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|---------------------------------|--|
| Permit Writer | William T. Rothwell II, P.E. |
| Email Address | W.Tracy.Rothwell@wv.gov |
| Company Name | Marshall University |
| Company ID | 011-00218 |
| Facility Name | Huntington Campus |
| Permit Number | R13-3318 |
| County | Cabell |
| Newspaper | The Herald-Dispatch <i>Complete Reported 526-1000</i> |
| Company Contact & Email #1 | Brandi Jacobs Jones, Sr. VP of Operations One John Marshall Drive Huntington, WV 25755 jacobs2@marshall.edu |
| Company Contact & Email #2 | Tracy B. Smith, Director, EHS One John Marshall Drive Huntington, WV 25755 tsmith@marshall.edu |
| Regional Office (if applicable) | NA |

*Publish Wed Nov 23 2016
30 days Fri Dec 23 2016*

INTERNAL PERMITTING DOCUMENT TRACKING MANIFEST

Company Name Marshall University - Huntington Campus

Permitting Action Number R13-3318 Total Days 14 DAQ Days 10

Permitting Action:

- | | | |
|---|---|--------------------------------------|
| <input type="radio"/> Permit Determination | <input type="radio"/> Temporary | <input type="radio"/> Modification |
| <input type="radio"/> General Permit | <input type="radio"/> Relocation | <input type="radio"/> PSD (Rule 14) |
| <input type="radio"/> Administrative Update | <input checked="" type="radio"/> Construction | <input type="radio"/> NNSR (Rule 19) |

Documents Attached:

- | | |
|--|---|
| <input checked="" type="radio"/> Engineering Evaluation/Memo | <input type="radio"/> Completed Database Sheet |
| <input checked="" type="radio"/> Draft Permit | <input type="radio"/> Withdrawal |
| <input checked="" type="radio"/> Notice | <input type="radio"/> Letter |
| <input type="radio"/> Denial | <input type="radio"/> Other (specify) <u>Notice Request</u> |
| <input type="radio"/> Final Permit/General Permit Registration | _____ |

| Date | From | To | Action Requested |
|-------|------|-----|---|
| 10/27 | Tra | Bev | Please review / Request to Go To Notice |
| 11/14 | Bev | Tra | Go to Notice |
| | | | |
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NOTE: Retain a copy of this manifest for your records when transmitting your document(s).



Permit / Application Information Sheet
Division of Environmental Protection
West Virginia Office of Air Quality

| | | | |
|--------------------------|--|---|---------------------|
| Company: | Huntington | Facility: | Marshall University |
| Region: | 3 | Plant ID: | 011-00218 |
| Application #: | 13-3318 | | |
| Engineer: | Rothwell, Tracy | Category: | |
| Physical Address: | One John Marshall Drive Huntington WV 25755 | SIC: [8221] EDUCATIONAL SERVICES - COLLEGES AND UNIVERSITIES, NEC NAICS: [611310] Colleges, Universities, and Professional Schools | |
| County: | Cabell | | |
| Other Parties: | ENV_CONT - Bailey, Travis 304-696-3032 VICE PRES - Jones, Brandi Jacob 304-696-3328 | | |

| |
|---|
| Information Needed for Database and AIRS |
| 1. Need valid physical West Virginia address with zip |
| 2. Air Program |
| 3. Inspection result |
| 4. Pollutant and class |

| | |
|---|------------|
| Regulated Pollutants | |
| CO Carbon Monoxide | 9.390 TPY |
| PM10 Particulate Matter < 10 um | 11.340 TPY |
| SO2 Sulfur Dioxide | 3.590 TPY |
| VOC Volatile Organic Compounds (Reactive organic gases) | 2.010 TPY |
| NOX Nitrogen Oxides (including NO, NO2, NO3, N2O3, N2O4, and N2O5) | 21.580 TPY |

| | | |
|---|-------------------------------|-------------------------|
| Summary from this Permit 13-3318 | | |
| Air Programs | Applicable Regulations | |
| SIP | | |
| Fee Program | Fee | Application Type |
| 9M | \$2,000.00 | CONSTRUCTION |

Notes from Database

| | |
|------------------------------|------------------------|
| Activity Dates | |
| APPLICATION RECEIVED | 05/06/2016 |
| ASSIGNED DATE | 05/09/2016 |
| APPLICATION FEE PAID | 05/09/2016 credit card |
| APPLICANT PUBLISHED LEGAL AD | 05/17/2016 |
| APPLICATION DEEMED COMPLETE | 06/06/2016 |

NON-CONFIDENTIAL

Please note, this information sheet is not a substitute for file research and is limited to data entered into the AIRTRAX database.

Company ID: 011-00218
 Company: Huntington
 Printed: 10/27/2016
 Engineer: Rothwell, Tracy

AIR QUALITY PERMIT NOTICE

Notice of Intent to Approve

On May 9, 2016, Marshall University applied to the WV Department of Environmental Protection, Division of Air Quality (DAQ) for a permit for the construction of five emergency generators at their Huntington campus located on One John Marshall Drive in Huntington, Cabell County, WV at latitude 38.423055 and longitude -82.430679. A preliminary evaluation has determined that all State and Federal air quality requirements will be met by the proposed facility. The DAQ is providing notice to the public of its preliminary determination to issue the permit as R13-3318.

The following potential emissions will be authorized by this permit action: Particulate Matter, 11.34 TPY; Volatile Organic Compounds, 2.01 TPY; Nitrogen Oxide, 21.58 TPY; Carbon Monoxide, 9.39 TPY; Sulfur Dioxide, 3.59 TPY; and Formaldehyde, 0.79 TPY.

Written comments or requests for a public meeting must be received by the DAQ before 5:00 p.m. on November XX, 2016. A public meeting may be held if the Director of the DAQ determines that significant public interest has been expressed, in writing, or when the Director deems it appropriate.

The purpose of the DAQ's permitting process is to make a preliminary determination if the proposed construction will meet all State and Federal air quality requirements. The purpose of the public review process is to accept public comments on air quality issues relevant to this determination. Only written comments received at the address noted below within the specified time frame, or comments presented orally at a scheduled public meeting, will be considered prior to final action on the permit. All such comments will become part of the public record.

William T. Rothwell II, P.E.
WV Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304
Telephone: 304/926-0499, ext. 1211
FAX: 304/926-0478

Additional information, including copies of the draft permit, application and all other supporting materials relevant to the permit decision may be obtained by contacting the engineer listed above. The draft permit and engineering evaluation can be downloaded at:

www.dep.wv.gov/daq/Pages/NSRPermitsforReview.aspx



west virginia department of environmental protection

Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone 304/926-0475

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Registration No.: R13-3318
Plant ID No.: 011-00218
Applicant: Marshall University (Marshall)
Facility Name: Huntington Campus
Location: Huntington, Cabell County
NAICS Code: 611310
Application Type: Construction
Received Date: May 6, 2016
Engineer Assigned: William T. Rothwell II, P.E.
Fee Amount: \$2,000.00
Date Received: May 9, 2016
Complete Date: June 5, 2016
Applicant Ad Date: May 17, 2016
Newspaper: *The Herald Dispatch*
UTM's: Easting: 375.11 km Northing: 4,253.72 km Zone: 17
Description: Marshall has applied for an after-the-fact permit for five (5) emergency generators that were installed for the purpose of providing back-up electrical power for critical operating functions of on-campus structures. The operational dates for the generators vary and date back to 1982. The emergency generators will be operated no more than 500 hours per year and the facility will limit testing and maintenance use to 100 hours per engine per calendar year.

BACKGROUND DISCUSSION

A total of five emergency generators have been installed and operated on the Marshall campus since 1982. Diesel fueled and natural gas emergency generators of various size were added over the course of the facilities development to provide backup emergency power for critical facility operations. The last emergency generator was installed in 2015. The following Table outlines the facility/generator configuration:

Table 1: Generator Locations

| Generator # | Source Location | Size (kW) | Make/Model | Year |
|-------------|---|-----------|--------------------------|------|
| EG-1 | Joan C. Edwards Stadium | 300 | Kohler 300 ROZD71 | 1991 |
| EG-2 | Weisburg Family Applied Engineering Complex | 787 | Caterpillar DCPXL15.2NZS | 2015 |
| EG-3 | Robert C. Byrd Biotechnology Building | 1818 | Caterpillar 3512 | 2006 |
| EG-4 | Science Building | 140 | Kohler 100RZ82 | 1982 |
| EG-5 | Harless Dining Hall | 500 | Cummins GGKD-5588961 | 2003 |

REGULATORY DISCUSSION

Four of the engines were manufactured prior to 2006 (Units EG-1, EG-3, EG-4, and EG-5); thus, these engines would normally be governed under the U.S. EPA’s National Emission Standards for Hazardous Pollutants (“NESHAP”) as per 40CFR63 Subpart ZZZZ. However, Marshall qualifies for Subpart ZZZZ’s institutional exemption, therefore, the provisions do not apply to these affected sources. The remaining one engine (Unit EG-2) was manufactured in 2015; thus, this engine operates under EPA’s New Source Performance Standard (“NSPS”). Engine EG-2 is Tier II certified and will operate under 40CFR60 Subpart IIII.

The NSPS engine meets the requirements of the NESHAP by operating under the NSPS. Engines operating under the NESHAP cannot use the WV DEP’s General Permit for Emergency Engines and therefore, must be registered through an individual Rule 13 Permit.

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 and NSPS regulations.

The NESHAP engines will comply with the following maintenance requirements:

- Operate/maintain engine & control device per manufacturer’s instructions or owner-developed maintenance plan
- Change 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 meter and record hours of operation
- Keep records of maintenance

Table 3 outlines the proposed equipment and control device information taken from permit application R13-3318:

Table 3: Equipment and Control Device Listing

| Emission Unit ID | Emission Unit Description | Detail Make/Model/ Fuel | Year Installed/ Modified | Design Capacity |
|------------------|---|--|-----------------------------|-----------------|
| EG-1 | Emergency Generator with integrated sub-base tank | Kohler/ 300 ROZD71 / 2FO | 1991 | 300 kW |
| EG-2 | Emergency Generator with integrated sub-base tank | Caterpillar / DCPXL15.2NZZ / 2FO | 2015 | 500 kW |
| EG-3 | Emergency Generator with integrated sub-base tank | Caterpillar / 3512 / 2FO | 2006 | 1250 kW |
| EG-4 | Emergency Generator | Kohler/ 100RZ82 / PQ | 1982 | 100 kW |
| EG-5 | Emergency Generator | Cummins / GGKD- 5588961 / PQ | 2003 | 150 kW |

SITE INSPECTION

This is an application for five (5) emergency generators installed for the purpose of allowing key systems to continue to operate without interruption during times of utility power outages. A site inspection was deemed unnecessary by the writer at this time, however, the facilities will be placed on the emergency generator list of sources from this permitting action.

Directions: From I-64 use Exit 11 (Hal Greer Blvd) then get on Rt 10 North and follow it for approximately 2.6 miles. Turn right onto 5th Avenue then left onto John Marshall Drive.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Emission estimates for criteria pollutants, hazardous and toxic pollutants were determined using emission factors from AP-42, 5th Edition, 1996 and Tier II limits where applicable. Emission estimates were calculated by the applicant and checked for accuracy and completeness by the writer.

