



Environmental Protection Agency Region 5
Water Enforcement and Compliance Assurance Division
77 W Jackson Blvd, Chicago, IL 60604

DTE ELECTRIC COMPANY MONROE POWER PLANT CLEAN WATER ACT (CWA) INSPECTION

Monroe, Michigan

Permit #: MI0001848

Report Date: October 20, 2023

Inspection Date: August 29 and 30, 2023

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SMITH**

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Appendix A. Exhibit Log

Appendix B . Photograph Log

1. Facility Information

Facility Name: DTE – Monroe Plant

Facility Owner: DTE Electric Company (hereinafter, Permittee)

Facility Operator: DTE Electric Company

Facility Address: 3500 East Front Street
Monroe Michigan 48161

Latitude and Longitude: 41.8887, -83.3437

Mailing Address: One Energy Room Plaza
Room 655 G.O.
Detroit Michigan 48228

Facility Contact: Daniel Casey
Plant Performance Manager over Operations and FGD
3500 East Front Street
Monroe Michigan 48161
Phone: (800) 477-4747
Email: daniel.casey@dteenergy.com

Permit Number: MI0001848

Receiving Water: Lake Erie

2. Introduction

On August 29 and 30, 2023, representatives from the U.S. Environmental Protection Agency (EPA) Region 5, along with PG Environmental (hereinafter collectively known as the Inspection Team), conducted a Clean Water Act (CWA) inspection of DTE Electric Company – Monroe Plant located at 3500 East Front Street, Monroe, Michigan, 48161 (herein after, Facility). The weather during the inspection was sunny; however, Facility representatives noted it had rained recently. According to National Oceanic and Atmospheric Administration (NOAA) rainfall data from the local forecast office for Monroe, Detroit/Pontiac, a rainfall of 0.01 inches occurred on August 29, 2023 and a rain fall of 3.5 inches occurred on August 24, 2023¹. The Monroe News reported that the August 24, 2023 storm caused the River Raisin to rise about a foot². River Raisin flows along the north side of the Monroe Plant.

EPA contractors and EPA staff presented their CWA inspector credentials at the start of the inspection and explained the purpose of the inspection to the Facility representatives. The Inspection Team gathered information by interviewing representatives, conducting a walk-through of the Facility, and collecting relevant documentation.

<u>Inspection Team:</u>	Jake Berger, US EPA, Inspector, Physical Scientist Joseph Forth, US EPA, Environmental Engineer Andi Hodaj, US EPA, Inspector, Environmental Engineer Eric Small, US EPA, Physical Scientist Tiffany Brackett, PG Environmental, EPA Contractor, Environmental Scientist Robert Naeser, PG Environmental, EPA Contractor, Environmental Scientist
<u>State Representatives:</u>	Bridgett Carver, EGLE – WRD, Environmental Quality Analyst Ashley Dragan, EGLE - Environmental Quality Analyst Jill Edelbrock, EGLE - Environmental Quality Analyst Lindsey Eveleth, EGLE-WRD, Environmental Quality Analyst Sabrina Good, EGLE – Environmental Quality Analyst Alex Seeger, EGLE - Environmental Quality Analyst Christine Veldkamp, EGLE-WRD, Compliance Specialist
<u>Key Facility Representative(s):</u>	Daniel Casey, DTE Plant Performance Manager over Operations and FGD Lisa Lockwood, DTE EMAS Gerald Chilson, DTE Environmental Engineer Todd Baker, DTE Manager EM&S

Refer to Appendix A, Exhibit 1 for copies of the inspection sign-in sheets

¹ [Climate \(weather.gov\)](https://www.weather.gov/)

² [Storms cause flooding in Monroe County \(monroenews.com\)](https://www.monroenews.com/)

2.1. Purpose of the Inspection

The purpose of the EPA Region 5 compliance evaluation inspection (CEI) was to evaluate compliance with the Facility's Michigan Department of Environment, Great Lakes and Energy (EGLE) National Pollutant Discharge Elimination System (NPDES) Permit Number MI0001848 ("Permit"). The Permit became effective December 1, 2022 and expires on October 1, 2025. The issue date for the Permit was November 30, 2022.

The presentation of inspection observations below does not constitute a formal compliance determination or notice of violation.

2.2. Background

The Facility is in Monroe, Michigan at the confluence of River Raisin and Lake Erie (refer to Appendix A, Exhibit 2). The Facility is a 3,108 megawatt (MW) coal-fired power plant with a Standard Industrial Classification (SIC) code of 4911 and North American Industry Classification System (NAICS) code of 227772. The Facility encompasses approximately 1,200 acres including the Main Plant site, the Fly Ash Basin, and the Coal Combustion Residuals (CCR) Vertical Extension (refer to Appendix A, Exhibit 3). The Fly Ash Basin and the CCR Vertical Extension are separated from the Main Plant area by the Discharge Canal. The Fly Ash Basin and CCR Vertical Extension are collectively referred to as the "On Site" area (refer to Appendix A, Exhibit 4). The On Site covers approximately 410 acres of the Facility's approximate total footprint of 1,200 acres.

The Facility has four main generating units that went online in 1971, 1972, 1973, and 1974, respectively. Each unit includes a super-critical boiler, turbine generator, and auxiliary units. The Facility also maintains a Flue Gas Desulfurization (FGD) System, FGD wastewater treatment area, and the Urea-to-Ammonia (U2A) building. Other on-site structures include storage tanks, electrical switchyard, peaking generators, maintenance shops, pollution control equipment, warehouses, and office buildings. The Facility operates 24 hours per day, seven days per week. The number of generating units operating depends on the season and need. All four units were operating during the inspection. Facility representatives stated two of the coal fired generating units will be decommissioned by 2028 and the other two will be decommissioned by 2032.

The primary fuel for all four units is low sulfur western coal, with units 1 and 2 also receiving high sulfur eastern coal and units 3 and 4 using high sulfur eastern coal and petroleum coke. The Facility's stormwater pollution prevention plan (SWPPP) notes that No. 2 fuel oil can be used for additional capacity. The coal used at the Facility arrives by barge or rail where it is then transferred directly to the plant for use or storage.

Stormwater that could mobilize pollutants in the Main Plant area is collected and treated through the "oily waste treatment system" (refer to Appendix A, Exhibit 5). The oily waste treatment system includes three storm stations (SS) numbered SS#1, SS#2, and SS#3, two equalization basin, swales/ditches, and six oil/water separators. The storm stations are belowground concrete sumps, each is equipped with an oil skimmer, used oil storage tank, a pump and emergency backup pump, shut-off valve and level float. The Facility has two

additional storm stations (SS#4 and SS#6) that are not part of the oily waste treatment system because the Facility does not anticipate oily waste in stormwater from the drainage areas contributing to SS#4 and SS#6.

The monitoring points (MPs) prior to discharging to NPDES Outfall 001 are described in Table 1. Note that the Permit and the SWPPP also identify MPs 001J, and 001K. Facility representatives and the SWPPP state that these monitoring locations are not present at the Facility. This CEI report refers to monitoring points as “MP” followed by the Permit designation (e.g., MP 001A).

Table 1. DTE Monroe Power Plant Internal NPDES Monitoring Points

Monitoring Point No.	Composition Discharge	Effluent Limits/Monitoring
MP 001A 41.87500° -83.35000° <i>*Located near entrance gate to Main Plant by Storm Station #1.</i>	1,978 million gallons per day (MGD) of: - Non-contact cooling water - Treated bottom ash transport water - Treated fly ash transport water - Treated coal pile runoff - Treated chemical and nonchemical metal cleaning wastes - Treated flue gas desulfurization wastewater - Treated flue gas desulfurization pre-treatment system backwash - Dredging dewatering water - Stormwater runoff	- Flow – Daily - Total Copper – Quarterly - Total (Low Level) Mercury – Monthly - Temperature – Daily - Thermal Discharge – Daily - pH – Weekly - Dechlorination Reagent – Daily (currently not applied) - Total Residual Chlorine (TRC) – 5x Weekly
MP 001B <i>*Located along discharge canal by inactive bottom ash basin. Typically has no discharge; weir control in place.</i>	Unspecified amount of stormwater runoff impacted by residual process wastewater within an inactive coal combustion residual basin. MP 001B discharges to MP 001A and then to Outfall 001.	- Flow – Daily - Total Suspended Solids (TSS) – Weekly - Oil & Grease – Twice Monthly
MP 001D <i>*Located north side of generating units by screen houses.</i>	1.5 MGD of low volume wastewater. MP 001D discharges to MP 001A and then to Outfall 001.	- Flow – Daily - TSS – Weekly - Oil & Grease – Twice Monthly
MP 001F <i>*Discharge point for On Site CCR Basin.</i>	19.4 MGD of: - Fly ash transport water - Storm water runoff	- Flow – Daily - TSS – Weekly - Oil & Grease – Twice Monthly
MP 001G <i>*This Monitoring point is not present.</i>	1 MGD of: - Bottom ash transport water (BATW) - Nonchemical metal cleaning wastewater	- Flow – Daily - TSS – Weekly - Oil & Grease – Twice Monthly - BATW Flow – Daily *Monitoring begins 12/31/2025.
MP 001H <i>*Discharge point for the South Process Pond.</i>	38.4 MGD of: - BATW - Fly ash transport water - Coal pile runoff - Chemical and nonchemical metal cleaning wastewater	- Flow – Daily - TSS – Weekly - Oil & Grease – Twice Monthly - Total Copper – Daily *When discharge chemical metal cleaning wastewater.

Monitoring Point No.	Composition Discharge	Effluent Limits/Monitoring
	- Low volume wastewater - Treated flue gas desulfurization wastewater - Flue gas desulfurization pretreatment system backwash - Dredging dewatering water - Storm water runoff	- Total Iron – Daily <i>*When discharge chemical metal cleaning wastewater.</i> - TRC – 3x Weekly when chlorine in use <i>*Additional monitoring may go into effect 12/31/2025.</i>
MP 001J <i>*This Monitoring point is not present.</i>	4.6 MGD of: - Chemical and nonchemical metal cleaning wastewater. - Treated flue gas desulfurization wastewater.	- Flow – Weekly - TSS – Weekly - Oil & Grease – Twice Monthly - Total copper – Daily per occurrence - Total iron – Daily per occurrence
MP 001K <i>*This Monitoring point is not present.</i>	2.4 MGD of: - Nonchemical metal cleaning wastewater - BATW - Nonchemical metal cleaning wastewater	- Flow – Weekly - TSS – Weekly - Oil & Grease – Twice Monthly

SOURCE: DTE Monroe Power Plant Stormwater Pollution Prevention Plan (April 2023)

3. Permitting and Compliance

This section contains a summary of permitting and compliance as it relates to permitted outfalls, discharge monitoring report data, and state compliance history.

3.1. Outfalls

The Permit identifies NPDES Outfall 001 (Outfall 001) as the Facility's outfall to Lake Erie. Outfall 001 is located at the southern end of the Main Plant area, west of the South Process Pond. The Permit identifies Outfall 001's location as 41.87500, -83.35000, in the approximate center of the Discharge Canal just before entry into Lake Erie, a water of the United States. The Discharge Canal flows between the main plant area and the On Site area.

