west virginia department of environmental protection

Division of Air Quality
601 57th Street, SE
Charleston, WV 25304-2345
Phone: 304-926-0475 Fax: 304-926-0479

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

ENGINEERING EVALUATION/FACT SHEET

BACKGROUND INFORMATION

Application No.:	R14-0007C
Plant ID No.:	061-00027
Applicant:	Morgantown Energy Associates (MEA)
Facility Name:	Morgantown Energy Facility
Location:	Morgantown
NAICS Code:	221112
Application Type:	Modification
Received Date:	November 23, 2015
Engineer Assigned:	Edward S. Andrews, P.E.
Fee Amount:	$3500.00
Date Received:	November 23, 2015 December 5, 2015
Complete Date:	January 27, 2016
Due Date:	April 25, 2016
Applicant Ad Date:	November 25, 2015
Newspaper:	*The Dominion Post*
UTM's:	Easting: 589.20 km Northing: 4,388.10 km Zone: 17
Description:	This application is to address the major source permitting issues for implementing the facility's compliance strategy with regards to complying with the Mercury and Air Toxic (MATS) Rule for the CFB units.

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DESCRIPTION OF PROCESS

Morgantown Energy Associates (MEA) is a West Virginia General Partnership with one location in Morgantown, West Virginia. The facility provides cogeneration services (steam and electric production) that supply steam to West Virginia University and the WVU medical center facilities and electric energy to MonPower, a subsidiary of FirstEnergy. The facility has two circulating fluidized bed (CFB) boilers identified as S009J and S009K. These CFB boilers are have a maximum heat input of 375 MMBtu/hr which can generated a combined steam output of about 560,000 pounds of steam per hour. These two unit are configured to burn a mixture of coal and coal refuse.

To support start-up operations and to provide a secondary means to meet the heat demand of the university, the facility operates two natural gas fired boilers with a combined maximum heat input of 264 MMBtu/hr.

There are fuel, limestone, and ash handling equipment associated with the facility that is used to support the operations of the two CFB boilers.

DESCRIPITION OF CHANGES

MEA has selected a MATS compliance strategy on the basis of Filterable Particulate Matter (PM), Sulfur Dioxide (S02), and Mercury (Hg). MEA has evaluated the facility and determined that the compliance strategy will include complying with the following standards:

- Filterable Particulate Matter (PM)- 0.015 lb/MMBtu (40 CFR 63.10005 (h)(l)(i)) using low emitting (LEE)electric utility steam generating units testing in lieu of Total non-Hg HAP metals or Individual HAP metals. If the units meet LEE, then the LEE compliance track will be followed. If the units do not meet the LEE requirement, then the facility will need to demonstrate compliance with the PM limit which must be demonstrated through continuous monitoring performance through the use of particulate matter continuous parameter monitoring system (CPMS), or a PM continuous emission monitoring system (CEMS), or compliance performance testing which is repeated on a quarterly basis to demonstrate compliance with 0.03 lb of filter PM per MMBtu limit.

- Sulfur dioxide ($S0_2$) - 0.20 lb/MMBtu (40 CFR Table 2 to Subpart UUUUU of Part 63) using an existing continuous emissions monitoring system along with a flue gas desulfurization system. This control strategy includes the existing limestoneinjection system for flue gas desulfurization, which requires compliance/adherence to §63.9991(c)(1) and (2).

- Mercury (Hg) - 0.12lb/trillion Btu (TBtu) or PTE 29.0 lb/yr (per unit) using LEE testing (40 CFR 63.10005(h)(l)(ii)(B)). The mercury limit under MATS is 1.2 lb/TBtu. If the units do not meet LEE requirements, then the facility will have to install and operate Hg CEMS or a sorbent trap monitoring system.

- Work Practices and Standards for tune-up of burner and combustion controls- the facility is required to tune up the electric generating unit (EGU) burner and the combustion controls. The initial tune-up is required by October 12, 2016 with subsequent tune-ups every 36 months. The site obtained a one year extension.

