

DTE Energy



VIA CERTIFIED MAIL

March 12, 2010

Mr. William Presson, Acting Section Supervisor
Permit Section
Air Quality Division
Michigan Department of Environmental Quality
525 W. Allegan
Constitution Hall - 3rd Floor North Tower
P.O. Box 30260
Lansing, MI 48933

Re: 2010 Planned Outage Notification - Monroe Power Plant (B2816), Unit 2

Dear Mr. Presson:

DTE Energy periodically removes its generating units from service for up to three months to perform maintenance, repair, and replacement activities that cannot otherwise be done with the unit in operation. Typically, this occurs on a 2-3 year cycle. Occasionally a unit is taken out of service for a planned shorter duration to perform less extensive work. During the upcoming twelve (12) week outage at the Monroe Power Plant on Unit 2 that begins on or about March 13, 2010, the following major projects are being undertaken: (1) boiler system repairs and replacements; (2) turbine repairs and replacement; (3) electrical repairs and replacement; and (4) draft system repairs and replacement. These projects are exempt under Michigan air rules and no permitting activity is required (see Attachment A). In the electric utility industry, these projects represent routine maintenance, repair and replacement activities.

We are providing notice that these projects are taking place based on the recently promulgated Michigan Prevention of Significant Deterioration (PSD) rules [R336.2801-2830] that became effective on December 4, 2006. Prior planned outage notifications were submitted under the federal New Source Review (NSR) rules promulgated on December 31, 2002 and that became effective in Michigan on March 3, 2003 (the 2002 rules). The 2002 rules required notification, additional record keeping, and annual reporting whenever *"there is a reasonable possibility that a project that is not a part of a major modification may result in a significant emissions increase..."* For the reasons discussed below, DTE Energy continues to believe there is no reasonable possibility that the proposed project will result in a significant emissions increase and thus, the requirements do not apply. However, until USEPA and/or the federal courts provide a clear definition of what constitutes routine maintenance, repair and replacement, DTE Energy will follow the requirements of Michigan Air Rule 1818(3). Accordingly, this outage notification for Monroe Unit 2, and all subsequent outage notifications submitted by DTE Energy will continue to follow the format of prior notifications, even though there is no expected increase in emissions as a result of the planned projects. We continue to believe this notice is not required by federal or state regulations.

The NSR applicability test requires a comparison of past actual and projected emissions. "Baseline actual emissions" are defined in Michigan Air Rule (MAR) 1801(b). The baseline period for defining past emissions for Monroe Unit 2 was originally established for the 12 week outage in February 2005 to be the two-year period in calendar years 2000-2001. That baseline is being replaced for this periodic outage. The new baseline is May 2005-April 2007. Net generation and capacity factor data for the new period were obtained from the DTE Energy Power Plant Performance Management (P3M) system records. Particulate emissions were based on fuel characteristics and EPA emission factors. Heat input, sulfur dioxide, and nitrogen oxide emissions were obtained from continuous emission monitoring system (CEMS) data presented in the EPA Annual Acid Rain Scorecard reports. Baseline emissions and other operating characteristics are shown in Table 1.

"Projected actual emissions," as defined in MAR 1801(II), are also shown in Table 1, along with a comparison of projected and baseline actual emissions. This comparison shows that the projects will not result in an emissions increase. The projected actual emissions in Table 1 were calculated as follows: First, PROMOD projections (production cost model output) were calculated based on the unit's expected post-outage maximum annual utilization during the period 2010-2014 with fuel characteristics similar to the baseline period. The expected post-outage maximum annual utilization (estimated to occur in 2013) was obtained from the PROMOD analysis contained in the 2010 PSCR Annual Report issued on September 10, 2009 as required by the Michigan Public Service Commission. As required under the new rules we then excluded from the PROMOD projections "...that portion of the unit's emissions following the project that an existing unit could have accommodated ... and that are also unrelated to the particular project," including increases due to demand and market conditions or fuel quality per MAR 1801(II)(ii)(C). (See Table 1)

It should be pointed out that emissions and operations fluctuate year-to-year due to market conditions and in any individual year could very well exceed baseline levels. Obviously, since the baseline represents a 2-year average, one of those years was above the baseline and one below. At some point in the future, baseline levels may be exceeded again, but not as a result of this outage. Future unit utilization is also a function of expected electricity market conditions. Many factors influence market demand – weather, availability of other units, transmission limitations, electrical system security, etc. Moreover, fuel quality could change. As mentioned above, the Michigan air rules direct one to exclude from projected actual emissions "...that portion of the unit's emissions following the project that an existing unit could have accommodated ... and that are also unrelated to the particular project," including increases due to demand growth or fuel quality changes per MAR 1801(II)(ii)(C).