Marshall's proposed facility emergency generator installations and operations will result in the following estimated potential to discharge controlled emissions:

Table 4: Emergency Generator Emission Summary - Criteria Pollutants

| Source ID No. | Potential Emissions (lbs/hr) | | | | | Potential Emissions (tons/yr) (500 hours) | | | | |
|---------------|------------------------------|-------|------|-----------------|------------------|---|------|------|-----------------|------------------|
| | NO _x | CO | VOC | SO ₂ | PM ₁₀ | NO _x | CO | VOC | SO ₂ | PM ₁₀ |
| EG-1 | 9.94 | 4.12 | 1.17 | 0.97 | 1.04 | 2.48 | 1.03 | 0.29 | 0.24 | 0.26 |
| EG-2 | 10.25 | 4.15 | 1.94 | 1.61 | 0.23 | 2.56 | 1.04 | 0.49 | 0.40 | 0.06 |
| EG-3 | 56.36 | 12.36 | 4.50 | 3.73 | 4.00 | 14.09 | 3.10 | 1.12 | 0.93 | 1.00 |
| EG-4 | 1.23 | 16.53 | 0.17 | 0.01 | 0.01 | 0.31 | 4.13 | 0.04 | 0.01 | 0.01 |
| EG-5 | 8.60 | 0.34 | 0.28 | 0.01 | 0.01 | 2.14 | 0.09 | 0.07 | 0.01 | 0.01 |
| TOTAL | 86.38 | 37.5 | 8.06 | 8.33 | 15.29 | 21.58 | 9.39 | 2.01 | 3.59 | 11.34 |

Table 5: Total Facility Criteria Pollutant PTE Summary

| Pollutant | Facility Wide PTE (tons/year) |
|----------------------------|-------------------------------|
| Nitrogen Oxides | 21.58 |
| Carbon Monoxide | 9.39 |
| Volatile Organic Compounds | 2.01 |
| Particulate Matter-10 | 11.34 |
| Sulfur Dioxide | 3.59 |
| Formaldehyde | 0.79 |

REGULATORY APPLICABILITY

PSD has no applicability to the proposed facility. The facility is subject to the following state and federal rules:

45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation

The proposed construction is subject to the requirements of 45CSR13 because there will be a potential to discharge controlled emissions in excess of 6 pph and 10 tpy of a regulated air pollutant. In addition, the proposed construction is ineligible for a General Permit and therefore requires a Rule 13 Permit to Construct. The applicant has submitted the \$2,000 application fee and published a Class I legal advertisement in *The Herald Dispatch* on May 17, 2016.

45CSR30 Requirements for Operating Permits

Certain compression ignition internal combustion engines are subject to 40CFR60, Subpart III. In this case, the one (1) diesel engine (EG-2) is Tier II certified and subject to 40CFR60, Subpart III.

45CFR60 Subpart III—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Marshall is subject to this subpart because one (1) engine (unit EG-2) was manufactured after April 1, 2006. The engine emissions for this unit are EPA Tier II Certified.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

Formaldehyde is emitted from combustion of #2 diesel fuel at very low levels:

Formaldehyde, a colorless, pungent-smelling gas, can cause watery eyes, burning sensations in the eyes and throat, nausea, and difficulty in breathing in some humans exposed at elevated levels (above 0.1 parts per million). High concentrations may trigger attacks in people with asthma. There is evidence that some people can develop a sensitivity to formaldehyde. It has also been shown to cause cancer in animals and may cause cancer in humans. Health effects include eye, nose, and throat irritation; wheezing and coughing; fatigue; skin rash; severe allergic reactions. May cause cancer. May also cause other effects listed under "organic gases."

AIR QUALITY IMPACT ANALYSIS

The installation and operation of the five emergency generators at the Huntington campus is not classified as a major source as defined by 45CSR14 (PSD). For this reason no air quality modeling was required.

MONITORING OF OPERATIONS

60 CFR 60 Subpart III sets specific monitoring and record-keeping requirements for limited use/emergency generator engines:

- Documenting the purpose for operating the engine and
- Performing regular, routine maintenance.

RECOMMENDATION TO DIRECTOR

The information contained in the permit application R13-3318 indicates that compliance with all applicable state rules and federal regulations should be achieved when all proposed control methods are in operation. Therefore, the granting of a permit to Marshall University for the installation and operation of five (5) emergency generators at the Huntington Campus, Cabell County, WV, is hereby recommended.



William T. Rothwell II, P.E.
Engineer

10/27/2016

Date

Facility Location: Huntington, Cabell County, West Virginia
Mailing Address: One John Marshall Drive, Huntington, WV 25755
Facility Description: Emergency Back Up Generators at the Huntington Campus
NAICS Code: 611310
UTM Coordinates: 375.113 km Easting • 4253.725 km Northing • Zone 17
Permit Type: Construction
Description of Change:

Marshall University has applied for a permit for five (5) emergency generators that were installed for the purpose of providing back-up electrical power for critical operating functions of on-campus structures. The operational dates for the generators vary and date back to 1982. The emergency generators will be operated no more than 500 hours per year and the facility will limit testing and maintenance use to 100 hours per engine per calendar year.

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

The source is not subject to 45CSR30.

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1.0. Emission Units

| Emission Unit ID | Emission Unit Description | Detail Make/Model/ Fuel | Year Installed/ Modified | Design Capacity | Control Device |
|-------------------------|---|--|-------------------------------------|------------------------|-----------------------|
| EG-1 | Emergency Generator with integrated sub-base tank | Kohler/ 300 ROZD71/ 2FO | 1991 | 300 kW | None |
| EG-2 | Emergency Generator with integrated sub-base tank | Caterpillar / DCPXL15.2NZZ / 2FO | 2015 | 500 kW | None |
| EG-3 | Emergency Generator with integrated sub-base tank | Caterpillar / 3512 / 2FO | 2006 | 1250 kW | None |
| EG-4 | Emergency Generator | Kohler/ 100RZ82 / PQ | 1982 | 100 kW | None |
| EG-5 | Emergency Generator | Cummins / GGKD- 5588961 / 2FO | 2003 | 150 kW | None |

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2.0. General Conditions

2.1. Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45 CSR § 30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.2. Acronyms

| | | | |
|-----------------------------|---|-------------------------|--|
| CAAA | Clean Air Act Amendments | NO_x | Nitrogen Oxides |
| CBI | Confidential Business Information | NSPS | New Source Performance Standards |
| CEM | Continuous Emission Monitor | PM | Particulate Matter |
| CES | Certified Emission Statement | PM_{2.5} | Particulate Matter less than 2.5µm in diameter |
| C.F.R. or CFR | Code of Federal Regulations | PM₁₀ | Particulate Matter less than 10µm in diameter |
| CO | Carbon Monoxide | Ppb | Pounds per Batch |
| C.S.R. or CSR | Codes of State Rules | pph | Pounds per Hour |
| DAQ | Division of Air Quality | ppm | Parts per Million |
| DEP | Department of Environmental Protection | Ppmv or ppmv | Parts per million by volume |
| dscm | Dry Standard Cubic Meter | PSD | Prevention of Significant Deterioration |
| FOIA | Freedom of Information Act | psi | Pounds per Square Inch |
| HAP | Hazardous Air Pollutant | SIC | Standard Industrial Classification |
| HON | Hazardous Organic NESHAP | SIP | State Implementation Plan |
| HP | Horsepower | SO₂ | Sulfur Dioxide |
| lbs/hr | Pounds per Hour | TAP | Toxic Air Pollutant |
| LDAR | Leak Detection and Repair | TPY | Tons per Year |
| M | Thousand | TRS | Total Reduced Sulfur |
| MACT | Maximum Achievable Control Technology | TSP | Total Suspended Particulate |
| MDHI | Maximum Design Heat Input | USEPA | United States Environmental Protection Agency |
| MM | Million | UTM | Universal Transverse Mercator |
| MMBtu/hr or mmbtu/hr | Million British Thermal Units per Hour | VEE | Visual Emissions Evaluation |
| MMCF/hr or mmcf/hr | Million Cubic Feet per Hour | VOC | Volatile Organic Compounds |
| NA | Not Applicable | VOL | Volatile Organic Liquids |
| NAAQS | National Ambient Air Quality Standards | | |
| NESHAPS | National Emissions Standards for Hazardous Air Pollutants | | |

2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Law W.Va. Code §§22-5-1 et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

2.4. Term and Renewal

- 2.4.1. This permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any applicable legislative rule;

2.5. Duty to Comply

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-3318 and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;
[45CSR§§13-5.11 and 13-10.3]

- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;

- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;

- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses and/or approvals from other agencies; i.e., local, state and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

2.7. Duty to Supplement and Correct Information

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

2.8. Administrative Update

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-4.]

2.9. Permit Modification

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-5.4.]

2.10. Major Permit Modification

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.
[45CSR§13-5.1]

2.11. Inspection and Entry

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

2.12. Emergency

- 2.12.1. An "emergency" means any situation arising from sudden and reasonable 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 the 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.

- 2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.
- 2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. 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,
 - d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emission, and corrective actions taken.
- 2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- 2.12.5. The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

2.13. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

2.14. Suspension of Activities

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

2.15. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege.

2.16. Severability

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

2.17. Transferability

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1]

2.18. Notification Requirements

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

2.19. Credible Evidence

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

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3.0. Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.

[45CSR§6-3.1.]

3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.

[45CSR§6-3.2.]

3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(I). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.

[40CFR§61.145(b) and 45CSR§34]

3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.

[45CSR§4-3.1] *[State-Enforceable only]*

3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.

[45CSR§13-10.5.]

3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45 C.S.R. 11.

[45CSR§11-5.2.]

3.2. Monitoring Requirements

[Reserved]

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and

orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary. [WV Code § 22-5-4(a)(15)]

3.4. Recordkeeping Requirements

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The

remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.

[45CSR§4. *State-Enforceable only.*]

3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.

- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304-2345

If to the USEPA:

Associate Director
Office of Air Enforcement and Compliance Assistance
(3AP20)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

3.5.4. **Operating Fee.**

- 3.5.4.1. In accordance with 45CSR22 – Air Quality Management Fee Program, the permittee shall not operate nor cause to operate the permitted facility or other associated facilities on the same or contiguous sites comprising the plant without first obtaining and having in current effect a Certificate to Operate (CTO). Such Certificate to Operate (CTO) shall be renewed annually, shall be maintained on the premises for which the certificate has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

- 3.5.4.2. In accordance with 45CSR22 – Air Quality Management Fee Program, enclosed with this permit is an Application for a Certificate to Operate (CTO), from the date of initial startup

through the following June 30. Said application and the appropriate fee shall be submitted to this office no later than 30 days prior to the date of initial startup. For any startup date other than July 1, the permittee shall pay a fee or prorated fee in accordance with Section 4.5 of 45CSR22. A copy of this schedule may be found on the reverse side of the application for a Certificate to Operate (CTO).

- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

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4.0 Source-Specific Requirements

4.1. Limitations and Standards

4.1.1. The following conditions and requirements are specific to the generator sets identified as units (EG-1, EG-3, EG-4, and EG-5) in Table 1.0 of this permit:

- a. The emission limits for each of the engines shall not exceed the limits specified below and compliance with this emission limit shall be satisfied by maintaining compliance with item b of this condition.

| Source ID No. | Potential Emissions (lbs/hr) | | | Potential Emissions (tons/yr) | | |
|---------------|------------------------------|-------|------|-------------------------------|------|------|
| | NO _x | CO | VOC | NO _x | CO | VOC |
| EG-1 | 9.94 | 4.12 | 1.17 | 2.48 | 1.03 | 0.29 |
| EG-3 | 56.36 | 12.36 | 4.50 | 14.09 | 3.10 | 1.12 |
| EG-4 | 1.23 | 16.53 | 0.17 | 0.31 | 4.13 | 0.04 |
| EG-5 | 8.60 | 0.34 | 0.28 | 2.14 | 0.09 | 0.07 |

- b. Each generator set shall be used as an emergency stationary generator and be limited to non-emergency operation of no more than 100 hours per year. Non-emergency operation shall be for maintenance checks, readiness testing and emergency demand response. Emergency operation is defined when electric power from the local utility is interrupted. Emergency demand response is when the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies, or other authorized entity as determine by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
[40 CFR §§63.6640(f) and (f)(1)]

- 4.1.4. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR§13-5.11.]