- Work Practice Standards for Startups and Shutdowns - the facility has to operate the continuous monitoring systems for the CFB boilers during periods of startups and shutdowns. The startup is on natural gas; once coal is fired all of the required controls must be engaged after permissive temperatures are achieved.

Meeting the MATS sulfur dioxide (SO2) limit of 0.20 lb/MMBtu will require operational changes. To meet this SO_2 limit under MATS, MEA proposes to enhance the removal efficiency for SO_2 from the existing limestone inject and fabric filter baghouses for each unit by increasing the amount of limestone injected from 10 to 30%. The limestone system is currently designed and permitted for the anticipated feed rates. This adjustment requires the fuel feed to increase by an estimated 1 to 3% to allow for the calcination of the limestone.

The increase in fuel rate for the boilers would constitute a change in the method of operation under 45 CSR 14 (West Virginia's Prevention of Significant Rule). To ensure that a significant increase of nitrogen dioxide emissions does not occur, MEA proposes to install a selective non-catalytic reduction (SNCR) system.

SITE INSPECTION

The facility was last inspected on June 11, 2014, by Mr. Brian Tephabock, Compliance and Enforcement Supervisor of the North Central Regional Office. As a result of the inspection, Mr. Tephabock determined that the facility is operating in compliance with all applicable regulations, rules, and permits.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

MEA proposes to maintain the same potential to emit or emission limits as stated in Permit R14-00007B for the CFB boilers, except for sulfur dioxide and mercury. The following table compares the permitted and the projected hourly rate.

Table #1 – Permitted and Projected Criteria Emissions				
Pollutant	Permitted under R14-007B		Projected Emission after the change	
	lb/hr	lb/MMBtu	lb/hr	lb/MMBtu
Nitrogen Oxides (NO_x)	300	0.40	274.199	0.31
Sulfur Dioxide (SO_2)	285	0.40	172.00	0.20
Carbon Monoxide (CO)	127.5	0.1257	52.286	0.059
Particulate Matter (PM)	22.5	0.022	6.887	0.008
PM less than 10 micros* (PM_{10})	N/A	N/A	19.203	0.022
PM less than 2.5 micros*($PM_{2.5}$)	N/A	N/A	17.384	0.020
Lead (Pd)	0.13	N/A	0.00206	0.000002
Volatile Organic Compounds	5.55	0.0074	1.002	0.001

* Includes the condensable fraction.

HAP emissions such as the metals to include mercury will not be reduced any further since MEA believes that the current operation is reducing these emissions to levels that are

already below the emission standard set in the MATS Rule, and MEA plans on conducting the testing required to demonstrate the LEE status for filterable PM and mercury.

Acid gas emissions will decrease as MEA increases the level of controlling SO_2 to achieve the 0.20 lb/MMBtu standard. However, it is difficult to predict the efficiency of these other acid gases in relationship to SO_2 emissions. It is known that hydrogen fluoride and hydrogen cyanide are the most reactive of the acid gases towards limestone that has been calcined. And, hydrogen chloride and SO_2 are the least reactive of the acid gases. Therefore, the proposed increased level of controlling SO_2 will reduce the other acid gases.

The applicant estimated the potential fugitive emissions associated with increased use of fuel and limestone. The emissions from additional haul road traffic was 0.006 tons per year of PM, 0.0010 tons per year of PM_{10}, and 0.0003 tons per year of $PM_{2.5}$. The fugitive dust emissions from off-loading the additional fuel is 0.01 tons per year of PM, 0.005 tons per year of PM_{10}, and 0.0007 tons per year of $PM_{2.5}$.

REGULATORY APPLICABLILITY

The Morgantown Energy Facility is a major source under 45 CSR 14, the State of West Virginia's rule on Prevention of Significant Deterioration (PSD) under the Clean Air Act.

