DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

B281673535

FACILITY: DTE Electric Company - Monroe Power Plant		**SRN / ID:** B2816
LOCATION: 3500 EAST FRONT STREET, MONROE		**DISTRICT:** Jackson
CITY: MONROE		**COUNTY:** MONROE
CONTACT: Jason Logan , Senior Environmental Specialist		**ACTIVITY DATE:** 07/10/2024
STAFF: Brian Carley	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Scheduled on-site inspection		
RESOLVED COMPLAINTS:		

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Purpose

This was an announced scheduled inspection of the DTE Electric Company – Monroe Power Plant (DTE Monroe). I arrived at the facility and met with Jerry Chilson, Environmental Engineer - DTE Monroe and Jacob Stephan, DTE Contractor. This facility is currently operating under ROP #MI-ROP-B2816-2019 and PTI #114-20 (EU-FlyAshStorage upgrade), #72-21 (FGD emergency generators), and #8-22 (incorporate the requirements of an Environmental Protection Agency (USEPA) Consent Decree (CD) in Civil Action No. 2:10-cv-13101 (date of Entry: 07/22/20) into a PTI). Safety requirements for this facility include hardhat, hearing protection, safety glasses, and long sleeves.

Background

DTE Monroe is a coal-fired power plant that began operation in 1971 and generates and transmits electricity for sale. The facility is divided into three sections in the ROP.

Section 1: This facility operates four similar sized supercritical, pulverized coal-fired B&W cell burner boilers with a total electric generating capacity of 3,280 MW (gross). The emissions from each boiler are controlled by low NOx burners, overfire air, selective catalytic reduction (SCR), dry wire electrostatic precipitators (ESP), and wet flue gas desulfurization (FGD) systems. The low NOx burner system was installed in the boilers in 1994 and a new generation of low NOx burners were installed on Units 1, 2, 3, and 4 on March 2006, March 2005, August 2006, and November 2005, respectively. They previously had an SO_3 and ammonia flue gas conditioning system installed, which became obsolete due to the installation of the FGD and SCR and have since been removed. In addition, each stack is equipped with a continuous emission monitoring (CEMS) system for the measurement of sulfur dioxide, nitrogen oxide, particulate matter, and carbon dioxide emissions. These units are subject to the 40 CFR Part 63 Subpart UUUUU - National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units (Mercury and Air Toxics Standard or MATS). Other emission sources in Section 1 include a coal and petroleum coke handling system, an ash handling system, auxiliary boilers, reciprocating internal combustion engines (RICE), parts cleaning stations, limestone handling systems, hydrated lime storage, gypsum material handling systems and a fly ash storage facility. The fly ash storage facility consists of Unit 1 – 4 electrostatic precipitator hoppers, vacuum blowers and piping for pneumatic transfer, a 3000-ton storage silo, and a 4,000-ton storage silo, a 200-ton silo, and associated blowers, pressure pumps, compressors, pipe conveyor lines, and spouts.

Section 2: DTE Electric Company – Monroe Peakers consists of five diesel fuel-fired generator peaking units that are limited use stationary reciprocating internal combustion engines. These units are subject to 40 CFR Part 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT).

Section 3: Monroe Fuels Company, which use to consist of coal and sorbent handling activity in the Reduced Emissions Fuel (REF) Transfer House and Refined Coal Plant Building including an 8,500-gallon Mersorb storage tank, a 750-ton S-Sorb solid storage silo, associated conveyors, and any trucking and unloading activities, has been completely removed from the site.

Compliance Evaluation
Timeframe for the records requested unless noted below: June 1, 2023, through May 31, 2024

SECTION 1 – Monroe Power Plant
EU-UNIT1
Unit 1, which began operating in 1971, is a coal-fired boiler nominally rated 817 MW (gross). Unit 1 was operating at the time of the inspection. They are currently combusting bituminous and sub-bituminous coal with pet coke in this unit to generate electricity as required in SC II.2 (see attachment 1). They are currently well under their limit of 23,652 tons of pet coke per month for each of those months for this unit. The only other fuel that is used in this unit is #2 ultralow sulfur diesel fuel for startup per SC II.1 and they are recording the amounts per SC VI.11(d) (see attachment 2). They have submitted a malfunction abatement plan (MAP) that also includes a plan that describes how emissions will be minimized during startup/shutdown for Unit 1 with the most recent version that was approved on August 8, 2023, per SC III.1 and 3 (see files). Based on the information reported in SLEIS, Unit 1 operated with an average 4,610 mmBtu/hr over the timeframe and is less than their limit of 7,624 mmBtu/hr as required by SC IV.1. All air pollution control devices were operating at the time of the inspection (SC IV.2). They provided documentation that they are maintaining the air pollution control equipment (see attachment 3). Per consent decree settling, “U.S. v DTE Energy Company, Civil Action No. EPA-5-2018-113(a)-MI-07” they also have installed a non-certified Hg CEMS as a process monitor and is used in addition with their current certified Hg monitoring system (SC IV.4). This allows the operators to initiate corrective actions in the event of elevated mercury emissions. They provided documentation that they are maintaining this equipment (see document 4). They’re also required in this consent decree to install and maintain a halogenated compound application system to promote mercury oxidation and maintain compliance with the unit’s mercury emission limits. They are currently using potassium iodide to minimize the mercury emissions and provided documentation that they are maintaining the air pollution control equipment (see attachment 5).