4.2. Monitoring Requirements

- 4.2.1. The permittee shall keep records of the hours of operation for the engines for the emergency generator sets identified Table 1.0. The records must document how many hours are spent for emergency operation, including what classified the operation as an emergency, and how many hours spent for non-emergency operation with corresponding reason for the non-operation. Such records shall be maintained in accordance with Condition 3.4.1. and must be in a manner to demonstrate compliance with the operating limits of Condition 4.1.3.c.
[40 CFR §60.4245(b), [40 CFR §60.4211(f)]]

4.3. Testing Requirements

[Reserved]

4.4. Recordkeeping Requirements

- 4.4.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:
- a. The date, place as defined in this permit, and time of sampling or measurements;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of the analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.
- 4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
- 4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:
- a. The equipment involved.

- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
 - f. Steps taken to correct the malfunction.
 - g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 4.4.4. The permittee shall keep records of all required maintenance performed on the engine in order to demonstrate compliance with items d and e of Condition 4.1.1.d for units (EG-1, EG-3, EG-4, and EG-5). Such records shall be maintained in accordance with Condition 3.4.1.
[40 CFR §§63.6655(d), & (e)]

4.5. Reporting Requirements

4.5.1. Starting for the calendar year of 2015, the permittee shall submit annual report of the emergency demand response operation to the Administrator by no later than March 31, 2016, and annually thereafter. Such report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator and Director using the addresses listed in Condition 3.5.3. These reports shall contain the following information:

- a. Name of the permittee and address where the engine is located.
- b. Date of the report and beginning and ending dates of the reporting period.
- c. Engine site rating and model year.
- d. Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
- e. Hours operated for the purposes specified in §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii), which are the emergency demand response operating hours.
- f. Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).
- g. Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated

the dispatch of the engine.

- h. If there were no deviations from the fuel requirements in §63.6604 (Condition 4.1.2.) that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.
- i. If there were deviations from the fuel requirements in §63.6604 (Condition 4.1.2.) that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

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CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached _____, representing the period beginning _____ and ending _____, and any supporting documents appended hereto, is true, accurate, and complete.

Signature¹

(please use blue ink)Responsible Official or Authorized Representative

Date

Name and Title

(please print or type)

NameTitle

Telephone No.

Fax No.

¹ This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation 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 a permit and either:
 - (I) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
 - (ii) the delegation of authority to such representative is approved in advance by the Director;
- b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of USEPA); or
- d. The designated representative delegated with such authority and approved in advance by the Director.



Permit / Application Information Sheet
Division of Environmental Protection
West Virginia Office of Air Quality

| | | | |
|--------------------------|--|--|---------------------|
| Company: | Huntington | Facility: | Marshall University |
| Region: | | Plant ID: | 011-00218 |
| Engineer: | Rothwell, Tracy | Application #: | 13-3318 |
| Physical Address: | One John Marshall Drive Huntington WV 25755 | Category: | |
| County: | | SIC: [8221] EDUCATIONAL SERVICES - COLLEGES AND UNIVERSITIES, NEC | |
| Other Parties: | ENV_CONT - Bailey, Travis 304-696-3032 VICE PRES - Jones, Brandi Jacob 304-696-3328 | NAICS: [611310] Colleges, Universities, and Professional Schools | |

Information Needed for Database and AIRS
 1. Need valid physical West Virginia address with zip
 2. Air Program
 3. Inspection result
 4. Pollutant and class

Regulated Pollutants

| Summary from this Permit 13-3318 | | |
|----------------------------------|------------|----------------------------------|
| Air Programs | Fee | Applicable Regulations |
| Fee Program | \$0.00 | Application Type CONSTRUCTION |

Notes from Database

Activity Dates
 APPLICATION RECIEVED 05/06/2016
 ASSIGNED DATE 05/09/2016

Complete 6/5/2016 — email sent on 6/13 Tracy

Smith - Contact Person

Payment Received 5/9 \$2,000
 Affidavit Received 5/8

5 Emergency Generators
 47 Nat gas fired Boilers

Qualifies for subpart 4E's institutional Exemption
 IF MFG'd prior to 2006 (the Engines would
 Normally be governed under NESHAP

NON-CONFIDENTIAL

Please note, this information sheet is not a substitute for file research and is limited to data entered into the AIRTRAX database.

Company ID: 011-00218
 Company: Huntington
 Printed: 05/09/2016
 Engineer: Rothwell, Tracy

Rothwell, W Tracy

From: Rothwell, W Tracy
Sent: Friday, October 7, 2016 2:36 PM
To: 'Smith, Tracy'
Subject: RE: WV DAQ NSR Permit Application Complete for Marshall University; Huntington

Hey Tracy!

Upon writing your R13 Permit, I have noticed a few additional "non permitted" diesel generators and one Natural gas generator on your spreadsheet that I would like to have more information on. I would like to have updated calculations. Engine spec sheets, and Certificates of Conformity (if applicable) and the date of manufacture on the following generators located at:

Henderson Center – 465 HP
Fine Arts Building – 375 HP
Drinko Library – 1,200 HP
Smith Hall – 755 HP
Parking Garage 6th Avenue – 324 HP
Rec Center – 470 HP
Visual Arts Ctr – 383 HP

If any of these engines require to be placed in the permit, along with the five that are in the permit, I will need to include them before I place the legal ad.

Thanks Tracy! I'll talk to you soon!

Tra



From: Rothwell, W Tracy
Sent: Tuesday, June 14, 2016 10:27 AM
To: Smith, Tracy <tsmith@marshall.edu>
Subject: RE: WV DAQ NSR Permit Application Complete for Marshall University; Huntington

Hey Tracy!

I was going to give you a call yesterday! I had previously talked to Jay about the Marshall permit and he told me that you were a contact person. I had to email the completeness doc to Travis yesterday and I received his out of office email attached to it with your name and number. I will give you a call this week. I hope all is going well with you.

Tra

From: Smith, Tracy [<mailto:tsmith@marshall.edu>]
Sent: Tuesday, June 14, 2016 10:23 AM
To: Rothwell, W Tracy <W.Tracy.Rothwell@wv.gov>
Subject: FW: WV DAQ NSR Permit Application Complete for Marshall University; Huntington

Tra:
Hope all is well. You can copy me in on any further correspondence regarding the permit.

On a lighter note, we need to get with J-Bird and go fishing sometime.

Tracy B. Smith

Director, Environmental Health and Safety
Marshall University
One John Marshall Drive
Huntington, WV 25755
Phone: 304.696.2993
Fax: 304.696.2437



This email and any files transmitted with it are confidential and intended solely for the use of the individual(s) to whom they are addressed. If you have received in error, please notify the sender immediately.

From: Jacobs, Brandi
Sent: Tuesday, June 14, 2016 5:19 AM
To: McKenna, Char <mckenna5@marshall.edu>; Smith, Tracy <tsmith@marshall.edu>
Subject: FW: WV DAQ NSR Permit Application Complete for Marshall University; Huntington

FYI

From: Rothwell, W Tracy [<mailto:W.Tracy.Rothwell@wv.gov>]
Sent: Monday, June 13, 2016 2:59 PM
To: Jacobs, Brandi <jacobs2@marshall.edu>; Bailey, Travis <bailey53@marshall.edu>
Cc: McKeone, Beverly D <Beverly.D.Mckeone@wv.gov>
Subject: WV DAQ NSR Permit Application Complete for Marshall University; Huntington

RE: Application Status: Complete
Marshall University
Huntington
Facility ID No. 011-00218
Application No. R13-3318

Ms. Jones

Your application for a Construction permit for the operation of five emergency generators and forty-seven natural gas fired boilers was received by this Division on May 6, 2016 and assigned to the writer for review. Upon review of said application, it has been determined that the application is complete and, therefore, the statutory review period commenced on June 6, 2016.

In the case of this application, the agency believes it will take approximately 90 days to make a final permit determination.

This determination of completeness shall not relieve the permit applicant of the requirement to subsequently submit, in a timely manner, any additional or corrected information deemed necessary for a final permit determination.

Should you have any questions, please contact William T. Rothwell II at (304) 926-0499 ext. 1211 or reply to this email.

| | |
|--|--|
|  | William T. Rothwell II, P. E. Division of Air Quality Engineer - NSR Permitting |
| <p>(304) 926-0499 x 1211 W.Tracy.Rothwell@wv.gov 601 57th Street SE Charleston, WV 25304</p> | |

WV DEP
601 57TH ST SE
CHARLESTON, WV 25304

SALE

MID: 5990 Store: 5430 Term: 7501
REF#: 0000009
Batch #: 077 RRN: 613019401487
05/09/16 15:1143
AVS: ZP MATCH CVC: H
Cust CODE: 0
Invoice #: 01100218
Trans ID: 466130691032037
APPR CODE: 023461
VISA Manual CNP
*****7733 **/**

AMOUNT \$2,000.00

APPROVED

I AGREE TO PAY ABOVE TOTAL AMOUNT
IN ACCORDANCE WITH CARD ISSUER'S
AGREEMENT
(MERCHANT AGREEMENT IF CREDIT VOUCHER)
RETAIN THIS COPY FOR STATEMENT
VERIFICATION

MERCHANT COPY

Rothwell, W Tracy

From: Adkins, Sandra K
Sent: Monday, May 09, 2016 3:43 PM
To: Rothwell, W Tracy
Subject: FW: WV DAQ Permit Application Status for Marshall University; Huntington
Attachments: 2016_05_09_15_12_12.pdf

I've updated AirTrax with payment info.

From: Ward, Beth A
Sent: Monday, May 09, 2016 3:13 PM
To: Adkins, Sandra K <Sandra.K.Adkins@wv.gov>; jacobs2@marshall.edu; 'bailey53@marshall.edu' <bailey53@marshall.edu>
Cc: McKeone, Beverly D <Beverly.D.Mckeone@wv.gov>; Rothwell, W Tracy <W.Tracy.Rothwell@wv.gov>; Coccari, Gene M <Gene.M.Coccari@wv.gov>
Subject: RE: WV DAQ Permit Application Status for Marshall University; Huntington

Please see the attached receipt.

Thank You!

OASIS CR 1600122499

From: Adkins, Sandra K
Sent: Monday, May 09, 2016 11:42 AM
To: jacobs2@marshall.edu; 'bailey53@marshall.edu' <bailey53@marshall.edu>
Cc: McKeone, Beverly D <Beverly.D.Mckeone@wv.gov>; Rothwell, W Tracy <W.Tracy.Rothwell@wv.gov>; Ward, Beth A <Beth.A.Ward@wv.gov>; Coccari, Gene M <Gene.M.Coccari@wv.gov>
Subject: WV DAQ Permit Application Status for Marshall University; Huntington

**RE: Application Status
Marshall University
Huntington
Facility ID No. 011-00218
Application No. R13-3318**

Ms. Jones,

Your application for a construction permit for the Huntington location was received by this Division on May 6, 2016, and was assigned to Tracy Rothwell. The following items were not included in the initial application submittal:

Original affidavit for Class I legal advertisement not submitted.

Application fee AND/OR additional application fees:
**\$1,000 Construction, Modification, Relocation or Temporary Permit*
**\$1,000 NSPS*

(You may contact the Accounts Receivable section at 304 926-0499 ext. 4888 or Beth Ward at ext. 1846 to pay via credit card. DEP accepts Visa and MasterCard only.)

These items are necessary for the assigned permit writer to continue the 30-day completeness review.

Within 30 days, you should receive a letter from Tracy stating the status of the permit application and, if complete, given an estimated time frame for the agency's final action on the permit.

Any determination of completeness shall not relieve the permit applicant of the requirement to subsequently submit, in a timely manner, any additional or corrected information deemed necessary for a final permit decision.

Should you have any questions, please contact the assigned engineer, Tracy Rothwell, at 304-926-0499, extension 1211.