The Permit also authorizes DTE to discharge fish and a portion of the intake canal water from NPDES Outfall 002 (Outfall 002) to Lake Erie via a pipeline. The Permit and Facility representatives stated Outfall 002 was inactive at the time of the inspection.

The Permit specifies that the discharge shall not contribute to receiving water turbidity, color, oil films, floating solids, foams, settleable solids, suspended solids, or deposits because of unnatural quantities which are or may become injurious to any designated use.

3.2. Internal Effluent Limitations

The Permit establishes final effluent limits for MPs 001B, 001D, 001F, 001G, and 001K. These five MPs are subject to final effluent limitations for total suspended solids (30 mg/L [maximum monthly], 100 mg/L [maximum daily]) and oil & grease (15 mg/L [maximum monthly], 20 mg/L [maximum daily]). The MPs must be monitored weekly for flow (million gallons). MP

001G is also monitored for BATW volume (MGD) and BATW flow (MGD and percentage). As noted previously, Facility representatives stated MP 001K is a legacy MP from a previous NPDES permit and was not monitored during the inspection.

MP 001H has the same final effluent limitations for TSS and O&G, plus effluent limitations for total copper (1.0 mg/L [maximum daily concentration]) and total iron (1.0 mg/L [maximum daily concentration]). MP 001G must be monitored for total residual chlorine three times per week during periods of chlorine use within the low-pressure general service water system.

3.3. Compliance and Enforcement History

The NPDES permit in effect at the Facility was issued by Michigan EGLE on November 30, 2022 with an effective date of December 1, 2022. The permit expires at midnight on October 1, 2025.

A review of EPA's ECHO database shows the Facility reported four permit violations in the last three years. Discharges through MP 001A exceeded the maximum daily limit of 15,500 MBTU/hour in the 4th quarter of 2022 and the 1st quarter of 2023 by 15% and 20% respectively. ECHO reports the Facility submitted late DMRs in February 2022 and August 2023.

EPA's Enforcement and Compliance History Online (ECHO) database reports the Facility has not been involved in informal or formal enforcement actions in the last five years.

4. Observations from Facility Walk-Through

The Inspection Team walked through the main waste generation, wastewater and stormwater treatment, process areas, and storage areas related to the Permit. This section summarizes the Inspection Team's observations for the following process areas observed during the inspection:

- Laboratory
- Generating Building
- Coal storage yard and unloading station
- Storm Stations #1, #2, and #3
- Storm Station #4
- Storm Station #6
- Process Swales
- Bottom Ash Transfer Area/Basins
- Urea-to-Ammonia (U2A) Building
- On Site
- South Process Pond
- Inactive Bottom Ash Basin
- Monitoring Point 001A
- Outfall 001

4.1. Laboratory

The Inspection Team visited the onsite laboratory located in the Generating Building. While in the lab, the Inspection Team observed laboratory equipment, sample kits including collection vessels (Photograph 21), the total recoverable chlorine (TRC) log (Photograph 23), and other bench sheets (Photograph 24). Calibration of laboratory equipment was maintained on lab sheets.

The Facility representatives stated that mercury samples are sent to the DTE laboratory located in downtown Detroit.

4.2. Generating Building

The Generating Building, on the northwestern portion of the Main Plant area houses the four coal-fired generating units. The Inspection Team observed floor drains in the Generating Building (Photograph 101), MP 001D (Photographs 102, 103, and 104), and the centrifuges and oil water separator (OWS; Photograph 105). Low volume wastewater flow through MP 001D is measured with a magmeter (Photograph 104). The MP 001D monitoring sample collection point is a valve beneath the pipe (Photograph 103).

4.3. Coal storage yard and unloading station

The Inspection Team observed where coal is delivered to the Facility by barge and rail. The barge dock is located on the south bank of River Raisin on the north side of the Main Plant (Photograph 5). Coal is unloaded from barges two to three times per week to the coal transfer houses (Photographs 6 and 7) with a 500 to 600 foot boom.

Barge unloading was not observed during the inspection and the Inspection Team was unable to access the barge dock. The dock was a secure area, and the Facility representatives were unable to provide access. The Facility representatives stated that barge operators are responsible for deploying booms and other best management practices during unloading events to minimize coal fines on the dock and in River Raisin.

Facility representatives stated that the Facility receives two 100 car coal trains each day. Coal trains unload at the dumper house. Coal is transferred from the dumper house to the coal storage yard. Stormwater from the area around the Dumper House drains to SS#6. At the time of the inspection the dumper house was out of service because of flooding during the August 24, 2023 storm event. Facility representatives stated water was pumped from the dumper house to the head end of the process swale (Photographs 9, 10, 11, and 12). A coal train was parked next to the coal transfer houses until the dumper house was back in service (Photograph 8).

The coal handling area has a leachate system that collects and routes coal pile runoff to SS#6 (Photographs 1 and 2). SS#6 discharges to the coal pile runoff ditch. The Inspection Team observed the process swale along the north, west, and east sides of the coal handling area conveys coal pile runoff to the South Process Pond and out MP 001H.

4.4. Storm Stations #1, #2, and #3

The Inspection Team observed, SS #1, #2, and #3 which collect and treat stormwater runoff from the Main Plant and Generating Building. These three Storm Stations operate in series with SS#3

discharging to SS#2, which discharges to SS#1. These three storm stations are each equipped with an oil skimmer and a used oil collection tank.

4.4.1. Storm Station #3

SS#3 collects wastewater from the northwest side of the Generating Building (Photograph 43), the diesel peaker units area, and from the Unit 1 oil room sump. Floor drains in the northwest side of the Generating Building flow to Unit 1 OWS. Effluent from Unit 1 OWS discharges to SS#3. Separated used oil from the OWS discharges to two used oil aboveground storage tanks (ASTs) inside the plant.

The Inspection Team observed the SS#3 sump (Photograph 40), skimmer (Photograph 41), and double-walled aboveground used oil tank (Photograph 42). Facility representatives stated the used oil tank is emptied one or two times each year.

4.4.2. Storm Station #2

SS#2 (Photograph 44) collects wastewater from the Flue Gas Desulphurization (FGD) area, Fuel Supply parking lot and area drains (Photographs 15 and 17), and runoff from the paved areas surrounding the Dumper House and south of the power plant. Facility representatives stated the Facility uses vacuum tanker trucks to pump oily water from sumps and collected at weirs within the oily waste treatment system ditches are emptied into a vacuum box clarifier located along the west side of the generating units. The vacuum box clarifier discharges to SS#2 which then discharges to SS#1.

SS#2 is equipped with an oil skimmer (Photograph 45) and AST for used oil (Photograph 46) and discharges effluent by pump or gravity feed northwest to SS#1. Facility representatives stated the SS#2 skimmer was down for maintenance during the inspection.

The Inspection Team observed the fueling station and maintenance station located on the south side of the Generating Building in the drainage area for SS#2. Diesel and gasoline were stored in double walled tanks (Photographs 13 and 14).

The maintenance station in SS#2 drainage area across the road south of the fueling station, consisted of an enclosed garage with trench drains at each garage door (Photograph 20) and an outdoor wash rack (Photograph 18). Light vehicle maintenance occurs at the maintenance station. The maintenance station trench drains connect to an OWS which discharges to SS#2. Runoff from a wash rack located adjacent to the maintenance station flows overland to a drop inlet that connects to SS#2 (Photographs 18 and 19).

The Inspection Team observed two uncontained 55-gallon drums of diesel exhaust fluid (DEF) on a pallet and a double-walled, empty diesel tank next to the Generating Building within the SS#2 drainage area (Photograph 16), north of the fueling station. The DEF and diesel were temporarily stored at this location to service a portable generator while a permanent generator was down for service.

4.4.3. Storm Station #1

The Inspection Team observed SS#1, (Photographs 47, 49, 50, and 52) which collects wastewater from the floor drains in the south side of the Generating Building (Photograph 48), Unit 3 oil room sump, and SS#2 (Photograph 53). The Inspection Team walked through the Generation Building and observed the ASTs and floor drains which flow to the OWS which discharges to SS#1.

Facility representatives stated stormwater from the northwestern side of the turbine house roof discharges to SS#1. The turbine extractor vents hot air to the roof as a mist, and this mist may contain oil that settles on the roof. The Inspection Team observed the roof from the SS#1 while the Facility representatives pointed to the features.

SS#1 effluent is pumped to one of two clarifiers and then to one of two yard OWS or to the equalization (EQ) basins to the south. Supernatant from the clarifiers goes through an OWS and then enters Process Swale 1 (PS1). PS1 receives additional process wastewaters on the way to the South Process Pond and MP 001H.

Facility representatives stated the two EQ basins provide extra capacity when a significant rain event exceeds the capacity of the Storm Stations. SS#1 is equipped with an oil skimmer (Photograph 51) and associated underground storage tank (UST) for used oil.

4.5. Storm Station #4

The Inspection Team observed SS#4 is located north of Warehouse B and collects runoff from the cascade drains for the coal transfer system, which first collect in the Coal Fines Washdown Basin (Photographs 89 and 97) located between the Generating Units and Warehouse B. SS#4 discharges effluent via an underground pipe east-southeast to SS#6. SS#4 is not equipped with an oil skimmer because the permittee does not expect this station to receive any oily wastewater.

The Inspection Team observed coal fines on the ground immediately east of the Coal Fines Washdown Pad (Photograph 93), upstream of SS#4.

The Inspection Team observed chemical totes and hoppers stored outside without cover or containment on the east side of Warehouse B (Photographs 92, 94, and 95). The Inspection Team observed accumulated stormwater in the hoppers (Photograph 96).

4.6. Storm Station #6

The Inspection Team observed SS#6 which receives effluent from SS#4 and runoff from the immediate area (including north end of coal pile, limestone pile, and dust suppressant storage tanks). SS#6 discharges effluent south under the railroad tracks and to a ditch flowing south along the coal storage pile, eventually discharging into the Coal Pile Runoff Pond.

4.7. Process Swales

As stated in the Facility's SWPPP:

Designed open swales/ditches are part of the Oily Waste Treatment System. PS1 flows south from the end of the yard OWS discharge pipe through an underflow

weir and culvert equipped with a curtain boom on both sides and into Process Swale 2 (PS2). PS2 receives effluent from the Bottom Ash Dewatering System (BADS) process, the FGD Pond, and the wastewater treatment plant. PS2 continues south and then east-southeast, combines with the CCR transfer pad wastewater and effluent from the Coal Pile Runoff Pond then flows through a weir into Process Swale 3 (PS3). PS3 continues flowing south-southeast, and then discharges into the South Process Pond.

The Inspection Team observed that vegetation growing in and around PS1 prevented a good visual observation of flow in PS1 (Photographs 11 and 12). Additionally, the Inspection Team observed accumulated solids and fines in PS2 (Photographs 25 and 26).