The first step in determining if the proposed modification will triggered a major modification of a major source and to determine which pollutants that the project is major for. MEA had elected to use the actual-to-projected-actual applicability test under 45 CSR §14-3.4.c., which is illustrated in the following equation:

$$Net\ Emission\ Change = PAE - BE - ECBA$$

Where:
PAE – Project Actual Emissions, in tons per year
BE – Baseline Emissions, in tons per year
ECBA – Emissions that could have been accommodated, in tons per year.

Both of the CFB boilers are considered existing emission units for the applicability test. Since these CFB boilers are classified as electric utility generating units, the applicant is only permitted to review and use the previous 5-year period (past actuals) in establishing the baseline emissions for this test. The applicant annualized the past emissions 24 month basis for each month from January 2010 to December 2014. The application was deemed complete on January 27, 2016. By rule only emissions that occurred before January 2011 cannot be used for this application because it is outside of the five year look back window for determining baseline emissions.

Table No. 3 Establishing Baseline for the NSR Pollutants		
Pollutant	Emissions (tpy)	Time Period
PM	26.50	Oct 12 to Sep 14
PM_{10}	74.71	Oct 12 to Sep 14
$PM_{2.5}$ Direct	67.03	Jan 11 to Dec 12
SO_2 (& precursor for $PM_{2.5}$)	970.72	Jan 13 to Dec 14
NO_x (precursor of Ozone and $PM_{2.5}$)	1,082.58	Jan 13 to Dec 14
CO	201.45	Jan 11 to Dec 14
VOCs	3.86	Oct 11 to Sep 13
Pb	0.008	Jan 11 to Dec 12

Projected actuals are needed for this applicability test. MEA used heat input and capacity factor projection, which were obtained from MEA's financial projections for operating years 2016 through 2020. Additional heat input was determined from the projected increase in limestone injection. MEA used a projected additional heat need for calcination of the limestone of 8.6 gigajoules (For 2016 and 2020 operating years, an extra 24 operating hours was include since they are leap years.

Table #4 PROJECTED OPERATION & EMISSIONS					
YEAR	2016	2017	2018	2019	2020
Capacity (%)	94%	90%	94%	94%	94%
Heat Input (MMBtu/yr)	6,233,021	5,956,839	6,217,996	6,217,996	6,233,021
Heat Input from Additional	153,108	203,921	214,117	214,117	214,703
Hours of Operation	8,301	7,884	8,278	8,278	8,301
NO_X (Tons)	993.3	958.3	1,000.5	1,000.5	1002.9*
SO_2 (Tons)	732.4*	616.1	643.2	643.2	644.8
CO (Tons)	189.4	182.7	190.8	190.8	191.2*
PM (Tons)	24.9	24.1	25.1	25.1	25.2*
PM_{10} (Tons)	69.6	67.1	70.1	70.1	70.2*

VOC(Tons)	3.6	3.5	3.7	3.7	3.7*
Lead (Pb) (Tons)	0.007	0.007	0.008	0.008	0.008*
$PM_{2.5}$ (Tons)	63.0	60.8	63.4	63.4	63.6*

* - Highest Project Year

Emissions that could have been accommodated are determined using the annualized single month minus the baseline emissions. Second, these emissions must be unrelated to the project and the emission units must been physically and legally allowed to emit these emissions. The following table will identify the annualized single month, month and year selected and the permitted emission limit.

