WestVirginiaUniversity.
ENVIRONMENTAL HEALTH AND SAFETY

December 2, 2016

West Virginia Dept. of Environmental Protection
Division of Air Quality
Permitting Section
601 57th Street, SE
Charleston, WV 25304

To Whom It May Concern:

RE: Application for NSR Permit (45C SR13)
West Virginia University – HSC Campus

On behalf of WVU, attached is a submittal of an application for an NSR Permit for emergency generators located at the WVU Health Science Center (HSC) Campus, 1 Medical Center Drive, Morgantown, WV. The original certification of publication of public notice will be submitted as soon as it is available from the newspaper.

The generators operate under the U.S. EPA National Emissions Standards for Hazardous Air Pollutants (NESHAP) as per 40 CFR 63 Subpart ZZZZ.

Attached is one original and three copies of the application. Please have the DAQ contact Brian Lemme for payment of the application fee. If you have any questions or require additional information, please do not hesitate to contact me at Brian.Lemme@mail.wvu.edu or (304) 293-8742.

Sincerely,

Brian Michael Lemme
Environmental Health and Safety Specialist

PO Box 6551 | 975 Rawley Lane
Morgantown, WV 26506-6551
O 304.293.3792 F 304.293.7257

Application for NSR Permit (45CSR13)
West Virginia University

HSC Campus
1 Medical Center Drive
Morgantown, WV 26506

Submitted To:
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304

Submitted:
December, 2016

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West Virginia University
HSC Campus

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WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

APPLICATION FOR NSR PERMIT AND TITLE V PERMIT REVISION (OPTIONAL)

PLEASE CHECK ALL THAT APPLY TO **NSR (45CSR13)** (IF KNOWN):

☐ **CONSTRUCTION** ☐ **MODIFICATION** ☐ **RELOCATION**
☐ **CLASS I ADMINISTRATIVE UPDATE** ☐ **TEMPORARY**
☐ **CLASS II ADMINISTRATIVE UPDATE** ☒ **AFTER-THE-FACT**

PLEASE CHECK TYPE OF **45CSR30 (TITLE V)** REVISION (IF ANY):

☐ **ADMINISTRATIVE AMENDMENT** ☐ **MINOR MODIFICATION**
☐ **SIGNIFICANT MODIFICATION**

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS **ATTACHMENT S** TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant *(as registered with the WV Secretary of State's Office):*
West Virginia University

2. Federal Employer ID No. ***(FEIN):***
556000842

3. Name of facility *(if different from above):*
Health Science Center Campus

4. The applicant is the:
☐ **OWNER** ☐ **OPERATOR** ☒ **BOTH**

5A. Applicant's mailing address:
975 Rawley Lane, P.O. Box 6551
Morgantown, WV 26506

5B. Facility's present physical address:
1 Medical Center Dr
Morgantown, WV 26506

6. **West Virginia Business Registration.** Is the applicant a resident of the State of West Virginia? ☒ **YES** ☐ **NO**
- If **YES,** provide a copy of the **Certificate of Incorporation/Organization/Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A.**
- If **NO,** provide a copy of the **Certificate of Authority/Authority of L.L.C./Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A.**

7. If applicant is a subsidiary corporation, please provide the name of parent corporation:

8. Does the applicant own, lease, have an option to buy or otherwise have control of the *proposed site?* ☒ **YES** ☐ **NO**
- If **YES,** please explain: WVU is the owner and operator of all property and equipment.
- If **NO,** you are not eligible for a permit for this source.

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): 7 Emergency Back Up Generators

10. North American Industry Classification System **(NAICS)** code for the facility:
611310

11A. DAQ Plant ID No. (for existing facilities only):
–

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A.

- For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- For **Construction** or **Relocation permits,** please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

Take the Star City/West Virginia University exit to get off of I-79 (Exit 155).

Follow US19 South, turn left onto Patteson Drive, stay straight to go onto Van Voorhis Road, destination is located on the right side of the road.

12.B. New site address (if applicable):	12C. Nearest city or town:	12D. County:
1 Medical Center Dr Morgantown, WV 26506	Morgantown	Monongalia
12.E. UTM Northing (KM):	**12F. UTM Easting (KM):**	**12G. UTM Zone:**
4389919	589137	17S

13. Briefly describe the proposed change(s) at the facility:
After the fact permitting of five (1500, 600, 600, 750 and 800 kW) Emergency Back Up Generators

14A. Provide the date of anticipated installation or change: / / – If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: 2004	14B. Date of anticipated Start-Up if a permit is granted: / /

14C. Provide a **Schedule** of the planned **Installation** of/**Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:
Hours Per Day: 24 Days Per Week: 7 Weeks Per Year: 52 (As needed up to 500 Hrs/Yr)

16. Is demolition or physical renovation at an existing facility involved? ☐ **YES** ☒ **NO**

17. **Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18. **Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process *(if known)*. A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance *(if known)*. Provide this information as **Attachment D.**

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13). $3,500.00

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan,** e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to ***Plot Plan Guidance***) .
- Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F.**

23. Provide a **Process Description** as **Attachment G.** N/A
– Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Safety Data Sheets (SDS)** for all materials processed, used or produced as **Attachment H.**

– For chemical processes, provide a MSDS for each compound emitted to the air. N/A

25. Fill out the **Emission Units Table** and provide it as **Attachment I.**

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J.**

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K.** N/A

28. Check all applicable **Emissions Unit Data Sheets** listed below:

☐ Bulk Liquid Transfer Operations	☐ Fire Pumps	☒ Emergency Generators
☐ Chemical Processes	☐ Hot Mix Asphalt Plant	☐ Solid Materials Sizing, Handling and Storage Facilities
☐ Concrete Batch Plant	☐ Incinerator	☐ Storage Tanks
☐ Grey Iron and Steel Foundry	☐ Indirect Heat Exchanger	
☐ General Emission Unit, specify		