4.8. Bottom Ash Transfer Area/Basins

The bottom ash transfer (BAT) is the Facility location for dewatering bottom ash. The dewatering process includes primary and secondary basins for each of the four power generating units. The water passes through the primary settling basin (Photographs 108 and 109) to the secondary settling basin by gravity (Photographs 110, 112, and 113). Water that leaves the basin enters the process swale. Facility representatives stated that maintenance is performed by stopping the flow to the basins and that the primary settling basins are cleaned every other day and the secondary approximately every two weeks.

When cleaned the material from the primary basins is placed on the transfer pad to be sold, and the secondary basin material receives additional drying before it is taken to a dry landfill offsite (Photographs 106 and 111). The Inspection Team observed that the transfer pad was equipped with a sump at each corner, each sump pumps back to the sedimentation basins (Photograph 107).

4.9. Urea-to-Ammonia (U2A) Building

The permittee converts urea into ammonia to feed into the selective catalytic reduction (SCR) systems to reduce the NO_x concentration of the flue gas. The Inspection Team observed where the urea-to-ammonia (U2A) process takes place in the U2A building located on the northeast corner of the main plant area. The building contains three 22,200-gallon urea dissolver tanks, a 360,000-gallon urea storage tank, a 100,000-gallon reactor feed tank (Photograph 100), four 9,000-gallon reactors, and one reactor blowdown tank. U2A Building interior floor drains connect to SS#3.

The Inspection Team observed a tanker unloading urea to the U2A building (Photograph 91) and coal fines on the ground adjacent to an outdoor work area, next to the U2A Building (Photograph 90). Facility representatives told the Inspection Team that urea offloading area drains to SS#4.

4.10. On Site

The Fly Ash Basin is located on the eastern side of the On Site area. MP 001F is located at the northeast corner of On Site (Photograph 68) and receives wastewater from the Fly Ash Basin via a discharge point along the eastern side of the basin that passes through three box weirs. Fly ash slurry is piped from the main plant and deposited into the Fly Ash Basin. At the time of

inspection, Facility representatives stated only one of four sluice pipes was conveying fly ash from the Main Plant to the Fly Ash Basin (Photograph 69).

The Fly Ash Basin discharges to a channel that flows in an easterly direction toward MP 00F (Photographs 56 and 59). Flow from the Fly Ash Basin is controlled by three stop log structures, also known as the Box Wiers Discharge Control Structure (Photographs 57, 58, and 60). Facility representatives stated the Fly Ash Basin has sufficient capacity to collect fly ash through closure of the coal-fired generating units.

MP 001F is located where the discharge channel flows over a weir (Photographs 61, 62, 63, 64, 65, 66). Facility representatives collect monitoring samples from the weir curtain (Photograph 66). Flow rate through MP 001F is measured from the staff gage. The Inspection Team observed a boom across the MP 001F discharge channel, upstream of MP 001F, to capture floatable materials.

The CCR Vertical Extension is located on the northwest corner of the On Site area. The CCR Vertical Extension is used for disposal of bottom ash (Photographs 71, 72, 73, and 74). The CCR Vertical Extension is constructed of two to three foot vertical lifts of bottom ash underlain by limestone and filter fabric. Stormwater from the CCR Vertical Extension goes to the Fly Ash Pond and is discharged through MP 001F. Facility representatives stated the CCR Vertical Extension will no longer receive bottom ash after December 31, 2023.

Equipment was staged at the northeastern corner of the CCR Vertical Extension. The Inspection Team observed a stocked spill kit (Photograph 76), a double-wall diesel tank with an automatic shut off valve (Photograph 77), and a portable toilet secured to the ground with tiedowns and stakes (Photograph 78).

4.11. South Process Pond

The South Process Pond is located at the southern end of the Main Plant area, immediately south of the inactive Bottom Ash Basin. PS3 (Photographs 25 and 26) conveys wastewater and stormwater from the Main Plant to the South Process Pond, including all areas that do not discharge to SS#1, SS#2, SS#3, and MP 001A.

The South Process Pond discharges to the Discharge Channel through MP 001H (Photographs 30, 32, and 34). Flow rate through MP 001H is measured with an optical flow meter backed up with a staff gage (Photographs 35 and 36).

The Inspection Team observed a dark plume in the Discharge Channel immediately downstream of MP 001H on August 29 (Photographs 31 and 32) and 30 (Photograph 125). On August 30, 2023, a Facility representative used a plastic water bottle to collect a sample from the plume as well as by Outfall 001. Facility representatives suggested that the plume resulted from recent storm events that stirred up sediment in the Discharge Channel at MP 001H (Photographs 123, 124, and 126).

4.12. Inactive Bottom Ash Basin

The Inactive Bottom Ash Basin is located immediately north of the South Process Pond (Photograph 27) and is separated from the South Process Pond by a constructed berm. The Inactive Bottom Ash Basin was the primary disposal location for bottom ash until it was closed in 2015. Since 2015, the Inactive Bottom Ash Basin has only received stormwater from areas on and immediately around the pond. The Inspection Team observed a contractor dredging the bottom ash from the pond. The Facility representatives stated they have a plan for clean closure.

MP 001B is the discharge point for the Inactive Bottom Ash Basin; however, Facility representatives stated that the Inactive Bottom Ash Basin does not discharge. The Inspection Team observed a float was placed on the upgradient side of the basin containment wall to retain process wastewater in the Inactive Bottom Ash Basin (Photograph 39). However, the Inspection Team observed leaks in the containment wall between the Inactive Bottom Ash Basin and the Discharge Channel on August 29, 2023. Members of the Inspection Team returned to the Inactive Bottom Ash Basin on August 30, 2023 and photo documented that the Inactive Bottom Ash Basin was leaking through the containment wall to the Discharge Channel at several locations near the MP 001B (Photographs 116, 117, 118, 119, 120, 121, and 122).

4.13. Monitoring Point 001A

The Inspection Team observed MP 001A, located on the east side of the Main Plant entrance (Photograph 79). MP 001A is just upstream from the City of Monroe's municipal wastewater treatment plant (WWTP) outfall (Photograph 80). The Inspection Team observed where discharge from Outfall 001 combines with water in the Facility's Discharge Canal west of the City of Monroe WWTP outfall (Photograph 82).

Facility representatives stated that 90 percent of the flow through MP 001A is cooling water. The Inspection team observed the process where the cooling water is diverted from River Raisin (Photograph 85) into the cooling water channel (Photographs 86 and 87), routed through the greenhouse building (Photograph 88), and returned to the cooling water channel upstream from Outfall 001A (Photograph 84). Effluent monitoring samples are collected from the middle of the cooling water channel at Outfall 001A (Photograph 83). Flow through Outfall 001A is based on maximum pump capacity, Outfall 001A is equipped with 12 pumps, which may result in the Facility overreporting flow through Outfall 001A.

The Inspection Team observed that booms placed in the cooling water channel, upstream from Outfall 001A, were parallel to the flow instead of perpendicular to flow which could allow floatable material to reach Outfall 001A.

4.14. Outfall 001

The Inspection Team observed the Outfall 001 sign where the Facility representatives stated they sampled (Photographs 37 and 38). Outfall 001 is identified in the permit as 41.87500, -83.35000, in the approximate center of the Discharge Canal just before entry into Lake Erie discharge Channel south of MP 001H and north of Lake Erie. Stormwater and process wastewater from all MPs flows into the Discharge Channel upstream of Outfall 001.

The Facility representative explained that monitoring samples at Outfall 001 are collected from the Discharge Channel from the shoreline at the “NPDES Sampling Point 001” sign (Photograph 37). The Inspection Team observed that this location is not at the coordinates identified in the Permit and, moreover, a peninsula extends from the Discharge Channel’s eastern shore in a northwesterly direction, downstream from where Outfall 001 samples are collected. The main Discharge Channel flow goes to the west of the peninsula while samples are collected from backwater flow.

5. Records Review

The EPA Inspection Team reviewed documentation onsite with Facility representatives and requested additional documents during the closing discussion. A formal records request was delivered by email to Daniel Casey on September 1, 2023 (refer to [Appendix A, Exhibit 6](#)). The Permittee provided the documents using EPA’s SharePoint link on or before September 6, 2023.

5.1. Stormwater Pollution Prevention Plan (SWPPP)

The SWPPP provided by the Facility is dated April 2023. The SWPPP includes the sections that are required by the Permit. The Permittee noted in their SWPPP that comprehensive inspections are completed quarterly, and good housekeeping inspections are completed monthly. The SWPPP states that the inspections are recorded using the forms provided in SWPPP Appendix A.

5.2. Facility Inspection Documents

Facility representatives provided completed *Quarterly Comprehensive Inspection Form* (Quarterly Form) and *Monthly Routine Inspection Forms* (Monthly Form). Both types of forms noted at the top that completed forms must be filed with the SWPPP files and or/electronically. The Quarterly form is dated June 30, 2023 and notes a “Visual assessment Q2 was not collected due to no qualifying event.” The Monthly Forms are dated June 30, 2023, July 25, 2023, and August 30, 2023. The August 30, 2023 form notes that the inspector investigated coal off load per EPA/EGLE and “remove old hard booms after drying” but do not confirm if either action was completed.

5.3. Discharge Monitoring Report Data Review

The Inspection Team reviewed discharge monitoring reports (DMRs) for April, May, and June 2023 and found no effluent limit exceedances for the three month period. MPs 001B, 001G, 001J, and 001K did not receive flow in April, May, and June 2023 and were not monitored. Facility representatives stated that MP 001B rarely has a discharge. As previously reported, Facility representatives stated MPs 001G, 001J, and 001K are not present at the Facility.

6. Potential Areas of Concern

The following areas of concern were noted during this inspection:

6.1. Outfall 001

Permit, Part I.A.1. states “Outfall 001 discharges to Lake Erie at Latitude 41.87500, Longitude -83.35000.” Permit, Part I.A.1. footnote b states “samples for pH and total mercury shall be taken prior to discharge to Lake Erie.”

The Outfall 001 sample location for pH and total mercury, as shown by the Facility representative, was in the Discharge Channel, upstream from the coordinates identified in the Permit.

6.2. MP 001B

Part I.A.2 of the Permit presents final effluent limitations for MP 001B for TSS and O&G. The Permit states:

During the period beginning on the effective date of this permit and lasting until the expiration date of this permit, the permittee is authorized to discharge an unspecified amount of storm water impacted by residual process wastewater within an inactive coal combustion residual basin from Monitoring Point 001B through Monitoring Point 001A and Outfall 001. Outfall 001 discharges to Lake Erie. Such discharge shall be limited and monitored by the permittee as specified below...

The Inspection Team reviewed DMRs for April, May, and June 2023. Monitoring results from MP 001B were not provided on these three DMRs. The Inspection Team observed leaks in the containment wall between the Inactive Bottom Ash Basin and the Discharge Channel on August 29, 2023. Several members of the Inspection Team returned to MP 001B on August 30, 2023 and photo documented that the Inactive Bottom Ash Basin was leaking through the containment wall to the Discharge Channel at several locations north and south of the MP 001B (Photographs 116, 117, 118, 119, 120, 121, and 122).