They completed all the required initial compliance stack tests during the week of May 5, 2014 (Section V, see files for stack test results). They conducted the follow-up stack tests that is required every 5 years for PM, PM_{10}, $PM_{2.5}$, VE, H_2SO_4, HCl, HF, Hg, As, Pb and VOC with the most recent conducted on July 9 through 11, 2024. The previous test was conducted on May 6-9, 2019, and the results were received by AQD on June 26, 2019. They reported that they were complying with the limits specified in Section I (see file for test results). They did the annual PM2.5 stack test during the week of August 22, 2023, and submitted the results on October 11, 2023, per SC V.3 (see file for stack test results). They

have installed a PM monitor and annually certifies it (SC VI.2). On January 24, 2024, they have sent in the results of the Response Correlation Audit (RCA) that was conducted December 4 through 6, 2023, which is the annual test to recertify the PM CEMS and the results showed that the monitor passed the RRA. They have certified SO2, NOx, CO, CO2 CEMS installed on this stack (SC VI.3). They are also monitoring flow with a certified meter and are monitoring mercury with sorbent tubes (SC VI.4 and 5). They conducted the annual certification of the mercury monitor on December 12, 2023 and the results received on February 7, 2024, showed they passed the certification (see files). They are also monitoring and recording their gross energy output per SC VI.6. I asked for and received the hourly and 24-hour rolling average SO2 emission rate and mass records for the week of June 16, 2024 (Sunday through Saturday), which is meets the requirements of SC VI.7. After reviewing this record, I determined that they were complying with this condition (see attachment 6). I also asked for and received the monthly and 12-month rolling average NOx emission rate and mass records for the timeframe as required by SC VI.8. After reviewing this record, I was determined that they were complying with the emission limits and recordkeeping conditions (see attachments 8a and 8b). I also requested and received the daily and 30-day rolling average CO emission rate and mass records for the month of May 2024 as required by SC VI.9. After reviewing this record, I determined that they were complying with this condition (see attachment 9). I then asked for the monthly and 12-month rolling average mercury emission rate records, expressed on a basis of gross energy output, and monthly and 12-month rolling time period mercury mass emission rate records as required by SC VI.10 (see attachment 10). I then asked for and received the total gigawatt-hours of energy produced on a monthly basis during the timeframe as required by SC VI.11.e. After reviewing this record, I determined that they were complying with this condition (see attachment 2). I also asked for and received the date(s) and the duration of all times EU-UNIT1 is operated under start-up or shutdown conditions as required by SC VI.11.f. After reviewing this record, I determined that they were complying with this condition (see attachment 11). They have been submitting quarterly excess emission reports as required by SC VII.4 (see MACES report received). During a previous inspection conducted on June 27, 2023, and using a rangefinder, I determined that their stack was 580 feet above the ground, which complies with the SC VIII.1 requirement that the stack must be a minimum of 579 feet above the ground. They are currently in compliance with Acid Rain and CSAPR requirements (SC IX.1, 2, 4, 5, and 6). With MATS still in effect, they are meeting the requirements of the Part 15 rules (SC IX.3). I have determined that they're in compliance with the conditions set forth in this table.

EU-UNIT2

Unit 2, which began operating in 1972, is a coal-fired boiler nominally rated 823 MW (gross). Unit 2 was operating at the time of the inspection. They are currently combusting bituminous and sub-bituminous coal with pet coke in this unit to generate electricity as required in SC II.2 (see attachment 1). They are currently well under their limit of 23,652 tons of pet coke per month for each of those months for this unit. The only other fuel that is used in this unit is #2 ultralow sulfur diesel fuel for startup per SC II.1 and they are recording the amounts per SC VI.11(d) (see attachment 2). They have submitted a malfunction abatement plan (MAP) that also includes a plan that describes how emissions will be minimized during startup/shutdown for Unit 2 with the most recent version that was approved on August 8, 2023, per SC III.1 and 3 (see files). Based on the information reported in SLEIS, Unit 2 operated with an average 4,958 mmBtu/hr over the timeframe and is less than their limit of 7,624 mmBtu/hr as required by SC IV.1. All air pollution control devices were operating at the time of the inspection (SC IV.2). They provided documentation that they are maintaining the air pollution control equipment (see

attachments 12 and 13). Per consent decree settling, “U.S. v DTE Energy Company, Civil Action No. EPA-5-2018-113(a)-MI-07” they also have installed a non-certified Hg CEMS as a process monitor and is used in addition with their current certified Hg monitoring system (SC IV.4). This allows the operators to initiate corrective actions in the event of elevated mercury emissions. They provided documentation that they are maintaining this equipment (see document 14). They’re also required in this consent decree to install and maintain a halogenated compound application system to promote mercury oxidation and maintain compliance with the unit’s mercury emission limits. They are currently using potassium iodide to minimize the mercury emissions and provided documentation that they are maintaining the air pollution control equipment (see attachment 5).

They completed all the required initial compliance stack tests during the week of Feb 9, 2015 (Section V, see files for stack test results). They conducted the follow-up stack tests that is required every 5 years for PM, PM_{10}, $PM_{2.5}$, VE, H_2SO_4, HCl, HF, Hg, As, Pb and VOC on April 16-24, 2024, and the results were submitted on June 25, 2024 (see files for test results). They did the annual PM2.5 stack test during the week of August 23, 2023, and submitted the results on October 11, 2023, per SC V.3 (see file for stack test results). They have installed a PM CEMS and annually certifies it. They conducted their annual certification on the PM CMS with a Relative Response Audit (RRA) and an RCA on October 12-14, 2023. The results of the RRA, submitted on November 15, 2023, showed that the monitor passed the RRA and RCA. They have certified SO2, NOx, CO, CO2 CEMS installed on this stack (SC VI.3). They are also monitoring flow with a certified meter and are monitoring mercury with sorbent tubes (SC VI.4 and 5). They conducted the annual certification of the mercury monitor on December 14, 2023, and the results received on February 7, 2024, showed they passed the certification (see files). They are also monitoring and recording their gross energy output per SC VI.6. I asked for and received the hourly and 24-hour rolling average SO2 emission rate and mass records for the week of June 16, 2024 (Sunday through Saturday), which is meets the requirements of SC VI.7. After reviewing this record, I determined that they were complying with this condition (see attachment 6). I also asked for and received the monthly and 12-month rolling average NOx emission rate and mass records for the timeframe as required by SC VI.8. After reviewing this record, I was determined that they were complying with the emission limits and recordkeeping conditions (see attachments 8a and 8b). I also requested and received the daily and 30-day rolling average CO emission rate and mass records for the month of May 2024 as required by SC VI.9. After reviewing this record, I determined that they were complying with this condition (see attachment 16). I then asked for the monthly and 12-month rolling average mercury emission rate records, expressed on a basis of gross energy output, and monthly and 12-month rolling time period mercury mass emission rate records as required by SC VI.10 (see attachment 17). I then asked for and received the total gigawatt-hours of energy produced on a monthly basis during the timeframe as required by SC VI.11.e. After reviewing this record, I determined that they were complying with this condition (see attachment 2). I also asked for and received the date(s) and the duration of all times EU-UNIT2 is operated under start-up or shutdown conditions as required by SC VI.11.f. After reviewing this record, I determined that they were complying with this condition (see attachment 18). They have been submitting quarterly excess emission reports as required by SC VII.4 (see MACES report received). During a previous inspection conducted on June 27, 2023, and using a rangefinder, I determined that their stack was 580 feet above the ground, which complies with the SC VIII.1 requirement that the stack must be a minimum of 579 feet above the ground. They are currently in compliance with Acid Rain and CSAPR requirements (SC IX.1, 2, 4, 5, and 6). With MATS still in effect, they are

meeting the requirements of the Part 15 rules (SC IX.3). I have determined that they're in compliance with the conditions set forth in this table.