AFFIDAVIT OF PUBLICATION

I, Becky Jarvis being duly sworn, depose and say that I am Legal Clerk for *The Herald-Dispatch*, HD Media Co., LLC, who publishes at Huntington, Cabell County, West Virginia, the newspaper *The Herald-Dispatch*, an Independent newspaper, the morning seven days each week, Monday through Sunday including New Year's Day, Memorial Day, the Fourth of July, Labor Day, Thanksgiving and Christmas; that I have been duly authorized by the Board of Directors of such corporation and the newspaper mentioned herein; that the legal advertisement attached in the left margin of this affidavit and made a part herof and bearing number 42800 was duly published in the *The Herald-Dispatch* once a week for 1 successive weeks, commencing with its issue of 05/17/2016 and ending with the issue of 05/17/2016, that said legal advertisement was published on the following dates: 05/17/2016 that the cost of publishing said annexed advertisement as aforesaid was \$ 40.61; that such newspaper in which such legal advertisement was published has been and is now published regularly, at least as frequently as once a week for at least fifty weeks during the calendar year as prescribed by its mailing permit and has been so published in the municipality of Huntington, Cabell County, West Virginia, for at least one year immediately preceding the date on which the legal advertisement set forth herein was delivered to such newspaper for publication; that such newspaper is a newspaper of "general circulation" as defined in article 3, chapter 59, of the West Virginia Code within the publication area or areas of the municipality of Huntington, Cabell, Putnam and Wayne Counties, West Virginia, and that such newspaper is circulated to the general public at a definite price or consideration; that such newspaper on each date published consists of not less than four pages without a cover; and that it is a newspaper to which the general public resorts for passing events of a political, religious, commercial and social nature, and for current happenings, announcements, miscellaneous reading matter, advertisements and other notices.

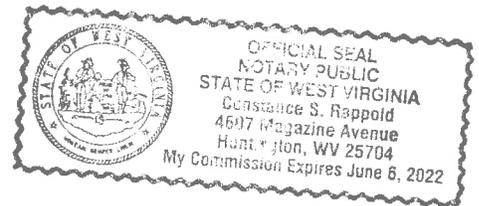
Taken, subscribed and sworn to before me in my said county this day: 05/17/2016

My commission expires June 6, 2022

Constance S. Rappold

Notary Public
Cabell County, West Virginia

Becky Jarvis



**AIR QUALITY
PERMIT NOTICE
Notice of
Application**

Notice is given that Marshall University has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Construction Permit for Emergency Generators located on One John Marshall Drive, Huntington, WV in Cabell County, West Virginia. The latitude and longitude coordinates are: (3 8 . 4 2 3 0 5 5 , -82.430679)

| Pollutant | Tons/Year |
|--------------|-----------|
| NOx | 71 |
| CO | 48 |
| PM | 10 |
| PM10 | 5.0 |
| VOC | 7.5 |
| SO2 | 4.0 |
| Formaldehyde | 2.5 |

The applicant estimates the potential to discharge the following Regulated Air Pollutants will be:

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 16th day of May, 2016.

By:
Marshall University
Brandi Jacobs Jones
Sr. VP of Operations
One John Marshall
Drive
Huntington, WV 25755

**LH-42800
5-17; 2016**

The Herald-Dispatch

PO Box 2017
 Huntington, WV 25720-2017
 Phone: 304.526.4002
www.herald-dispatch.com

CLASSIFIED INVOICE

OFFICE OF ACCOUNTING
 MARSHALL UNIVERSITY

2016 MAY 23 A 9:58



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 The Herald-Dispatch
 Herald HOME BUYERS Guide Herald
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MARSHALL UNIVERSITY
 ACCOUNTS PAYABLE
 HUNTINGTON WV 25755-0001

| | | | | | | | | |
|----------------------------|-------|-------------|----------------------------------|-------------|-----------|------------|-----------|-----------|
| CUSTOMER NO. | | INVOICE NO. | | | | | | |
| 5983 | | 1393084 | | | | | | |
| PAY BY | | AMOUNT DUE | | | | | | |
| UPON RECEIPT | | \$40.61 | | | | | | |
| START DATE | | END DATE | | | | | | |
| 05/17/2016 | | 05/17/2016 | | | | | | |
| DATE | EDT | CLASS | DESCRIPTION | COL X DEPTH | TIMES RUN | TOTAL SIZE | AD NUMBER | AMOUNT |
| 05/17 | CLASS | 9010 | AIR QUALITY PERMIT NOTICE NOTICE | OF1 X 71.00 | 1 | 71.00 | 42800 | \$40.61 |
| SALES REP: 51 LEGALS | | | | | | | | TOTAL DUE |
| PHONE NUMBER: 304-696-2823 | | | | | | | | \$40.61 |

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The Herald-Dispatch

*Billing Questions Call: 304-526-2813

MARSHALL UNIVERSITY
 ACCOUNTS PAYABLE
 HUNTINGTON WV 25755-0001

CUSTOMER NO. 5983
 INVOICE NO. 1393084
 AD NUMBER 42800
 TOTAL DUE \$40.61

- Check payable to: The Herald-Dispatch Discover
 Visa MasterCard American Express

| | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

Credit Card Number

Signature

Expiration Month / Year

Rothwell, W Tracy

From: Rothwell, W Tracy
Sent: Monday, June 13, 2016 2:58 PM
To: jacobs2@marshall.edu; 'bailey53@marshall.edu'
Cc: McKeone, Beverly D
Subject: WV DAQ NSR Permit Application Complete for Marshall University; Huntington

**RE: Application Status: Complete
Marshall University
Huntington
Facility ID No. 011-00218
Application No. R13-3318**

Ms. Jones

Your application for a Construction permit for the operation of five emergency generators and forty-seven natural gas fired boilers was received by this Division on May 6, 2016 and assigned to the writer for review. Upon review of said application, it has been determined that the application is complete and, therefore, the statutory review period commenced on June 6, 2016.

In the case of this application, the agency believes it will take approximately 90 days to make a final permit determination.

This determination of completeness shall not relieve the permit applicant of the requirement to subsequently submit, in a timely manner, any additional or corrected information deemed necessary for a final permit determination.

Should you have any questions, please contact William T. Rothwell II at (304) 926-0499 ext. 1211 or reply to this email.



All 47 Boilers Combined all less than 10 MM Each

| | lb/hr | TPM | | |
|-----------------|-------|-------|-------|------|
| NOx | 9.65 | 42.26 | 21.67 | 6.06 |
| CO | 8.11 | 35.50 | 8.26 | 2.56 |
| Pm | 0.73 | 3.21 | 1.32 | 0.04 |
| VOC | 0.53 | 2.32 | 2.01 | 2.67 |
| SO ₂ | 0.06 | 0.25 | 1.57 | 1.85 |
| HAP | 0.01 | 0.03 | 0.986 | 1.22 |

Non Permitted Generator Calculations

18 Generators

Bethany

21.67

NESHAP Area Sources Institutional Boilers 40 CFR 63 (6J)

Existing Small area boilers

Construction commenced on or before 6/4/2010 ? Less than 10 mmBtu/hr

Gas - No Requirements by the rule

Oil - Tune up every other year or every 5 years

Fume

Not on line

Rothwell, W Tracy

From: Smith, Tracy <tsmith@marshall.edu>
Sent: Monday, October 10, 2016 2:46 PM
To: Rothwell, W Tracy
Subject: FW: WV DAQ NSR Permit Application Complete for Marshall University; Huntington
Attachments: Non Permitted Gen CalcsA.pdf; COC - Smith Hall.pdf; COC Drinko.pdf; COC Parking Garage 6th Ave.pdf; COC Rec Center.pdf; COC Visual Arts.pdf; epa - Visual Arts.pdf; epa-Smith Hall.pdf; epa-Drinko.pdf; epa-Gullickson Prichard Harless & Hender.pdf; epa-Parking Garage 6th Ave.pdf; epa-Rec Center.pdf

Hey Tra:
See message below as well as the attached documents.

From: Bailey, Travis
Sent: Monday, October 10, 2016 2:38 PM
To: Smith, Tracy <tsmith@marshall.edu>
Subject: RE: WV DAQ NSR Permit Application Complete for Marshall University; Huntington

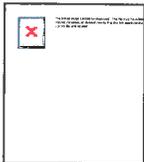
Tracy,

I submitted all of the generators' calculations in the original permit packet but it may have been too small to read so I have attached the PDF document so it can be expanded as needed. I also have attached all of the additional material that I have that Tra requested. If you have any questions or if Tra needs anything else please do not hesitate to contact me.

Thanks,

Travis

Travis M. Bailey, M.S., LEED AP BD+C, CSI
Environmental Specialist
Environmental Health and Safety Department
Marshall University
304-696-3032



From: Smith, Tracy
Sent: Friday, October 7, 2016 2:37 PM
To: Bailey, Travis <bailey53@marshall.edu>
Subject: FW: WV DAQ NSR Permit Application Complete for Marshall University; Huntington

See below.

From: Rothwell, W Tracy [<mailto:W.Tracy.Rothwell@wv.gov>]
Sent: Friday, October 07, 2016 2:36 PM
To: Smith, Tracy <tsmith@marshall.edu>
Subject: RE: WV DAQ NSR Permit Application Complete for Marshall University; Huntington

Hey Tracy!

Upon writing your R13 Permit, I have noticed a few additional “non permitted” diesel generators and one Natural gas generator on your spreadsheet that I would like to have more information on. I would like to have updated calculations. Engine spec sheets, and Certificates of Conformity (if applicable) and the date of manufacture on the following generators located at:

- Henderson Center – 465 HP
- Fine Arts Building – 375 HP
- Drinko Library – 1,200 HP
- Smith Hall – 755 HP
- Parking Garage 6th Avenue – 324 HP
- Rec Center – 470 HP
- Visual Arts Ctr – 383 HP

If any of these engines require to be placed in the permit, along with the five that are in the permit, I will need to include them before I place the legal ad.

Thanks Tracy! I’ll talk to you soon!

Tra



From: Rothwell, W Tracy
Sent: Tuesday, June 14, 2016 10:27 AM
To: Smith, Tracy <tsmith@marshall.edu>
Subject: RE: WV DAQ NSR Permit Application Complete for Marshall University; Huntington

Hey Tracy!

I was going to give you a call yesterday! I had previously talked to Jay about the Marshall permit and he told me that you were a contact person. I had to email the completeness doc to Travis yesterday and I received his out of office email attached to it with your name and number. I will give you a call this week. I hope all is going well with you.

Tra

From: Smith, Tracy [<mailto:tsmith@marshall.edu>]
Sent: Tuesday, June 14, 2016 10:23 AM
To: Rothwell, W Tracy <W.Tracy.Rothwell@wv.gov>
Subject: FW: WV DAQ NSR Permit Application Complete for Marshall University; Huntington

Tra:
Hope all is well. You can copy me in on any further correspondence regarding the permit.

On a lighter note, we need to get with J-Bird and go fishing sometime.

Tracy B. Smith
Director, Environmental Health and Safety
Marshall University
One John Marshall Drive
Huntington, WV 25755
Phone: 304.696.2993
Fax: 304.696.2437



This email and any files transmitted with it are confidential and intended solely for the use of the individual(s) to whom they are addressed. If you have received in error, please notify the sender immediately.

From: Jacobs, Brandi
Sent: Tuesday, June 14, 2016 5:19 AM
To: McKenna, Char <mckenna5@marshall.edu>; Smith, Tracy <tsmith@marshall.edu>
Subject: FW: WV DAQ NSR Permit Application Complete for Marshall University; Huntington

FYI

From: Rothwell, W Tracy [<mailto:W.Tracy.Rothwell@wv.gov>]
Sent: Monday, June 13, 2016 2:59 PM
To: Jacobs, Brandi <jacobs2@marshall.edu>; Bailey, Travis <bailey53@marshall.edu>
Cc: McKeone, Beverly D <Beverly.D.Mckeone@wv.gov>
Subject: WV DAQ NSR Permit Application Complete for Marshall University; Huntington

RE: Application Status: Complete
Marshall University
Huntington
Facility ID No. 011-00218
Application No. R13-3318

Ms. Jones

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Should you have any questions, please contact William T. Rothwell II at (304) 926-0499 ext. 1211 or reply to this email.