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L.**

29. Check all applicable **Air Pollution Control Device Sheets** listed below: **N/A**

☐ Absorption Systems	☐ Baghouse	☐ Flare
☐ Adsorption Systems	☐ Condenser	☐ Mechanical Collector
☐ Afterburner	☐ Electrostatic Precipitator	☐ Wet Collecting System
☐ Other Collectors, specify		

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M. N/A**

30. Provide all **Supporting Emissions Calculations** as **Attachment N,** or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O.**

➢ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and ***Example Legal Advertisement*** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33. **Business Confidentiality Claims.** 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 found in the ***General Instructions*** as **Attachment Q.**

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

☐ Authority of Corporation or Other Business Entity	☐ Authority of Partnership
☒ Authority of Governmental Agency	☐ Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R.**

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned [X] **Responsible Official** / [X] **Authorized Representative,** hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

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.

SIGNATURE _____ DATE: 12-2-16

(Please use blue ink) *(Please use blue ink)*

35B. Printed name of signee:		35C. Title:
Gayle Fratto		Assistant Director
35D. E-mail:	36E. Phone:	36F. FAX:
Gayle.Fratto@mail.wvu.edu	304-293-7396	304-293-7257
36A. Printed name of contact person (if different from above):		36B. Title:
Brian Lemme		EHS Specialist
36C. E-mail:	36D. Phone:	36E. FAX:
Brian.Lemme@mail.wvu.edu	304-293-8742	304-293-7257

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- [X] Attachment A: Business Certificate
- [X] Attachment B: Map(s)
- [X] Attachment C: Installation and Start Up Schedule
- [X] Attachment D: Regulatory Discussion
- [X] Attachment E: Plot Plan
- [X] Attachment F: Detailed Process Flow Diagram(s)
- [ ] Attachment G: Process Description
- [ ] Attachment H: Safety Data Sheets (SDS)
- [X] Attachment I: Emission Units Table
- [X] Attachment J: Emission Points Data Summary Sheet
- [ ] Attachment K: Fugitive Emissions Data Summary Sheet
- [X] Attachment L: Emissions Unit Data Sheet(s)
- [ ] Attachment M: Air Pollution Control Device Sheet(s)
- [X] Attachment N: Supporting Emissions Calculations
- [X] Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans
- [X] Attachment P: Public Notice
- [ ] Attachment Q: Business Confidential Claims
- [X] Attachment R: Authority Forms
- [ ] Attachment S: Title V Permit Revision Information
- [ ] Application Fee

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

- [ ] *Forward 1 copy of the application to the Title V Permitting Group and:*
- [ ] *For Title V Administrative Amendments:*
  - [ ] *NSR permit writer should notify Title V permit writer of draft permit,*
- [ ] *For Title V Minor Modifications:*
  - [ ] *Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,*
  - [ ] *NSR permit writer should notify Title V permit writer of draft permit.*
- [ ] *For Title V Significant Modifications processed in parallel with NSR Permit revision:*
  - [ ] *NSR permit writer should notify a Title V permit writer of draft permit,*
  - [ ] *Public notice should reference both 45CSR13 and Title V permits,*
  - [ ] *EPA has 45 day review period of a draft permit.*

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

ATTACHMENT A

Business Registration Certificate

WEST VIRGINIA

STATE TAX DEPARTMENT

BUSINESS REGISTRATION CERTIFICATE

ISSUED TO:

WEST VIRGINIA UNIVERSITY
PO BOX 6005 ONE WATERFRONT PLACE
MORGANTOWN, WV 26506-6005

BUSINESS REGISTRATION ACCOUNT NUMBER: **2275-2664**

This certificate is issued on: 10/23/2012

This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code

The person or organization identified on this certificate is registered to conduct business in the State of West Virginia at the location above.

This certificate is not transferrable and must be displayed at the location for which issued.

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them. CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.