EU-UNIT3

Unit 3, which began operating in 1973, is a coal-fired boiler nominally rated 823 MW (gross). Unit 3 was not operating at the time of the inspection. They are currently combusting bituminous and sub-bituminous coal with pet coke in this unit to generate electricity as required in SC II.2 (see attachment 1). They are currently using under their limit of 23,652 tons of pet coke per month for each of those months for this unit. The only other fuel that is used in this unit is #2 ultralow sulfur diesel fuel for startup per SC II.1 and they are recording the amounts per SC VI.11(d) (see attachment 2). They have submitted a malfunction abatement plan (MAP) that also includes a plan that describes how emissions will be minimized during startup/shutdown for Unit 3 with the most recent version that was approved on August 8, 2023, per SC III.1 and 3 (see files). Based on the information reported in SLEIS, Unit 3 operated with an average 4,419 mmBtu/hr over the timeframe and is less than their limit of 7,624 mmBtu/hr as required by SC IV.1. All air pollution control devices were available to operate at the time of the inspection (SC IV.2). They provided documentation that they are maintaining the air pollution control equipment (see attachments 19 and 20). Per consent decree settling, "U.S. v DTE Energy Company, Civil Action No. EPA-5-2018-113(a)-MI-07" they also have installed a non-certified Hg CEMS as a process monitor and is used in addition with their current certified Hg monitoring system (SC IV.4). This allows the operators to initiate corrective actions in the event of elevated mercury emissions. They provided documentation that they are maintaining this equipment (see attachment 21). They're also required in this consent decree to install and maintain a halogenated compound application system to promote mercury oxidation and maintain compliance with the unit's mercury emission limits. They are currently using potassium iodide to minimize the mercury emissions and stated that they have not had to do any maintenance since they installed it.

They completed all the required initial compliance stack tests during the week of May 10, 2011 (Section V, see files for stack test results). The follow-up stack tests are required every 5 years for PM, PM_{10}, VE, H_2SO_4, HCl, HF, Hg, As, Pb and VOC with the most recent stack test conducted July 9 through 11, 2024. They are not required to conduct the annual PM2.5 stack test any more per SC V.3. They have installed a PM CEMS and annually certifies it. They have conducted the RCA on the PM CEMS on December 12-13, 2023. The results of the RCA, submitted on January 24, 2024, showed that the monitor passed the RCA. They have certified SO2, NOx, CO, CO2 CEMS installed on this stack (SC VI.3). They are also monitoring flow with a certified meter and are monitoring mercury with sorbent tubes (SC VI.4 and 5). They conducted the annual certification of the mercury monitor on January 4, 2024, and the results received on February 14, 2024, showed they passed the certification (see files). They are also monitoring and recording their gross energy output per SC VI.6 (see attachment 8). I asked for and received the hourly and 24-hour rolling average SO2 emission rate and mass records for the week of June 16, 2024, (Sunday through Saturday), which is meets the requirements of SC VI.7. After reviewing this record, I determined that they were complying with this condition (see attachment 6). I also asked for and received the monthly and 12-month rolling average NOx emission rate and mass records for the timeframe as required by SC VI.8. After reviewing this record, I was determined that they were complying with the emission limits and recordkeeping conditions (see attachments 8a and 8b). I also requested and received the daily and 30-day rolling average CO emission rate and mass records for the month of May 2024 as required by SC VI.9. After reviewing this record, I determined that they were complying with this

condition (see attachment 23). I then asked for the monthly and 12-month rolling average mercury emission rate records, expressed on a basis of gross energy output, and monthly and 12-month rolling time period mercury mass emission rate records as required by SC VI.10 (see attachment 24). I then asked for and received the total gigawatt-hours of energy produced on a monthly basis during the timeframe as required by SC VI.11.e. After reviewing this record, I determined that they were complying with this condition (see attachment 2). I also asked for and received the date(s) and the duration of all times EU-UNIT3 is operated under start-up or shutdown conditions as required by SC VI.11.f. After reviewing this record, I determined that they were complying with this condition (see attachment 25). They have been submitting quarterly excess emission reports as required by SC VII.4 (see MACES report received). During a previous inspection conducted on June 27, 2023, and using a rangefinder, I determined that their stack was 580 feet above the ground, which complies with the SC VIII.1 requirement that the stack must be a minimum of 579 feet above the ground. They are currently in compliance with Acid Rain and CSAPR requirements (SC IX.1, 2, 4, 5, and 6). With MATS still in effect, they are meeting the requirements of the Part 15 rules (SC IX.3). I have determined that they're in compliance with the conditions set forth in this table.

