

Application Type     **New**      
 Facility Type     **Storm Water**      
 Major / Minor     **Minor**    

**NPDES PERMIT FACT SHEET  
 INDIVIDUAL INDUSTRIAL WASTE (IW)  
 AND IW STORMWATER**

Application No.     **PA0253839**      
 APS ID     **1075907**      
 Authorization ID     **1417974**    

**Applicant and Facility Information**

Applicant Name	<u>    <b>Diamond Mulch, Inc.</b>    </u>	Facility Name	<u>    <b>Wood Waste Processing Facility</b>    </u>
Applicant Address	<u>    PO Box 1080 Mars, PA 16046-1080    </u>	Facility Address	<u>    1 Hershey Road Indianola, PA 15051-9745    </u>
Applicant Contact	<u>    Elizabeth R. Bertha    </u>	Facility Contact	<u>    Wendy Dunlap    </u>
Applicant Phone	<u>    (724) 452-0899 ext. 17; (724) 816-6149    </u>	Facility Phone	<u>    (412) 767-8834; (412) 335-7805    </u>
Applicant Email	<u>    <b>ebertha@senecalandfill.com</b>    </u>	Facility Email	<u>    <b>wendyd@diamondmulch.com</b>    </u>
Client ID	<u>    258181    </u>	Site ID	<u>    706336    </u>
SIC Code	<u>    4953, 2499    </u>	Municipality	<u>    Indiana Township    </u>
SIC Description	<u>    Trans. &amp; Utilities - Refuse Systems; Manufacturing - Wood Products, Not Elsewhere Classified,    </u>	County	<u>    Allegheny    </u>
Date Application Received	<u>    May 27, 2008    </u>	EPA Waived?	<u>    Yes    </u>
Date Application Accepted	<u>    _____     _____     _____    </u>	If No, Reason	<u>    _____     _____     _____    </u>
Purpose of Application	<u>    New NPDES permit for existing discharges of storm water associated with industrial activities.    </u>		

**Summary of Review**


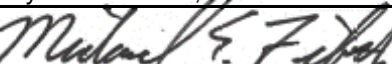
On May 28, 2008, on behalf of Diamond Mulch, Inc. (DMI), SE Technologies, Inc. submitted an application dated May 23, 2008 for a new NPDES permit for discharges from DMI's Wood Waste Processing Facility (Facility) in Indianola, PA. On November 4, 2022, DMI submitted an updated NPDES permit application per DEP's request.

The Facility produces wood mulch products from clean wood wastes (e.g., tree trimming wastes, stumps, and clean wood pallets). The wastes are processed via grinding, shredding, and aging to generate a saleable mulch product. The mulch is sold to regional landscape supply companies and contractors. Water is added during the process (whether by rainfall or from collected storm water) to reduce dust emissions, reduce the potential for fire, and to help age the mulch product. During the mulching process, a significant volume of fines (sawdust) is generated. The fines are not suitable for sale and are segregated from the mulch product and mixed with other ingredients to produce an enriched topsoil product.

In addition to the mulching and enriched topsoil operations, the facility historically produced compost for commercial sale. DMI has approval to conduct compost and concrete operations at the site, but those operations are not currently conducted.

Wood wastes are received by truck and staged north of the mulching pad or in 20 cubic yard roll-off boxes staged in an area immediately south of the main entrance. All mulch processing is performed on an approximate 1.6-acre concrete pad. The pad is designed to collect storm water that is used as the primary water source for process water needs. Leachate and storm water collected on the pad is routed to a 38' x 85' x 10' leachate storage tank. During dry periods, water from the tank is used for process operations. If the tank starts to fill, then the water is hauled offsite to the Seneca Landfill.

Mulch is dyed at the site and stored in finishing bins. Mulch dyeing operations are conducted primarily from mid-March to mid-June depending on customer demand. DMI reported dye releases to Deer Creek in March 2019 and May 2020, but operations were modified to route runoff from mulch dyeing to the leachate storage tank.

Approve	Deny	Signatures	Date
✓		 Ryan C. Decker, P.E. / Environmental Engineer	December 13, 2022
X		 Michael E. Fifth, P.E. / Environmental Engineer Manager	December 19, 2022

### Summary of Review

There is an office and a maintenance building onsite, but trucks are not serviced at the Facility. Floor drains in the maintenance building were sealed. There is an outdoor diesel fueling area southwest of the maintenance building with one 6,000-gallon double-walled aboveground diesel fuel tank (for on-road vehicles) and one 1,000-gallon double-walled aboveground diesel fuel tank (for off-road vehicles). Spill kits are kept in a nearby maintenance shed. Two other 1,000-gallon aboveground diesel fuel tanks are located inside the maintenance building along with one 500-gallon waste oil tank, two 300-gallon tanks for hydraulic oil and lube oil, and 55-gallon drums of transmission fluid, gear lube, grease, and anti-freeze.