Table #5 – Emission that Could have Been Accommodated (ECBA)								
Pollutant	NO_x	SO_2	CO	PM	PM_{10}	VOC	Pd	$PM_{2.5}$
Max Monthly Emissions	102.00	94.6	19.45	2.56	7.14	0.37	0.00076	6.47
Month & Year	Mar 2014	Mar 2014	Jan 2012	Mar 2014	Mar 2014	Jan 2012	Jan 2012	Jan 2012
Annualized Emission	1,224.00	1,135.20	233.40	30.72	85.68	4.44	0.01	77.64
Permitted Emission Rate	1,314.00	1,248.30	514.65	98.55		24.31	0.57	
BE	1,082.58	970.72	201.45	26.50	74.71	3.86	0.008	67.03
ECBA	141.42	164.48	31.95	4.22	10.97	0.58	0.0020	10.61

BE – Baseline Emissions
ECBA – Emissions that Could have Been Accommodated

Table #6 Change in Emissions					
Pollutant	Projected Actuals Emissions – PA (tpy)	Baseline Emissions – BE (tpy)	ECBA (tpy)	Net change in Emissions (tpy)	Significant Threshold Level (tpy)
NO_x	1,002.89	1082.58	141.44	- 221.13	40
SO_2	732.41	970.72	164.48	- 402.79	40
CO	191.24	201.45	31.95	- 42.16	100
PM	25.19	26.50	4.22	- 5.53	25
PM_{10}	70.23	74.71	10.97	- 15.45	15
VOC	3.67	3.86	10.97	-11.16	40
Pb	0.01	0.01	0.0020	0.00	0.6
$PM_{2.5}$	63.58	67.03	10.61	- 14.06	10

(-) – Represents decrease in emissions.

Therefore, the net emission change for this project is less than the significance level for each corresponding pollutant and therefore the project does not pose a significant increase in emissions of any regulated pollutant under the PSD program. Thus, this proposed project is not classified as a major modification and no further review under Rule 14 is required.

It should be noted that this project should result in no increase of any regulated NSR pollutant, and therefore 45 CSR §§14-19.8.c. and d. would not be applicable to this project.

With regards to the National Ambient Air Quality Standards, Monongalia County is classified as attainment for all criteria pollutants. Thus, no review of this proposed project is required for applicability under Rule 19 (West Virginia's Non-attainment Permitting Rule) for this particular application. Therefore, this proposed project does not require a permit under PSD and/or Non-Attainment New Source Review.

The facility is currently classified as a major source of HAPs, which means the facility has the potential to emit 10 tons per year of a single HAP, which would be hydrogen chloride for this facility, or 25 tpy of total HAPs. Within the application, MEA has not elected to determine if this project would change the facility's major source status for HAPs.

Regardless, the MATS Rule (Subpart UUUUU – Nation Emission Standards for Hazardous Air Pollutants: Coal- and Oil- Fired Electric Utility Steam Generating Units) applies to major and area sources of Hazardous Air Pollutants (HAPs).

The main purpose of this project is to increase the level of acid gas control to meet the HCl or SO_2 standard of the MATS Rule while not increasing emissions of other pollutants. The two CFR boilers are coal fired EGUs, which were constructed in 1989. Thus, these units are classified as *existing coal-fired burning not low rank virgin coal*. The emission standards that MEA intents to comply with for the two CFB boilers from MATS is presented in following list.

- Filterable PM standard of 0.03 lb/MMBtu or 0.3 lb/MWh (gross electric output).
- SO_2 standard of 0.20 lb/MMBtu or 1.5 lb/MWh (gross electric output).
- Hg standard of 1.2 lb/TBtu (Trillion) or 0.013 lb/GWh (gross electric output).

MEA only needs to enhance the control efficiency of the inherent dry scrubber system for each CFB boiler to be capable of complying with the applicable acid gas (HCl or alternative SO_2) emission standards in the MATS Rule. MEA plans on demonstrating that these CFB boilers qualify as LEE units for filterable PM and mercury, which the past emission inventories for these unit supports. If MEA is successful in making these demonstrations, these source is not required to conduct the initial and continuous compliance demonstrations for the respective pollutant (See 40 CFR §§63.10000(c)(1)(i), (iii), (iv) and (vi)). For filterable PM, the source has to repeat this demonstration once every 3 years. MATS requires mercury LEE units to repeat this demonstration once every year. The demonstration for a PM LEE requires the sampling

volume to be double for each run. For Hg LEE status, the source has to conduct a 30 operating day test.

