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West Virginia Education, Research and Technology Park (WVERTP) Steam Plant

Air Permit Renewal Application

(Application Checklist for Administrative Completeness)

☒	Two signed copies of the application (at least one must contain the original *"Certification"* page signed and date in blue ink)
☒	Correct number of copies of the application on separate CDs or diskettes (i.e., at least one disk per copy)
☒	Table of Contents (needs to be included but not for administrative completeness)
☒	Facility Information
☒	Description of process and products, including NAICS and SIC Codes, and alternative operating scenarios
☒	ATTACHMENT A – Area map showing plant location
☒	ATTACHMENT B – Plot plans showing buildings and process areas
☒	ATTACHMENT C – Process flow diagram(s) showing all emission units, control equipment, emission points, and their relationships
☒	ATTACHMENT D – Title V Equipment Table completed for all emission units at the facility except those designated as significant activities
☒	ATTACHMENT E – Emission Unit Form completed for each emission unit listed in the Title V Equipment Table (ATTACHMENT D) and, if applicable, a Schedule of Compliance Form (ATTACHMENT F), for all requirements for which the emission unit is not in compliance. (All emission units are in compliance with permit requirements; therefore, a Schedule of Compliance Form (ATTACHMENT F) is not provided.)
☒	Identification of all applicable requirements with a description of the compliance status, the methods used for demonstrating compliance, and a Schedule of Compliance Form (ATTACHMENT F) for all requirements for which the source is not in compliance.
☒	Listing of all active permits and consent orders (if applicable)
☒	Facility-wide emissions summary
☒	Identification of significant activities
☒	General Application Forms signed by a Responsible Official

WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY, 601 57th Street SE
Charleston, WV 25304 – Phone: (304) 926-0475
www.dep.wv.gov/daq

INITIAL/RENEWAL TITLE V PERMIT APPLICATION – GENERAL FORMS

Section 1: General Information

1. Name of Applicant (As registered with the WV Secretary of State's Office):
West Virginia Higher Education Policy Commission (WVHEPC)

2. Facility Name or Location:
West Virginia Education, Research, and Technology Park (WVERTP) Steam Plant

3. DAQ Plant ID No.:
0 3 9 — 0 0 5 2 8

4. Federal Employer ID No. (FEIN):
5 5 0 5 1 7 0 9 2

5. Permit Application Type:
☐ Initial Permit When did operations commence? 06/14/2005
☒ Permit Renewal What is the expiration date of the existing permit? 08/24/2011
☐ Update to Initial/Renewal Permit Application

6. Type of Business Entity:
☐ Corporation ☒ Governmental Agency ☐ LLC
☐ Partnership ☐ Limited Partnership

7. Is the Applicant the:
☐ Owner ☒ Operator ☐ Both

If the Applicant is not both the owner and operator, please provide the name and address of the other party.
West Virginia Higher Education Policy Commission (WVHEPC)
1018 Kanawha Boulevard East, Suite 700
Charleston, WV 25301

8. Number of onsite employees:
7 Total Onsite Employees

9. Governmental Code: 2
☐ Privately owned and operated; 0
☐ Federally owned and operated; 1
☒ State government owned and operated; 2
☐ County government owned and operated; 3
☐ Municipality government owned and operated; 4
☐ District government owned and operated; 5

10. Business Confidentiality Claim
Does this application include confidential information (per 45CSR31)? ☐ Yes ☒ No

If yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's *"PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY"* guidance.

11. Mailing Address

Street or PO Box: 1018 Kanawha Boulevard East, Suite 700

City: Charleston **State:** West Virginia **Zip:** 25301

Phone Number: (304) 558-2736 **Fax Number:** (304) 558-5719

12. Facility Location		
Street: 3200/3300 Kanawha Turnpike	**City:** Charleston	**County:** Kanawha
UTM Easting: 438.67 **km**	**UTM Northing:** 4,245.47 **km**	**Zone:** ☒ 17 or ☐ 18
Directions: From Charleston, take Interstate 64 (I-64) west to the Kanawha Turnpike Exit. Travel West onto Kanahwa Turnpike approximately ½ mile. Turn into the entrance of the West Virginia Education, Research and Technology Park (WVERTP) (formerly the Union Carbide Company (UCC) industrial site). Upon entering the Park on Timberland Drive, proceed straight ahead to the three-way stop sign. Turn left at the three-way stop and proceed to the end of the road. The WVERTP Steam Plant is located at the end of the road on the right.		
Portable Source? ☐ Yes ☒ No		
Is facility located within a nonattainment area? ☒ Yes ☐ No		**If yes, for what air pollutants:** PM2.5 8-Hr Ozone
Is facility located within 50 miles of another state? ☒ Yes ☐ No		**If yes, name the affected state(s):** Ohio
Is facility located within 100 km of a Class I Area[1]? ☐ Yes ☒ No **If no, do emissions impact a Class I Area[1]?** ☐ Yes ☒ No		**If yes, name the area(s):**
[1] Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.		