William T. Rothwell II, P. E.
Division of Air Quality
Engineer - NSR Permitting

{304} 926-0499 x 1211
W.Tracy.Rothwell@wv.gov
601 57th Street SE
Charleston, WV 25304

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

2006 Model Year Certificate of Conformity

Manufacturer: CUMMINS INC.
Engine Family: 6CEXL015.AAB
Certificate Number: CEX-NRCI-06-02
Intended Service Class: NR 9 (>560)
Fuel Type: DIESEL
FELs: NMHC+NOx: N/A NOx: N/A PM: N/A
Effective Date: 8/22/2005
Date Issued: AUG 22 2005


Merrilyn Zaw-Mon, Director
Certification and Compliance Division
Office of Transportation and Air Quality

Pursuant to Section 213 of the Clean Air Act (42 U.S.C. section 7547) and 40 CFR Part 89, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following nonroad engines, by engine family, more fully described in the documentation required by 40 CFR Part 89 and produced in the stated model year.

This certificate of conformity covers only those new nonroad compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 89 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 89.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 89.129-96 and 89.506-96 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 89. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void ab initio for other reasons specified in 40 CFR Part 89.

This certificate does not cover nonroad engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

2004 Model Year Certificate of Conformity

Manufacturer: **Cummins Inc.**
Certificate Number: **CEX-NR9-04-05**
Effective Date: **7/14/03**
Date Issued: **7/14/03**



Gregory A. Green, Director
Certification and Compliance Division
Office of Transportation and Air Quality

Pursuant to Section 213 of the Clean Air Act (42 U.S.C. section 7547) and 40 CFR 89, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following nonroad engines, by engine family, more fully described in the documentation required by 40 CFR Part 89 and produced in the stated model year.

Nonroad Diesel Engine Family: 4CEXL030.AAA

This certificate of conformity covers only those new nonroad compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 89 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 89. This certificate of conformity does not cover nonroad engines imported prior to the effective date of the certificate.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 89.129-96 and 89.506-96 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 89. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void ab initio for other reasons specified in 40 CFR Part 89.

This certificate does not cover nonroad engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2012 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT OF 1990

OFFICE OF TRANSPORTATION
AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: Cummins Inc.
(U.S. Manufacturer or Importer)

Certificate Number: CCEXL0409AAD-008

Effective Date:
05/19/2011
Expiration Date:
12/31/2012


Karl J. Simpson, Director
Compliance and Innovative Strategies Division

Issue Date:
05/19/2011
Revision Date:
N/A

Model Year: 2012

Manufacturer Type: Original Engine Manufacturer

Engine Family: CCEXL0409AAD

Mobile/Stationary Indicator: Stationary
Emissions Power Category: 130<=kW<225
Fuel Type: Diesel
After Treatment Devices: No After Treatment Devices Installed
Non-after Treatment Devices: No Non-After Treatment Devices Installed

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF TRANSPORTATION AND AIR QUALITY
WASHINGTON, DC 20460



CERTIFICATE OF CONFORMITY
2008 MODEL YEAR

Manufacturer: **CUMMINS INC.**
Engine Family: **8CEXL0661AAH**
Certificate Number: **CEX-NRCI-08-19**
Intended Service Class: **NR 7 (225-450)**
Fuel Type: **DIESEL**
FELs: **NMHC+NOx: N/A NOx: N/A PM: N/A**
Effective Date: **11/26/2007**
Date Issued: **11/26/2007**

Karl J. Simon, Director
Compliance and Innovative Strategies Division
Office of Transportation and Air Quality

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60 and Part 89, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following stationary and nonroad engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and 89, and produced in the stated model year.

This certificate of conformity covers only those new stationary and nonroad compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and 89 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60 and 89.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 89.129-96 and 89.506-96 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to a revocation or suspension of this certificate for reasons specified in 40 CFR Part 89. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void ab initio for other reasons specified in 40 CFR Part 89.

This certificate does not cover stationary and nonroad engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2015 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT**

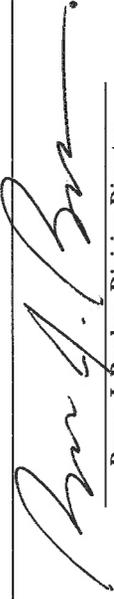
**OFFICE OF TRANSPORTATION
AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105**

Certificate Issued To: Cummins Inc.
(U.S. Manufacturer or Importer)

Certificate Number: FCExB14.0ENA-002

Effective Date:
11/26/2014

Expiration Date:
12/31/2015



**Byron J. Bunker, Division Director
Compliance Division**

Issue Date:
11/26/2014

Revision Date:
N/A

Manufacturer: Cummins Inc.
Engine Family: FCExB14.0ENA
Certification Type: Stationary (Part 60)
Fuel: Natural Gas (CNG/LNG)
Emission Standards: VOC (g/HP-hr) : 1
NOx (g/HP-hr) : 2
CO (g/HP-hr) : 4
Emergency Use Only: Y

Pursuant to Section 213 of the Clean Air Act (42 U.S.C. section 7547) and 40 CFR Part 60, 1065, 1068, and 60 (stationary only and combined stationary and mobile) and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following nonroad engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new nonroad spark-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60. This certificate of conformity does not cover nonroad engines imported prior to the effective date of the certificate.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068.20 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover large nonroad engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.



Specification Sheet
Model GFBC EPA SI NSPS Certified



| KW(KVA) @ 0.8 P.F | |
|-------------------|------------------|
| Compression | 60 Hz-1800 RPM |
| Ratio | Standby |
| 8.5:1 (Note 1) | 250 kW (312 kVa) |

Note:

(1) 54°C (130° F) or lower water temperature into the aftercooler.

NOTE: This engine is EPA certified and must be operated as outlined in the supplied O&M manual.

| Fuel Application Guide | |
|---|-------|
| Compression Ratio | 8.5:1 |
| Dry Processed Natural Gas | Yes |
| Propane (HD-5) | N/A |
| All gases such as field gas, digester and sewage gas will require an analysis of the specified gas and pre-approval from CNGE. Consult you Cummins Distributor for details. | |

The Cummins NPower GF-series commercial generator set is a fully integrated power generation system providing optimum performance, reliability, and versatility for stationary standby power applications.

A primary feature of the GF GenSet is strong motor-starting capability and fast recovery from transient load changes. The torque-matched system includes a heavy-duty Cummins 4-cycle spark ignited engine, an AC alternator with high motor-starting kVA capacity, and an electronic voltage regulator with three phase sensing for precise regulation under steady-state or transient loads. The GF GenSet accepts 100% of the nameplate standby rating in one step. * Sets comply with 10 second ready to load per NFPA 110.

The standard PowerCommand® digital electronic control is an integrated system that combines engine and alternator controls for high reliability and optimum GenSet performance.

Optional weather-protective housing and component heaters shield the generator set from extreme operating conditions.** Environmental concerns are addressed by low exhaust emission engines, sound-attenuated housings, and exhaust silencers. A wide range of options, accessories, and services are available, allowing configuration to your specific power generation needs.

Every production unit is factory tested at rated load and power factor. This testing includes demonstration of rated power and single-step rated load pickup. Cummins NPower manufacturing facilities include quality standards, emphasizing our commitment to high quality in the design, manufacture, and support of our products. The PowerCommand control is UL508 Listed.

All Cummins NPower generator sets are backed by a comprehensive warranty program and supported by a worldwide network of 233 locations to assist with warranty, service, parts, and planned maintenance support.

Cummins Heavy-Duty Engine - Rugged 4-cycle industrial spark ignited engine delivers reliable power, low emissions, and fast response to load changes.

Alternator - Several alternator sizes offer selectable motor-starting capability with low reactance 2/3 pitch windings, low waveform distortion with non-linear loads, fault-clearing short-circuit capability, and class H insulation. The alternator electrical insulation system is UL1446 Recognized.

Control Systems - The PowerCommand electronic control is standard equipment and provides total genset system integration, including automatic remote starting/stopping, precise voltage regulation, alarm and status message display, AmpSentry™ protection, output metering, and auto-shutdown at fault detection, and NFPA 110 compliance. PowerCommand control is Listed to UL508.

Cooling System - Standard cooling package provides reliable running at the rated power level, at up to 104°F ambient temperature.

Housings - Optional weather-protective housing and sound attenuation housing(s) are available.

Standards - Generators are designed, manufactured and tested to relevant UL, NFPA, ISO and IEC standards. The alternator is certified to CSA 22.2. The controls are CSA C282-M1999 and 22.2 No.14 M91. PowerCommand control is UL508 Listed.

Warranty and Service - Backed by a comprehensive warranty and worldwide distributor service network.

* Adequate fuel pressure and volume must be provided.

** Cold weather heaters are recommended when ambient temperatures are below 32 °F.



The general specifications provide representative configuration details. Consult the outline drawing for installation design.

| Specifications - General | |
|--|---|
| Unit Width | 1778 mm (70 in) Open set |
| Unit Height | 2007 mm (79 in) Open set |
| Unit Length | 3734 mm (147in) Open set |
| Unit Dry Weight | 2995 to 3596 kg (6605 to 7927 lbs) - Dependant on selected alternator. |
| Rated Speed | 1800 rpm |
| Voltage Regulation, No Load to Full Load | ±1.0% |
| Random Voltage Variation | ±1.0% |
| Frequency Regulation | Isochronous |
| Random Frequency Variation | ±0.5% |
| Radio Frequency Interference | Optional PMG excitation operates in compliance with BS800 and VDE level G and N. Addition of RFI protection kit allows operation per MIL-STD-461 and VDE level K. |
| See outline drawing for installation design specifications. | |

Standby Rating based on: Applicable for supplying emergency power for the duration of normal power interruption. No sustained overload capability is available for this rating. (Equivalent to Fuel Stop Power in accordance with ISO3046, AS2789, DIN6271 and BS5514). Nominally rated. Usage based on ISO 8528

See engine data sheet FR 10792 for altitude and ambient derate curves.

Gensets with Weather or Sound Enclosures may reduce ambient capability by 2 to 4.5°C (4 to 8°F) depending on enclosure type and site conditions.

1) Data represents gross engine performance capabilities obtained and corrected in accordance with SAEJ1349 conditions of 29.61 in. Hg.(100KPa) barometric pressure [361 ft. (110m) altitude], 77°F (25°C) inlet air temperature, and 0.30 in Hg.(100KPa) water vapor pressure using dry processed natural gas fuel with 905 BTU per standard cubic foot (33.72 kJ/L) lower heating value. Deration may be required due to altitude, temperature or type of fuel. Consult your local Cummins Distributor for details.

2) FUEL SYSTEM

Standard Carburetor – IMPCO Make
 Low Pressure Dry Processed Natural Gas – (905 BTU/ft.² L.H.V.)
 Running Pressure to Engine381 to 508 mm H₂O(15 to 20 in. H₂O)
 Minimum Gas Supply Pipe Size @ Engine50.8 mm (2.0 in.)
 Gas Supply Filter Pressure Rating690 kPa (100psi)

The preceding pipe sizes are only suggestions and piping may vary with temperatures, distance from fuel supply and application of local codes. Gas must be available at adequate volume and pressure for engine at the regulator.

The Genset (engine) performance is based on processed natural gas fuel with 905 BTU per standard cubic foot (33.72 kJ/L) lower heating value. Variations in fuel composition and/or supply pressure must be eliminated during steady state operation. Locate the gas regulator as near to the engine as possible. Some systems may need an accumulator or other device(s) for startup or unstable conditions, contact the Fuel Supply utility for details.