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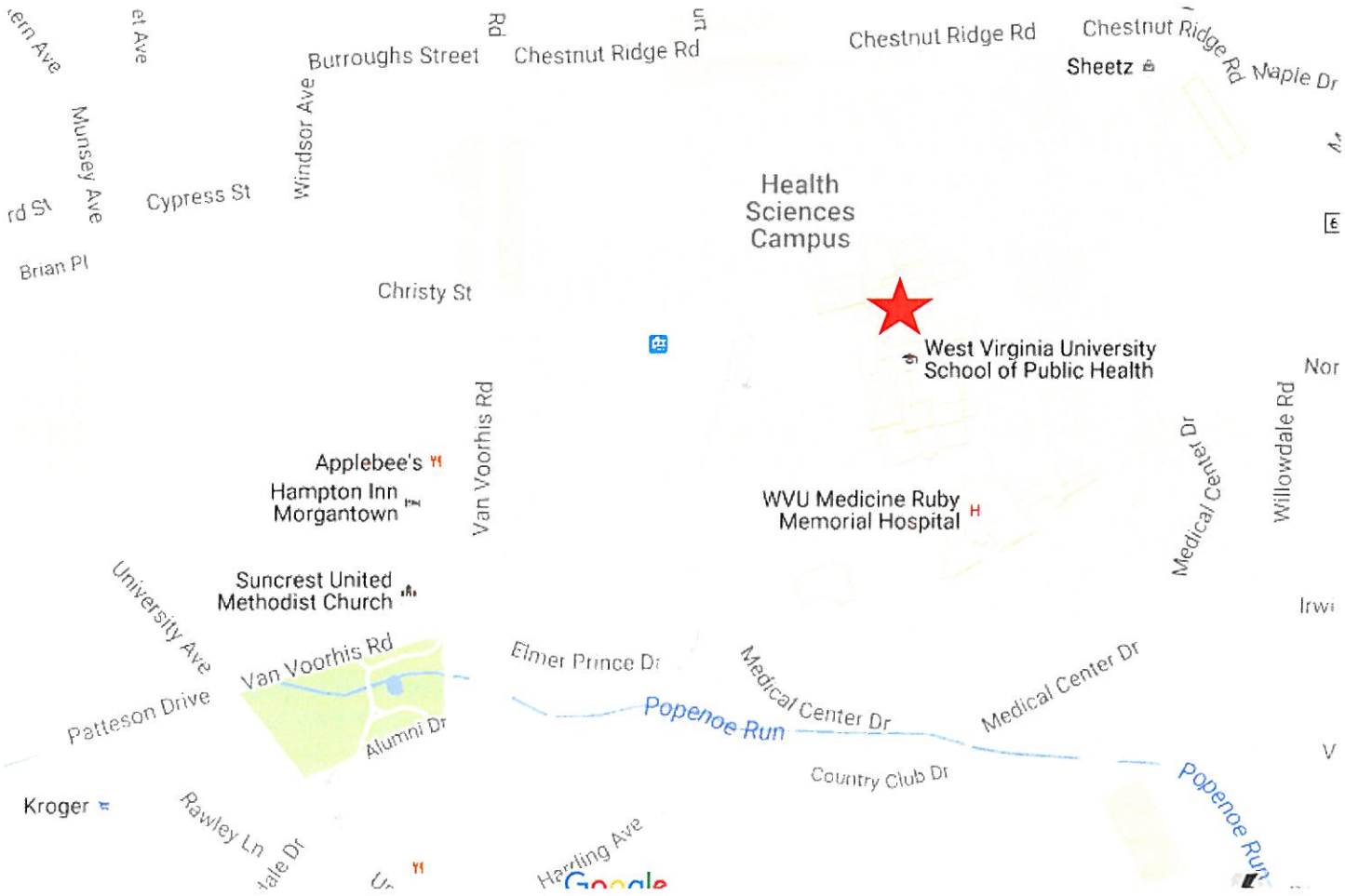
ATTACHMENT B

Maps

WVU Health Science Center
1 Medical Center Dr
Morgantown, WV 26506

From I-79:

1. Take **Exit 155** (Star City/Osage exit) and travel Northeast on Chaplin Hill Road towards University Town Center.
    a. If traveling **South** on I-79 turn **LEFT**.
    b. If traveling **North** on I-79 turn **RIGHT**.
2. Bear **RIGHT** onto US-19/WV-7/Jerry West Blvd. (Sheetz is on the right corner) and travel 1.4 miles.
3. Turn **LEFT** onto Patteson Drive (at WVU Coliseum) and travel East 0.8 miles.
4. Turn slight **RIGHT** onto Elmer Prince Dr.
5. Take the first exit on the roundabout to Medical Center Drive.
6. Parking is located on the left side of the street.
7. The Health Sciences Building is a grey building, located directly behind Ruby Memorial Hospital.



ATTACHMENT C

Installation and Start Up Schedule

Installation and Start up Schedule

HSC North – Room B6D (G1-HSC) 1500 kW generator was installed in 2004, the HSC South-Room G400 (G3-HSC) 600 kW was installed in 2016, the HSC North – Animal Facilities Annex (G4-HSC) 600 kW generator was installed in 2013, the HSC Biomedical Research Center (G6-HSC) 750 kW generator was installed in 2008, the HSC Blanchette Rockefeller Neurosciences Institute (G7-HSC) 800 kW generator was installed in 2008; thus, there are existing generators/engines and are included in the after-the-fact portion of this air permit application.

ATTACHMENT D
Regulatory Discussion

Regulatory Discussion

The source will limit operations of the emergency generators so the maximum emissions from all criteria pollutants will be less than major source thresholds. Thus, the facility is not a major project for Prevention of Significant Deterioration (PSD) as per 40 CFR 52.21 nor Nonattainment New Source Review (NSR) as per §45-19 of the WV DEP Air Quality Regulations.

The three engines were manufactured prior to 2006; thus, these engines operate under the U.S. EPA's National Emission Standards for Hazardous Pollutants (NESHAP) as per 40 CFR 63 Subpart ZZZZ.

Two engines manufactured after 2008 have all associated documentation and data sheets establishing that all current standards and regulations are in compliance with WV DEP DAQ. This engine will operate under the U.S. EPA's National Emission Standards for Hazardous Pollutants (NESHAP) as per 40 CFR 63 Subpart ZZZZ.