13. Contact information		
Responsible Official: Dr. Brian Noland	**Title:** Chancellor	
Company Name: West Virginia Higher Education Policy Commission		
Street or P.O. Box: 1018 Kanawha Boulevard East, Suite 700		
City: Charleston	**State:** West Virginia	**Zip:** 25301
Phone Number: (304) 558-0281	**Fax Number:** (304) 558-1259	
Email Address: noland@hepc.wvnet.edu		
Environmental Contact: Dr. Brian Noland	**Title:** Chancellor	
Company Name: West Virginia Higher Education Policy Commission		
Street or P.O. Box: 1018 Kanawha Boulevard East, Suite 700		
City: Charleston	**State:** West Virginia	**Zip:** 25301
Phone Number: (304) 558-0281	**Fax Number:** (304) 558-1259	
Email Address: noland@hepc.wvnet.edu		
Application Preparer #1: Patrick Coughlin	**Title:** Environmental Specialist III	
Company Name: Duke Energy		
Street or P.O. Box: 1000 East Main Street		
City: Plainfield	**State:** Indiana	**Zip:** 46168
Phone Number: (317) 225-9963	**Fax Number:** (317) 838-2490	
Email Address: patrick.coughlin@duke-energy.com		
Application Preparer #2: Robert Dorzback	**Title:** Sr. EHS Engineer	
Company Name: Duke Energy		
Street or P.O. Box: 139 East Fourth Street, EM740		
City: Cincinnati	**State:** Ohio	**Zip:** 45202
Phone Number: (513) 582-1062	**Fax Number:** (513) 287-3499	
Email Address: robert.dorzback@duke-energy.com		

14. Facility Description:

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Boiler #1 (“Boiler 100”)	Steam	221330	4961
Boiler #2 (“Boiler 150”)	Steam	221330	4961

Provide a general description of operations.

This facility operates two natural gas-fired boilers each with a heat capacity of 65.93 million BTU/hr (MMBTU/hr). Operations consist of the generation and distribution of steam heat.

15. Area Map.

Provide an **Area Map** showing the plant location as **Attachment A.**

16. Plot Plan.

Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to “Plot Plan - Guidelines.”

17. Process Flow Diagram.

Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Section 2: Applicable Requirements

18. Applicable Requirements Summary.	
Instructions: Mark all applicable requirements:	
☒ SIP	☐ FIP
☒ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☐ NESHAP (45CSR15)	☐ Nonattainment NSR (45CSR19)
☒ Section 111 NSPS	☐ Section 112(d) MACT standards
☐ Section 112(g) Case-by-case MACT	☐ 40 CFR 112(r) Risk Management Plan (RMP)
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial product requirements, section 183(e)
☐ Section 129 Standards/Requirements	☐ Stratospheric Ozone Depletion (Title VI)
☐ Tank vessel requirement, section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☐ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ **C**ompliance **A**ssurance **M**onitoring (40 CFR 64)
☐ CAIR NO_x Annual Trading Program (45CSR39)	☐ CAIR NO_x Ozone Season Trading Program (45CSR40)
☐ CAIR SO_2 Trading Program (45CSR41)	

19. Non Applicability Determinations.
List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.
The National Emission Standards for Hazardous Air Pollutants (NESHAPs) for industrial boilers (40 CFR 63, Subpart DDDDD is not applicable because Boilers #1 and #2 are fire-tube boilers.
☐ Permit Shield:

19. Non Applicability Determinations *(Continued).* – *Attach additional pages as necessary.*

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

No further additional pages.

☐ Permit Shield:

20. Facility-Wide Applicable Requirements.

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*).

Open Burning (45 CSR 6-3.1): The open burning of refuse by any person, firm, corporation, association, or public agency is prohibited except for fire training.

Asbestos (40 CFR 61.145(b) and 45 CSR 51): This facility shall conduct inspections and sampling for asbestos-containing materials (ACM) or suspected ACM prior to any renovation or demolition.

Odor (45 CSR 4-3.1): The facility shall not cause, suffer, or allow the discharge of pollutants which cause or contribute to an objectionable odor at any location occupied by the public.

Permanent Shutdown (45 CSR 13-10.5): A source which does not operate at least 500 hours in one twelve month period within a five year period may be considered permanently shutdown unless information is supplied to the WVDEP Division of Air Quality (DAQ) of the contrary.

Standby Plan for Reducing Emissions (45 CSR 11-5.2)

Emissions Inventory (45 CSR 22-5-4(a)(14): Submit, on an annual basis, an emissions inventory.