The leaks through the containment wall are discharges from the Inactive Bottom Ash Basin to the Discharge Channel.

6.3. MP 001H

The Inspection Team observed a plume of discoloration at MP 001H. Water was collected for observation purposes on August 20, 2023. The source of the plume was unknown, Facility representatives suggested that the plume resulted from recent storm events that stirred up sediment in the South Process Pond (Photographs 123, 124, and 126).

6.4. Preventative Maintenance and Good Housekeeping

The April 2023 SWPPP, Section 5.1 identifies preventative maintenance procedures for the Oily Waste Treatment System – Process Swales (PS1, PS2, PS3) including “Inspect for sediment and debris accumulation; remove if necessary.”

The Inspection Team observed sediment and debris accumulation in PS1 and PS2 (Photographs 25, 26, and 99).

The April 2023 SWPPP, Section 5.2 states “drips, leaks, and spills are immediately cleaned up.”

The Inspection Team observed coal fines on the ground outside the U2A Building (Photograph 90), south of Warehouse B (Photograph 92), and immediately east of the Coal Fines Washdown Pond (Photograph 89).

Chemical totes and hoppers were observed to be stored outside without cover or containment (Photographs 92, 94, 95, and 96).

The Inspection Team observed that booms placed in the cooling water channel, upstream from Outfall 001A, were parallel to the flow instead of perpendicular to flow which could allow floatable material to reach Outfall 001A (Photographs 81 and 84).

6.5. Effluent Sampling

The Inspection Team observed a Facility representative collecting water samples for oil and grease analysis from MP 001H on August 29, 2023. The Facility representative was using a plastic container at the end of a pole to collect the samples and then walking the sample to the truck where the sample was transferred into bottles for laboratory analysis.

Part 1.A.6 of the Permit establishes oil and grease effluent limits for discharges through MP 001H. EPA Method 1664 requires oil and grease samples to be collected in a glass container because oil and grease can stick to the inside of a plastic container.

6.6. Laboratory Methods

Part II.B.2 of the Permit states “[t]est procedures for the analysis of pollutants shall conform to regulations promulgated pursuant to Section 304(h) of the Clean Water Act (40 CFR Part 136 – Guidelines Establishing Test Procedures for the Analysis of Pollutants), unless specified otherwise in this permit.”

During the on-site laboratory review, the Inspection Team observed that the Permittee’s laboratory bench sheet lists EPA Method 160.2 for analysis of TSS (refer to Attachment A, Exhibit 7). 40 CFR Part 136.3 does not list EPA Method 160.2 as an approved test method for TSS.

The DTE Monroe Power Plant TSS standard operating procedure (SOP) references ASTM International D5907-13. CFR Part 136.3³ lists ASTM D5907-13 as an approved test method for TSS (refer to Attachment A, Exhibit 8). At the time of inspection, it was unclear which test method was being used by the onsite laboratory.

³ <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-136/section-136.3>

ATTACHMENT A

Exhibit Log

Inspection Sign-In Sheet				Date:	
Location:	Name	Agency/Company	Position	Phone	Email
	Gerald Chilton	DTE	Environmental Engineer	734.286.7618	gerald.chilton@dteenergy.com
	Todd Baker	DTE	MANAGER EM'S	734 545 4952	Todd.Baker@dteenergy.com
	Micki Orlando	DTE	WATER SWS (EMS) Analyst	248.207.7168	marcelo.orlando@dteenergy.com
	Alex Seeger	EG-LE	Environmental Quality Analyst	517-449-6300	seegera3@michigan.gov
	Kyle Taylor	DTE	Maintenance Manager	734-384-3319	Kyle.Taylor@dteenergy.com
	Ben Goehmann	DTE	Plant Manager	313.348.0595	benjamin.goehmann@dteenergy.com
	Brooke Thomsen	PTE	FGD Engineer	734-512-3960	brooke.thomsen@dteenergy.com
	Eric Burger	DTE	FGD Manager	734-785-8450	Eric.burger@dteenergy.com
	Jim Feaganes	DTE	Production Manager	734-771-3713	Donal.Feaganes@dteenergy.com
	Lisa Lockwood	DTE	EM & S	989 450 5092	lisa.hagerty@dteenergy.com

Exhibit 1 (Page 1 of 3). DTE Monroe Power Plant CEI Sign-in Sheet

Inspection Sign-In Sheet				
Location:		Date:		
Name	Agency/Company	Position	Phone	Email
DAN CASEY	DTE	PLANT MANAGER	248-202-254	DANIEL.CASEY@DTEENERGY.COM
Bridgett Carver	EGLE	EQA	517-257-7880	carverb@Michigan.gov
Jill Edelbrock	EGLE	EQA	989-855-3426	edelbrockj@Michigan.gov
Sabrina Good	EGLE	EQA	586-292-8132	goods2@Michigan.gov
LINDSEY ENGLISH	EGLE	EQA	586-292-297	englishl@Michigan.gov
Joseph Fortin	EPA	Envr. Engineer	313-866-7275	fortin.joseph@epa.gov
Eric Small	USEPA Region 5	Physical Scientist	312-886-6680	small.eric@epa.gov
Jake Berger	USEPA	Inspector	312-353-8024	berger.jake@epa.gov
Andi Hodijs	USEPA	Inspector	312-353-6645	hodijsandi@epa.gov
Chris Paquette	DTE	Environmental	810-728-5019	christopher.paquette@dteenergy.com
Asmney Dragoon	EGLE	EQA	517-331-0442	DragoonA@Michigan.gov
Chris Verducci	EGLE-URS	Environmental Specialist	616-401-1556	verduccic@Michigan.gov
Rob Watson	PG&E	Environmental Specialist	303-921-3674	Rob.Watson@pgandew.com
Tiffany Brickett	PG&E	EPA Contractor	720-784-8088	tiffany.brickett@pgandew.com

Exhibit 1 (Page 2 of 3). DTE Monroe Power Plant CEI Sign-in Sheet

Location:			Inspection Sign-In Sheet		Date:	
Name	Agency/Company	Position	Phone	Email		
Gerald Chilton	DTE	Environmental Engineer	734-286-7613	gerald.chilton@dteenergy.com		
Todd Baker	DTE	MANAGER EM's	734 545 4952	todd.baker@dteenergy.com		
Mici Orlandea	DTE	WATER SWS (EMS) Analyst	248.201.7768	masee.b.orlandea@dteenergy.com		
Alex Seeger	EGLE	Environmental Quality Analyst	517-449-6300	seegera3@michigan.gov		
Kyle Taylor	DTE	Maintenance Manager	734-384-2819	Kyle.Taylor@DTEenergy.com		
Ben Goehmann	DTE	Plant Manager	313.348.0595	benjamin.goehmann@dteenergy.com		
Brooke Thanasia	PTE	F&D Engineer	734-512-3960	brooke.thanasia@dteenergy.com		
Eric Burger	DTE	F&D Manager	734-785-8450	Eric.burger@dteenergy.com		
Jim Feaganes	DTE	Production Manager	734-777-3713	Don.B.Feaganes@DTEenergy.com		
Lisa Lockwood	DTE	EMS	989 450 5092	lisa.hagerly@DTEEnergy.com		