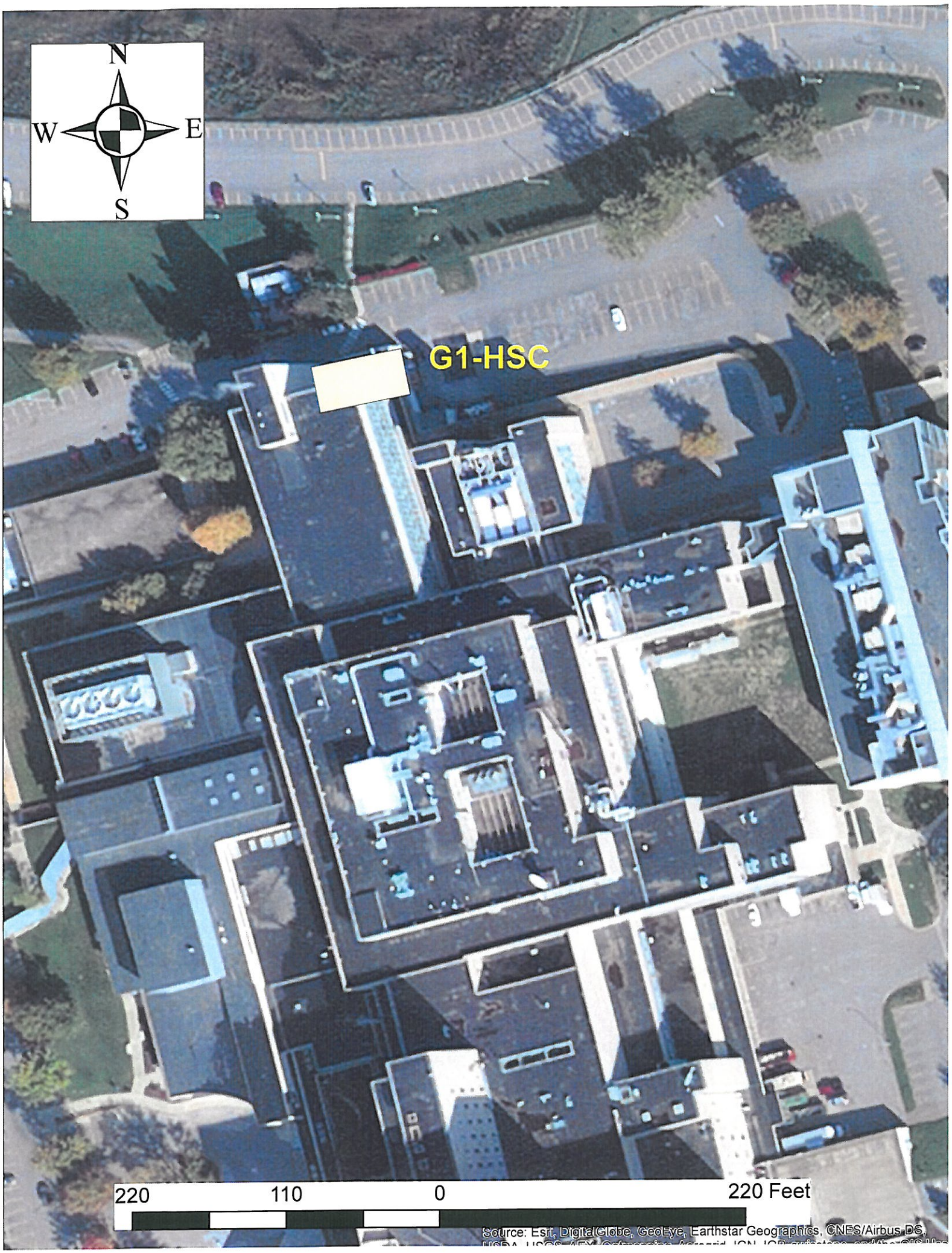
The facility will limit testing and maintenance use to <100 hours per engine per calendar year; thus, the engines will maintain their emergency status as per the NESHAP regulations. The NESHAP engines will comply with the following maintenance requirements.

- Operate/Maintain engine and control device per manufacturer's instructions or owner-developed maintenance plan.
- Change oil/oil filter and inspect hoses/belts every 500 hours or annually; inspect air cleaner (CI) or spark plugs (SI) every 1,000 hours or annually.
- Emergency engines must have hour mete and records hours of operation.
- Keep records of maintenance.

The emissions analysis includes hazardous air pollutants (HAPs) of which no single HAP is greater than 13 tons per year (tpy), nor cumulative HAPs greater than 27 tpy; thus the site is an area source of HAPs. The facility will comply with all other applicable WV DEP DAQ regulations for the engine use.

ATTACHMENT E

Plot Plan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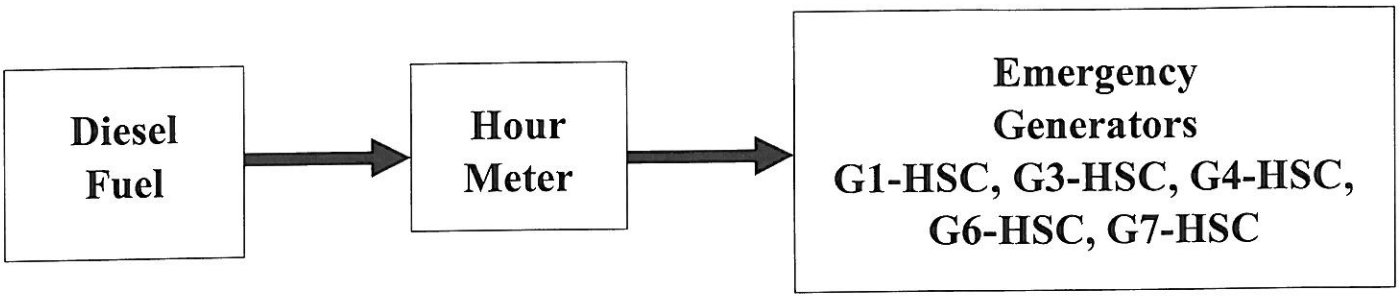
ATTACHMENT F

Process Flow Diagram

Attachment F:

Process Flow Diagram

WVU HSC Campus



ATTACHMENT I

Emissions Units Table

Attachment I

Emission Units Table

(includes all emission units and air pollution control devices that will be part of this permit application review, regardless of permitting status)

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type[3] and Date of Change	Control Device[4]
G1-HSC	G1-HSC	HSC North-Room B6D	2004	1500 kW	After the fact	None
G3-HSC	G3-HSC	HSC South- Room G400	2016	600 kW	After the fact	None
G4-HSC	G4-HSC	HSC North - Animal Facilities Annex	2013	600 kW	After the fact	None
G6-HSC	G6-HSC	HSC Biomedical Research Center	2007	750 kW	After the fact	None
G7-HSC	G7-HSC	HSC Blanchette Rockefeller Neuroscience Institute	2007	800 kW	After the fact	None

[1] For Emission Units (or Sources) use the following numbering system:1S, 2S, 3S,... or other appropriate designation.
[2] For Emission Points use the following numbering system:1E, 2E, 3E, ... or other appropriate designation.
[3] New, modification, removal
[4] For Control Devices use the following numbering system: 1C, 2C, 3C,... or other appropriate designation.