Cummins heavy-duty spark ignited engines use advanced combustion technology for reliable and stable power, low emissions, and fast response to sudden load changes.

Electronic governing is standard for applications requiring constant (isochronous) frequency regulation such as Uninterruptible Power Supply (UPS) systems, non-linear loads, or sensitive electronic loads. Optional coolant heaters are recommended for all emergency standby installations or for any application requiring fast load acceptance after start-up.

Specifications - Engine

| | | | | |
|--|--|------|------|------|
| Base Engine | Cummins Model GTA855e | | | |
| Displacement | 14 L (855 in ³) | | | |
| Overspeed Limit | 2100 rpm | | | |
| Regenerative Power | 250 kW | | | |
| Cylinder Block Configuration | Cast iron with replaceable wet cylinder liners | | | |
| Cranking Current | 900 amps at ambient temperature of 0°C (32°F) | | | |
| Battery Charging Alternator | 37 amps | | | |
| Battery Type | 8D | | | |
| Starting Voltage | 24-volt, negative ground | | | |
| Standard Cooling System | 40°C (104°F) ambient radiator | | | |
| Lube Oil Filter Types | Single spin-on canister-combination full flow with bypass | | | |
| Fuel | STANDBY | | | |
| Fuel Consumption (Approximate) | Load | 1/2 | 3/4 | Full |
| | kW | 125 | 188 | 250 |
| Natural Gas | CFH | 1951 | 2692 | 3440 |
| Propane Vapor * | CFH | N/A | N/A | N/A |
| Propane Liquid * | GPH | N/A | N/A | N/A |
| Cooling | Full Load | | | |
| Jacket Water Heat Rejection to Coolant | 275 kW (15628 BTU/min) | | | |
| Aftercooler Heat Rejection to Coolant | 56 kW (3175 BTU/min) | | | |
| Heat Rejection to Room | 38 kW (2135 BTU/min) | | | |
| Jacket Water Coolant Capacity (w/radiator) | 74 L (19.5 USG) | | | |
| Jacket Water Coolant Flow Rate | 526 L/min (139 GPM) | | | |
| Aftercooler Coolant Capacity (w/radiator) | 41 L (10.9 USG) | | | |
| Aftercooler Coolant Flow Rate | 129 L/min (34 GPM) | | | |
| Maximum Coolant Friction Head ** | 34 kPa (5 psi) | | | |
| Maximum Coolant Static Head ** | 18.3 m (60 ft) | | | |
| Radiator Fan Load | 21 kW (28 hp) | | | |
| Air | Full Load | | | |
| Combustion Air | 317 L/sec (672 cfm) | | | |
| Maximum Air Cleaner Restriction | 381 mm H ₂ O (15 in H ₂ O) | | | |
| Alternator Cooling Air (302D) | 0.99 m ³ /s (2100 cfm) | | | |
| Radiator Cooling Air | 15928 L/sec (33750 cfm) | | | |
| Maximum Restriction at Radiator Discharge (static) | 12.7 mm H ₂ O (0.5 in H ₂ O) | | | |
| Exhaust | Full Load | | | |
| Gas Flow (Full Load) | 804 L/sec (1704 cfm) | | | |
| Gas Temperature | 659° C (1218° F) | | | |
| Maximum Back Pressure | 51 mm Hg (2 in Hg) | | | |
| Engine | Full Load | | | |
| Gross Engine Power Output | 286 kWm (383 hp) | | | |
| BMEP | 1357 kPa (197 psi) | | | |
| Piston Speed | 9.14 m/s (1800 ft/min) | | | |
| Oil Capacity | 34 L (9 gal) | | | |

* Emergency use only. Not for primary fuel use.

** Jacket water only.

Several alternators are available for application flexibility based on the required motor-starting kVA and other requirements. Larger alternator sizes have lower temperature rise for longer life of the alternator insulation system. In addition, larger alternator sizes can provide a cost-effective use of engine power in across-the-line motor-starting applications and can be used to minimize voltage waveform distortion caused by non-linear loads.

Single-bearing alternators couple directly to the engine flywheel with flexible discs for drive train reliability and durability. No gear reducers or speed changers are used. Two-thirds pitch windings eliminate third-order harmonic content of the AC voltage waveform and provide the standardization desired for paralleling of generator sets. The standard excitation system is a self (shunt) excited system with the voltage regulator powered directly from the

Separately Excited Permanent Magnet Generator (PMG) System - This option uses an integral PMG to supply power to the voltage regulator. A PMG system generally has better motor-starting performance, lower voltage dip upon load application, and better immunity from problems with harmonics in the main alternator output induced by non-linear loads. This option is recommended for use in applications that have large transient loads, sensitive electronic loads (especially UPS applications), harmonic content, or that require sustained short-circuit current (sustained 3-phase short circuit current at approximately 3 times rated for 10 seconds).

Alternator Sizes - On any given model, various alternator sizes are available to meet individual application needs. Alternator sizes are differentiated by maximum winding temperature rise, at the generator set standby rating, when operated in a 40°C (104°F) ambient environment. Available temperature rises range from 80°C to 150°C (176°F to 302°F). Not all temperature rise selections are available on all models. Lower temperature rise is accomplished using larger alternators at lower current density. Lower temperature rise alternators have higher motor-starting kVA, lower voltage dip upon load application, and they are generally recommended to limit voltage distortion and heating due to harmonics induced by non-linear loads. Alternator Space Heater - is recommended to inhibit condensation.

| Three Phase Reconnectable | | Single Phase Non-Reconnectable | | Three Phase Non-Reconnectable | | | | | |
|--|---------------|--------------------------------|--|-------------------------------|---------|-------------------|-------------|---------|---------|
| <input type="checkbox"/> | 120/208 | <input type="checkbox"/> | 240/416 | <input type="checkbox"/> | 220/380 | | | | |
| <input type="checkbox"/> | 127/220 | <input type="checkbox"/> | 254/440 | <input type="checkbox"/> | 347/600 | | | | |
| <input type="checkbox"/> | 139/240 | <input type="checkbox"/> | 277/480 | | | | | | |
| <input type="checkbox"/> | 120/240 | | | | | | | | |
| Specifications - Alternator | | | | | | | | | |
| Design | | | Brushless, 4-pole, drip-proof revolving field | | | | | | |
| Stator | | | 2/3 pitch | | | | | | |
| Rotor | | | Direct-coupled by flexible disc | | | | | | |
| Insulation System | | | Class H per NEMA MG1-1.65 or better | | | | | | |
| Standard Temperature Rise * | | | 125° C * | | | | | | |
| Exciter Type | | | Shunt or PMG | | | | | | |
| Phase Rotation | | | A (U), B (V), C (W) | | | | | | |
| Alternator Cooling | | | Direct-drive centrifugal blower | | | | | | |
| AC Waveform Total Harmonic Distortion | | | <5% total no load to full linear load <3% for any single harmonic | | | | | | |
| Telephone Influence Factor (TIF) | | | <50 per NEMA MG1-22.43. | | | | | | |
| Telephone Harmonic Factor (THF) | | | <3 | | | | | | |
| | | 80° C Alternator | | 105° C Alternator | | 125° C Alternator | | | |
| Voltage Ranges | 120/208 | 277/480 | 347/600 | 120/208 | 277/480 | 347/600 | 120/208 | 277/480 | 347/600 |
| | Thru | | | Thru | | | Thru | | |
| | 139/240 | | | 139/240 | | | 139/240 | | |
| | 240/416 | | | 240/416 | | | 240/416 | | |
| | Thru | | | Thru | | | Thru | | |
| | 277/480 | | | 277/480 | | | 277/480 | | |
| Motor Starting | Broad Range | 480 | 600 | Broad Range | 480 | 600 | Broad Range | 480 | 600 |
| Maximum KVA (90% Sustained Voltage) | 1372 | 1210 | 1210 | 1028 | 1028 | 1028 | 1028 | 904 | 904 |
| Alternator Datasheet No. | ADS342A | ADS341A | ADS341A | ADS340A | ADS340A | ADS340A | ADS340A | ADS339A | ADS339A |
| Full Load Current | 120/240, 1 Ph | 120/208 | 127/220 | 139/240 | 220/380 | 240/416 | 254/440 | 277/480 | 347/600 |
| (Amps @ Standby Rating) | 1042 | 867 | 820 | 752 | 475 | 434 | 410 | 376 | 301 |

* Other Temp Rises Available. See options at end of datasheet for more details.

Other Display Data

- Genset model data.
- Start attempts, starts, running hours.
- Fault history.
- RS485 Modbus® interface.
- Data logging and fault simulation (requires InPower service tool).
- Total kilowatt hours.



PowerCommand Control 2.2

The PowerCommand Control is an integrated generator set control system providing voltage regulation, engine protection, operator interface and isochronous governing (optional). The integration of all control functions into a single control system provides enhanced reliability and performance, compared to conventional generator set control systems. Prototype tested; UL, CSA, and CE

Features

- **AmpSentry™** protection providing a full range of alternator protection functions matched to the alternator provided.
- Battery monitoring and testing features and smart starting control system.
- Standard PCCNet RS485 interface to devices such as remote annunciator for NFPA 110 applications.
- Control boards potted for environmental protection.
- InPower™ PC-based service tool available for detailed

AC Protection

- Over current warning and shutdown.
- Over and under voltage shutdown.
- Over and under frequency shutdown.
- Over excitation (loss of sensing) fault.
- Field overload.
- Overload warning.
- Reverse kW shutdown.

Digital Voltage Regulation

- 3-phase line-to-line sensing.
- Configurable torque matching.
- Integrated digital electronic voltage regulator.
- Fault current regulation under single or three phase fault

Engine Protection

- Overspeed shutdown.
- Low oil pressure warning and shutdown.
- High coolant temperature warning and shutdown.
- Low coolant level warning or shutdown.
- Low coolant temperature warning.
- High, low and weak battery voltage warning.
- Fail to start (overcrank) shutdown.
- Fail to crank shutdown.
- Redundant start disconnect.
- Cranking lockout.
- Sensor failure indication.
- Low fuel level warning or shutdown.

Operator / Display Panel

- Manual off switch.
- Alpha-numeric display with pushbutton access for viewing engine and alternator data and providing setup, controls and adjustments (English or international symbols).
- LED lamps indicating genset running, not in auto, common warning, common shutdown, manual run mode and remote start.

Control Functions

- Time delay start and cooldown.
- Cycle cranking.
- PCCNet interface.
- (4) Configurable inputs.
- (4) Configurable outputs.
- Remote emergency stop.
- Battle short mode.
- Load shed.
- Real time clock with exerciser.

PCC Options

- Auxiliary output relays (2).
- 120/240 V, 100 W anti-condensation heater.
- Remote annunciator with (3) configurable inputs and (4) configurable outputs.
- Remote operator panel.
- PMG alternator excitation.
- PowerCommand iWatch web server for remote monitoring and alarm notification (loose).
- Digital governing.
- AC output analog meters (bargraph).
Color-coded graphical display of:
 - Line-to-line AC voltage
 - 3-phase current
 - Frequency
 - kVa
- PowerCommand 3.3 control with Parallel Configuration.

Engine Data

- DC Voltage
- Lube oil pressure.
- Coolant temperature.

