPR NO_X Ozone Season Group 2 sources in a State (and Indian country within the borders of such State) during a control period exceed the State assurance level or if a common designated representative's share of total NO_X emissions from the base CSAPR NO_X Ozone Season Group 2 units at base CSAPR NO_X Ozone Season Group 2 sources in a State (and Indian country within the borders of such State) during a control period exceeds the common designated representative's assurance level.

(v) To the extent the owners and operators fail to hold CSAPR NO_X Ozone Season Group 2 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,

(A) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B) Each CSAPR NO_X Ozone Season Group 2 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR Part 97, Subpart EEEEE and the Clean Air Act.

(3) Compliance periods

(i) A CSAPR NO_X Ozone Season Group 2 unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of May 1, 2017, or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.830(b) and for each control period thereafter.

(ii) A base CSAPR NO_X Ozone Season Group 2 unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.830(b) and for each control period thereafter.

(4) Vintage of CSAPR NO_X Ozone Season Group 2 allowances held for compliance

(i) A CSAPR NO_X Ozone Season Group 2 allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a CSAPR NO_X Ozone Season Group 2 allowance that was allocated or auctioned for such control period or a control period in a prior year.

(ii) A CSAPR NO_X Ozone Season Group 2 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (c)(2)(i) through (iii) above for a control period in a given year must be a CSAPR NO_X Ozone Season Group 2 allowance that was allocated or auctioned for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) Allowance Management System requirements

Each CSAPR NO_X Ozone Season Group 2 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR Part 97, Subpart EEEEE.

(6) Limited authorization

A CSAPR NO_X Ozone Season Group 2 allowance is a limited authorization to emit one ton of NO_X during the control period in one year. Such authorization is limited in its use and duration as follows:

(i) Such authorization shall only be used in accordance with the CSAPR NO_X Ozone Season Group 2 Trading Program; and

(ii) Notwithstanding any other provision of 40 CFR Part 97, Subpart EEEEE, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) Property right

A CSAPR NO_X Ozone Season Group 2 allowance does not constitute a property right.

(d) Title V permit requirements

(1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO_X Ozone Season Group 2 allowances in accordance with 40 CFR Part 97, Subpart EEEEE.

(2) A description of whether a unit is required to monitor and report NO_X emissions using a continuous emission monitoring system (pursuant to 40 CFR Part 75, Subpart H), an excepted monitoring system (pursuant to 40 CFR Part 75, Appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), or an alternative monitoring system (pursuant to 40 CFR Part 75, Subpart E) in accordance with 40 CFR 97.830 through 97.835 may be added to, or changed in, a title V permit using minor permit modification procedures in accordance with 40 CFR 70.7(e)(2) and 71.7(e)(1), provided that the requirements applicable to the described monitoring and reporting (as added or changed, respectively) are already incorporated in such permit. This paragraph explicitly provides that the addition of, or change to, a unit's description as described in the prior sentence is eligible for minor permit modification procedures in accordance with 40 CFR 70.7(e)(2)(i)(B) and 71.7(e)(1)(i)(B).

(e) Additional recordkeeping and reporting requirements

(1) Unless otherwise provided, the owners and operators of each CSAPR NO_X Ozone Season Group 2 source and each CSAPR NO_X Ozone Season Group 2 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(i) The certificate of representation under 40 CFR 97.816 for the designated representative for the source and each CSAPR NO_X Ozone Season Group 2 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.816 changing the designated representative.

(ii) All emissions monitoring information, in accordance with 40 CFR Part 97, Subpart EEEEE.

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR NO_X Ozone Season Group 2 Trading Program.

(2) The designated representative of a CSAPR NO_X Ozone Season Group 2 source and each CSAPR NO_X Ozone Season Group 2 unit at the source shall make all submissions required under the CSAPR NO_X Ozone Season Group 2 Trading Program, except as provided in 40 CFR 97.818. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR Part 70 and 71.

(f) Liability

(1) Any provision of the CSAPR NO_X Ozone Season Group 2 Trading Program that applies to a CSAPR NO_X Ozone Season Group 2 source or the designated representative of a CSAPR NO_X Ozone Season Group 2 source shall also apply to the owners and operators of such source and of the CSAPR NO_X Ozone Season Group 2 units at the source.