ATTACHMENT J

Emission Points Data Summary Sheet

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table-& Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions [4]		Maximum Potential Controlled Emissions [5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used [6]	Emission Concentration [7] (ppmv or mg/m[4])
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
G1-HSC	G1-HSC	G1-HSC	G1-HSC					NOx CO Sox PM VOC Formaldehyde	48.960 11.220 16.504 1.428 1.438 0.161	12.24 2.805 4.126 0.357 0.360 0.040			Gas	AP-42	ALL EMISSIONS PER UNIT
G3-HSC	G3-HSC	G3-HSC	G3-HSC					NOx CO Sox PM VOC Formaldehyde	19.584 5.451 1.673 1.795 0.575 0.064	4.896 1.363 0.418 0.449 0.144 0.016			Gas	AP-42	ALL EMISSIONS PER UNIT

G4-HSC	G4-HSC	G4-HSC	G4-HSC					NOx CO Sox PM VOC Formaldehyde	11.341 4.062 1.673 1.795 0.575 0.064	2.835 1.015 0.418 0.449 0.143 0.016			Gas	Manufacturer engine specs, AP-42	ALL EMISSIONS PER UNIT
G6-HSC	G6-HSC	G6-HSC	G6-HSC					NOx CO Sox PM VOC Formaldehyde	8.717 0.966 2.091 0.292 0.719 0.080	2.179 0.241 0.523 0.073 0.180 0.020			Gas	Manufacturer engine specs, AP-42	ALL EMISSIONS PER UNIT
G7-HSC	G7-HSC	G7-HSC	G7-HSC					NOx CO Sox PM VOC Formaldehyde	9.418 1.078 2.230 0.288 0.767 0.086	2.354 0.270 0.558 0.072 0.192 0.021			Gas	Manufacturer engine specs, AP-42	ALL EMISSIONS PER UNIT

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

[1] Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

[2] Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

[3] List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. **LIST** Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, all applicable Greenhouse Gases (including CO_2 and methane), etc. **DO NOT LIST** H_2, H_2O, N_2, O_2, and Noble Gases.

[4] Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[5] Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[6] Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

[7] Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m^3) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO_2, use units of ppmv (See 45CSR10).

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 2: Release Parameter Data								
Emission Point ID No. *(Must match Emission Units Table)*	Inner Diameter (ft.)	Exit Gas			Emission Point Elevation (ft)		UTM Coordinates (km)	
		Temp. (°F)	Volumetric Flow [1] (acfm) *at operating conditions*	Velocity (fps)	Ground Level *(Height above mean sea level)*	Stack Height [2] *(Release height of emissions above ground level)*	Northing	Easting
G1-HSC					1102		39°39'22.777"N	79°57'30.42"W
G3-HSC					1135		39°39'16.121"N	79°57'25.725"W
G4-HSC					1128		39°39'18.004"N	79°57'26.402"W
G6-HSC					1111		39°39'19.745"N	79°57'22.375"W
G7-HSC					1102		39°39'11.926"N	79°57'37.587"W

[1] Give at operating conditions. Include inerts.
[2] Release height of emissions above ground level.

ATTACHMENT L

Emissions Unit Data Sheets

General Permit G60-C Registration
Section Applicability Form

General Permit G60-C was developed to allow qualified registrants to seek registration for emergency generator(s).

General Permit G60-C allows the registrant to choose which sections of the permit that they wish to seek registration under. Therefore, please mark which sections that you are applying for registration under. Please keep in mind, that if this registration is approved, the issued registration will state which sections will apply to your affected facility.

Section 5	Reciprocating Internal Combustion Engines (R.I.C.E.)*	☒
Section 6	Tanks	☐
Section 7	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40CFR60 Subpart IIII)	☐
Section 8	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40CFR60 Subpart JJJJ)	☐

* **Affected facilities that are subject to Section 5 may also be subject to Sections 7 or 8. Therefore, if the applicant is seeking registration under both sections, please select both.**

EMERGENCY GENERATOR ENGINE DATA SHEET

Source Identification Number[1]		G1-HSC		G3-HSC		G4-HSC	
Engine Manufacturer and Model		Caterpillar / 3512B		Detroit Diesel 92 / 600R02D71		Cummins / DQCA-1209108	
Manufacturer's Rated bhp/rpm		2040		816		816	
Source Status[2]		ES		ES		ES	
Date Installed/Modified/Removed[3]		2004		2016		2013	
Engine Manufactured/Reconstruction Date[4]		2004		2016		2012	
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart IIII? (Yes or No)[5]		Yes		Yes		Yes	
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart JJJJ? (Yes or No)[6]		No		No		No	
Engine, Fuel and Combustion Data	Engine Type[7]						
	APCD Type[8]						
	Fuel Type[9]	2FO		2FO		2FO	
	H_2S (gr/100 scf)						
	Operating bhp/rpm						
	BSFC (Btu/bhp-hr)						
	Fuel throughput (ft^3/hr)						
	Fuel throughput ($MMft^3$/yr)						
	Operation (hrs/yr)	500		500		500	
Reference[10]	Potential Emissions[11]	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
	NOx	48.960	12.24	19.584	4.896	11.341	2.8353
	CO	11.220	2.805	5.451	1.363	4.062	1.0155
	VOC	1.438	0.360	0.575	0.144	0.575	0.143
	SO_2	16.504	4.126	1.673	0.418	1.673	0.418
	PM_{10}	1.428	0.357	1.795	0.449	1.795	0.449
	Formaldehyde	0.161	0.0402	0.064	0.0161	0.064	0.0161