If MEA is unsuccessful in demonstrating the units as a LEE units or lose their LEE status, then the requirements of initial and continuous compliance requirements are in effect. For filterable PM, the source would have to conduct one of the following continuous compliance options:

- Install and use PM continuous emission monitoring system (CEMS);
- PM Continuous Parameter Monitoring System (CPMS); or
- Quarterly PM testing.

For mercury, the source would have to conduct one of the following continuous compliance options:

- Install and use Hg CEMS; or
- Install and use Hg sorbent trap monitoring system;

For initial and continuous compliance with the SO_2 standard of MATS, MEA can utilize the current SO_2 CEMS minus the missing data procedures of Part 75.

These CFB boilers are currently and will remain subject to emission standards of Subpart Da to Part 60 for PM, which includes visible emissions, and SO_2; 45 CSR 2 for PM , which includes visible emissions; and 45 CSR 10 for SO_2. Currently, compliance for the sulfur dioxide and visible emissions standards in these regulations and rules is demonstrated through the use SO_2 CEMS and continuous opacity monitoring systems (COMS). Particulate matter (PM) is demonstrated through performance testing on a frequency established in 45 CSR §2A-5.2.

The only applicable regulation or rule that defines modification is Subpart Da. Subpart Da to Part 60 defines *modification* in the general provision of Part 60 as any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility. The proposed change in method of operation would increase fuel to the unit that would increase the potential of SO_2, which is needed to increase the SO2 removal of the control device that would decrease SO_2 emissions prior to being released to the atmosphere. Thus, this proposed change in method of operation does not meet the definition of modification of Part 60 and the current standards of Subpart Da remain as the enforceable standard, which is 0.60 lb of SO_2 per MMBtu and a 70% reduction efficiency of SO_2. The existing SO2 limit in the permit and in the MATS Rule is more stringent than the one in Subpart Da. Thus, the most stringent SO_2 would be the 0.20 lb per MMBtu from MATS and 94.8% SO_2 reduction requirement from Condition A(6) of Permit R14-0007C.

The auxiliary boilers are subject to the New Source Performance Standards of Subpart Db since each unit will have a design heat input rating of greater than 100 MMBtu/hr. Subpart Db establishes performance standards by pollutant by fuel type (i.e. coal, oil, and natural gas). For natural gas fired units, the subpart only establishes a performance standard for NO_x emissions. These units will be constructed after July 9, 1997 which makes the unit applicable to the limit in 40 CFR §60.44b(l) of 0.20 lb of NO_x (expressed as NO_2) per MMBtu. These units will be equipped with a low-NO_x burner with a maximum NO_x rate of 0.036 lb/MMBtu. At this NO_x rating, these units would have a margin of compliance of 18% of the applicable NO_x limit.

Subpart Db requires affected sources to demonstrate compliance with the NO_x limit on a 30 day rolling average. This subpart will require the use of a NO_x continuous emission monitoring system (NO_x CEMS) with a means to measure either O_2 or CO_2in the exhaust for demonstrating compliance with the NO_x emission standard. The application states that NO_x CEMS will be installed to meet the Part 75 monitoring requirements, which is applicable under 40 CFR §60.48b(b)(2).

The auxiliary boilers are subject to 40 CFR 63, Subpart DDDDD – National Emission Standard for Hazardous Air Pollutants (NESHAP) for Major Sources: Industrial Commercial, and Institutional Boilers and Process Heaters & the CFB boilers would be subject

This regulation establishes work practices as a means to comply with the emission standards (see Item 3 of Table 3 to Subpart DDDDD of Part 63). These boilers under Subpart DDDDD will be considered as new units. The one-time energy assessment is not required for new units. Therefore, the energy assessment is not applicable for these boilers and will not be included.