EU-UNIT4

Unit 4, which began operating in 1974, is a coal-fired boiler nominally rated 817 MW (gross). Unit 4 was operating at the time of the inspection. They are currently combusting bituminous, sub-bituminous coal, and pet coke in this unit to generate electricity as required in SC II.2 (see attachment 1). They are currently using under their limit of 23,652 tons of pet coke per month for each of those months for this unit. The only other fuel that is used in this unit is #2 ultralow sulfur diesel fuel for startup per SC II.1 and they are recording the amounts per SC VI.11(d) (see attachment 2). They have submitted a malfunction abatement plan (MAP) that also includes a plan that describes how emissions will be minimized during startup/shutdown for Unit 4 with the most recent version that was approved on August 8, 2023, per SC III.1 and 3 (see files). Based on the information reported in SLEIS, Unit 4 operated with an average 4,937 mmBtu/hr over the timeframe and is less than their limit of 7,624 mmBtu/hr as required by SC IV.1. All air pollution control devices were operating at the time of the inspection (SC IV.2). They provided documentation that they are maintaining the air pollution control equipment (see attachments 26 and 27). Per consent decree settling, "U.S. v DTE Energy Company, Civil Action No. EPA-5-2018-113(a)-MI-07" they also have installed a non-certified Hg CEMS as a process monitor and is used in addition with their current certified Hg monitoring system (SC IV.4). This allows the operators to initiate corrective actions in the event of elevated mercury emissions. They provided documentation that they are maintaining this equipment (see document 28). They're also required in this consent decree to install and maintain a halogenated compound application system to promote mercury oxidation and maintain compliance with the unit's mercury emission limits. They are currently using potassium iodide to minimize the mercury emissions and stated that they have not had to do any maintenance since they installed it.

They completed all the required initial compliance stack tests during the week of January 3, 2011 (Section V, see files for stack test results). The follow-up stack tests that is required every 5 years for PM, PM_{10}, VE, H_2SO_4, HCl, HF, Hg, As, Pb and VOC was last done on July 17, 18, and 22, 2024. They are not required to conduct the annual PM2.5 stack test any more per SC V.3. The last required annual PM2.5 stack test was conducted during the week of June 20, 2022, and the results were submitted on September 2, 2022, per SC V.3 (see file for stack test results). They have installed a PM CEMS and annually certifies it.

They have conducted the RCA on the PM CEMS on January 31, 2024. The results of the RRA, submitted on March 6, 2024, showed that the monitor passed the RCA. They have certified SO2, NOx, CO, CO2 CEMS installed on this stack (SC VI.3). They are also monitoring flow with a certified meter and are monitoring mercury with sorbent tubes (SC VI.4 and 5). They conducted the annual certification of mercury monitor on January 18 and 23, 2024 and the results received on February 14, 2024, showed they passed the certification (see files). They are also monitoring and recording their gross energy output per SC VI.6. I asked for and received the hourly and 24-hour rolling average SO2 emission rate and mass records for the week of June 16, 2024, (Sunday through Saturday), which is meets the requirements of SC VI.7. After reviewing this record, I determined that they were complying with this condition (see attachment 6). I also asked for and received the monthly and 12-month rolling average NOx emission rate and mass records for the timeframe as required by SC VI.8. After reviewing this record, I was determined that they were complying with the emission limits and recordkeeping conditions (see attachments 8a and 8b). I also requested and received the daily and 30-day rolling average CO emission rate and mass records for the month of May 2024 as required by SC VI.9. After reviewing this record, I determined that they were complying with this condition (see attachment 30). I then asked for the monthly and 12-month rolling average mercury emission rate records, expressed on a basis of gross energy output, and monthly and 12-month rolling time period mercury mass emission rate records as required by SC VI.10 (see attachment 31). I then asked for and received the total gigawatt-hours of energy produced on a monthly basis during the timeframe as required by SC VI.11.e. After reviewing this record, I determined that they were complying with this condition (see attachment 2). I also asked for and received the date(s) and the duration of all times EU-UNIT4 is operated under start-up or shutdown conditions as required by SC VI.11.f. After reviewing this record, I determined that they were complying with this condition (see attachment 32). They have been submitting quarterly excess emission reports as required by SC VII.4 (see MACES report received). During a previous inspection conducted on June 27, 2023, and using a rangefinder, I determined that their stack was 580 feet above the ground, which complies with the SC VIII.1 requirement that the stack must be a minimum of 579 feet above the ground. They are currently in compliance with Acid Rain and CSAPR requirements (SC IX.1, 2, 4, 5, and 6). With MATS still in effect, they are meeting the requirements of the Part 15 rules (SC IX.3). I have determined that they're in compliance with the conditions set forth in this table.

EU-CASCADES

This table covers the coal handling activity in the Cascades room. We did not go onto the roof to see the exhaust vents for the Cascades room to see if there was any opacity coming from the vents. They currently have a fugitive dust plan (approved on May 23, 2023 – see attachment 37) and a MAP (approved on July 30, 2019 – see attachment 33) for this unit per SC III.1 and 2, respectively (see files). All the associated enclosures, water sprays, and dust collectors are being operated in a satisfactory manner (SC IV.1 and 2). They provided documentation that they are maintaining the dust control equipment for this unit as required in SC IV.1 and 2 (see attachment 34). They have upgraded all the dust collectors for EU-CASCADES. Cascades #4 and 5 were the last ones upgraded and the initial stack tests were done in September 2019 with the reports received on November 5, 2019 (see files for stack test results). This unit is required after its initial $PM_{2.5}$ stack test, to test every 5 years for the next 10 years per SC V.1 through 4 with the last stack test done Unit D3 on December 20, 2023 and the results were received on February 9, 2024. Instead of installing a bag leak detection system, they conduct and document daily non-certified visible emissions observations per SC VI.2, which I requested and reviewed their observations for

the months of March, April, and May 2024 (see attachment 35). Based on the information and my inspection, I determined that they're in compliance with this table.

EU-TRANSFERHS

This table covers coal handling in the transfer houses (nos. 1, 2, 3, 9, and 11). This emission unit was partially operating at the time of the inspection. The dust collectors in Transfer Houses 1, 2, 3 are no longer in use and they are using a fog spray from a portable hose for these areas to control the dust. They currently have a fugitive dust plan (approved on May 23, 2023 – see attachment 37) and a MAP (see attachment 36) for this unit per SC III.1 and 2, respectively (see files). The Fuel Systems personnel use non-certified VE readings with the requirement that if any VE's are detected, corrective actions must be taken with the incident documented (SC VI.2 and 3). They enter their observations into the fuel systems shift report daily, which I requested and reviewed their observations for the months of March, April, and May 2023 (see attachment 35). They are required to do a stack test to verify the $PM_{2.5}$ emissions after they modify the emission unit. They did conduct a PM 2.5 stack test on 12/9/12 on the Transfer House 11 dust collector and had a result of 0.03 lb/hr, which is lower than the $PM_{2.5}$ limit of 2.74 lb/hr for this unit (see files for stack test report). However, in 2017 they dismantled the dust collector and now use a fog spray from a portable hose to control the dust. At the time of the inspection, none of the transfer houses have been modified or upgraded. I have determined that they're in compliance with the requirements of this table.