☐ Permit Shield:

For all facility-wide applicable requirements listed above, provide monitoring/testing, recordkeeping, and reporting activities which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Open Burning (45 CSR 6-3.1): Facility shall request pre-approval prior to conducting open burning associated with fire-extinguisher training at the facility.

Asbestos (40 CFR 61.145(b) and 45 CSR 51): This facility shall notify the West Virginia Department of Environmental Protection (WVDEP) of any ACM-removal activities at least 10 days prior to commencement of any ACM removal.

Odor (45 CSR 4-3.1): The facility shall maintain records of any odor complaints received by the facility. Records shall document the assessment of and investigation into the complaint and any corrective action taken, if applicable.

Permanent Shutdown (45 CSR 13-10.5): Facility shall maintain records of operation of each boiler. If the hours of operation fall below 500 hours per twelve consecutive months, the facility will notify the WVDEP Division of Air Quality (DAQ) and provide information explaining the operating conditions and whether the facility is shutting down.

Standby Plan for Reducing Emissions (45 CSR 11-5.2) – Facility shall prepare a Standby Plan for Reducing Emissions upon notification to do so from the WVDEP Division of Air Quality (DAQ).

Emissions Inventory (45 CSR 22-5-4(a)(14): Submit, on an annual basis, an emissions inventory.

Are you in compliance with all facility-wide applicable requirements? ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

20. Facility-Wide Applicable Requirements. *(Continued).* – *Attach additional pages as necessary.*

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*).

☐ Permit Shield:

For all facility-wide applicable requirements listed above, provide monitoring/testing, recordkeeping, and reporting activities which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Are you in compliance with all facility-wide applicable requirements? ☒ Yes ☐ No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

21. Active Permits/Consent Orders.		
Permit or Consent Order Number	Date of Issuance (MM/DD/YYYY)	List any Permit Determinations that Affect the Permit *(if any)*
R13-2604A	12/13/2005	NA
R13-2604B	06/18/2008	NA

22. Inactive Permits/Obsolete.		
Permit Number	Date of Issuance (MM/DD/YYYY)	Permit Condition Number
R132604	03/15/2005	Entire air permit was re-issued to remove the Boiler Maximum Achievable Control Technology (MACT) Requirements

Section 2: Facility-Wide Emissions

23. Facility-Wide Emissions Summary (Tons per Year (TPY)).			
Criteria Pollutants	Potential Emissions (TPY)		
	Boiler #1	Boiler #2	Total Emissions
Carbon Monoxide (CO)	31.49	31.49	62.98
Nitrogen Oxides (NO_X)	19.36	19.36	38.72
Lead (Pb)	Negligible	Negligible	Negligible
Particulate Matter ($PM_{2.5}$)[1]			
Particulate Matter (PM_{10})[1]	2.01	2.01	4.02
Total Particulate Matter (TSP)	2.01	2.01	4.02
Sulfur Dioxide (SO_2)	0.175	0.175	0.36
Volatile Organic Compounds (VOC)	4.64	4.64	9.28
Hazardous Air Pollutants[2]	**Potential Emissions (TPY)**		
NA			
Regulated Pollutants other than Criteria and HAP			
NA			

[1]$PM_{2.5}$ and PM_{10} are components of TSP.

[2]For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply).		
☒	1	Air compressors and pneumatically operated equipment, including hand tools.
☐	2	Air contaminant detectors or recorders, combustion controllers or shutoffs.
☒	3	Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
☒	4	Bathroom/toilet vent emissions.
☐	5	Batteries and battery charging stations, except at battery manufacturing plants.
☒	6	Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
☐	7	Blacksmith forges.
☒	8	Boiler water treatment operations, not including cooling towers.
☐	9	Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
☐	10	CO_2 lasers, used only on metals and other materials which do not emit HAP in the process.
☐	11	Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
☒	12	Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
☒	13	Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
☐	14	Demineralized water tanks and demineralizer vents.
☐	15	Drop hammers or hydraulic presses for forging or metalworking.
☐	16	Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
☐	17	Emergency (backup) electrical generators at residential locations.
☐	18	Emergency road flares.
☐	19	Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO_2, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis: _____ _____ _____ _____

24. Insignificant Activities (Check all that apply) *(Continued)*.		
☐	20	Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27. Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis: _____ _____ _____ _____
☐	21	Environmental chambers not using hazardous air pollutant (HAP) gases.
☐	22	Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
☐	23	Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
☐	24	Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
☐	25	Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
☐	26	Fire suppression systems.
☐	27	Firefighting equipment and the equipment used to train firefighters.
☐	28	Flares used solely to indicate danger to the public.
☐	29	Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
☐	30	Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
☐	31	Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
☐	32	Humidity chambers.
☐	33	Hydraulic and hydrostatic testing equipment.
☐	34	Indoor or outdoor kerosene heaters.
☐	35	Internal combustion engines used for landscaping purposes.
☐	36	Laser trimmers using dust collection to prevent fugitive emissions.
☐	37	Laundry activities, except for dry-cleaning and steam boilers.
☐	38	Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
☐	39	Oxygen scavenging (de-aeration) of water.
☐	40	Ozone generators.

