



*VIA FedEx*

24 February 2017

Mr. Steve Pursley  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

Reference: Moundsville Power, LLC  
Class I Administrative Update of Approved Air Permit  
(R14-0030C)

Dear Mr. Pursley:

On behalf of Moundsville Power, LLC (Moundsville Power), Environmental Resources Management, Inc. (ERM) is submitting this application for a Class I Administrative Update to the current air permit (R14-0030C) for Moundsville Power's proposed gas-fired combined-cycle combustion turbine electric power plant in Moundsville, Marshall County, WV.

Specifically, this Class I Administrative Update is to allow the flexibility to utilize either General Electric (GE) Frame 7FA.04 or 7FA.05 combustion turbines. The current air permit, in footnote 2 of the table in Section 4.1.5, specifies 7FA.04 combustion turbines. Moundsville Power wishes to add "or 7FA.05" to this footnote. The 7FA.05 is the latest version of the 7FA series combustion turbine, which GE continues to improve. It is the same class of GE turbine. The 7FA.05 offers improved efficiency (better heat rate) as compared to the 7FA.04, but is similar enough to the 7FA.04 that it can be operated to meet all of the existing permit limitations. No increases in any permit emission limits or operating limits are proposed with this Administrative Update.

As part of this Class I Administrative Update, Moundsville Power proposes slight decreases in the combustion turbine tons/yr emission rates for NO<sub>x</sub>, CO, PM, PM<sub>10</sub>, and VOC in the table in Section 4.1.4, to eliminate minor double-counting of emissions from both startups and shutdowns and steady-state emissions. The annual emission caps in the current permit are based on addition of maximum annual start-up and shutdown emissions to maximum annual steady state emissions, without exclusion of off-line hours that would be associated with those start-ups and shutdowns.

Moundsville Power believes that this change qualifies as a Class I Administrative Update under 45 CSR-13-4.2.a.8, which pertains to a *“Change in a permit condition as necessary to allow changes in operating parameters, emission points, control equipment or any other aspect of a source which results in a decrease in the emission of any existing regulated air pollutant or any new regulated air pollutant.”*

The requested revisions are illustrated in the form of markups to the approved air permit in **Appendix 1**. **Appendix 2** contains an Application for NSR Permit form, completed for a Class I Administrative Update. We greatly appreciate the attention you have given to this project, and look forward to working with you on this Class I Administrative Update.

Please call me at (609) 403-7518 or Mr. Jon Perry of ERM at (609) 403-7505 if you have any questions or need any additional information.

Sincerely,



William M. Hanna III, P.E.  
*Partner*

Enclosures

*Appendix 1 - Permit Markups with Requested Revisions*

GHGs (CO <sub>2e</sub> )	2,387,593.00
Total HAPs	13.06

<sup>1</sup> Includes both filterable and condensable particulate matter

Compliance with the annual emission limits shall be determined using CEMs for CO and NO<sub>x</sub>. For all other pollutants, it shall be determined by multiplying the hourly steady state emissions in condition 4.1.2 by the number of hours of steady state operation and adding the appropriate start up and shut down emissions from condition 4.1.3.

4.1.5 Pursuant to the BACT provisions under 45CSR14, the permittee shall meet the following requirements for each combustion turbine/HRSG unit:

PSD Pollutant									
CO		NO <sub>x</sub>		PM <sub>2.5</sub> /PM <sub>10</sub> /PM <sup>(1)</sup>		VOCs		GHGs	
Limit	Tech. <sup>(2)</sup>	Limit	Tech. <sup>(2)</sup>	Limit	Tech. <sup>(2)</sup>	Limit <sup>(4)</sup>	Tech. <sup>(2)</sup>	Limit (CO <sub>2e</sub> )	Tech. <sup>(2)</sup>
2.0 ppmvd	OC, CP	2.0 ppmvd	DLNB, SCR, CP	8.9 lb/hr	AF, NG, CP	1ppmvd 2ppmvd	OC, CP	792lb/ MW- hr <sup>(3)</sup>	NG, GE7FA

<sup>1</sup> PM emission rates are given in total particulate (filterable + condensable) matter

<sup>2</sup> CP=Good Combustion Practices; SCR = Selective Catalytic Reduction; DLNB = Dry Low NO<sub>x</sub> Burners; OC = Oxidation Catalyst; AF = inlet air filtration; NG = Use of Natural Gas (or a Natural Gas/Ethane blend) as a fuel; GE7FA = use of GE Frame 7FA.04 turbines.

<sup>3</sup> Based on combined cycle gross MW output, at 59°F ambient temperature, with no duct firing, evaporative cooling on, and the combustion turbines firing natural gas and operating at base load.

<sup>4</sup> 1ppm limit applies when duct firing is not occurring. 2 ppm limit applies when duct firing is occurring. Ppm values are by volume, dry basis, corrected to 15% oxygen.

or 7FA.05

4.1.5.1 During startup and shut down the applicant shall minimize the emissions by:

1. Operating and maintaining the turbine/HRSG units and associated air pollution control equipment in accordance with good combustion and air pollution control practices, safe operating practices, and protection of the facility.
2. Implementing operations and maintenance practices comprised of maintaining a high level of operation time, and minimizing (as much as practicable) the frequency of startup and shutdown events.
3. Operate continuous emission monitoring system (CEMS), and other continuous monitoring systems and devices required by this permit.