EU-DUMPERHS

This emission unit only operates when they are unloading coal trains. It was not operating at the time of the inspection. They currently have a fugitive dust plan (approved on May 23, 2023 – see attachment 37) and a MAP (approved in 2017) for this unit per SC III.1 and 2, respectively (see files). They are maintaining and operating the dust collector as described in their MAP. They provided documentation that they are maintaining the dust control equipment for this unit as required in SC IV.1 and 2 (see attachment 38). The Fuel Systems personnel use non-certified VE readings with the requirement that if any VE is detected, corrective actions must be taken with the incident documented to show that they are operating and maintaining the dust collector satisfactorily (SC IV.1 and VI.2 and 3). They enter their observations into the fuel systems shift report daily, which I requested and reviewed their observations for the months of March, April, and May 2023 (see attachment 35). The most recent PM 2.5 stack test on the Dumper House was conducted during the week of October 19, 2022 (SC V.1). This unit is required after its initial $PM_{2.5}$ stack test, to test every 5 years for the next 10 years per SC V.1 through 4 and this is the last PM2.5 stack test that is required by SC V.2. I have determined that they're in compliance with the requirements of this table.

EU-COALUNLOAD

This unit only operates when there is a coal shipment that comes in on Great Lakes ship and there was one on site on the day of the inspection. They currently have a fugitive dust plan (approved on May 23, 2023 – see attachment 37) and a MAP (approved on June 29, 2011) for this unit per SC III.1 and 2, respectively (see files). They provided documentation that they are maintaining the dust control equipment for this unit as required in SC IV.1 and 2 (see attachment 35). The Fuel Systems personnel use non-certified VE readings with the requirement that if any VE is detected, corrective actions must be taken with the incident documented to show that they are operating and maintaining the dust collector satisfactorily (SC IV.1 and VI.2 and 3). They enter their observations into the fuel systems shift report daily, which I requested and reviewed their observations for the months of March, April, and

May 2021 (see attachment 35). All the external conveyors are hooded and look like they are being maintained (SC IV.2). I have determined that they're in compliance with the requirements of this table.

EU-CRUSHERHS

This unit covers the coal handling operations in the crusher house. They currently have a fugitive dust plan (approved on May 23, 2023 – see attachment 37) and a MAP (approved on June 29, 2011) for this unit per SC III.1 and 2, respectively (see files). The Fuel Systems personnel use non-certified VE readings with the requirement that if any VE is detected corrective actions must be taken with the incident documented (SC IV.1 and VI.2 and 3). They enter their observations into the fuel systems shift report on a daily basis (see attachment 35). All external conveyors are hooded and are being maintained (SC IV.2). They are required to do a stack test to verify the PM2.5 emissions after they modify the emission unit. They have not modified this emission as of the time of this this inspection. I have determined that they're in compliance with the requirements of this table.

EU-PETCOKE

This unit covers the pet coke handling activity, including roadway traffic and pile maintenance, and it was operating on the day of the inspection. They currently have a fugitive dust plan (approved on May 23, 2023 – see attachment 37) and a MAP (approved in 2018) for this unit per SC III.1 and 2, respectively (see files). They are keeping logs of the trucks that are delivering the pet coke to the Monroe Power Plant. I asked for and received the logs for the week of June 16, 2024 (see attachment 39) and they are being operated for less than 16 hours per day and recorded as required by SC III.3 and VI.2. The Fuel Systems personnel use non-certified VE readings with the requirement that if any VE is detected, corrective actions must be taken with the incident documented (SC IV.1 and VI.2 and 3). They enter their observations into the fuel systems shift report daily, which I requested and reviewed their observations for the months of March, April, and May 2024 (see attachment 35). They have installed the permanent equipment (SC IV.2 and VII.1). They do not use the dust collector very much because they determined that this process does not create very much fugitive dust. They were loading pet coke onto the main conveyor at the time of the inspection and I did not see any fugitive emissions from the pile or any part of the process. I have determined that they're in compliance with the requirements of this table.

EU-LIMESTONE

This emission unit covers the limestone handling activities, which includes the ship unloading process, storage and pile maintenance, and reclaims activities – including any trucking activities, and the Prep building. It also covers two PM10 ambient air monitors with one located by the unloading dock and the other on Dunbar Road. There was not a ship delivering limestone at the time of the inspection so that portion of the emission unit was not in operation at the time of the inspection. They currently have a fugitive dust plan (approved on May 23, 2023 – see attachment 37) and a MAP (approved in 2018) for this unit per SC III.1 and 2, respectively (see files). They are maintaining and operating the dust collector as described in their MAP (see attachment 40). The FGD Operations personnel use non-certified VE readings with the requirement that if any VE is detected, corrective actions must be taken with the incident documented to show that they are operating and maintaining the dust collector satisfactorily. All observations are recorded in the Plant View database and are in a format like the fuel systems report (SC VI.2 and 3). They enter their observations into the FGD systems shift report daily, which I requested and reviewed their observations for the months of March, April, and May 2023 (see attachment 41). All external

conveyors are hooded and are being maintained (SC IV.2). They did a Method 9 stack test as required by 40 CFR Part 60, Subpart OOO on the exhaust ports on the Reagent Building where they crush the limestone on 9/9/13 with the results of no visible emissions being observed, which is below their limit of 5% opacity (SC I.2). They have three limestone silos, each with its own dust collector and exhaust bin vents that exhaust out of the side of the Reagent Building and down at least 115 feet above the ground. They are maintaining the ambient air monitors (SC VI.2) and they have provided me with the most recent maintenance log for each one (see attachments 40). They have been reporting the data from these monitors as required by SC VII.4 (see files). I have determined that they're in compliance with the requirements of this table.