24. Insignificant Activities (Check all that apply) *(Continued)*.		
☒	41	Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
☐	42	Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
☐	43	Process water filtration systems and demineralizers.
☐	44	Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
☐	45	Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
☐	46	Routing calibration and maintenance of laboratory equipment or other analytical instruments.
☐	47	Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
☐	48	Shock chambers.
☐	49	Solar simulators.
☐	50	Space heaters operating by direct heat transfer.
☐	51	Steam cleaning operations.
☐	52	Steam leaks.
☐	53	Steam sterilizers.
☒	54	Steam vents and safety relief valves.
☐	55	Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
☐	56	Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
☐	57	Such other sources or activities as the Director may determine.
☐	58	Tobacco smoking rooms and areas.
☐	59	Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table.

Fill out the **Title V Equipment Table** and provide it as **ATTACHMENT D.**

26. Emission Units.

For each emission unit listed in the **Title V Equipment Table**, fill out and provide an **Emission Unit Form** as **ATTACHMENT E.**

For each emission unit not in compliance with an applicable requirement, fill out a **Schedule of Compliance Form** as **ATTACHMENT F**.

27. Control Devices.

For each control device listed in the **Title V Equipment Table**, fill out and provide an **Air Pollution Control Device Form** as **ATTACHMENT G**.

For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the **Compliance Assurance Monitoring (CAM) Form(s)** for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as **ATTACHMENT H**.

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

*Note: This Certification must be signed by a responsible official. The **original**, signed in **blue ink**, must be submitted with the application. Applications without an **original** signed certification will be considered as incomplete.*

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print):

Name: Brian Noland	Title: Chancellor

Responsible official's signature:

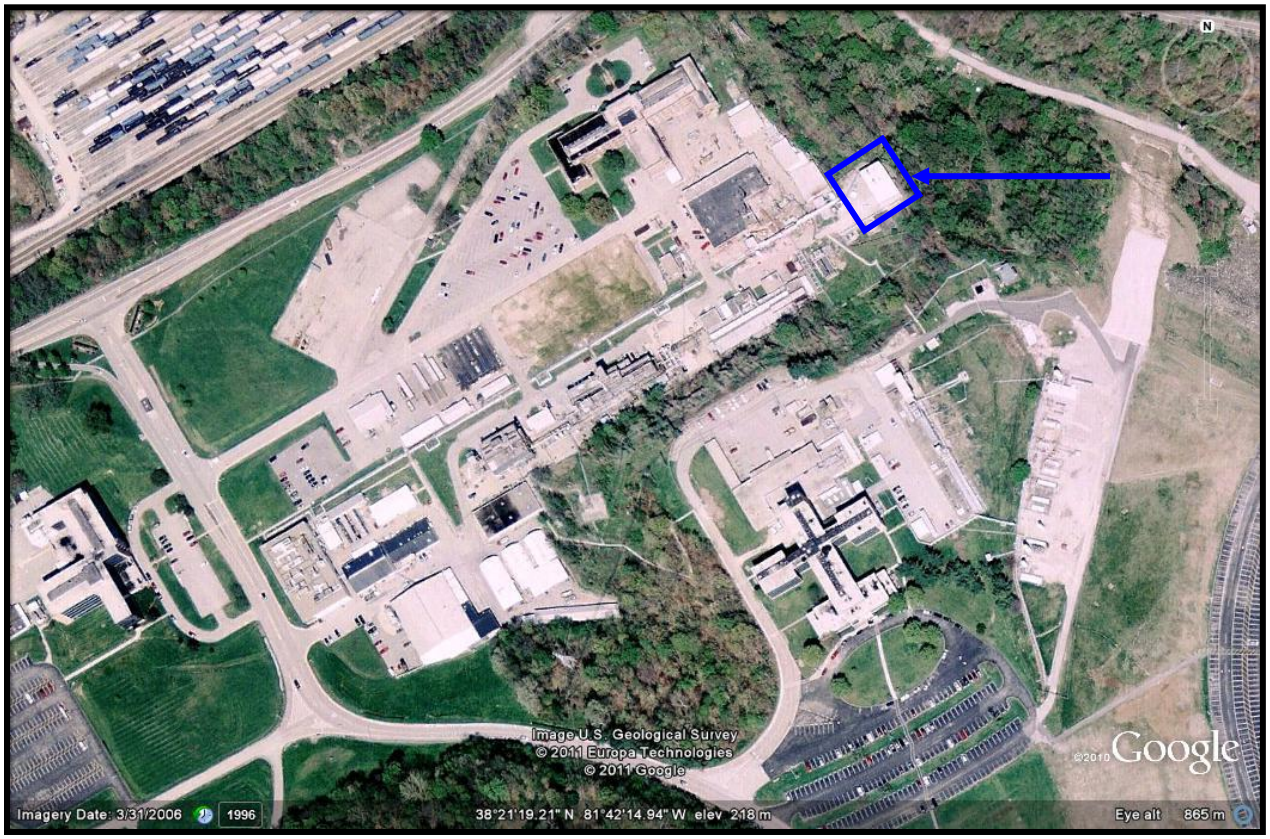
Signature: _____ Signature Date: _____
(Must be signed and dated in blue ink)