Exhibit 1 (Page 3 of 3). DTE Monroe Power Plant CEI Sign-in Sheet

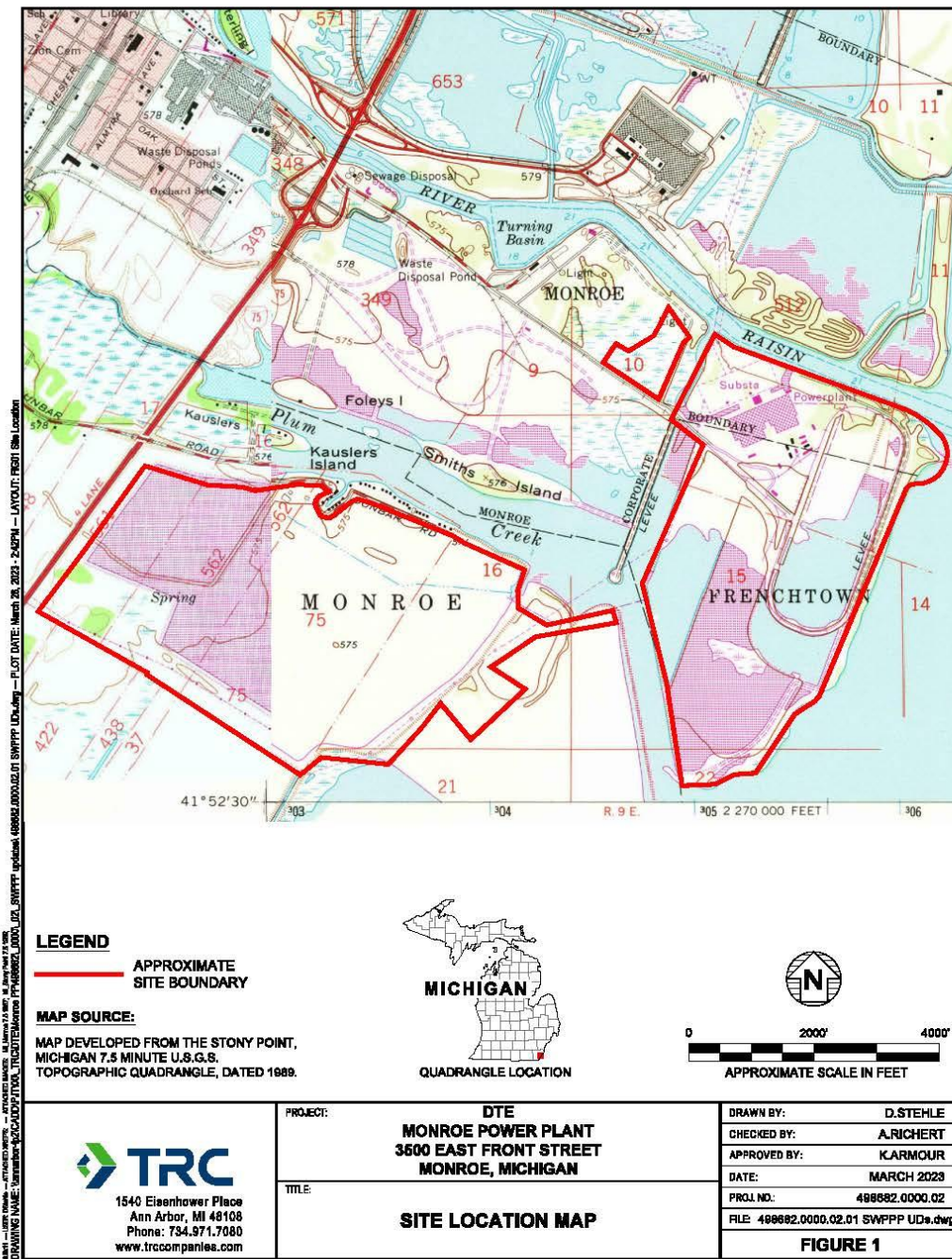


Exhibit 2. SWPPP Site Location Map



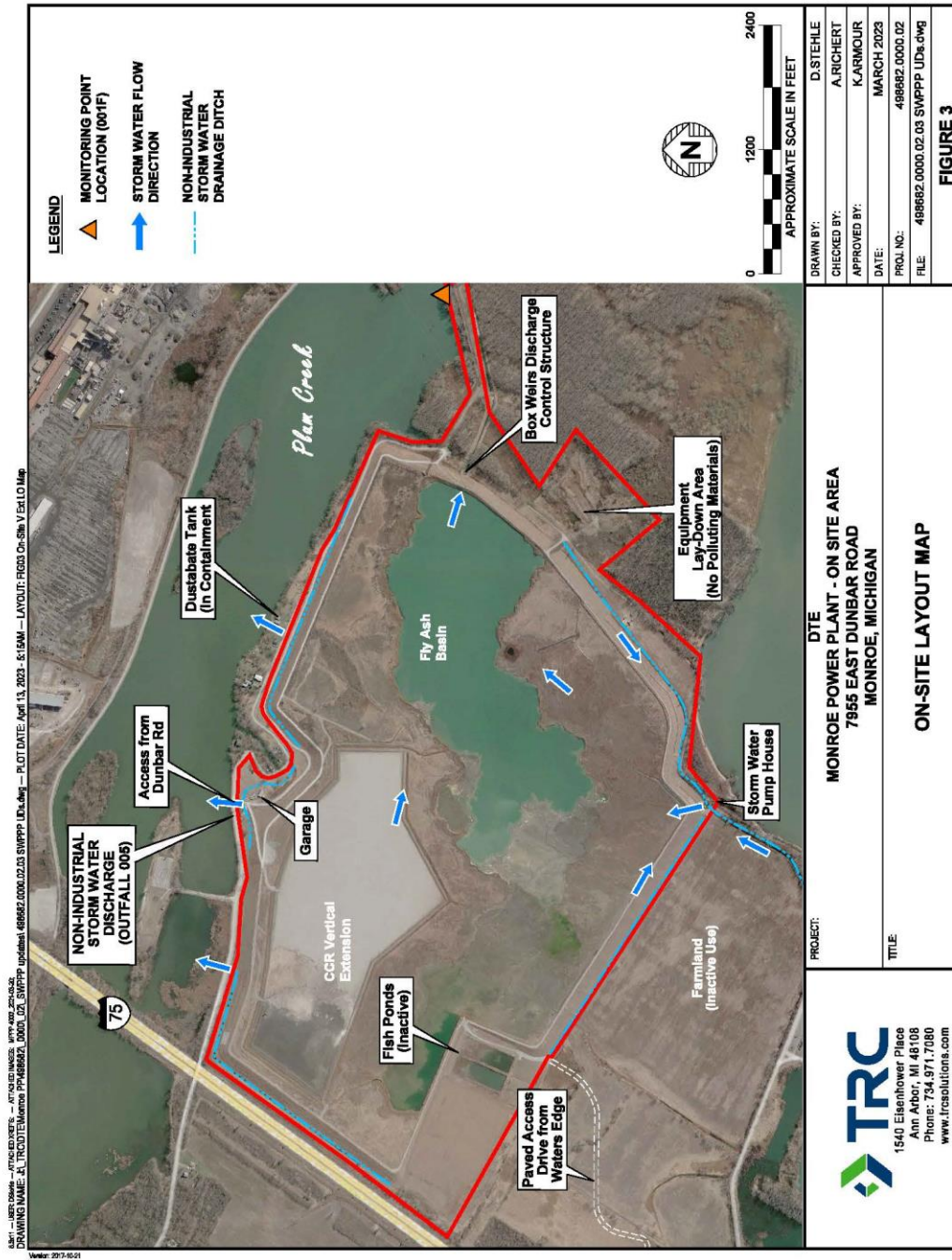


Exhibit 4. SWPPP On-Site Layout Map

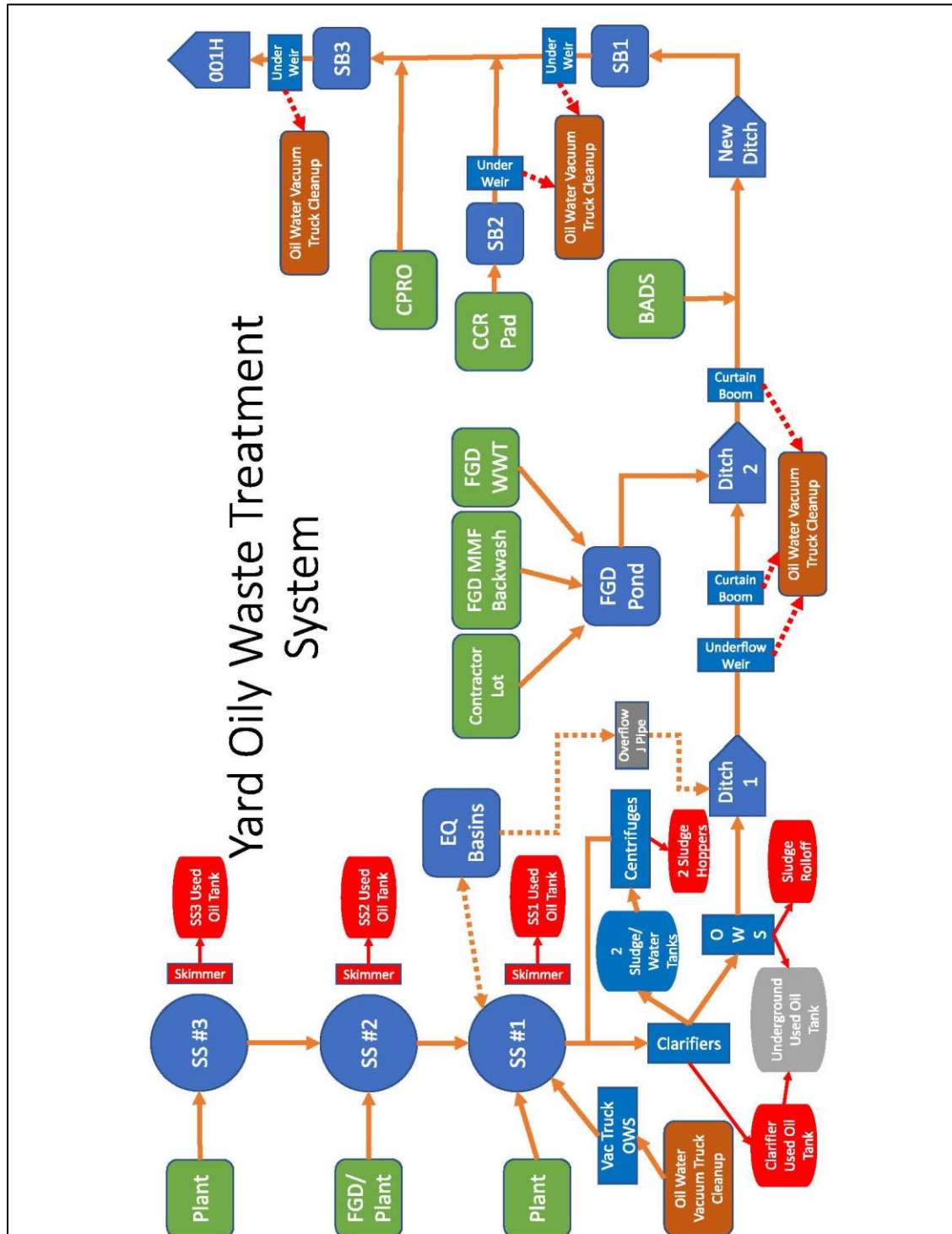


Exhibit 5. Yard Oily Waste Treatment System schematic

Records Request R5—DTE Electric Company ¶

Record¶	Notes (current NPDES permit term only)¶	¶
Routine Reporting¶	¶	¶
• → Good-housekeeping-inspection-records¶	NPDES-MI0001848, Part-1, Section-B.5.b¶	¶
• → Quarterly-comprehensive-stormwater-inspection-records¶	NPDES-MI0001848, Part-1, Section-B.5.c¶	¶
• → Quarterly-visual-assessment-of-stormwater-records¶	NPDES-MI0001848, Part-1, Section-B.5.d¶	¶
Plans¶	¶	¶
• → Stormwater-Pollution-Prevention-Plan (SWPPP)¶	NPDES-MI0001848, Part-1, Section-B.2¶	¶
• → Spill-Prevention-Control-and-Countermeasures (SPCC)-plan¶	If referenced in the SWPPP (NPDES-MI0001848, Part-1, Section-B.5.e)¶	¶
• → Stormwater-Pollution-Prevention-Plan (SWPPP)¶	NPDES-MI0001848, Part-1, Section-B.2¶	¶
Laboratory¶	¶	¶
• → Laboratory-Quality-Assurance (QA)/-Quality-Control (QC)-Program¶	NPDES-MI0001848, Part-1, Section-A.1-8¶	¶
• → SOPs-for-laboratory-procedures¶	NPDES-MI0001848, Part-2, Section-B.2¶	¶
• → Instrumentation-calibration-logs¶	NPDES-MI0001848, Part-2, Section-B.3¶	¶
• → Sample-chain-of-custodies (COCs)-and-corresponding-laboratory-analytical-data-(at-least-3-most-recent-months-of-reporting)¶	NPDES-MI0001848, Part-2, Section-B.4¶	¶
• → Laboratory-bench-sheets-or-raw-data-sheets-(at-least-3-most-recent-months-of-reporting)¶	NPDES-MI0001848, Part-2, Section-B.4¶	¶
Operations-and-Maintenance-¶	¶	¶
• → Flow-measurement—type-of-meter, meter-calibration-records-for-all-meters-used-for-compliance-with-NPDES-Permit-(i.e., influent-and-effluent-meters)¶	NPDES-MI0001848, Part-2, Section-B.3¶	¶

¶

Exhibit 6. DTE Monroe Power Plant NPDES Records Request.