EMERGENCY GENERATOR ENGINE DATA SHEET

Source Identification Number[1]		G6-HSC		G7-HSC			
Engine Manufacturer and Model		Cummins / 750DQFAA-7055		Cummins / DQFAB-5776873			
Manufacturer's Rated bhp/rpm		1020		1088			
Source Status[2]		ES		ES			
Date Installed/Modified/Removed[3]		2008		2008			
Engine Manufactured/Reconstruction Date[4]		2007		2007			
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart IIII? (Yes or No)[5]		Yes		Yes			
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart JJJJ? (Yes or No)[6]		No		No			
Engine, Fuel and Combustion Data	Engine Type[7]						
	APCD Type[8]						
	Fuel Type[9]	2FO		2FO			
	H_2S (gr/100 scf)						
	Operating bhp/rpm						
	BSFC (Btu/bhp-hr)						
	Fuel throughput (ft^3/hr)						
	Fuel throughput ($MMft^3$/yr)						
	Operation (hrs/yr)	500		500			
Reference[10]	Potential Emissions[11]	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
	NO_X	8.717	2.179	9.418	2.354		
	CO	0.966	0.241	1.078	0.270		
	VOC	0.719	0.180	0.767	0.021		
	SO_2	2.091	0.523	2.230	0.558		
	PM_{10}	0.292	0.073	0.288	0.072		
	Formaldehyde	0.080	0.0201	0.086	0.0215		

1. Enter the appropriate Source Identification Number for each emergency generator. Generator engines should be designated EG-1, EG-2, EG-3 etc. If more than three (3) engines exist, please use additional sheets.

2. Enter the Source Status using the following codes:

NS	Construction of New Source (installation)	ES	Existing Source
MS	Modification of Existing Source	RS	Removal of Source

3. Enter the date (or anticipated date) of the engine's installation (construction of source), modification or removal.

4. Enter the date that the engine was manufactured, modified or reconstructed.

5. Is the engine a certified stationary spark ignition internal combustion engine according to 40CFR60 Subpart IIII. If so, the engine and control device must be operated and maintained in accordance with the manufacturer's emission-related written instructions. You must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. If the certified engine is not operated and maintained in accordance with the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and you must demonstrate compliance according to 40CFR§60.4210 as appropriate.

   Provide a manufacturer's data sheet for all engines being registered.

6. Is the engine a certified stationary spark ignition internal combustion engine according to 40CFR60 Subpart JJJJ. If so, the engine and control device must be operated and maintained in accordance with the manufacturer's emission-related written instructions. You must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. If the certified engine is not operated and maintained in accordance with the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and you must demonstrate compliance according to 40CFR§60.4243a(2)(i) through (iii), as appropriate.

   Provide a manufacturer's data sheet for all engines being registered.

7. Enter the Engine Type designation(s) using the following codes:

LB2S	Lean Burn Two Stroke	RB4S	Rich Burn Four Stroke
LB4S	Lean Burn Four Stroke		

8. Enter the Air Pollution Control Device (APCD) type designation(s) using the following codes:

A/F	Air/Fuel Ratio	IR	Ignition Retard
HEIS	High Energy Ignition System	SIPC	Screw-in Precombustion Chambers
PSC	Prestratified Charge	LEC	Low Emission Combustion
NSCR	Rich Burn & Non-Selective Catalytic Reduction	SCR	Lean Burn & Selective Catalytic Reduction

9. Enter the Fuel Type using the following codes:

PQ	Pipeline Quality Natural Gas	RG	Raw Natural Gas
2FO	#2 Fuel Oil	LPG	Liquid Propane Gas

10. Enter the Potential Emissions Data Reference designation using the following codes. Attach all referenced data to this *Compressor/Generator Data Sheet(s)*.

MD	Manufacturer's Data	AP	AP-42	
GR	GRI-HAPCalc™	OT	Other _____	(please list)

11. Enter each engine's Potential to Emit (PTE) for the listed regulated pollutants in pounds per hour and tons per year. PTE shall be calculated at manufacturer's rated brake horsepower and may reflect reduction efficiencies of listed Air Pollution Control Devices. Emergency generator engines may use 500 hours of operation when calculating PTE. PTE data from this data sheet shall be incorporated in the *Emissions Summary Sheet*.

EMERGENCY GENERATOR EMISSION SUMMARY SHEET FOR CRITERIA POLLUTANTS

Emergency Generator Location: WVU HSC Campus						Registration Number (Agency Use)				
	Potential Emissions (lbs/hr)					Potential Emissions (tons/yr)				
Source ID No.	NO_X	CO	VOC	SO_2	PM_{10}	NO_X	CO	VOC	SO_2	PM_{10}
G1-HSC	48.960	11.220	1.438	16.504	1.438	12.240	2.805	0.360	4.1259	0.357
G3-HSC	19.584	5.451	0.575	1.673	1.795	4.896	1.363	0.144	0.4182	0.4488
G4-HSC	11.341	4.062	0.575	1.673	1.795	2.8353	1.0155	0.144	0.4182	0.4488
G6-HSC	8.717	0.966	0.719	2.091	0.292	2.1793	0.2415	0.180	0.523	0.0730
G7-HSC	9.418	1.078	0.767	2.230	0.288	2.3545	0.2696	0.192	0.558	0.0719
Total	98.020	22.777	4.074	24.171	5.608	24.505	5.695	1.020	6.043	1.293