Note: Please check all applicable attachments included with this permit application:	
☒	ATTACHMENT A: Area Map
☒	ATTACHMENT B: Plot Plan(s)
☒	ATTACHMENT C: Process Flow Diagram(s)
☒	ATTACHMENT D: Equipment Table
☒	ATTACHMENT E: Emission Unit Form(s)
☐	ATTACHMENT F: Schedule of Compliance Form(s) **(Not Applicable)**
☐	ATTACHMENT G: Air Pollution Control Device Form(s) **(Not Applicable)**
☐	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s) **(Not Applicable)**

All of the required forms and additional information can be found and downloaded from, the DEP website at www.dep.wv.gov/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

ATTACHMENT A

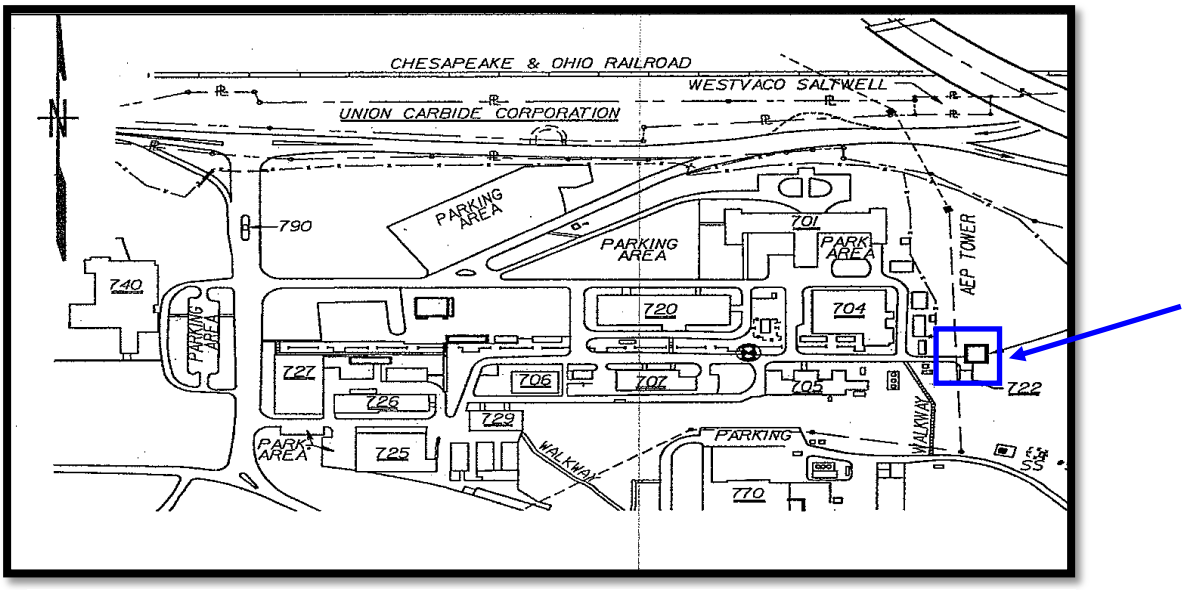
AREA MAP



The West Virginia Education, Research and Technology Part (WVERTP) Steam Plant is noted by the blue box.