NPDES MC Work Sheet

Date: **8-28-23** Week **1** of **1**

N.P.D.E.S. Worksheet

001A, Discharge Canal

Test	pH Standardization	Analysis EPA 160.1	1	2 (Dup)
Date Standardized	8-28-2023	Date Performed	8-28-2023	
Time Standardized	08:43	Time Performed	09:55	
Sampler Initials		pH	8.08	
Limit:	pH 6.5 - 9.0	Temperature °C	29.6	
		Analyst Initials		

pH Standardization

Buffer Temp (°C)	Buffer	mV	pH
20.14	4 Buffer	151.8	4.00
20.24	7 Buffer	-23.2	7.02
20.06	10 Buffer	-196.05	10.06
20.00	7 Check	-21.7	7.01
	% Slope	58.88	99.88
		58.46	

001B, Area - 15 TSS Collect O/G

TSS	Analysis EPA 160.2	1	2 (Dup)
Date Collected			
Time Collected			
Flow, inches			
Sampler Initials			
Volume (ml)			
Final wt. (g)			
Initial wt. (g)			
TSS (mg/l)			
Analyst Initials			

Limit: Monthly avg. 30 mg/l
Max. Daily avg. 100 mg/l

001H, Area - 15 TSS

TSS	Analysis EPA 160.2	2	1	2 (Dup)
Date Collected	8-28-2023	Date Performed	8-30-23	
Time Collected	10:00	Time Performed	10:54	
Pond Level (in)	574.3	Volume (mL)	250	
Discharge Level (in)	572.8	Final wt. (g)	1.2560	1.2554
Stop Logs	2	Initial wt. (g)	1.2527	
Sampler Initials		TSS (mg/l)	13.2	
Analyst Initials		Flow Monitor Reading	18.6887	

Combined limits with 001B

001D, Low Volume Demineralizer Waste TSS

TSS	Analysis EPA 160.2	4	1	2 (Dup)
Date Collected	8-29-2023	Date Performed	8-30-23	
Time Collected	8:30	Time Performed	10:56	
Integrator Flow (raw)	24006.768	Volume (ml)	250	
Flowrate (gpm)	1556	Final wt. (g)	1.2524	1.2524
Discharge Channel Level (ft)		Initial wt. (g)	1.2524	
Sampler Initials		TSS (mg/l)		
Analyst Initials				

001F, On-site TSS Collect O/G

TSS	Analysis EPA 160.2	3	1	2 (Dup)
Date Collected	8-28-2023	Date Performed	8-30-23	
Time Collected	10:35	Time Performed	10:55	
Flow (in.)	5 1/2	Volume (ml)	250	
Sampler Initials		Final wt. (g)	1.2784	1.2744
		Initial wt. (g)	1.2782	
Limit:	Monthly avg. 30 mg/l	TSS (mg/l)	0.8	
	Max. Daily avg. 100 mg/l	Analyst Initials		

001D, Limits:
Monthly average: 30 mg/l
Max Daily Avg: 100 mg/l

Exhibit 7. The laboratory bench sheet dated August 23, 2023 listing EPA Method 160.2 as the analytical methodology for TSS.

- ASTM International D5907-13 Standard Test Methods for Filterable Matter (Total Dissolved Solids) and Non-filterable Matter (Total Suspended Solids) in Water.

26

ATTACHMENT B

Photograph Log

Photographs 1 – 115 taken by Robert Naeser on August 29 and 30, 2023

Photograph 116-126 taken by Tiffany Brackett using EPA Camera on
August 30, 2023

DTE Electric Company – Monroe Plant, Inspection Report Photo Log

August 29 and 30, 2023



Photograph 1. DTE - Monroe Plant DSCN0087.JPG
Description: View into Storm Station Number 6 (SS#6), by the coal pile handling area.



Photograph 2. DTE - Monroe Plant DSCN0088.JPG
Description: Additional view of SS#6 seen in Photograph 1.



Photograph 3. DTE - Monroe Plant DSCN0089.JPG
Description: View, facing southwest, at the Main Plant.



Photograph 4. DTE - Monroe Plant DSCN0090.JPG
Description: Additional view of Main Plant seen in Photograph 3.

DTE Electric Company – Monroe Plant, Inspection Report Photo Log

August 29 and 30, 2023



Photograph 5. DTE - Monroe Plant DSCN0091.JPG
Description: View, facing northeast, of the dock on River Rasin next to the coal pile. The dock is beyond the fence line.



Photograph 7. DTE - Monroe Plant DSCN0093.JPG
Description: Additional view of the coal transfer houses seen in Photograph 6.



Photograph 6. DTE - Monroe Plant DSCN0092.JPG
Description: View, facing southeast, of coal transfer houses.



Photograph 8. DTE - Monroe Plant DSCN0094.JPG
Description: View, facing east, of the road between the dock seen in Photograph 5 and coal transfer stations in Photograph 6 and 7.

DTE Electric Company – Monroe Plant, Inspection Report Photo Log

August 29 and 30, 2023



Photograph 9. DTE - Monroe Plant DSCN0095.JPG
Description: View, facing north, of ditch that receives discharge from SS#6.



Photograph 11. DTE - Monroe Plant DSCN0097.JPG
Description: Close up view of ditch that receives discharge from SS#6.



Photograph 10. DTE - Monroe Plant DSCN0096.JPG
Description: View, facing northeast, of ditch that receives discharge from SS#6.



Photograph 12. DTE - Monroe Plant DSCN0098.JPG
Description: Additional close view of ditch that receives discharge from SS#6 as seen in Photograph 11.

DTE Electric Company – Monroe Plant, Inspection Report Photo Log

August 29 and 30, 2023



Photograph 13. DTE - Monroe Plant DSCN0099.JPG
Description: View, facing east, of the double-walled gasoline tank at the fueling station seen in Photograph 14.



Photograph 15. DTE - Monroe Plant DSCN0101.JPG
Description: View of a drop inlet located downgradient from the fueling area and the motor pool. This inlet connects to Storm Station (SS#2).



Photograph 14. DTE - Monroe Plant DSCN0100.JPG
Description: View, facing east, of a fueling station across from the Motor Pool Building. The 500 gallon, double-walled diesel storage tank is visible on the right side of the photo.



Photograph 16. DTE - Monroe Plant DSCN0102.JPG
Description: View, facing north, of two 50-gallon barrels with diesel exhaust fluid (DEF) stored outside not undercover and without secondary containment. Also pictured are a portable generator and double-walled diesel tank.

DTE Electric Company – Monroe Plant, Inspection Report Photo Log

August 29 and 30, 2023



Photograph 17. DTE - Monroe Plant DSCN0103.JPG
Description: General view of a drop inlet connected to SS#2.



Photograph 19. DTE - Monroe Plant DSCN0105.JPG
Description: Additional photo of the inlet seen in Photograph 18.



Photograph 18. DTE - Monroe Plant DSCN0104.JPG
Description: View, facing north, of inlet below a vehicle wash station at the Motor Pool. The inlet connects to SS#2.



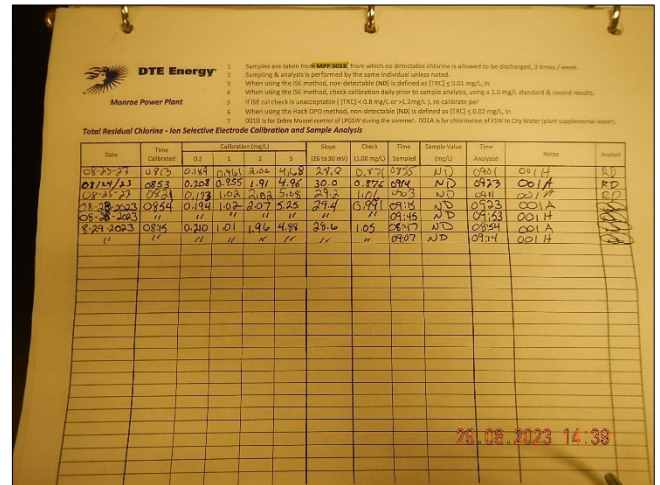
Photograph 20. DTE - Monroe Plant DSCN0106.JPG
Description: General view of a trench drain inside the Motor Pool. The trench drain connects to SS#2 via an oil water separator (OWS).

DTE Electric Company – Monroe Plant, Inspection Report Photo Log

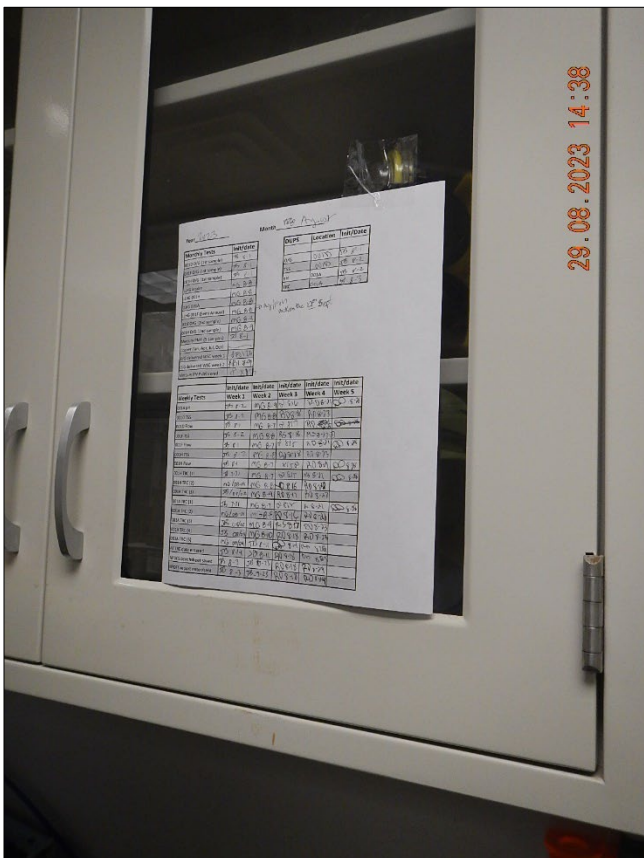
August 29 and 30, 2023



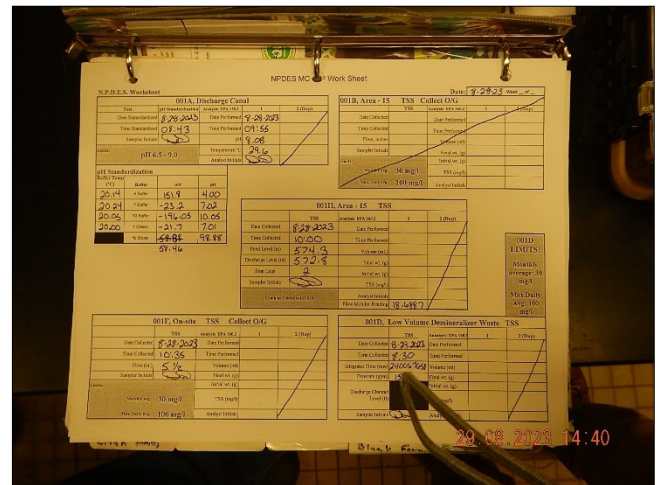
Photograph 21. DTE - Monroe Plant DSCN0107.JPG
Description: View of sampling kit prepped for use in the field.



Photograph 23. DTE - Monroe Plant DSCN0109.JPG
Description: Completed bench sheet for total residual chlorine maintained in the laboratory.



Photograph 22. DTE - Monroe DSCN0108.JPG
Description: View of the August 2023 laboratory test log maintained in the laboratory.



Photograph 24. DTE - Monroe Plant DSCN0110.JPG
Description: Completed NPDES MC Work Sheet maintained in the laboratory.