EU-GYPSUMHAND

This emission unit covers the gypsum handling activity in the gypsum dewatering building and the gypsum storage and loading building. This emission unit was in operation and trucks were being loaded at the time of the inspection. They currently have a fugitive dust plan (approved on May 23, 2023 – see attachment 37) and a MAP (approved on March 2, 2018) for this unit per SC III.1 and 2, respectively (see files). They are maintaining and operating the dust collector as described in their MAP. The FGD Operations personnel use non-certified VE readings with the requirement that if any VE is detected, corrective actions must be taken with the incident documented to show that they are operating and maintaining the dust collector satisfactorily. All observations are recorded in the Plant View database and are in a format like the fuel systems report (SC VI.2 and 3). They enter their observations into the FGD systems shift report daily, which I requested and reviewed their observations for the months of March, April, and May 2021 (see attachment 41). They also keep logs, like the ones they are using for the pet coke delivery, of the trucks that are hauling the gypsum from the Monroe Power Plant. I asked for and received the daily logs for week June 16, 2024. They are being operated for well under than 16 hours per day as required by SC III.3 and VI.3 (see attachment 42). The truck wheel wash and all external conveyors are hooded and are being maintained per SC IV.1 and 2. I have determined that they're in compliance with the requirements of this table.

EU-HYDRATEDLIME

This emission unit covers the storage and handling of hydrated lime. They currently have a fugitive dust plan (approved on May 23, 2023 – see attachment 37) and a MAP (approved on June 29, 2011) for this unit per SC III.1 and 2, respectively (see files). They are maintaining and operating the dust collector as described in their MAP. The FGD Operations personnel use non-certified VE readings with the requirement that if any VE is detected corrective actions must be taken with the incident documented to show that they are operating and maintaining the dust collector satisfactorily. All observations are recorded in the Plant View database and are in a format like the fuel systems report (SC VI.2 and 3). They enter their observations into the FGD systems shift report daily, which I requested and reviewed their observations for the months of March, April, and May 2023 (see attachment 41). The associated enclosures have been installed and are being maintained (SC IV.2). They have two hydrated lime silos with its own dust collector and exhaust bin vents that exhaust out of the side of the dust collector. During a previous inspection conducted on June 27, 2023, and using a rangefinder, I used a rangefinder to determine the height of these vents and saw that they were at least 91 feet above the ground, which is above the minimum of 89 feet above the ground as required by SC VIII.1 and VIII.2. I have determined that they're in compliance with the requirements of this table.

EU-FlyAshStorage/PTI 114-20

This emission unit covers a fly ash storage facility that previously was owned by Headwaters, Inc. On December 20, 2018, DTE Electric purchased this facility and is now responsible the operations and the compliance of this facility. The facility currently processes the flyash in a slurry form. Under EPA 40 CFR Part 423, using water to transport fly ash must cease by December 31, 2023. With the issuance of PTI #114-20, the current fly ash collection and handling system was converted to handle dry fly ash. This includes the addition of new equipment as well as modifications to existing equipment. With this new system installed and operating, it processes the fly ash from all four units and the existing wet extraction/slurry transport system will be permanently retired and removed from service.

I did not see any visible emissions from any of the exhaust stacks at the time of the inspection (SC I.6). This facility, which located at 3333 E. Front St. is due west of the plant and is contiguous to the Monroe Plant. As such, the Monroe Plant includes this facility in their fugitive dust plan as required in SC III.1 (approved May 23, 2023 – see files). They provided me with a copy of a diagram of the grain loading rating for the bin vent filters as required by SC VI.2 (see attachment 43). They also provided me with the daily non-certified readings for March, April, May 2021 (SC VI.1). They did not report any visible emissions, so corrective actions were necessary (see attachment 44). They do not keep any outside fly ash storage piles nor is there any sign of any storage piles, which meets the requirement of SC III.2. They provided me with the following amounts this year that they had sent the conditioned fly ash to a landfill as required by SC VI.4 (see attachment 45 for further details).

Month	Total (Tons)
July 2023	7,304.12
August 2023	19,389.06
September 2023	17881.03
October 2023	19537.31
November 2023	16045.51
December 2023	20147.7
January 2024	25466.5
February 2024	18302.51
March 2024	5316.83
April 2024	19802.54
May 2024	22154.02
June 2024	26894.41
July 2024	9717.99

I have determined that they’re in compliance with this table.

FG-ProjectPC1-4

This flexible group is to verify that the increase of the use of sub-bituminous coal and adding pet coke to provide additional fuels for Units 1, 2, 3, and 4; the installation of four (4) wet FGD quench pumps; modifications to the fuel handling systems; the installation of new material handling systems for limestone and gypsum; and the installation of a new fuel handling system for petroleum coke is a minor nonattainment source modification by use of

the actual-to-projected-actual applicability test. They submitted the 2023 Annual Emission Analysis Report, which dated as February 28,2024 and it was logged in on March 6, 2024. The report showed that the actual emissions were lower than the projected annual emissions as well as the baseline annual emissions (see files). This report show that they are lower than the projected annual emissions as well as the baseline annual emissions. I have determined that they're in compliance with this table.

FG-COALBLRCAM

This table covers the compliance assurance monitoring (CAM) requirements for the coal-fired boilers. They are required to monitor PM, lead, and HF through Presumptively Acceptable Monitoring (PAM). They are monitoring SO_2 as a surrogate for HF because in MATS, facilities with a FGD system installed and operating are allowed to use SO2 CEMS in lieu of monitoring or stack testing for acid gases. They are monitoring PM as a surrogate for lead because in MATS, facilities are allowed to use PM monitoring or stack testing in lieu of monitoring or stack testing for lead and other metals. I asked for the records of the PM CEMS 24-hour rolling average in lbs/MMBtu for each hour of May 31, 2024, for Units 1-4 as required by SC VI.1. After reviewing this record, I determined that they were complying with this condition (see attachment 46). I also asked for the records of the SO2 lbs/MMBtu 30-boiler operating day, rolling arithmetic average for each day for the month of May 2024 for Units 1-4 as required by SC VI.2. After reviewing this record, I determined that they were complying with this condition (see attachment 6). They also have been submitting the semi-annual reports as required in SC VII.4 and 5 (see files). I determined that they are complying with this table.