ATTACHMENT B

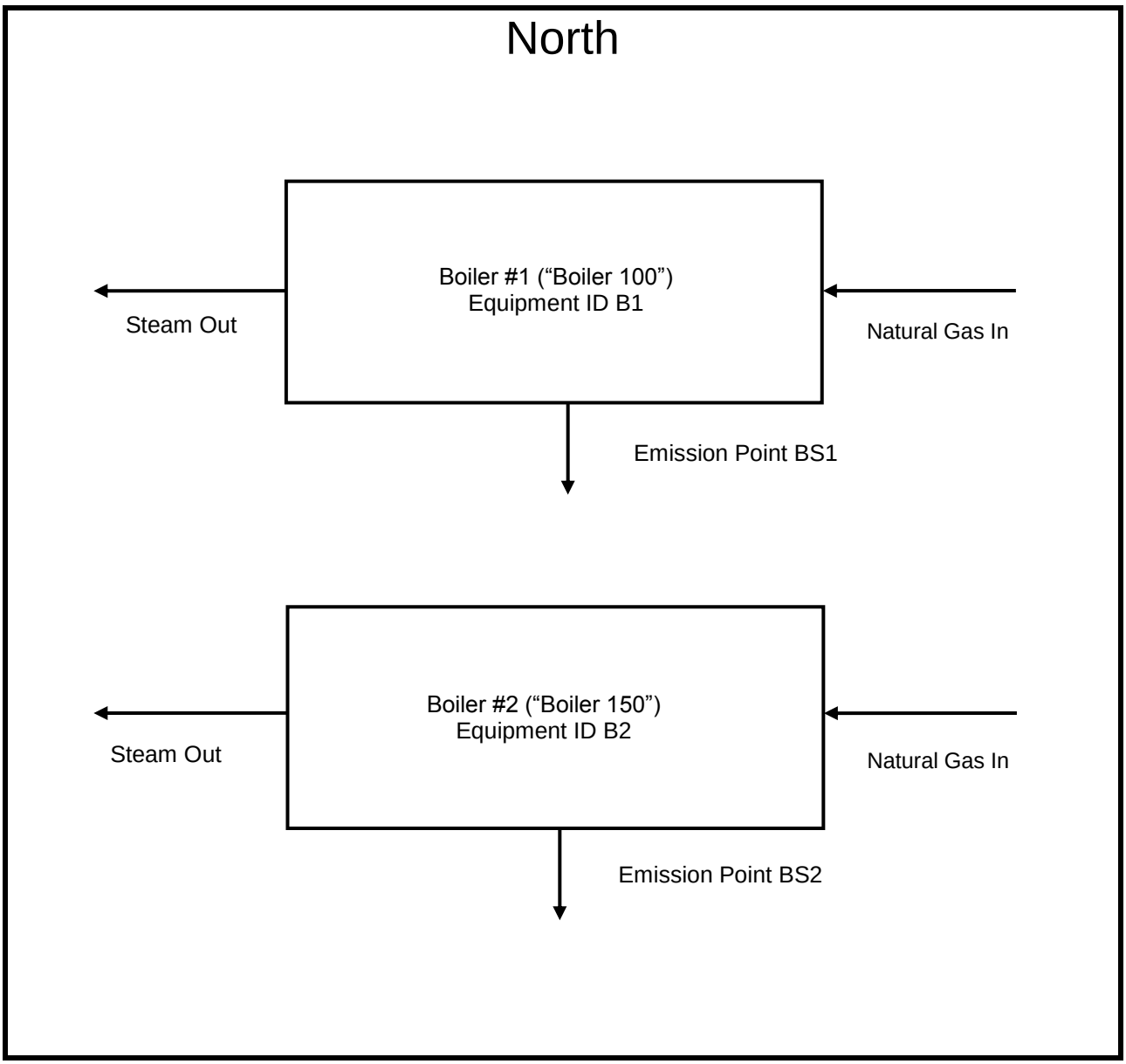
SITE PLOT PLAN



The West Virginia Education, Research and Technology Part (WVERTP) Steam Plant is noted by the blue box.

ATTACHMENT C

PROCESS FLOW DIAGRAM



APPENDIX D

EQUIPMENT TABLE

Includes all emission units at the facility except those designated as Insignificant Activities in Section 4, Item 24 of General Forms.

Emission Point ID[1]	Control Point[1]	Emission Unit ID[1]	Emission Unit Description	Design Capacity	Year Installed / Modified
BS1		B1	Natural Gas-Fired, Fire Tube Boiler #100	65.93 MMBTU/hr	2005
BS2		B2	Natural Gas-Fired, Fire Tube Boiler #150	65.93 MMBTU/hr	2005

[1] For 45 CSR 13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45 CSR 13 permit. For grandfathered sources, the numbering system should be consistent with the registrations or emissions inventory previously submitted to the WVDEP DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45 CSR 13 numbering system: 1S, 2S, 3S,….or other appropriate description for emission units, 1C, 2C, 3C,….or other appropriate designation for control devices, 1E, 2E, 3E,….or other appropriate designation for emission points.