EMERGENCY GENERATOR EMISSION SUMMARY SHEET FOR HAZARDOUS/TOXIC POLLUTANTS

Emergency Generator Location: WVU HSC Campus

Registration Number (Agency Use)

	Potential Emissions (lbs/hr)						Potential Emissions (tons/yr)					
Source ID No.	Benzene	Ethyl-benzene	Toluene	Xylenes	n-Hexane	Formalde-hyde	Benzene	Ethyl-benzene	Toluene	Xylenes	n-Hexane	Formalde-hyde
G1-HSC	4.84E-03	0	2.12E-03	1.48E-03	0	6.12E-03	1.21E-03	0	5.31E-04	3.70E-04	0	1.53E-03
G3-HSC	1.94E-03	0	8.49E-04	5.92E-04	0	2.45E-03	4.84E-04	0	2.12E-04	1.48E-04	0	6.12E-04
G4-HSC	1.61E-03	0	5.83E-04	4.01E-04	0	1.64E-04	4.03E-04	0	1.46E-04	1.00E-04	0	4.10E-05
G6-HSC	2.01E-03	0	7.29E-04	5.01E-04	0	2.05E-04	5.03E-04	0	1.82E-04	1.25E-04	0	5.12E-05
G7-HSC	2.15E-03	0	7.78E-04	5.34E-04	0	2.18E-04	5.37E-04	0	1.94E-04	1.34E-04	0	5.46E-05
Total	1.26E-02	0	5.06E-03	3.51E-03	0	9.16E-03	3.14E-03	0	1.27E-03	8.77E-04	0	2.29E-03

General Permit Levels
Construction, Modification, Relocation, Administrative Update

Class II General Permits – G10-C (Coal Preparation and Handling), G20-B (Hot Mix Asphalt), G30-D (Natural Gas Compressor Stations), G35-A (Natural Gas Compressor Stations with Flares/Glycol Dehydration Units), G40-B (Nonmetallic Minerals Processing), G50-B (Concrete Batch Plant), G60-C (Emergency Generators)

Class I General Permit - G65-C (Emergency Generators)

General Permit	Public Notice	Review Period as per 45CSR13	Application Fee	Criteria	Application Type
Class II General Permit (Construction)	30 days (applicant)	90 days	$500 + applicable NSPS fees	6 lb/hr and 10 tpy of any regulated air pollutant OR 144 lb/day of any regulated air pollutant, OR 2 lb/hr of any hazardous air pollutant OR 5 tpy of aggregated HAP OR 45CSR27 TAP (10% increase if above BAT triggers or increase to BAT triggers) or subject to applicable standard or rule, but subject to specific eligibility requirements	Registration Application
Class II General Permit (Modification)	30 days (applicant)	90 days	$500 + applicable NSPS fees	Same as Class II General Permit (Construction) but subject to specific eligibility requirements	Registration Application
Administrative Update (Class I)	None	60 days	None	Decrease in emissions or permanent removal of equipment OR more stringent requirements or change in MRR that is equivalent or superior	Registration Application or Written Request
Administrative Update (Class II)	30 days (applicant)	60 days	$300 + applicable NSPS fees	No change in emissions or an increase less than Class II Modification levels	Registration Application
Relocation	30 days (applicant)	45 days	$500 + applicable NSPS fees	No emissions increase or change in facility design or equipment	Registration Application
Class I General Permit	None	45 days	$250	Same as Class II General Permit (Construction) but subject to specific eligibility requirements	Registration Application

ATTACHMENT N

Supporting Emissions Calculations

Attachment N-1: Emergecy Generator Supporting Emission Calculations

ID#	kW	HP	BTU/hr	Nox (lb/hr)	CO (lb/hr)	Sox (lb/hr)	PM-10 (lb/hr)	Formaldehyde (lb/hr)	VOC (lb/hr)	Nox (ton/yr)	CO (ton/yr)	SOx (ton/yr)	PM-10 (ton/yr)	Formaldehyde (ton/yr)	VOC (ton/yr)
G1-HSC	1500	2040		48.960	11.220	16.504	1.438	0.161	1.438	12.240	2.805	4.126	0.357	0.0402	0.360
G3-HSC	600	816		19.584	5.451	1.673	1.795	0.064	0.575	4.896	1.363	0.418	0.449	0.0161	0.144
G4-HSC	600	816		11.341	4.062	1.673	1.795	0.064	0.575	2.835	1.016	0.418	0.449	0.0160	0.144
G6-HSC	750	1020		8.717	0.966	2.091	0.292	0.080	0.719	2.179	0.242	0.523	0.073	0.0201	0.180
G7-HSC	800	1088		9.418	1.078	2.230	0.288	0.086	0.767	2.355	0.270	0.558	0.072	0.0214	0.192
Total				**98.020**	**22.777**	**24.171**	**5.608**	**0.455**	**4.074**	**24.505**	**5.695**	**6.043**	**1.400**	**0.1138**	**1.020**

Attachment N-2: Emergecy Generator Supporting Emission Calculations - References

Diesel Engines

AP-42 <600 hp

(lb/hphr)

Nox	0.03100
CO	0.00668
Sox	0.00205
PM-10	0.00220
Formaldehyde	0.001180
VOC - exhaust	0.01500

AP-42 >600 hp

(lb/hphr)

Nox	0.02400
CO	0.00550
Sox	0.00809
PM-10	0.00070
Formaldehyde	0.000079
VOC - exhaust	0.00071