MEA prepared and submitted a complete application, paid the filing and NESHAP fees, and published a Class I Legal ad in the *Dominion Post* on November 23, 2015. The facility currently holds a valid Title V Operating Permit and included Attachment S of the application for a minor modification of this operating permit.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

The CFB boilers will not emit any pollutants that aren't already being emitted by these emission units at the facility. Therefore, no information about the toxicity of the hazardous air pollutants (HAPs) is presented in this evaluation.

AIR QUALITY IMPACT ANALYSIS

An air dispersion modeling study or analysis was not required, because the proposed modification does not meet the definition of a major modification of a major source as defined in 45CSR14.

MONITORING OF OPERATIONS

All the CFB and auxiliary boilers vent to a common stack before being released to the atmosphere. A Continuous Emissions Monitoring (CEM) system is used to measure sulfur dioxide, nitrogen oxides, and diluent gas (either O_2 or CO_2) and opacity is located at a common point to all four of the boilers venting to Stack 1. The MATs Rule, 40 CFR 63.10010(a)(3) allows affected unit(s) to utilize a common stack with non-affected unit(s). Thus, the use of the existing SO_2 CEMs is acceptable except that MEA must assign the calculated emission rate to each unit which includes the two auxiliary boilers.

The MATs Rule has several different monitoring options to demonstrate compliance with the PM and mercury standards. However, MEA has elected to demonstrate that the CFB boilers can qualify as a *low emitting emission* (LEE) units under the MATs Rule for PM and mercury in lieu of preforming the monitoring requirements for demonstrating continuous compliance with the standards for these two pollutants. A LEE unit must demonstrate that the unit is operating at less than 50% of the emission standard expect for mercury which is less than 10 percent of the allowable. For these two CFB boiler, the PM rate has to be less than 0.015 pounds per MMBTU (equates to less than 11.25 pounds per hour from Stack 1) and the mercury rate has to be less than 1.0 pounds per trillion Btu (equates to less than 0.00075 pounds per hour from Stack 1).

To qualify as a LEE unit, MEA will be required to conduct performance testing for PM using Method 5 but increase the minimum sample by a factor of 2. For a mercury LEE unit, MEA will be required to conduct a 30 boiler operating day performance test using Method 30B in Appendix A-8 to Part 60. To maintain LEE status under the MATs Rule, MEA will be required to repeat this testing once every 3 years for PM and once every year for mercury (40 CFR 63.10006(b)).

Under MATS, there are two definitions for start-up (paragraph 1 or paragraph 2). MEA plans on using the paragraph 1 definition and is required to record the information in 40 CFR §§63.10032(f)(1), (f)(3), and (f)(4). 40 CFR 63.10032(f)(2) applies to sources using the start-up in paragraph 2.

CHANGES TO PERMIT R13-1085B/R14-0007B

The current permit was written in an outdated format which is no longer being used by the DAQ. This writer recommends integrating the existing limits and conditions into the current format used by the agency today. Also, the DAQ no longer assigns permit applications a Rule 13 and R14 permit numbers for the same application. If the source has received a major source or major modification of a major source permit under Rule 14, then the R14 number remains for the permit number for that permit even if the source only is required to obtain a Rule 13 permit for the life of the facility. Thus, the Rule 13 permit number will be dropped from the permit

number. A reference to the previous permits in Permit Conditions 2.4.1. and 2.5.1. will note the Rule 13 and Rule 14 permit numbers as listed on these originally issued permit.

Permit R13-1085B/R14-0007B included all four of the boilers and material handling activities. This writer recommends established one section (4.0.) to cover specific requirements for all of the boilers and another section (5.0.) for the material handling equipment associated with handling fuel, limestone, and flyash at the facility.

The following table is a listing of the existing conditions and corresponding new conditions numbers in the draft permit.