APPENDIX E

APPLICABLE REQUIREMENTS – BOILER #1

Emission Unit Description.		
Emission Unit ID Number: BS1	**Emission Unit Name:** Boiler #1 ("Boiler 100)	**Control devices associated with this emission unit:** None
Provide a brief description of the emission unit (type, method of operation, design parameters, etc.): Boiler #1 is a 65.93 MMBTU/hr fire-tube boiler		
Manufacturer: Johnston Boiler	**Model Number:** PFXA 1600-2G250S	**Serial Number:** 10458-2
Construction Date: 03/23/2005	**Installation Date:** 06/14/2005	**Modification Date:** NA
Design Capacity (Examples: Furnaces (tons/hr), Tanks (gals)) 65.93 MMBTU/hr		
Maximum Hourly Throughput: 70,136 scf/hr	**Maximum Annual Throughput:** 614.93 MM scf/yr	**Maximum Operating Schedule:** 8760 hr/yr

Fuel Usage Data (Complete all Applicable Fields).	
Does this emission unit combust fuel? __X__ Yes _____ No	**If yes, is it:** ____ Indirect Fired __X__ Direct Fired
Maximum design heat input and/or maximum horsepower rating: 65.93 MMBTU/hr	**Type and BTU/hr rating of burners:** Low NOx burners rated at 65.93 MMBTU/hr
List the primary fuel types(s) and, if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. The primary fuel type is natural gas. Maximum hourly fuel usage is 70,136 scf/hr. Maximum annual fuel usage is 614.39 MMSCF/yr.	
Describe each fuel expected to be used during the term of the permit.	

Fuel Type	Max. Sulfur Content	Max Ash Content	BTU Value
Natural Gas	2000 grains/scf	NA	1,230 BTU/scf

Emissions Data.

Criteria Pollutants	**Potential Emissions**	
	PPH	**TPY**
Carbon Monoxide (CO)	7.2	31.49
Nitrogen Oxides (NOx)	4.5	19.36
Lead (Pb)	NA	NA
Particulate Matter (PM10)	0.5	2.01
Total Particulate Matter (PM)	0.5	2.01
Sulfur Dioxide (SO2)	0.1	0.175
Volatile Organic Compounds (VOC)	1.1	4.64

Hazardous Air Pollutants (HAPs)	**Potential Emissions**	
	PPH	**TPY**
NA	NA	NA

Regulated Pollutants other than Criteria or HAPs	**Potential Emissions**	
	PPH	**TPY**
NA	NA	NA

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions for all criteria pollutants except for NOx are based on AP42 emission factors, maximum operating capacity and maximum fuel usage.

The potential emissions for NOx are based on a short term emissions limitation of 0.067 lb/MMBTU.

Compliance with the NOx and CO emissions rate were demonstrated during stack tests performed on November 19-20, 2005 and January 15, 2008.

Applicable Requirements.

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Condition 4.1.1 – Maximum designed heat input capacity shall not exceed 65.93 MMBTU/hr.
Condition 4.1.2 – Maximum emission rates are limited to the limits listed in Table 4.1.2.
Condition 4.1.2 – Compliance with annual fuel usage and emission limits shall be determined using a rolling yearly total.
Condition 4.1.4 – Visible emissions shall not exceed 10% based on a 6-minute average except as authorized per 45 CSR 2, Section 3.1. In accordance with Condition 4.1.10, compliance with the opacity limit shall be based on 40 CFR 60, Appendix A, Method 9, or by using a continuous opacity monitor.
Condition 4.1.8 – Records of the operating schedule and quantity and quality of fuel consumed in this unit.
Condition 4.1.9 – Equipment shall be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions
Condition 4.3.1 – Emission stack testing shall be conducted in accordance with 40 CFR 60, Appendix A, for the purpose of demonstrating compliance. Stack testing shall be conducted in accordance with the schedule set forth in Condition 4.3.1(a),(b),(c).
Condition 4.4.1 – Maintain records of the quantities, types, and supplier(s) of each fuel combusted on a daily basis. Maintain dates/times of all start-ups, shutdowns and malfunction durations.
Condition 4.4.2 – Calculate and keep records of monthly and 12-month rolling emission sums for CO, VOC, PM, PM10, SO2, and NOx.
Condition 4.4.3 – Maintain monthly average heat content and quantity of the natural consumed.
Condition 4.5.1 – Notifications and requirements shall be performed in accordance with 40 CFR 60.7.

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For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Condition 3.3 – Conduct stack tests to determine compliance with emission limits.
Condition 3.4 – Maintain records of monitoring measurements, tests, and/or analyses.
Condition 3.5 – Submit any applications, forms, reports, compliance certifications required by permit to the WVDEP DAQ.
See other monitoring/testing/recordkeeping/reporting requirements listed above.