Additionally, Part 18 of the Michigan Air Rules allows an existing utility steam generating unit to use a different baseline period for each pollutant under the definition of "Baseline Actual Emissions" in R336.2801(b)(i)(C) as follows:

"(C) For a regulated new source review pollutant, if a project involves multiple emissions units, then only 1 consecutive 24-month period shall be used to determine the baseline actual emissions for the emissions units being changed. A different consecutive 24-month period may be used for each regulated new source review pollutant." [Emphasis added]

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Accordingly, a pollutant-specific baseline for sulfur dioxide ("SO₂") was chosen as July 2006-June 2008. The pollutant-specific baseline for nitrogen oxides ("NO_x") was chosen to be October 2006-September 2008. The pollutant-specific baseline for particulate matter (PM) was chosen to be January 2008-December 2009.

All of the replacement components are identical or functionally equivalent to the equipment now in service, and they do not change the basic design parameters of Monroe Unit 2, which will continue to meet enforceable emission and operational limitations. Moreover, the Utility Air Regulatory Group (UARG), an organization of which DTE Energy is a member, has submitted to the EPA NSR Docket during prior comment periods a list of repair and replacement activities that utilities must perform to keep electric generating facilities operational.¹ These activities are considered routine in the electric utility industry. Furthermore, MAR 1801(aa)(iii)(A) specifies that routine maintenance, repair and replacement activities are not major modifications. Therefore, Part 18 requirements do not apply to these projects.

If you have questions on this notice, please contact me at (313) 235-4698 or via email at gossiauxk@dteenergy.com or you may contact Mr. Wayne Rugenstein at (313) 235-7023 or via email at rugensteinw@dteenergy.com.

Regards,



Kelly L. Guertin
Staff Environmental Engineer
Environmental Management & Resources

Attachments

FILE: MONPP U2 Planned Outage 2010 - HSR Notification.docx

Cc: C. E. Jennings
R. C. Larlham
Scott Miller -- AQD Jackson
F. D. Warren

¹ DTE has previously provided to your office a copy of the UARG document as part of the Monroe Unit 1 Planned Maintenance Outage Notification dated January 21, 2004.

ATTACHMENT A

Monroe Power Plant Unit 2 Outage Summary

The following activities will be performed during the outage scheduled to begin on or about March 13, 2010, and are exempt under the Michigan Air Pollution Rules as outlined below:

- **Boiler System Repairs and Replacements** – Replacement of economizer tubes; replacement of reheat pendants; replacement of a section of water wall tubes and burner cells; and boiler tube chemical cleaning with the replacement of 210 valves. These activities are exempt under MAR 285(a).
- **Turbine System Repairs and Replacements** – Rewind MTG rotor; install static exciter; replacement of generator lead box; overhaul of north boiler feed pump turbine & rebuild south boiler feed pump; and install boiler feed pump TSI. These activities are exempt under MAR 285(a).
- **Electrical System Repairs and Replacements** – Replace system service transformer #62; replace 4160V cables from system service transformers; rebuild 9-4160V circuit breakers. These activities are exempt under MAR 285(a).
- **Draft & Fuel Burning Repairs and Replacements** – Replace ten air heater gas side expansion joint. This activity is exempt under MAR 285(a).

Table 1
 Monroe Power Plant - Unit 2
 Comparison of Actual and Projected Actual Emissions & Operations

Period	Baseline Actual per MAR 1801(b)(1)(2)	Pollutant - Specific Baseline Actual Emissions for NO _x per MAR 1801(b)(1)(2)	Pollutant - Specific Baseline Actual Emissions for SO ₂ per MAR 1801(b)(1)(2)	Pollutant - Specific Baseline Actual Emissions for PM per MAR 1801(b)(1)(2)	PROMOD Projection per MAR 1802(1)(ii)(A) ⁽³⁾	Emissions Excluded per MAR 1802(1)(ii)(A) ⁽³⁾	Projected Actual Emissions per MAR 1802(1)(ii)	Emission Change
May 2005-April 2007	795	795	795	795	January 2013-December 2013			
Unit Electrical Capacity, MW	4,983,296				795			
Net Generation, MWh	85.5%				5,748,000			
Annual Capacity Factor	47,335,146	44,343,031	45,802,027	43,742,775	82.5%			
Heat Input, mmBtu					54,974,000			
SO ₂ , lb/mmBtu		0.47	1.32		1.23			
NO _x , lb/mmBtu					0.53			
PM, lb/mmBtu				0.02	0.02			
SO ₂ , tons		10,398	30,115		35,816	3,701	30,115	0
NO _x , tons					14,494	4,096	10,398	0
PM, tons				498	615	117	498	0

Notes:
 (1) Michigan Air Rule (MARI)
 (2) Baseline values are a 12-month average of a selected 24-month consecutive operating period
 (3) PROMOD projections are based on the maximum utilization for the period 2010-2014 as shown in the DTE Energy - Detroit Edison
 Power Supply Cost Recovery (PSCR) 2010 Annual Report (dated 9-10-09) as required by the Michigan Public Service Commission