PowerCommand Control Values

| | PCC | Genset Reference Values |
|--|---|-------------------------|
| Ambient Operating Temperature | -40 to +70°C (-40 to 158°F) HMI -20 to +70°C (-4 to 158°F) | - |
| Operating Altitude | up to 5000 meters (13,000 ft.) | - |
| Alternator Data | | |
| Voltage | AC: Single or Three Phase Line-to-line or Line-to-neutral | - |
| Digital Output Voltage Regulation | Within +/-1.0% any loads between no load to full. Drift = no more than +/-1.5% for 40°C (104°F) temp change in 8 hours. | - |
| Current | 3-Phase AC | - |
| Frequency | 60 Hz | - |
| Battery Config | 24 VDC | 24 VDC |
| Engine Data | | |
| Voltage | DC | DC |
| Lube Oil Pressure | Adjustable | Adjustable |
| Engine Idle Speed | Adjustable | Adjustable |
| Genset values are for reference only. For unit data see genset data tag. | | |

Engine

- 120/208/240/480 V, 4000 W coolant heaters
- 120/208/240 V, 300 W lube oil heater

Cooling System

- Heat exchanger cooling
- Remote radiator cooling

Fuel System

- Flexible fuel connector
- Fuel strainer

Alternator

- 80° C rise alternator
- 105° C rise alternator
- 125° C rise alternator
- 120/240 V, 100 W anti-condensation heater
- Single phase

Exhaust System

- GenSet mounted muffler (Enclosure Models Only)
- Heavy duty exhaust elbow
- Slip on exhaust connection

Generator Set

- AC entrance box
- Batteries
- Battery charger
- Export box packaging
- Main line circuit breaker
- PowerCommand Network Communication Module (NCM)
- Stage I enclosure w/silencer
- Stage II enclosure w/silencer
- Remote annunciator panel
- Spring isolators
- Weather protective enclosure with silencer
- 2 year standby warranty
- 5 year basic power warranty

A wide range of products and services is available to match your power generation system requirements. Cummins Power Generation products and services include:

- Diesel and Spark-Ignited Generator Sets
- Transfer Switches
- Bypass Switches
- Parallel Load Transfer Equipment
- Digital Paralleling Switchgear
- PowerCommand Network and Software
- Distributor Application Support
- Planned Maintenance Agreements

All components and subsystems are covered by an express limited one-year warranty. Other optional and extended factory warranties and local distributor maintenance agreements are available. Contact your distributor/dealer for more information.



CSA - The alternator is certified to CSA 22.2. The controls are CSA C282-M1999 and 22.2 No.14 M91.



PTS - The Prototype Test Support (PTS) program verifies the performance integrity of the generator set design. Products bearing the PTS symbol have been subjected to demanding tests in accordance with NFPA 110 to verify the design integrity and performance under both normal and abnormal operating conditions including short circuit, endurance, temperature rise, torsional vibration, and transient response, including full load pickup.



NPower

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www.cumminsnpower.com

Cummins and PowerCommand are registered trademarks of Cummins Inc.
AmpSentry is a trademark of Cummins Inc.
LonWorks is a registered trademark of Echelon

Important: Backfeed to a utility system can cause electrocution and/or property damage. Do not connect generator sets to any building electrical system except through an approved device or after building main switch is open.



**Power
Generation**

2015 EPA Tier 2 Exhaust Emission Compliance Statement 500DFEK Stationary Emergency 60 Hz Diesel Generator Set

Smith Hall?

Compliance Information:

The engine used in this generator set complies with Tier 2 emissions limit of U.S. EPA New Source Performance Standards for stationary emergency engines under the provisions of 40 CFR 60 Subpart IIII when tested per ISO8178 D2.

| | |
|---|---------------------|
| Engine Manufacturer: | Cummins Inc |
| EPA Certificate Number: | FCEXL015.AAJ-011 |
| Effective Date: | 08/11/2014 |
| Date Issued: | 08/11/2014 |
| EPA Engine Family (Cummins Emissions Family): | FCEXL015.AAJ (J103) |

Engine Information:

| | | | |
|--------------------------|-------------------------------------|-------------------------|---------------------------|
| Model: | QSX / QSX15 / QSX15-G / QSX15-G9 | Bore: | 5.39 in. (137 mm) |
| Engine Nameplate HP: | 755 | Stroke: | 6.65 in. (169 mm) |
| Type: | 4 Cycle, In-line, 6 Cylinder Diesel | Displacement: | 912 cu. in. (15 liters) |
| Aspiration: | Turbocharged and CAC | Compression Ratio: | 17.0:1 |
| Emission Control Device: | Electronic Control | Exhaust Stack Diameter: | 8 in. |

Diesel Fuel Emission Limits D2 Cycle Exhaust Emissions

| | Grams per BHP-hr | | | Grams per kWm-hr | | |
|--|-------------------|-----------|-----------|-------------------|-----------|-----------|
| | <u>NOx + NMHC</u> | <u>CO</u> | <u>PM</u> | <u>NOx + NMHC</u> | <u>CO</u> | <u>PM</u> |
| Test Results - Diesel Fuel (300-4000 ppm Sulfur) | 4.3 | 0.4 | 0.10 | 5.7 | 0.6 | 0.13 |
| EPA Emissions Limit | 4.8 | 2.6 | 0.15 | 6.4 | 3.5 | 0.20 |
| Test Results - CARB Diesel Fuel (<15 ppm Sulfur) | 3.9 | 0.4 | 0.08 | 5.2 | 0.6 | 0.11 |
| CARB Emissions Limit | 4.8 | 2.6 | 0.15 | 6.4 | 3.5 | 0.20 |

The CARB emission values are based on CARB approved calculations for converting EPA (500 ppm) fuel to CARB (15 ppm) fuel.

Test Methods: EPA/CARB Nonroad emissions recorded per 40CFR89 (ref. ISO8178-1) and weighted at load points prescribed in Subpart E, Appendix A for Constant Speed Engines (ref. ISO8178-4, D2)

Diesel Fuel Specifications: Cetane Number: 40-48. Reference: ASTM D975 No. 2-D.

Reference Conditions: Air Inlet Temperature: 25°C (77°F), Fuel Inlet Temperature: 40°C (104°F). Barometric Pressure: 100 kPa (29.53 in Hg), Humidity: 10.7 g/kg (75 grains H2O/lb) of dry air; required for NOx correction, Restrictions: Intake Restriction set to a maximum allowable limit for clean filter; Exhaust Back Pressure set to a maximum allowable limit.

Tests conducted using alternate test methods, instrumentation, fuel or reference conditions can yield different results.

Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.



Exhaust Emission Compliance Statement

750DFHA

60 Hz Diesel Generator Set

Compliance Information:

The engine used in this generator set may be used in mobile applications under EPA OEM transition program rules (paragraph 89.102).

| | |
|-----------------------------------|-----------------|
| Engine Manufacturer: | Cummins Inc. |
| EPA Certificate Number: | CEX-NR9-05-34.1 |
| Effective Date: | 12/30/2004 |
| Date Issued: | 12/30/2004 |
| EPA Nonroad Diesel Engine Family: | 5CEXL030.ABA |
| CARB Executive Order: | U-R-002-258-1 |

Engine Information:

| | | | |
|--------------------------|--|---------------|------------------------------|
| Model: | Cummins Inc. QST30-G1 Nonroad 1 | Bore: | 5.51 in. (140 mm) |
| Engine Nameplate HP: | 1135 | | |
| Type: | 4 Cycle, 50°V, 12 Cylinder Diesel | Stroke: | 6.50 in. (165 mm) |
| Aspiration: | Turbocharged and Aftercooled | Displacement: | 1860 cu. in. (30.5 liters) |
| Compression Ratio: | 14:1 | | |
| Emission Control Device: | Turbocharged and Low Temperature Aftercooled | | |

U.S. Environmental Protection Agency Non-Road Tier 1 Limits

(All Values are Grams per HP-Hour)

COMPONENT

| | |
|----------------------------------|-----|
| HC (Total Unburned Hydrocarbons) | 1.0 |
| NOx (Oxides of Nitrogen as NO2) | 6.9 |
| CO (Carbon Monoxide) | 8.5 |
| PM (Particulate Matter) | 0.4 |

Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.

Gyllickson
Hall



7GNAA ONAN GENERATOR SET EXHAUST EMISSION DATA SHEET

The engine used in this generator set is certified to comply with EPA phase 1 and 1995-1999 California emission regulations for ULGE engines.

ENGINE

| | |
|-----------------------------------|--|
| Model: Onan LPG-2 | Bore: 3.38 in. (86 mm) |
| Type: 4 Cycle, In-line 2 Cylinder | Stroke: 3.15 in. (80 mm) |
| Aspiration: Natural | Displacement: 56.7 cu. in. (.9 liters) |
| Compression Ratio: 9.5:1 | Standby HP: 10.1 HP (7.5 kW) |
| Emission Control Device: | |

U.S. Environmental Protection Agency Phase 1 and 1995-99 California Limits

| COMPONENT | (All Values are Grams per HP-Hour) |
|--|------------------------------------|
| HC+NOx (Total Unburned Hydrocarbons + Oxides of Nitrogen as NO2) | 10 |
| CO (Carbon Monoxide) | 300 |

Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels

Pritchard
Hall



16GNAC ONAN GENERATOR SET EXHAUST EMISSION DATA SHEET

The engine used in this generator set is certified to comply with EPA phase 1 and 1995-1999 California emission regulations for ULGE engines.

ENGINE

| | |
|-----------------------------------|--|
| Model: Onan LPG-4 | Bore: 3.38 in. (86 mm) |
| Type: 4 Cycle, In-line 4 Cylinder | Stroke: 3.15 in. (80 mm) |
| Aspiration: Natural | Displacement: 114 cu. in. (1.9 liters) |
| Compression Ratio: 9.5:1 | Standby HP: 23.5 HP (17.5 kW) |
| Emission Control Device: | |

U.S. Environmental Protection Agency Phase I and 1995-99 California Limits

| COMPONENT | (All Values are Grams per HP-Hour) |
|--|------------------------------------|
| HC+NOx (Total Unburned hydrocarbons + Oxides of Nitrogen as NO2) | 10 |
| CO (Carbon Monoxide) | 300 |

Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.



Harless
Dining
Hall

150GGKD ONAN GENERATOR SET EXHAUST EMISSION DATA SHEET

ENGINE

| | |
|---|--|
| Model: Cummins GTA8.3-LC-G2 | Bore: 4.49 in. (114 mm) |
| Type: 4 Cycle, In-line 6 Cylinder Spark-Ignited | Stroke: 5.32 in. (135 mm) |
| Aspiration: Turbocharged and CAC | Displacement: 505 cu. in. (8.3 liters) |
| Compression Ratio: 10.5:1 | |

| PERFORMANCE DATA | NATURAL GAS | |
|-------------------------------|-------------|-------|
| | Standby | Prime |
| BHP @ 1800 RPM (60 Hz) | 240 | 219 |
| Fuel Consumption (BTU/Hp-Hr) | 7067 | 7208 |
| Air to Fuel Ratio | 15 | 14.5 |
| Exhaust Gas Flow (ACFM) | 1377 | 1241 |
| Exhaust Gas Temperature (°F) | 1086 | 1105 |

EXHAUST EMISSION DATA

(All Values are Grams per HP-Hour)

| COMPONENT | NATURAL GAS | |
|---|-------------|------------|
| | Standby | Prime |
| HC (Total Unburned Hydrocarbons) | 1.28 | 1.43 |
| NOx (Oxides of Nitrogen as NO ₂) | 16.2 | 16.1 |
| CO (Carbon Monoxide) | 0.62 | 0.65 |
| PM10 (Particulate Matter) | negligible | negligible |

TEST CONDITIONS

Data was recorded during steady state rated engine speed (± 25 RPM) with full load (± 2%). Pressures, temperatures, and emission rates were stabilized.

Fuel Specification:

Natural Gas: Dry processed natural gas with a 905 BTU per standard cubic foot LHV

Fuel Temperature: 60 °F ± 9 °F at Flow Transmitter

Fuel Pressure: 14.73 PSIA ± 0.5 PSIA at Flow Transmitter

Intake Air Temperature: 77 °F ± 9 °F at inlet

Barometric Pressure: 29.92 in. Hg ± 1 in. Hg

All emissions data is a calculated average of engines tested under the conditions shown above.