Are you in compliance with all facility-wide applicable requirements? ☒ Yes ☐ No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

APPENDIX E

APPLICABLE REQUIREMENTS – BOILER #2

Emission Unit Description.		
Emission Unit ID Number: BS2	**Emission Unit Name:** Boiler #2 (“Boiler 150)	**Control devices associated with this emission unit:** None
Provide a brief description of the emission unit (type, method of operation, design parameters, etc.): Boiler #2 is a 65.93 MMBTU/hr fire-tube boiler		
Manufacturer: Johnston Boiler	**Model Number:** PFXA 1600-2G250S	**Serial Number:** 10458-1
Construction Date: 03/23/2005	**Installation Date:** 06/14/2005	**Modification Date:** NA
Design Capacity (Examples: Furnaces (tons/hr), Tanks (gals)) 65.93 MMBTU/hr		
Maximum Hourly Throughput: 70,136 scf/hr	**Maximum Annual Throughput:** 614.39 MM scf/yr	**Maximum Operating Schedule:** 8760 hr/yr

Fuel Usage Data (Complete all Applicable Fields).	
Does this emission unit combust fuel? __X__ Yes _____ No	**If yes, is it:** ____ Indirect Fired __X__ Direct Fired
Maximum design heat input and/or maximum horsepower rating: 65.93 MMBTU/hr	**Type and BTU/hr rating of burners:** Low NOx burners rated at 65.93 MMBTU/hr
List the primary fuel types(s) and, if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. The primary fuel type is natural gas. Maximum hourly fuel usage is 70,136 scf/hr. Maximum annual fuel usage is 531.3 MMSCF/yr.	
Describe each fuel expected to be used during the term of the permit.	

Fuel Type	Max. Sulfur Content	Max Ash Content	BTU Value
Natural Gas	2000 grains/scf	NA	1,230 BTU/scf

Emissions Data.

Criteria Pollutants	**Potential Emissions**	
	PPH	**TPY**
Carbon Monoxide (CO)	7.2	31.49
Nitrogen Oxides (NOx)	4.5	19.36
Lead (Pb)	NA	NA
Particulate Matter (PM10)	0.5	2.01
Total Particulate Matter (PM)	0.5	2.01
Sulfur Dioxide (SO2)	0.1	0.175
Volatile Organic Compounds (VOC)	1.1	4.64

Hazardous Air Pollutants (HAPs)	**Potential Emissions**	
	PPH	**TPY**
NA	NA	NA

Regulated Pollutants other than Criteria or HAPs	**Potential Emissions**	
	PPH	**TPY**
NA	NA	NA

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Potential emissions for all criteria pollutants except for NOx are based on AP42 emission factors, maximum operating capacity and maximum fuel usage.

The potential emissions for NOx are based on a short term emissions limitation of 0.067 lb/MMBTU.

Compliance with the NOx and CO emissions rate were demonstrated during stack tests performed on November 19-20, 2005 and January 15, 2008.

Applicable Requirements.

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Condition 4.1.1 – Maximum designed heat input capacity shall not exceed 65.93 MMBTU/hr.
Condition 4.1.2 – Maximum emission rates are limited to the limits listed in Table 4.1.2.
Condition 4.1.2 – Compliance with annual fuel usage and emission limits shall be determined using a rolling yearly total.
Condition 4.1.4 – Visible emissions shall not exceed 10% based on a 6-minute average except as authorized per 45 CSR 2, Section 3.1. In accordance with Condition 4.1.10, compliance with the opacity limit shall be based on 40 CFR 60, Appendix A, Method 9, or by using a continuous opacity monitor.
Condition 4.1.8 – Records of the operating schedule and quantity and quality of fuel consumed in this unit.
Condition 4.1.9 – Equipment shall be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions
Condition 4.3.1 – Emission stack testing shall be conducted in accordance with 40 CFR 60, Appendix A, for the purpose of demonstrating compliance. Stack testing shall be conducted in accordance with the schedule set forth in Condition 4.3.1(a),(b),(c).
Condition 4.4.1 – Maintain records of the quantities, types, and supplier(s) of each fuel combusted on a daily basis. Maintain dates/times of all start-ups, shutdowns and malfunction durations.
Condition 4.4.2 – Calculate and keep records of monthly and 12-month rolling emission sums for CO, VOC, PM, PM10, SO2, and NOx.
Condition 4.4.3 – Maintain monthly average heat content and quantity of the natural consumed.
Condition 4.5.1 – Notifications and requirements shall be performed in accordance with 40 CFR 60.7.

☐ Permit Shield:

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Condition 3.3 – Conduct stack tests to determine compliance with emission limits.
Condition 3.4 – Maintain records of monitoring measurements, tests, and/or analyses.
Condition 3.5 – Submit any applications, forms, reports, compliance certifications required by permit to the WVDEP DAQ.
See other monitoring/testing/recordkeeping/reporting requirements listed above.

Are you in compliance with all facility-wide applicable requirements? ☒ Yes ☐ No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.