DTE Electric Company – Monroe Plant, Inspection Report Photo Log

August 29 and 30, 2023



Photograph 25. DTE - Monroe Plant DSCN0111.JPG
Description: View, facing southeast, of process swale channel.



Photograph 27. DTE - Monroe Plant DSCN0113.JPG
Description: View, facing west, of the inactive bottom ash basins and south process pond.



Photograph 26. DTE - Monroe Plant DSCN0112.JPG
Description: View, facing northwest, of process swale channel.



Photograph 28. DTE - Monroe Plant DSCN0114.JPG
Description: General view, facing north, of the Monroe Power Plant.

DTE Electric Company – Monroe Plant, Inspection Report Photo Log

August 29 and 30, 2023



Photograph 29. DTE - Monroe Plant DSCN0115.JPG
Description: General view, facing north, of the Monroe Power Plant.



Photograph 31. DTE - Monroe Plant DSCN0117.JPG
Description: View, facing west, of the discharge canal side of 001H. Discoloration was visible in the area where the South Process Pond water entered the canal.



Photograph 30. DTE - Monroe Plant DSCN0116.JPG
Description: View, facing west, of NPDES sampling station point 001H (001H) north of Outfall 001B from the south process pond side.



Photograph 32. DTE - Monroe Plant DSCN0118.JPG
Description: View of 001H facing east towards the south process pond.

DTE Electric Company – Monroe Plant, Inspection Report Photo Log

August 29 and 30, 2023



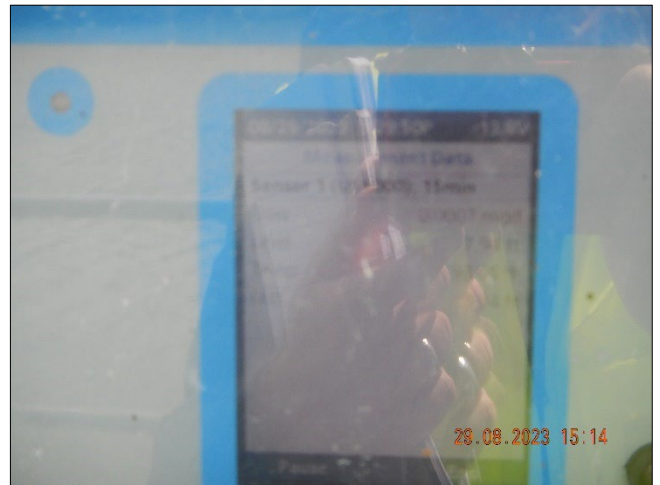
Photograph 33. DTE - Monroe Plant DSCN0119.JPG
Description: Additional view of the same location seen in Photograph 31.



Photograph 35. DTE - Monroe Plant DSCN0121.JPG
Description: Additional view of the south process pond by NPDES Monitoring Point 001H, facing southeast.



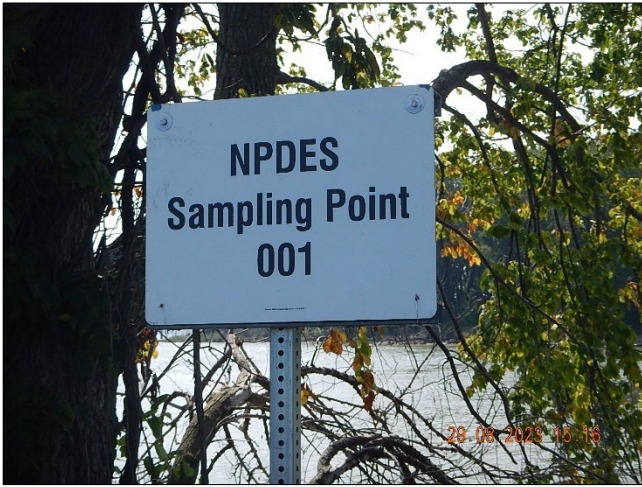
Photograph 34. DTE - Monroe Plant DSCN0120.JPG
Description: Additional view of the same location seen in Photograph 31 and 33.



Photograph 36. DTE - Monroe Plant DSCN0122.JPG
Description: View of flow meter at 001H.

DTE Electric Company – Monroe Plant, Inspection Report Photo Log

August 29 and 30, 2023



Photograph 37. DTE - Monroe Plant DSCN0123.JPG
Description: View, facing west, of the NPDES Sampling Point 001 (001). The drainage canal is located just beyond the sign.



Photograph 39. DTE - Monroe Plant DSCN0125.JPG
Description: View, facing north, of the walkway next to the inactive bottom ash basin.



Photograph 38. DTE - Monroe Plant DSCN0124.JPG
Description: View, facing west, of 001 where the Facility representatives stated they collect samples.



Photograph 40. DTE - Monroe Plant DSCN0126.JPG
Description: General view of SS#3.

DTE Electric Company – Monroe Plant, Inspection Report Photo Log

August 29 and 30, 2023



Photograph 41. DTE - Monroe Plant DSCN0127.JPG
Description: General view of the SS#3 skimmer.



Photograph 43. DTE - Monroe Plant DSCN0129.JPG
Description: General view of the generating building looking west from SS#3.



Photograph 42. DTE - Monroe Plant DSCN0128.JPG
Description: General view of the double-wall used oil tank at SS#3.



Photograph 44. DTE - Monroe Plant DSCN0130.JPG
Description: General view of SS#2.

DTE Electric Company – Monroe Plant, Inspection Report Photo Log

August 29 and 30, 2023



Photograph 45. DTE - Monroe Plant DSCN0131.JPG
Description: General view of the SS#2 skimmer.



Photograph 47. DTE - Monroe Plant DSCN0133.JPG
Description: View of SS#1.



Photograph 46. DTE - Monroe Plant DSCN0132.JPG
Description: View of the concrete containment area around the SS#2 single-wall used oil tank.



Photograph 48. DTE - Monroe Plant DSCN0134.JPG
Description: View, looking northeast, at the Main Plant and PAC building in front of it. Roof drains on the northwestern side of the turbine house roof (circled) are piped to SS#1.

DTE Electric Company – Monroe Plant, Inspection Report Photo Log

August 29 and 30, 2023



Photograph 49. DTE - Monroe Plant DSCN0135.JPG
Description: General view inside SS#1.



Photograph 51. DTE - Monroe Plant DSCN0137.JPG
Description: General view of the SS#1 skimmer.



Photograph 50. DTE - Monroe Plant DSCN0136.JPG
Description: General view inside SS#1.



Photograph 52. DTE - Monroe Plant DSCN0138.JPG
Description: General view of the water surface inside SS#1.

DTE Electric Company – Monroe Plant, Inspection Report Photo Log

August 29 and 30, 2023



Photograph 53. DTE - Monroe Plant DSCN0139.JPG
Description: General view of water entering SS#1.



Photograph 55. DTE - Monroe Plant DSCN0141.JPG
Description: View, facing east, at the channel between the Fly Ash Basin and Outfall 001F.



Photograph 54. DTE - Monroe Plant DSCN0140.JPG
Description: Stormwater pump house at the southern corner of the Off-site Fly Ash Basin. The Off-site Fly Ash Basin is west and across the discharge canal from the Main Plant.



Photograph 56. DTE - Monroe Plant DSCN0142.JPG
Description: Closer view looking east at the channel between the Fly Ash Basin and Outfall 001F.

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Photograph 57. DTE - Monroe Plant DSCN0143.JPG
Description: General view looking west across the Fly Ash Basin from the Box Weirs Discharge Control Structure.



Photograph 59. DTE - Monroe Plant DSCN0145.JPG
Description: General view of outflow from the Box Weirs Discharge Control Structure to the channel between the Fly Ash Basin and Outfall 001F.



Photograph 58. DTE - Monroe Plant DSCN0144.JPG
Description: General view looking northwest across the Fly Ash Basin from the Box Weirs Discharge Control Structure.



Photograph 60. DTE - Monroe Plant DSCN0146.JPG
Description: The Box Weirs Discharge Control Structure uses a three stop log structure to control the elevation of the Fly Ash Basin.

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Photograph 61. DTE - Monroe Plant DSCN0147.JPG
Description: View, facing east, of NPDES Sampling Point 001F and the Discharge Canal in the background.



Photograph 63. DTE - Monroe Plant DSCN0149.JPG
Description: View, facing southeast, of the Outfall 001F staff gage and effluent sampling weir (circled).



Photograph 62. DTE - Monroe Plant DSCN0148.JPG
Description: View, facing south, of the channel between the Fly Ash Basin and Outfall 001F, just upstream of Outfall 001F.



Photograph 64. DTE - Monroe Plant DSCN0150.JPG
Description: Closer view facing southeast of the Outfall 001F staff gage and effluent sampling weir (circled).

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Photograph 65. DTE - Monroe Plant DSCN0151.JPG
Description: View, facing south, of the downstream side of the Outfall 001F effluent weir.



Photograph 67. DTE - Monroe Plant DSCN0153.JPG
Description: View, facing west, from the Outfall 001F effluent sampling weir at the boom placed across the discharge channel to detain floatable material.



Photograph 66. DTE - Monroe Plant DSCN0152.JPG
Description: Close view of the Outfall 001F effluent weir. The permittee referred to the weir as "v notch" but looked to be a rectangular weir.



Photograph 68. DTE - Monroe Plant DSCN0154.JPG
Description: View looking southeast at water flowing into the Discharge Canal from Outfall 001F.

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Photograph 69. DTE - Monroe Plant DSCN0155.JPG
Description: View, facing east, at the Monroe Plant from underneath the four fly ash slurry lines that deliver fly ash from the Main Plant to the Fly Ash Basin.



Photograph 71. DTE – Monroe Plant DSCN0157.JPG
Description: View, facing southeast, across the CCR Vertical Extension. The CCR Vertical Extension is northwest of the Fly Ash Basin.



Photograph 70. DTE - Monroe Plant DSCN0156.JPG
Description: View, facing east, across the Discharge Canal from Outfall 001F towards Outfall 001B (circled).



Photograph 72. DTE – Monroe Plant DSCN0158.JPG
Description: The CCR Vertical Extension is used to dispose of bottom ash. Close view of bottom ash at the CCR Vertical Extension.

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Photograph 73. DTE – Monroe Plant
DSCN0159.JPG

Description: View, facing west, across the CCR Vertical Extension.



Photograph 75. DTE – Monroe Plant
DSCN0161.JPG

Description: View, facing northeast, from the CCR Vertical Extension toward Plum Creek and the Monroe Plant.



Photograph 74. DTE – Monroe Plant
DSCN0160.JPG

Description: View, facing south, across the CCR Vertical Extension.



Photograph 76. DTE - Monroe Plant DSCN0162.JPG

Description: General view of a spill kit at the CCR Vertical Extension equipment staging area.

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Photograph 77. DTE - Monroe Plant DSCN0163.JPG
Description: General view of the double wall diesel tank at the CCR Vertical Extension equipment staging area.



Photograph 79. DTE - Monroe Plant DSCN0165.JPG
Description: View, facing west, of NPDES Sampling Point 001A (001A).