Cummins Powersuite

(g/hp-hr) Full-prime values

	HC	Nox	CO	PM	SO2
DSFAB	0.08	2.13	0.8	0.8	0.08
DGFC	0.14	4.5	0.6	0.2	
DSFAD	0.05	2.2	0.56	0.06	0.15
DGBB	0.5	6.99	1.26	N/A	0.62
DGFA	0.48	6.48	0.3	0.18	0.59
DGHD	0.4	3.94	0.36	0.12	
DGCG	0.25	6.86	2.1	0.42	
DGGD	0.51	4	0.46	0.12	N/A
DSGAC	0.05	2.54	0.51	0.07	0.15
DGFB	0.27	5.28	0.41	0.14	0.61
DSKBA	0.05	2.7	0.4	0.25	
DQCA	0.08	6.31	2.26	N/A	N/A
DQFAA	0.09	3.88	0.43	0.13	0.1
DQFAB	0.09	3.93	0.45	0.12	0.1
DSGAE	0.03	3.9	0.23	0.03	0.14
DFED	0.19	9	0.92	0.1	0.57
DKAF	0.04	2.21	0.68	0.6	
DFBF	0.18	10.89	0.6	0.5	0.62
DFFB	0.29	10.2	1.1	0.15	0.58
DFEB	1.48	9.8	0.38	0.5	0.62
DFEJ	0.07	4.95	0.45	0.05	
DSGAA	0.15	1.92	1.03	0.11	0.17

Kohler

Weight cycle (g/kWh)

	CO	HC	NOX	PM
450REOZV	0.69	0.16	5.19	0.096

Caterpillar

lb/hr

Model	CO	HC	NOX
3142	0.55	0.06	14.57

ATTACHMENT O

Monitoring/Recordkeeping Reporting/Testing Plans

Monitoring/Recordkeeping/Reporting/Testing Plans

Hourly operation records will be kept and updated monthly. The type of operation (i.e., emergency, emergency demand response, testing, and maintenance) will be included. No stack testing is required. Appropriate reports to the WVDEP will be submitted as required. As per NESHAP and NSPS, records of maintenance will be kept starting with the 2017-2018 fiscal year on July 1, 2017. Reviews of process controls and operations for testing will be conducted quarterly.

ATTACHMENT P

Public Notice

TO BE PUBLISHED IN THE DOMINION POST ON December 5th

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that West Virginia University has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Construction Permit for emergency backup generators located at 1 Medical Center Drive, in Morgantown, in Monongalia County, West Virginia. The latitude and longitude coordinates are: 39.653415N 79.957355W

The applicant estimates the potential to discharge the following Regulated Air Pollutants will be: 24.505 tons per year (tpy) for Oxides of Nitrogen; 5.695 tpy for Carbon Monoxide; 6.043 tpy for Sulfur Dioxide; 1.400 tpy for Particulate Matter; 1.020 tpy for Volatile Organic Compounds; and 0.1140105 tpy for Formaldehyde.

Startup of operation began on or about 2004 or later. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1250, during normal business hours.

Dated this the 5th day of December, 2016.

By: West Virginia University
Brian Lemme
EHS Specialist
975 Rawley Lane
Morgantown, WV 26506

ATTACHMENT R
Authority Forms

Attachment R
AUTHORITY OF GOVERNMENTAL AGENCY

TO: The West Virginia Department of Environmental Protection, Division of Air Quality

DATE: December 2, 2016

ATTN: Director

Agency's Federal Employer I.D. Number 556000842

The undersigned hereby files with the West Virginia Department of Environmental Protection, Division of Air Quality, a permit application.

Further, the agency certifies as follows:

(1) Gayle Fratto is the chief executive officer, a ranking elected official, or an authorized representative and in that capacity may represent the interests of the agency and may obligate and legally bind the agency. (In the case of a federal agency, "chief executive officer" includes the head of geographical area having responsibility for the overall operations of a principal geographic unit of the agency.)

(2) If the agency changes its authorized representatives then the agency shall notify the Director of the West Virginia Department of Environmental Protection, Division of Air Quality, immediately upon such change.

12-2-16

Chief Executive Officer, Ranking Elected Official, a Head of Geographical Area (for a Federal Agency) or Other Authorized Officer

(If not the Chief Executive Officer, Ranking Elected Official or a Head of Geographical Area (for a Federal Agency), then the agency must submit a Resolution or other legal document stating legal authority of other authorized officer to bind the agency.)

West Virginia University

Governmental Agency Name

WestVirginiaUniversity.
ENVIRONMENTAL HEALTH AND SAFETY

October 7, 2015

Mr. William F. Durham
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304

Dear Mr. Durham:

Subject: WVU Signatory Authority Authorization

I hereby authorize the following people of WVU Facilities and Services, Environmental Health and Safety, to sign all reports, permit applications and other correspondence as required by the West Virginia Department of Environmental Protection, Chapter 22 of the Code of West Virginia and the legislative rules and regulations promulgated thereunder.

- John Principe, Director
- Gayle Fratto, Assistant Director
- John Hando, Risk Assessment Emergency Response Coordinator
- Joyce Addison, Manager Hazardous Materials
- Brian Lemme, Environmental Health and Safety Specialist
- Paul Porter, Hazardous Materials Specialist

If you have any questions or comments, please contact Brian Lemme at (304) 293-8742 or e-mail Brian.Lemme@mail.wvu.edu.

Sincerely,

Narvel G. Weese, Jr.
Vice President for Administration and Finance

XC: File

PO Box 6551 | 975 Rawley Lane
Morgantown, WV 26506-6551
304.293.3792 304.293.7257