FGAUXBOILERS

This flexible group contains two auxiliary boilers that are subject to 40 CFR 63 Subpart DDDDD (Boiler MACT) as existing limited use boilers. At the time of the inspection, auxiliary boilers #1 and #2 were not operating. These two boilers are used when necessary and can be sent to any header that it is needed at. These two boilers only burn diesel fuel with a sulfur content of 15 ppm per SC II.1 and provided me with the specification provide the vendor as required by SC VI.3 (see attachment 46). They are also required by SC II.2 and VI.5 and 6 to monitor and record their actual heat input burned in each unit to determine their annual capacity factor for each boiler to verify that it is less than 10%. The annual capacity factor for the north auxiliary boiler was 0.38% and for the south auxiliary boiler was 0.30% (see attachment 2). They are maintaining the boilers and recording the activity as required by SC III.2 (see attachments 48, 49, and 50). The last tune ups that were done on these boilers occurred on December 1, 2023, and on February 22, 2024, for the north Boiler and January 28, 2021, for the south boiler, which meets the requirements of SC III.3. I asked for and received a copy of the last tune-up report for each boiler as required by SC III.2 (see attachment 51 – see files). They are also keeping track of the monthly fuel usage and hours of operation per SC VI.2 and 4 (see attachments 2 and 52). They have submitted their Notification of Compliance Status Report on March 10, 2016, and they have certified that they have complied with the tune up requirements of the Boiler MACT. I have determined that they're in compliance with this table.

FG-WFGD-QP1&2

This table covers Quench Pump 1 servicing the Unit 3 stack and Quench Pump 2 servicing the Unit 4 stack. These two quench pumps were not operating at the time of the inspection. These pumps only burn diesel fuel with a sulfur content of 15 ppm per SC II.1, which I verified after reviewing the fuel analysis (SC VI.2) that they provided me during this inspection (see attachment 46). They are operating the pumps according to the

manufacturer's instructions and did not develop one of its own (SC III.1, 4 and 5). Each pump has a non-resettable hour meter that they use to track the amount of time in minutes and hours each one runs (SC IV.1). Unit 3's quench pump ran for a total of 7.55 hours (453 minutes) from March 6, 2023 through June 4, 2024. Unit 4's quench pump ran for a total of 9.13 hours (548 minutes) from March 6, 2023 through June 4, 2024. They record the amount of time it ran and the time that it ran, which was mainly for maintenance, per SC VI.1 (see attachment 53). They reported to me that the quench pumps had an emergency operation on 4/28/24, which resulted in 132 minutes of run time on Unit 3 and Unit 4 pumps for the month of April. The pumps were used to cool flue gas when AR pumps tripped offline on Unit 4. Both pumps operated as they have ability send water to the sister unit. All other hours during the requested timeframe were for maintenance and/or readiness checks. Each of the quench pumps operated for less than 10 hours for timeframe requested, which is well under their limit of 200 hours per 12 month rolling time period as required by SC III.2. With each time they ran the quench pumps, it was for maintenance purposes, they are in complying with SC III.3. They are considered emergency stationary ICE and they are being operated for less than 100 hours for the last year. I consider them in compliance with 40 CFR Part 60, Subpart IIII, which means they are also in compliance with the RICE MACT (SC IX.1 and 2). I have determined that they're in compliance with the requirements of this table.

FG-WFGD-QP3&4

This table covers Quench Pump 3 servicing the Unit 1 stack and Quench Pump 4 servicing the Unit 2 stack. These two quench pumps were not operating at the time of the inspection. These pumps only burn diesel fuel with a sulfur content of 15 ppm per SC II.1, which I verified after reviewing the fuel analysis (SC VI.2) that they provided me during this inspection (see attachment 46). They are operating the pumps according to the manufacturer's instructions and did not develop one of its own (SC III.1, 4 and 5). Each pump has a non-resettable hour meter that they use to track the amount of time in minutes and hours each one runs (SC IV.1). Unit 1's quench pump ran for a total of 5.87 hours (352 minutes) from March 6, 2023 through June 4, 2024. Unit 2's quench pump ran for a total of 4.62 hours (277 minutes) from March 6, 2023 through June 4, 2024. They record the amount of time it ran and the time that it ran, which was for maintenance, per SC VI.1 (see attachment 53). Each of the quench pumps operated for less than 6 hours last year, which is well under their limit of 200 hours per 12 month rolling time period as required by SC III.2. With each time they ran the quench pumps, it was for maintenance purposes, they are in complying with SC III.3. They are considered emergency stationary ICE and they are being operated for less than 100 hours for the last year. I consider them in compliance with 40 CFR Part 60, Subpart IIII, which means they are also in compliance with 40 CFR Part 63, Subpart ZZZZ (SC IX.1 and 2). I have determined that they're in compliance with the requirements of this table.

FG-MESBLDG

This flexible group contains two 6.3 mmBtu/hr boilers, which are subject to the Boiler MACT. These two boilers are in the units designed to burn light oil sub-category and have a heat input rating less than 10 mmBtu/hr. They recently replaced EU-BLR1_MESB with a new unit designated EU-BLR1_MESB2023. This new boiler will be meet the requirements of the Boiler MACT as a new unit with the first tune-up due within 61 months of the startup date. This new installation is exempt under Rule 282(2)(b)(ii). These two boilers only burn diesel fuel with a sulfur content of 15 ppm per SC II.1 and provided me with the specification provide the vendor as required by SC VI.3 (see attachment 46). As a result, they do not have any emission limits or compliance demonstrations. These two boilers were

not operating at the time of the inspection. The initial compliance requirements for the existing boiler are limited to the work practice standards of tune ups and a one-time energy assessment, which they have done. On March 10, 2016, DTE Monroe submitted a certification of compliance stating that they have completed the required initial tune ups and have performed an energy assessment on this boiler by the required date of January 31, 2016 (see files for notification). The most recent tune-ups done on these units were done on March 10, 2023, for Boiler 2 (SC III.1). They also showed me a copy of the most recent periodic report as require by SC VII.5 (see attachment 54). I have determined that they are complying with this table.