(2) Any provision of the CSAPR NO_X Ozone Season Group 2 Trading Program that applies to a CSAPR NO_X Ozone Season Group 2 unit or the designated representative of a CSAPR NO_X Ozone Season Group 2 unit shall also apply to the owners and operators of such unit.

(g) Effect on other authorities

No provision of the CSAPR NO_X Ozone Season Group 2 Trading Program or exemption under 40 CFR 97.805 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO_X Ozone Season Group 2 source or CSAPR NO_X Ozone Season Group 2 unit from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, or the Clean Air Act.

(h) Effect on units in Indian country

Notwithstanding the provisions of paragraphs (a) through (g) above, paragraphs (a) through (g) shall be deemed not to impose any requirements on any source or unit, or any owner, operator, or designated representative with regard to any source or unit, in Indian country within the borders of the State.

STATEMENT OF BASIS
by
Kansas Department of Health and Environment
for
Class I Operating Permit Significant Modification
of
The Empire District Electric Company – Riverton Power Station
Source ID: 0210002, Tracking No.: OP100032 v5.1
August 25, 2020

This statement of basis sets forth the legal and factual basis for a significant modification to the Class I operating permit, which modifies existing permit conditions, including references to the applicable statutory or regulatory provisions. Determinations were made based upon the application submitted, file review and reasonable inquiry

I. Facility Description

The Empire District Electric Company – Riverton Power Station (EDEC) is a fossil fuel electricity generation facility located on Highway 66 in Riverton, Kansas. The facility currently operates one combined cycle combustion turbine unit and two simple cycle combustion turbine units.

Insignificant activities at the plant include space heaters, parts cleaners, vapor extractors, emergency generators, cooling towers, diesel fuel tanks, gasoline tanks, solvent tank, and laboratory activities.

At the time of permit issuance, the facility required a Class I operating permit because it meets the definition of a major source under 40 CFR Part 70 and 71 since it has potential to emit above 100 tons per year (tpy) for oxides of nitrogen (NO_X), particulate matter (PM), particulate matter less than or equal to 10 microns in aerodynamic diameter (PM_{10}), carbon monoxide (CO) and volatile organic compounds (VOC).

II. Facility Equipment

See list of equipment in Section IV of the permit with no proposed changes at this time.

III. Facility Emissions Summary

Pollutant	2018 Actual (tpy)*	Potential (tpy)
NO_x	163.5	>100
VOC	0.74	>100
SO_x	2.9	<100
CO	21.4	>100
PM_{10}	22.1	>100
Formaldehyde	3.34	7.65
Total HAPs	4.82	11.09

* These values are based on the data input in SLEIS (State and Local Emissions Inventory System) 2018 Facility Emission Summary report.

IV. Basis for permit modifications

A. A construction permit modification was issued on August 25, 2020 to remove Major Source HAP requirements from construction permit C-10913 issued July 11, 2013 (revised February 19, 2015; July 7, 2015; September 27, 2016) and to reclassify the facility as an Area Source of HAP emissions. For consistency with the construction modifications, the following operating permit conditions were modified:

1. Requirements of 40 CFR 63, Subpart YYYY were removed.

2. Major Source of HAP emissions requirements of 40 CFR 63, Subpart ZZZZ were changed to Area Source of HAP emissions requirements.

B. Section VI.A. Limitation 2.a. of the March 30, 2018 Class I operating permit is not part of 40 CFR 60 Subpart KKKK (NSPS KKKK) requirements. It was moved to Limitation 2 and the rest of the existing requirements from NSPS KKKK are moved to Limitation 3.

C. The reporting requirement in Section VI.A. Limitation 3.i.iii. of the of the March 30, 2018 Class I operating permit was moved to the Reporting Section in Section VI.A. Limitation 3.j.iv of this modified Class I operating permit.

D. Attachment C to this Class I operating permit (OP100032 v5.1) was updated to include the most recent Attachment B of the Acid Rain Permit (OPAR00002 v7.0) issued on January 6, 2020.