Table # 7 – Condition Key between R13-1058B/R14-0007B to R14-0007C		
Condition No. of R13-1058B/R14-0007B	Condition No. R14-0007C	Notes/Comments
A(1)	4.1.1. –PM; 4.1.2. -SO_2; 4.1.3. -NO_2; 4.1.4.-CO; 4.1.5. –VOC; 4.1.6. -Hg.	Other pollutants limits are exactly the same in A(3) which are only listed in 4.1.17.
A(2)	4.1.2.a	Included the existing table for the auxiliary boilers
A(3)	4.1.17.	Only incorporated mass limits. See following discussion
A(4)	5.1.1.	
A(5)	5.1.2.	
A(6)	4.1.1.b.ii.	Intergraded into the SO2 limit for the CFB boilers.
A(7)	3.1.7.	This section covers the whole facility.
A(8)	3.1.8.	This section covers the whole facility.
A(9)	3.1.9.	This section covers the whole facility.
B(1) Rule 2	4.1.1.a.i. & 4.1.3.k.	Rule 2 PM and opacity Standards
B(1) Rule 10	4.1.1.b.i	SO_2 limit
B(1) Subpart Da	4.1.1.b.i for SO2; 4.1.1.a.i. for PM; and 4.1.3.k. for opacity	Opacity limit in Rule 2 is more stringent than Subpart Da
B(1) Subpart Db	4.1.2.a.	Existing permitted limit is more stringent than Subpart Db

B(1) Method 9	Not necessary and omitted	B(1)(d), Subpart Da, and Rule 2 requires COMs.
B(1)(b)	Intergraded into 4.2.1.g and 4.3.1. as part of either the Test for PM LEE Status or PM Monitoring for MATS	MAT monitoring requirements are more stringent
B(1)(c)	4.1.1.b.ii., 4.2.1.a. SO2 CEMs and 4.2.2. as fired fuel monitoring system	Subpart Da allow the use of Part 75 CEMs in lieu of Part 60 CEMs minus the missing data procedures
B1(e)	5.1.3.	Fugitive PM Controls
B(1)(f)	4.5.1	Subpart Da reporting
B(1)(g)	Omitted	Subpart Da & Db Initial Notification
B(2)	4.2.1.b., h, and i.	NOx CEMs
B(5)	4.3.2.	CO Testing Requirements
B(4), B(6) though B(9)	These were appropriate test methods available at the time the original permit was issued. Omitted these conditions that list specific testing methods.	DAQ permit format requires test protocols be submitted prior to any compliance testing and the DAQ will determinate if the test method is acceptable or not at the time (See Condition 3.3.1.)

Conditions A(2), and A(3) were written for different operating scenarios in mind. A(2) was for only when the auxiliary boilers in operation while A(3) capped the total emissions when all four boilers were operating. Remember all four boilers release emissions to a common stack. A(1) sets mass rates for both of the CFB boilers, concentration limits and heat input limits for each CFB to meet. The same mass rate limits in A(1) are established in A(3) except for VOCs, and CO, which is the sum of the CO and VOCs limits for the CFB boilers (A(1)) and auxiliary boilers (A(2)).

The writer recommends omitting the mass rate limits from A(1) execpt for VOCs and CO; and establishing a total mass rate emission limit for the common stack based on the mass limits in A(3) regardless of which units are operating. This new condition (Condition 4.1.17) is replacing the other emission limits for the CFB boilers (A(1) & A(3)).

The applicable MATS requirements were add for the CFB boilers as well as Subpart DDDDD to Part 63 (Boiler MACT) for the auxiliary boilers. The auxiliary boilers are subject to only the tune-up provisions of Subpart DDDDD because the units are only natural gas fired boilers. These tune-ups must be conducted annually.

RECOMMENDATION TO DIRECTOR

The information provided in the permit application indicates the proposed modification of the facility will meet all the requirements of the applicable rules and regulations when operated in accordance with the permit application. Therefore, the writer recommends granting Morgantown Energy Associates a Rule 13 modification permit for their facility located in Morgantown, WV.

Edward S. Andrews, P.E.
Engineer

March 3, 2016
Date