FG-EMERGENS

This table covers existing, emergency engines, that are subject to the RICE MACT. These engines are exempt from Michigan Rule 201 permit requirements pursuant to Rule 278 and Rule 285(2)(g). Currently, the only emission unit subject to this table is an emergency fire pump in the Unit 1-2 Screenhouse. This unit has been decommissioned and is no longer operational and they are in the process of removing this unit from the site. I have determined that they are complying with this table.

FGMATS

This table covers all the requirements of MATS, of which EU-UNIT1, EU-UNIT2, EU-UNIT3, and EU-UNIT4 are subject to this February 28, 2023, as required by SC VII.4 (see files). I asked for and received the hourly and 30-day rolling average PM emission rate, the hourly and 30-day rolling average Hg emission rate, and the hourly and 30-day rolling average SO_2 emission rate records for each emission unit for May 2024, per SC VI.7, 8, and 9, respectively (see attachment 55, 56, and 57, respectively). They also provided the date and duration of each startup and shutdown for each unit as required by SC VII.15.e (see attachments 58). I also requested records of the occurrence and duration of each malfunction and the actions taken to minimize emissions in accordance with MATS as required by SC VII.15.f and g. They said that they had not any malfunction during the requested timeframe. I determined that they are currently meeting the MATS requirements. I have determined that they are complying with this table.

FG-NSPS4I

This table covers MI R336.1285(2) exempted diesel engines, model year 2008 or later, less than 25 Hp. These engines are subject to 40 CFR Part 60, Subpart IIII as non-emergency stationary combustion ignition (CI) internal combustion engines (ICE) and meet the RICE MACT requirements by complying with the requirements of 40 CFR Part 60 Subpart IIII. They currently do not have any units on-site at the time of the inspection. I have determined that they're in compliance with this table.

FGCOLDCLNRS

This flexible group covers all the cold cleaners that are at the Monroe Plant. There are currently four cold cleaners on site: one at the CHCC Machine Shop; one at the Motor Pool Building; and the remaining two are in the building where they work on the heavy machinery. These parts cleaners are the same ones that I have inspected in previous scheduled inspections. At the time of the inspection, none of the cold cleaners were in use and all of them had written operating instructions posted in an accessible, conspicuous location on or near each cold cleaner (SC VI.3). They are keeping all the required records with the information required by SC VI.2 (see attachment 59). I have determined that they're in compliance with this table.

New Unit

They have installed a new fire pump in the Unit 3-4 Screenhouse. They said that this fire pump is exempt from needing to obtain a permit to install per Rule 285(2)(g). However, this fire pump is subject to the RICE MACT and 40 CFR 60 Subpart IIII. The fire pump is a 350 hp diesel engine with a displacement of 9 liters and would be EPA certified. Even though this unit is exempt, it will be incorporated into the ROP during the renewal as its own table since it does not meet the descriptions in FG-NSPS4I and FG-EMERGENS. This unit only burns diesel fuel with a sulfur content of 15 ppm per SC II.1 (see attachment 46). They are limited to 100 hours of operation per year for maintenance checks and testing with up to 50 hours of those 100 hours able to operate in non-emergency situations (SC III.1). In requested timeframe, this unit ran a total of 8 hours (see attachment 60). They stated that all run time is non-emergency situations (maintenance and readiness checks) and that they did not have any emergency run-times. I have verified that they have non-resettable hour meters on these boilers (SC IV.1). They told me that they change the oil every six months in this unit and maintain and test this unit on a regular basis (see attachment 61). I have determined that they are complying with both the RICE MACT and Subpart III.

FG-FGD_ENG/PTI 72-21

This permit covers four 2,328 HP (1,736 kilowatts (kW)) diesel-fueled emergency engine with a model year of 2011 or later, and a displacement of less than 30 liters/cylinder. These units are subject to the RICE MACT and 40 CFR Part 60, Subpart IIII and all four emergency engines are Tier 2 certified. These units only burn diesel fuel with a sulfur content of 15 ppm per SC II.1 (see attachment 46). They provided me with the hours of operation for the four units (see attachment 62). They stated that all the runs were for maintenance and ready checks and that there were no run hours for emergency situations (SC III.1, III.2, III.3, and VI.4). They also provided the dates of the most recent maintenance checks and readiness test as required by SC III.6 (see attachment 63). Since these are certified engines and they are following the manufacturer's instructions, no performance tests are required to be conducted (SC V.1 and VI.2(b)). They did provide me with the manufacturer's certification documentation as required by SC VI.2(a) (see attachment 64). They have an electronic version of the manufacturer's written instructions and they provided me with a screenshot of the cover page of the manual as required in SC VI.3(a) (see attachment 65). They also provided a copy of each certified engine's maintenance that was required by the manufacturer's written instructions as required by SC VI.3(a) (see attachment 66). I determined that they are complying with this table.

SECTION 2 - Monroe Peakers

FGPEAKERS

This flexible group covers five diesel fuel-fired generator peaking units that are limited use stationary reciprocating internal combustion engines, which were not operating at the time of the inspection. These five peaking units only burn diesel fuel with a sulfur content of 15 ppm per SC II.1 and provided an analysis per SC VI.2 (see attachment 46). Each peaking unit has a non-resettable hour meter that they use to track the amount of time in minutes and hours each one runs (SC IV.1). They are also keeping track of the monthly fuel usage and hours of operation per SC III.1, VI.1 and 3 (see attachment 67). These peaking units are also subject to 40 CFR Part 63, Subpart ZZZZ. Since these peaking units are classified as limited use, they do not have to meet the requirements of Subpart ZZZZ and of subpart A of this part except for the initial notification requirements of § 63.6645(f). AQD received the initial notification for these peaking units on August 30, 2010. I have determined that they're in compliance with this table.

SECTION 3 – Monroe Fuels Company

EU-REFHS&BL

This emission unit represents coal and sorbent handling activity in the REF Transfer House and Refined Coal Plant Building, which is operated by the Monroe Fuel Company. As stated before, this entire process has been completely removed from this site.

Compliance Determination

They have submitted all the reports required by MI-ROP-B2816-2019 and SLEIS within the timeframes mentioned required. All the reports have been determined as acceptable as submitted (see MACES report received). Based on the information received during the inspection and the reports that have been submitted, I have determined that they are complying with the requirements of their ROP and PTIs.

NAME Brian Culley DATE 9/17/2024 SUPERVISOR