E. Changes were made in (OP100032 v5.1) to update the Class I operating permit boilerplate language in Section **VIII.D.3. Facility-Wide Applicable Requirements, K.A.R. 28-19-517, Annual Emissions Inventory and Fees**, Submittal; Section **XI. Permit Shield,** Section **XIII. Reporting of Deviations from Permit Terms,** Section **XIV.G. General Provisions, Compliance Certification,** Section **XIV.J. General Provisions, Permit Amendment, Modification, Reopening, and Changes Not Requiring a Permit Action, and** Section **XIV.N. General Provisions, Submissions** of the permit issued on March 30, 2018 (OP100032 v5.0, O-12086).

F. Area Source MACT CCCCCC requirements became applicable to the 500-gallon Unleaded Gasoline Storage Tank and were added to this Class I operating permit. The Unleaded Gasoline Storage Tank was removed from the Insignificant Activities list and the tank identifier was changed from IA-002 to TK-002.

G. The facility removed gasoline from one 500-gallon storage tank (IA-003) and converted it to diesel fuel storage. The description of this tank was updated in the Insignificant Activities list.

Kansas Department of Health and Environment
Bureau of Air

CLASS I OPERATING PERMIT
ANNUAL CERTIFICATION CR-02

Source ID No.: 0210002 **Source Name:** The Empire District Electric Company –Riverton Power Station

The period of time for which compliance is certified began at 12:01 a.m. on _____, _____ and ended at 11:59 p.m. on _____, _____.

Certifications of compliance are required to be submitted at least annually. The period of time covered by each certification document cannot exceed one year and there can be no period of time during the term of the permit for which compliance is not certified.

The terms or conditions of the permit that is the basis for this certification are those specified in the Class I Operating Permit issued and/or renewed by the Secretary of Health and Environment on _____, _____.

Compliance status of each term or condition of the permit during the certification period:
1. ____ In continuous compliance with all applicable requirements during the entire certification period.
2. ____ Not in continuous compliance with all applicable requirements during the entire certification period. ***If not in continuous compliance with all applicable requirements during the entire certification period, mark the applicable description below.*** ____ One or more instances of non-compliance with any applicable requirement during the certification period. ____ Continuous non-compliance with any applicable requirement during the certification period. ***Provide a summary of the nature, duration, and frequency of the non-compliance that occurred, including the applicable requirement(s) and emission unit(s).***

Compliance status of each term or condition of the permit *at the time* the certification is signed:
1. ____ In compliance with all applicable requirements at the time of certification.
2. ____ Not in compliance with all applicable requirements at the time of certification. ***Provide a description of the nature, duration, and frequency of the non-compliance that occurred, including the applicable requirement(s) and emission unit(s).***

Kansas Department of Health and Environment
Bureau of Air

CLASS I OPERATING PERMIT
ANNUAL CERTIFICATION CR-02

Methods used to determine compliance during the certification period and at the time of signing the certification:
1. ____ In accordance with compliance demonstration methods specified in the Class I Operating Permit.
2. ____ Other - In accordance with attachments.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on information and belief formed after reasonable inquiry, including the person or persons who manage the system, or those persons directly responsible for gathering the information, the stated information in this document is true, accurate, and complete.

Name of Responsible Official (print or type):

Title: _____

Signature: _____ Date: _____ / _____ / _____

"Responsible official" means one of the following (From K.A.R. 28-19-200 General provisions; definitions):

(1) For a corporation, a president, secretary, treasurer or vice-president in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production or operating facilities applying for or subject to permit or other relevant regulatory requirement and either:

(A) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million, in second quarter, 1980 dollars; or

(B) the delegation of authority to such representative is approved in advance by the department;

(2) for a partnership or sole proprietorship, a general partner or the proprietor, respectively;

(3) for a municipality, or a state, federal or other public agency, a principal executive officer or ranking elected official. For purposes of this definition, a principal executive officer of a federal agency shall include the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency; or

(4) for affected sources, the designated representative under title IV, acid deposition control, of the federal clean air act, 42 USC 7401 et seq.

Send certification with original signatures to:

Air Compliance & Enforcement Section
Bureau of Air
Kansas Department of Health and Environment
1000 SW Jackson, Suite 310
Topeka, KS 66612-1366

Send a copy of certification to:

Kansas Compliance Officer
Air Branch
Enforcement and Compliance Assurance Division
U.S. EPA, Region 7
11201 Renner Blvd.
Lenexa, Kansas 66219