The data is subject to instrumentation, measurement, and engine to engine variability. Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.



**Power
Generation**

2015 EPA Tier 3 Exhaust Emission Compliance Statement 150DSGAC Stationary Emergency 60 Hz Diesel Generator Set

Compliance Information:

The engine used in this generator set complies with Tier 3 emissions limit of U.S. EPA New Source Performance Standards for stationary emergency engines under the provisions of 40 CFR 60 Subpart IIII when tested per ISO8178 D2.

| | |
|---|---------------------|
| Engine Manufacturer: | Cummins Inc |
| EPA Certificate Number: | FCEXL0409AAD-024 |
| Effective Date: | 10/02/2014 |
| Date Issued: | 10/02/2014 |
| EPA Engine Family (Cummins Emissions Family): | FCEXL0409AAD (D313) |

Engine information:

| | | | |
|--------------------------|-------------------------------------|-------------------------|--------------------------|
| Model: | QSB6.7 / QSB7 / QSB7-G5 NR3 | Bore: | 4.21 in. (107 mm) |
| Engine Nameplate HP: | 324 | Stroke: | 4.88 in. (124 mm) |
| Type: | 4 Cycle, In-line, 6 Cylinder Diesel | Displacement: | 408 cu. in. (6.7 liters) |
| Aspiration: | Turbocharged and CAC | Compression Ratio: | 17.2:1 |
| Emission Control Device: | | Exhaust Stack Diameter: | 4 in. |

Diesel Fuel Emission Limits D2 Cycle Exhaust Emissions

| | Grams per BHP-hr | | | Grams per kWm-hr | | |
|--|-----------------------|-----------|-----------|-----------------------|-----------|-----------|
| | <u>NOx + NMHC</u> | <u>CO</u> | <u>PM</u> | <u>NOx + NMHC</u> | <u>CO</u> | <u>PM</u> |
| Test Results - Diesel Fuel (300-4000 ppm Sulfur) | 3.0 | 0.7 | 0.08 | 4.0 | 1.0 | 0.11 |
| EPA Emissions Limit | 3.0 | 2.6 | 0.15 | 4.0 | 3.5 | 0.20 |
| Test Results - CARB Diesel Fuel (<15 ppm Sulfur) | 2.7 | 0.7 | 0.07 | 3.7 | 1.0 | 0.10 |
| CARB Emissions Limit | 3.0 | 2.6 | 0.15 | 4.0 | 3.5 | 0.20 |

The CARB emission values are based on CARB approved calculations for converting EPA (500 ppm) fuel to CARB (15 ppm) fuel.

Test Methods: EPA/CARB Nonroad emissions recorded per 40CFR89 (ref. ISO8178-1) and weighted at load points prescribed in Subpart E, Appendix A for Constant Speed Engines (ref. ISO8178-4, D2)

Diesel Fuel Specifications: Cetane Number: 40-48. Reference: ASTM D975 No. 2-D.

Reference Conditions: Air Inlet Temperature: 25°C (77°F), Fuel Inlet Temperature: 40°C (104°F). Barometric Pressure: 100 kPa (29.53 in Hg), Humidity: 10.7 g/kg (75 grains H₂O/lb) of dry air; required for NO_x correction, Restrictions: Intake Restriction set to a maximum allowable limit for clean filter; Exhaust Back Pressure set to a maximum allowable limit.

Tests conducted using alternate test methods, instrumentation, fuel or reference conditions can yield different results.

Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.



**Power
Generation**

2015 EPA Tier 3 Exhaust Emission Compliance Statement 300DQHAB Stationary Emergency 60 Hz Diesel Generator Set

Compliance Information:

The engine used in this generator set complies with Tier 3 emissions limit of U.S. EPA New Source Performance Standards for stationary emergency engines under the provisions of 40 CFR 60 Subpart IIII when tested per ISO8178 D2.

| | |
|---|---------------------|
| Engine Manufacturer: | Cummins Inc |
| EPA Certificate Number: | FCEXL0661AAH-010 |
| Effective Date: | 08/07/2014 |
| Date Issued: | 08/07/2014 |
| EPA Engine Family (Cummins Emissions Family): | FCEXL0661AAH (H353) |

Engine Information:

| | | | |
|--------------------------|-------------------------------------|-------------------------|---------------------------|
| Model: | QSM / QSM11 / QSM11-G4 | Bore: | 4.92 in. (125 mm) |
| Engine Nameplate HP: | 470 | Stroke: | 5.79 in. (147 mm) |
| Type: | 4 Cycle, In-line, 6 Cylinder Diesel | Displacement: | 661 cu. in. (10.8 liters) |
| Aspiration: | Turbocharged and CAC | Compression Ratio: | 16.1:1 |
| Emission Control Device: | | Exhaust Stack Diameter: | 6 in. |

Diesel Fuel Emission Limits D2 Cycle Exhaust Emissions

| | Grams per BHP-hr | | | Grams per kWm-hr | | |
|--|-------------------|-----------|-----------|-------------------|-----------|-----------|
| | <u>NOx + NMHC</u> | <u>CO</u> | <u>PM</u> | <u>NOx + NMHC</u> | <u>CO</u> | <u>PM</u> |
| Test Results - Diesel Fuel (300-4000 ppm Sulfur) | 2.5 | 0.4 | 0.06 | 3.3 | 0.6 | 0.08 |
| EPA Emissions Limit | 3.0 | 2.6 | 0.15 | 4.0 | 3.5 | 0.20 |
| Test Results - CARB Diesel Fuel (<15 ppm Sulfur) | 2.3 | 0.4 | 0.05 | 3.0 | 0.6 | 0.07 |
| CARB Emissions Limit | 3.0 | 2.6 | 0.15 | 4.0 | 3.5 | 0.20 |

The CARB emission values are based on CARB approved calculations for converting EPA (500 ppm) fuel to CARB (15 ppm) fuel.
Test Methods: EPA/CARB Nonroad emissions recorded per 40CFR89 (ref. ISO8178-1) and weighted at load points prescribed in Subpart E, Appendix A for Constant Speed Engines (ref. ISO8178-4, D2)

Diesel Fuel Specifications: Cetane Number: 40-48. Reference: ASTM D975 No. 2-D.

Reference Conditions: Air Inlet Temperature: 25°C (77°F), Fuel Inlet Temperature: 40°C (104°F). Barometric Pressure: 100 kPa (29.53 in Hg), Humidity: 10.7 g/kg (75 grains H₂O/lb) of dry air; required for NO_x correction, Restrictions: Intake Restriction set to a maximum allowable limit for clean filter; Exhaust Back Pressure set to a maximum allowable limit.

Tests conducted using alternate test methods, instrumentation, fuel or reference conditions can yield different results.
 Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.



Permit / Application Information Sheet
Division of Environmental Protection
West Virginia Office of Air Quality

| | | | |
|--------------------------|--|-----------------------|--|
| Company: | Huntington | Facility: | Marshall University |
| Region: | | Plant ID: | 011-00218 |
| Application #: | | Application #: | 13-3318 |
| Engineer: | Rothwell, Tracy | Category: | |
| Physical Address: | One John Marshall Drive Huntington WV 25755 | SIC: | [8221] EDUCATIONAL SERVICES - COLLEGES AND UNIVERSITIES, NEC |
| County: | | NAICS: | [611310] Colleges, Universities, and Professional Schools |
| Other Parties: | ENV_CONT - Bailey, Travis 304-696-3032 VICE PRES - Jones, Brandi Jacob 304-696-3328 | | |

Information Needed for Database and AIRS
 1. Need valid physical West Virginia address with zip
 2. Air Program
 3. Inspection result
 4. Pollutant and class

Regulated Pollutants

| Summary from this Permit 13-3318 | | |
|----------------------------------|-------------------------------|-------------------------|
| Air Programs | Applicable Regulations | |
| Fee Program | Fee | Application Type |
| | \$0.00 | CONSTRUCTION |

Notes from Database

Activity Dates
 APPLICATION RECIEVED 05/06/2016
 ASSIGNED DATE 05/09/2016

5 Emergency Generators
47 Natural Gas Fired Boilers

*All Boilers are under 10MMBTU/hr
 Should they not be in the permit - NO Exempt*

Just put the EMERGENCY GENs in the Permit like WVU's?

IF SO, EASY

NON-CONFIDENTIAL

Please note, this information sheet is not a substitute for file research and is limited to data entered into the AIRTRAX database.

Company ID: 011-00218
 Company: Huntington
 Printed: 05/09/2016
 Engineer: Rothwell, Tracy

Adkins, Sandra K

From: Adkins, Sandra K
Sent: Monday, May 09, 2016 11:42 AM
To: 'jacobs2@marshall.edu'; 'bailey53@marshall.edu'
Cc: McKeone, Beverly D; Rothwell, W Tracy; Ward, Beth A; Coccari, Gene M
Subject: WV DAQ Permit Application Status for Marshall University; Huntington

**RE: Application Status
Marshall University
Huntington
Facility ID No. 011-00218
Application No. R13-3318**

Ms. Jones,

Your application for a construction permit for the Huntington location was received by this Division on May 6, 2016, and was assigned to Tracy Rothwell. The following items were not included in the initial application submittal:

Original affidavit for Class I legal advertisement not submitted.

Application fee AND/OR additional application fees:

**\$1,000 Construction, Modification, Relocation or Temporary Permit*

**\$1,000 NSPS*

(You may contact the Accounts Receivable section at 304 926-0499 ext. 4888 or Beth Ward at ext. 1846 to pay via credit card. DEP accepts Visa and MasterCard only.)

These items are necessary for the assigned permit writer to continue the 30-day completeness review.

Within 30 days, you should receive a letter from Tracy stating the status of the permit application and, if complete, given an estimated time frame for the agency's final action on the permit.

Any determination of completeness shall not relieve the permit applicant of the requirement to subsequently submit, in a timely manner, any additional or corrected information deemed necessary for a final permit decision.

Should you have any questions, please contact the assigned engineer, Tracy Rothwell, at 304-926-0499, extension 1211.

After-the-fact R13-3318 R13#
011-00218 NWFD#?

Construction
Tracy

45CSR13 Administrative Update, Construction, Modification, Relocation, Temporary Permit or General Permit Registration Incomplete Application

A complete application is demonstrated when all of the information required below is properly prepared, completed and attached. The items listed below are required information which must be submitted with a 45CSR13 permit application. Any submittal will be considered incomplete if the required information is not included. The applicant must submit a complete application in order to receive a 45CSR13 permit.

- Class I legal advertisement not published in a newspaper certified to accept legal advertisements and original affidavit submitted.
- Application fee AND/OR additional application fees not included:
 - \$250 Class I General Permit
 - \$300 Class II Administrative Update
 - \$1,000 Construction, Modification, Relocation or Temporary Permit
 - \$500 Class II General Permit
 - \$1,000 NSPS
 - \$2,500 NESHAP
 - \$2,500 45CSR27 Pollutant
 - \$5,000 Major Modification
 - \$10,000 Major Construction
- Original and two (2) copies of the application not submitted.
- File organization – application pages are not numbered or in correct order, application is not bound in some way, etc.
- Confidential Business Information is not properly identified.
- General application forms not completed and signed by a responsible official.
- Authority of Corporation form not included – required if application is signed by someone other than a responsible official.
- Applicant is not registered with the West Virginia Secretary of State's Office.
- Copy of current Business Registration Certificate not included.
- Process description, including equipment and emission point identification numbers, not submitted.
- Process flow diagram, including equipment and emission point identification numbers, not submitted.
- Plot plan, including equipment and emission point identification numbers, not submitted.
- Applicable technical forms not completed and submitted:
 - Emission Point Data Summary Sheets
 - Air Pollution Control Device Sheets
 - Emission Unit Data Sheets
 - Equipment List Form
- Emission calculations not included – emission factors, references, source identification numbers, etc.
- Electronic submittal diskette not included.