4.1.6 Each combustion turbine/HRSG unit shall burn only pipeline quality natural gas or a pipeline quality natural gas and ethane (25% max by volume) mix as fuel. For the combustion turbine/HRSG unit, "fuel" shall mean "pipeline quality natural gas or a pipeline quality natural gas and ethane (25% max by volume) mix"

4.1.7 Each combustion turbine/HRSG unit shall use the emission control devices specified under Table 1.0 at all times when in operation except during periods of startup and shutdown when operating temperatures do not allow for proper use of the emission control devices.

4.1.8 In order to minimize NO<sub>x</sub> emissions, within 180 days of startup, the permittee shall determine the optimal injection rate of aqueous ammonia into the SCR. The permittee shall then operate the SCR at the determined injection rate.

PM <sup>3</sup>	Hot Start	2.7	2,364
	Warm Start	4.3	
	Cold Start	6	
	Shutdown	1.5	
PM <sub>10</sub> <sup>3</sup>	Hot Start	2.7	2,364
	Warm Start	4.3	
	Cold Start	6	
	Shutdown	1.5	
PM <sub>2.5</sub> <sup>3</sup>	Hot Start	2.7	2,364
	Warm Start	4.3	
	Cold Start	6	
	Shutdown	1.5	
VOCs	Hot Start	55	55,216
	Warm Start	56	
	Cold Start	380	
	Shutdown	46	

<sup>1</sup> Pollutants not listed in this table are limited to the rates in condition 4.1.1 at all times including startup and shutdown.

<sup>2</sup> A hot start is defined as a start following 8 hours of shutdown or less. A warm start is defined as a start following at least 8 hours of shutdown but not more than 72 hours of shutdown. A cold start is defined as a start following 72 hours of shutdown or more.

<sup>3</sup> Includes both filterable and condensable particulate matter.

4.1.3.1 Moundsville Power proposes slight decreases in the combustion turbine emission rates for NO<sub>x</sub>, CO, PM, PM<sub>10</sub>, and VOC.

4.1.4 Total emissions from combustion turbine/HRSG units shall not exceed the following:

Pollutant	tons/year	
CO	208.15	← 206.33
NO <sub>x</sub>	149.81	← 146.83
PM <sup>(1)</sup>	79.15	← 77.96
PM <sub>10</sub> <sup>(1)</sup>	79.15	← 77.96
PM <sub>2.5</sub> <sup>(1)</sup>	77.38	
SO <sub>2</sub>	5.55	
VOCs	77.28	← 76.24
H <sub>2</sub> SO <sub>4</sub>	3.57	
Lead	0.01	

*Appendix 2 -Application for NSR Permit  
(Class I Administrative Update)*



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**DIVISION OF AIR QUALITY**

601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
(304) 926-0475  
[www.dep.wv.gov/daq](http://www.dep.wv.gov/daq)

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

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

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

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

- ADMINISTRATIVE AMENDMENT     MINOR MODIFICATION  
 SIGNIFICANT MODIFICATION

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

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

**Section I. General**

1. Name of applicant (as registered with the WV Secretary of State's Office): <b>Moundsville Power, LLC</b>		2. Federal Employer ID No. (FEIN): <b>46-1954749</b>	
3. Name of facility (if different from above): <b>Same</b>		4. The applicant is the: <input type="checkbox"/> OWNER <input type="checkbox"/> OPERATOR <input checked="" type="checkbox"/> BOTH	
5A. Applicant's mailing address: <b>1401 McKinney Street, Suite 1800 Houston, Texas 77010</b>		5B. Facility's present physical address: <b>N/A</b>	
6. <b>West Virginia Business Registration.</b> Is the applicant a resident of the State of West Virginia? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO – If YES, provide a copy of the <b>Certificate of Incorporation/Organization/Limited Partnership</b> (one page) including any name change amendments or other Business Registration Certificate as <b>Attachment A</b> . – If NO, provide a copy of the <b>Certificate of Authority/Authority of L.L.C./Registration</b> (one page) including any name change amendments or other Business Certificate as <b>Attachment A</b> .  <b>Please refer to the original NSR air permit application submitted to WVDEP December 2013, the Class II Administrative Update submitted to WVDEP April 2015, and the Class II Administrative Update submitted to WVDEP December 2015.</b>			
7. If applicant is a subsidiary corporation, please provide the name of parent corporation:			
8. Does the applicant own, lease, have an option to buy or otherwise have control of the <i>proposed site</i> ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO – If YES, please explain: <b>Option to Buy</b> – If NO, you are not eligible for a permit for this source.			
9. Type of plant or facility (stationary source) to be <b>constructed, modified, relocated, administratively updated</b> or <b>temporarily permitted</b> (e.g., coal preparation plant, primary crusher, etc.):  <b>Electric Power Generation Unit</b>		10. North American Industry Classification System (NAICS) code for the facility:  <b>221112</b>	
11A. DAQ Plant ID No. (for existing facilities only): <b>051-00188</b>		11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): <b>R14-0030C</b>	

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

12A.