Photograph 78. DTE - Monroe Plant DSCN0164.JPG
Description: The portable toilet at the CCR Vertical Extension equipment staging area was secured to the ground with tiedowns and stakes.



Photograph 80. DTE - Monroe Plant DSCN0166.JPG
Description: View, facing west, of the wastewater treatment plant outfalls into the discharge canal.

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Photograph 81. DTE - Monroe Plant DSCN0167.JPG
Description: View, facing east, at the cooling water discharge canal.



Photograph 83. DTE - Monroe Plant DSCN0169.JPG
Description: View on the western side of the cooling water discharge canal. This area is directly after the location where samples were collected according to site representatives.



Photograph 82. DTE - Monroe Plant DSCN0168.JPG
Description: General view, facing west, of where the discharge canal and cooling water discharge meet beyond 001A.



Photograph 84. DTE - Monroe Plant DSCN0170.JPG
Description: General view, facing west, of the cooling water discharge canal from 001A. Booms (circled) were parallel to flow instead of perpendicular.

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Photograph 85. DTE - Monroe Plant DSCN0171.JPG
Description: View, facing north, of cooling water intake location where water is taken from the River Raisin.



Photograph 87. DTE - Monroe Plant DSCN0173.JPG
Description: Traveling screen next to the channel on the north side of the screen house building.



Photograph 86. DTE - Monroe Plant DSCN0172.JPG
Description: View, facing south, of the cooling water intakes.



Photograph 88. DTE - Monroe Plant DSCN0174.JPG
Description: General view inside the Number 3 and 4 screenhouse building.

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Photograph 89. DTE - Monroe Plant DSCN0175.JPG
Description: View, facing north, of the Coal Fines Washdown Pond.



Photograph 91. DTE - Monroe Plant DSCN0177.JPG
Description: View, facing south, of urea being offloaded into the U2A Building.



Photograph 90. DTE - Monroe Plant DSCN0176.JPG
Description: Coal fines on the ground adjacent to the U2A Building. Runoff from this area goes to SS#4.



Photograph 92. DTE - Monroe Plant DSCN0178.JPG
Description: View, facing north, of Warehouse B with totes and hoppers stored outside without cover or containment.

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Photograph 93. DTE - Monroe Plant DSCN0179.JPG
Description: Coal fines on the ground, immediately east of the Coal Fines Washdown Pond (circled, see also Photograph 89).



Photograph 95. DTE - Monroe Plant DSCN0181.JPG
Description: Up-close view of totes seen in Photograph 92.



Photograph 94. DTE - Monroe Plant DSCN0180.JPG
Description: Up-close view of totes seen in Photograph 92.



Photograph 96. DTE - Monroe Plant DSCN0182.JPG
Description: Up-close view of hoppers seen in Photograph 92.

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Coal Fines
Washdown Pad

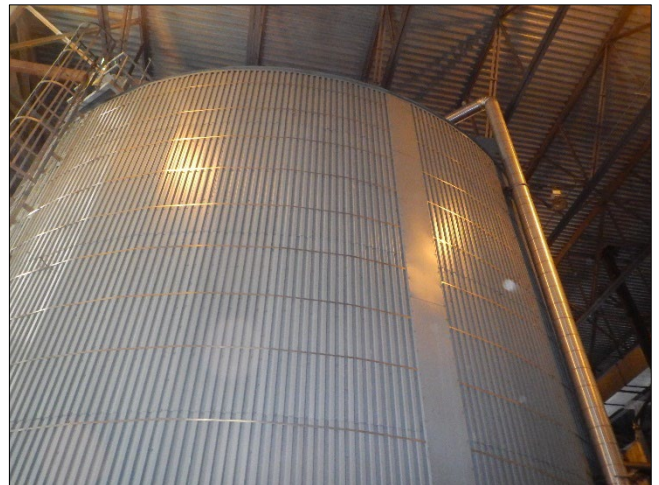
Photograph 97. DTE - Monroe Plant DSCN0183.JPG
Description: View, facing southwest, of the Generating Building. The conduit from the coal conveyor belt to the Coal Fines Washdown Pad is circled.



Photograph 99. DTE - Monroe Plant DSCN0185.JPG
Description: The Process Swale starts east of SS#4.



Photograph 98. DTE - Monroe Plant DSCN0184.JPG
Description: Additional view of the Generating Building, as seen in Photograph 97.



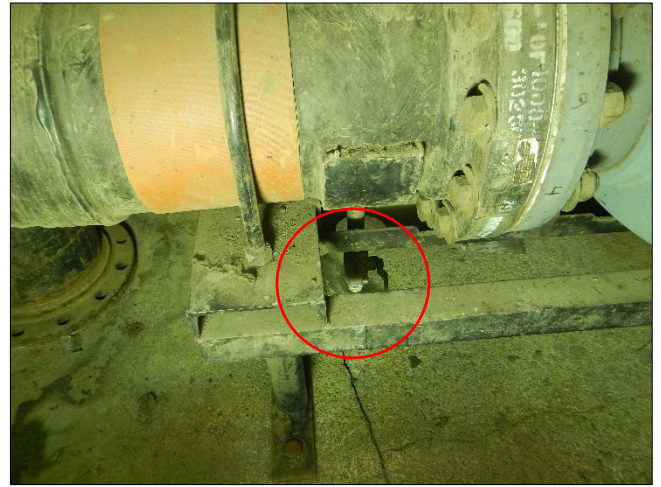
Photograph 100. DTE - Monroe Plant DSCN0186.JPG
Description: 100,000 gallon urea tank inside of the U2A Building.

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Photograph 101. DTE - Monroe Plant DSCN0187.JPG
Description: Floor drains inside the Generating Building connect to the Oily Waste Treatment System.



Photograph 103. DTE - Monroe Plant DSCN0189.JPG
Description: 001D samples are collected from a valve (circled).



Photograph 102. DTE - Monroe Plant DSCN0188.JPG
Description: General view of NPDES Sampling Point 001D inside the Generating Building. Flow is monitored with a mag meter.



Photograph 104. DTE - Monroe Plant DSCN0190.JPG
Description: Flow rate through NPDES Sampling Point 001D.

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Photograph 105. DTE - Monroe Plant DSCN0191.JPG
Description: General view of the centrifuges and OWSs inside the Generating Building.



Photograph 107. DTE - Monroe Plant DSCN0193.JPG
Description: The Bottom Ash Transfer Pad is equipped with a sump in each corner (circled). The sumps pump stormwater back to the sedimentation basins.



Photograph 106. DTE - Monroe Plant DSCN0192.JPG
Description: View, facing south, of the Bottom Ash transfer Pad.



Photograph 108. DTE - Monroe Plant DSCN0194.JPG
Description: View, facing east, of the Bottom Ash Transfer Area sedimentation basins.

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Photograph 109. DTE - Monroe Plant DSCN0195.JPG
Description: Additional view, facing east, of the Bottom Ash Transfer area sedimentation basins see in Photograph 108.



Photograph 111. DTE - Monroe Plant DSCN0197.JPG
Description: View, facing south, of the CCR Transfer Pad and Bottom Ash Transfer Pad.



Photograph 110. DTE - Monroe Plant DSCN0196.JPG
Description: View, facing west, of the Bottom Ash Transfer Area sedimentation basins.



Photograph 112. DTE - Monroe Plant DSCN0198.JPG
Description: Additional view, facing west, of the Bottom Ash Transfer Area sedimentation basins seen in Photograph 110.

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Photograph 113. DTE - Monroe Plant DSCN0199.JPG
Description: View of the tail end of the Bottom Ash Transfer Area sedimentation basins.



Photograph 115. DTE - Monroe Plant DSCN0201.JPG
Description: View of the equipment shed and spill kits on the west side of the Bottom Ash Transfer Area sedimentation basins.



Photograph 114. DTE - Monroe Plant DSCN0200.JPG
Description: General view of the Monroe Plant across the Bottom Ash Transfer Area sedimentation basins.



Photograph 116. DTE - Monroe Plant RIMG3193.JPG
Description: View of standing water on the drainage canal side of the inactive bottom ash basin.

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Photograph 117. DTE - Monroe Plant RIMG3194.JPG
Description: View of additional leaks in the containment wall on the western side of the inactive bottom ash basin.



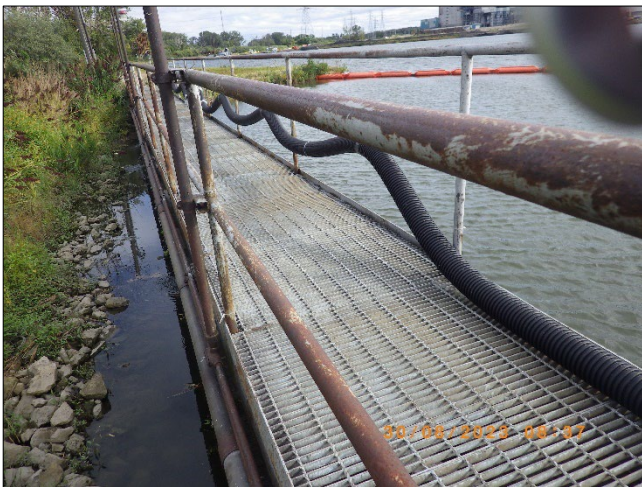
Photograph 118. DTE - Monroe Plant RIMG3195.JPG
Description: View of additional leaks in the containment wall on the western side of the inactive bottom ash basin.

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Photograph 119. DTE - Monroe Plant RIMG3196.JPG
Description: View of additional leaks in the containment wall on the western side of the inactive bottom ash basin.



Photograph 120. DTE - Monroe Plant RIMG3197.JPG
Description: General view of walkway on the western side of the inactive bottom ash basin.



Photograph 121. DTE - Monroe Plant RIMG3198.JPG
Description: View of additional leaks in the containment wall on the western side of the inactive bottom ash basin.



Photograph 122. DTE - Monroe Plant RIMG3199.JPG
Description: View of additional leaks in the containment wall on the western side of the inactive bottom ash basin.

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Photograph 123. DTE - Monroe Plant RIMG3200.JPG
Description: View of water collected by a facility representative using a plastic bottle for a visual aid regarding the darker colored water in discharge canal by 001H. Note this is not the bottle or sampling method that would be used for NPDES compliance samples.



Photograph 124. DTE - Monroe Plant RIMG3201.JPG
Description: View of water collected from the dark colored water in the discharge canal by 001H on the left and downstream by 001 on the right. The water was collected by a facility representative for a visual aid during the inspection, these are not the bottles or sampling method that would be used for NPDES compliance samples.

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Photograph 125. DTE - Monroe Plant RIMG3202.JPG
Description: View of the water discoloration by 001H when the plastic water bottle samples were taken on August 30, 2023.



Photograph 126. DTE - Monroe Plant RIMG3203.JPG
Description: View of water collected from the dark colored water in the discharge canal by 001H on the left and downstream by 001 on the right. The water was collected by a facility representative for a visual aid during the inspection, these are not the bottles or sampling method that would be used for NPDES compliance samples.