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

**The site is located approximately three (3) miles south of Moundsville, West Virginia located between State Route 2 and the Ohio River and adjacent to County Highway 2/19. Former Allied Chemical Plant site.**

12.B. New site address (if applicable):  
**Chemical Plant Access Road South  
Moundsville, WV 26041**

12C. Nearest city or town:  
**Moundsville, WV**

12D. County:  
**Marshall**

12.E. UTM Northing (KM): **4417.175**

12F. UTM Easting (KM): **517.346**

12G. UTM Zone: **17**

13. Briefly describe the proposed change(s) at the facility: **Construction of an electric power generation facility.**

14A. Provide the date of anticipated installation or change: **2<sup>nd</sup> Quarter 2017**

- If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen:        /        /

14B. Date of anticipated Start-Up if a permit is granted:  
**1<sup>st</sup> Quarter 2020**

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

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:

Hours Per Day **24**        Days Per Week **7**        Weeks Per Year **52**

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

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

18. **Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process (*if known*). A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance (*if known*). Provide this information as **Attachment D**. **See Item 6.**

## ***Section II. Additional attachments and supporting documents.***

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13). **No fee required for Class I Administrative Update.**

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

21. Provide a **Plot Plan**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to **Plot Plan Guidance**) . **See Item 6.**

- Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

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

**Please refer to the original NSR air permit application submitted to WVDEP December 2013, the Class II Administrative Update submitted to WVDEP April 2015, and the Class II Administrative Update submitted to WVDEP December 2015.**

23. Provide a **Process Description** as **Attachment G**.

**Please refer to the original NSR air permit application submitted to WVDEP December 2013, the Class II Administrative Update submitted to WVDEP April 2015, and the Class II Administrative Update submitted to WVDEP December 2015.**

- Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

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



24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H**.  
 – For chemical processes, provide a MSDS for each compound emitted to the air. **See Item 6.**

25. Fill out the **Emission Units Table** and provide it as **Attachment I**. **See Item 6.**

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J**. **See Item 6.**

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K**. **See Item 6.**

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

<input type="checkbox"/> Bulk Liquid Transfer Operations	<input type="checkbox"/> Haul Road Emissions	<input type="checkbox"/> Quarry
<input type="checkbox"/> Chemical Processes	<input type="checkbox"/> Hot Mix Asphalt Plant	<input type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities
<input type="checkbox"/> Concrete Batch Plant	<input type="checkbox"/> Incinerator	<input type="checkbox"/> Storage Tanks
<input type="checkbox"/> Grey Iron and Steel Foundry	<input type="checkbox"/> Indirect Heat Exchanger	
<input type="checkbox"/> General Emission Unit, specify		

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L**. **See Item 6.**

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

<input type="checkbox"/> Absorption Systems	<input type="checkbox"/> Baghouse	<input type="checkbox"/> Flare
<input type="checkbox"/> Adsorption Systems	<input type="checkbox"/> Condenser	<input type="checkbox"/> Mechanical Collector
<input type="checkbox"/> Afterburner	<input type="checkbox"/> Electrostatic Precipitator	<input type="checkbox"/> Wet Collecting System
<input type="checkbox"/> Other Collectors, specify		

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M**. **See Item 6.**

30. Provide all **Supporting Emissions Calculations** as **Attachment N**, or attach the calculations directly to the forms listed in Items 28 through 31. **See Item 6.**

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O**. **See Item 6.**

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

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and **Example Legal Advertisement** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.  
**Not required for Class I Administrative Update.**

33. **Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?  
 YES     NO

➤ If **YES**, identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's **"Precautionary Notice – Claims of Confidentiality"** guidance found in the **General Instructions** as **Attachment Q**.

### **Section III. Certification of Information**

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

<input type="checkbox"/> Authority of Corporation or Other Business Entity	<input type="checkbox"/> Authority of Partnership
<input type="checkbox"/> Authority of Governmental Agency	<input type="checkbox"/> Authority of Limited Partnership

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

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

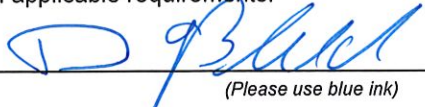
35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

**Certification of Truth, Accuracy, and Completeness**

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

**Compliance Certification**

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

SIGNATURE  DATE: 2/24/2017  
(Please use blue ink) (Please use blue ink)

35B. Printed name of signee: **Dirk Straussfeld** 35C. Title: **EVP & Chief Operating Officer**

35D. E-mail: **DStraussfeld@quantumug.com** 36E. Phone: **(713) 485-8650** 36F. FAX: **(713) 485-8651**

36A. Printed name of contact person (if different from above): **Same** 36B. Title:

36C. E-mail: 36D. Phone: 36E. FAX:

**PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:**

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

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

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

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

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