#### Site History

DMI acquired the Facility from Emery Tree Service, Inc. on October 26, 2007. At the time of acquisition, the Facility had ceased operations in compliance with an administrative order from DEP due to failure to correct violations of the Clean Streams Law, the Solid Waste Management Act, and Municipal Waste General Permit WMGM015D001, which authorized the processing and beneficial use of timber waste and leaf and yard waste. To address the outstanding violations and allow DMI to restart operations at the Facility, DMI and DEP entered into a Consent Order and Agreement (COA) dated October 26, 2007. The COA required DMI to implement various corrective actions including the removal of existing mulch piles, processed soil, and windrows of partially composted material. Leachate collected on the concrete mulching pad and leachate collected in a 20,000-gallon cistern also had to be removed. Among other things, the COA also required DMI to:

- 1) collect monthly samples of water exiting the Deer Creek Culvert (Outfall 001) and analyze the samples for the following parameters: pH, total dissolved solids, suspended solids (TSS), chemical oxygen demand (COD), biochemical oxygen demand (BOD<sub>5</sub>), ammonia, lead, copper, nickel, zinc, aluminum, barium, cobalt, iron, manganese, phenols, and fecal coliform;
- 2) submit a Storm Water Pollution Prevention Plan that included: the identification of all sources of run-on storm water and methods to control run-on storm water; identification of all storm water drainage system inlets and conveyances; identification of the drainage area contributing to each storm water drainage system inlet; identification of potential sources of pollution that may affect the quality of each inlet (e.g., loading/unloading operations, outdoor storage activities, outdoor manufacturing or processing activities, significant dust or particulate generating processes and on-site waste disposal practices); and the identification of BMPs, housekeeping procedures, and control measures currently employed and that could be employed; and
- 3) submit a comprehensive Site Investigation Report to determine the location and source of all pre-existing industrial waste and storm water discharges from the Facility and evaluate the integrity and capacity of the concrete mulching pad, leachate collection lines, cistern, and storm water collection system.

DMI has complied with the requirements of the COA.

#### Facility Discharges

The Facility is bordered to the east by the Pennsylvania Turnpike Commission right-of-way and to the west by Deer Creek (see aerial images later in this Fact Sheet). The drainage characteristics of the site and areas upgradient of the site were described in the COA's required Site Investigation Report submitted by Diamond Mulch as required by the COA as follows:

Property housing the DMI operations is comprised of two distinct topographical areas. All industrial activities (mulching operations, vehicle maintenance, vehicle refueling and enriched topsoil production) take place on a relatively level area that is situated approximately 50 feet above the historic flood plain of Deer Creek. This area appears to have been constructed by hilltop removal just south of the office building and filling of a natural valley north of this building. Much of the fill material is reportedly debris from historic construction projects on the contiguous Turnpike Commission property along the eastern border. Natural drainage from this operational area is a typical radial pattern, discharging down slope to the south, west and north.

The remainder of the property is generally within the historic flood plain of Deer Creek. Natural drainage from this area is generally sheet flow to Deer Creek. Deer Creek flows south along the western edge of the property, approximately 3 miles to a confluence with the Allegheny River. A small area in the northwestern portion of the property appears to have been filled at some time in the past.

There are three (3) known culverts that convey stormwater runoff from the turnpike and the wooded hillside east of the turnpike. All three discharge along the eastern DMI property boundary. The southernmost culvert discharges to an

### Summary of Review

open earthen pit immediately east of the mulch processing equipment. A 24-inch corrugated plastic drainage line receives this discharge as well as discharge from the topsoil processing area. This line extends under the mulch processing pad and discharges to a drop box (inlet) at the entrance drive to the facility. This drop box conveys this discharge, along with runoff from [McClellan] Road and the entrance drive, directly to Deer Creek. The northern culvert discharges to an isolated wetland directly north of the operational area, within the boundaries of the DMI property. It was reported that at one time a culvert existed under [McClellan] Road that drained this area but it has been determined that none exists today. Discharge from the middle culvert discharges to an earthen pit along the eastern boundary of the operational area. From there it is conveyed to a junction box along the northern boundary of the mulch pad.

The discharge pipe to Deer Creek is monitored as Outfall 001 and collects most of the runoff from the upper bench where DMI's operations occur, and runoff from areas upland of DMI that collect in the middle and southern culverts under the turnpike. To differentiate the impacts of turnpike runoff from Facility runoff, additional outfalls will be included in the permit including Outfalls 002, 003, 004, 005, 006 and Internal Monitoring Point 104. Separate from DMI's discrete contributions at those outfalls, it is possible (based on DMI's SWPPP) that there is inflow and infiltration from DMI to the pipelines carrying upgradient runoff under the Facility, which is why Outfall 001 is included in the permit despite the offsite flows present at that location.

Outfall 002 is a catch basin located along the Facility's entrance road (Hershey Road) that collects runoff from that entrance road. The catch basin ties into the discharge pipe that leads to Outfall 001.

Outfall 003 discharges storm water runoff from the fueling area, roof drains from the office/maintenance building, topsoil processing and storage areas, finished mulch storage area, and a gravel parking lot. The outfall discharges over the hillside of the upper bench near the crest of the entrance road onto the lower staging area. This storm water does not flow through Outfall 001.

As the Site Investigation Report states, there are three culverts that route offsite storm water beneath the site to Deer Creek. The northern culvert does not discharge onto the active industrial areas of DMI's property and is not considered in the permit. The earthen pit that receives flow from the middle culvert under the turnpike also receives runoff from DMI's topsoil storage area. DMI's contribution to the pit is identified as Outfall 006. Inflow to the pit from DMI's topsoil storage area might not be a discrete conveyance (e.g., there are no catch basins and pipes in that area), but there are methods to temporarily concentrate sheet flow for sampling.

The earthen pit along the eastern boundary of the operational area that receives flow from the southern culvert under the turnpike also receives runoff from DMI's topsoil processing and storage area and runoff from DMI's eastern perimeter road near the office and maintenance building. DMI's contributions to the earthen pit will be identified as Outfalls 004 and 005 with Internal Monitoring Point 104 drilling down further on DMI's runoff contributions from near the office and maintenance building—contributions that are less likely to be influenced by runoff from the turnpike.

#### Permit Type

Even though the Facility only discharges storm water associated with industrial activities, DEP's "PAG-03 General Permit for Discharges of Stormwater Associated with Industrial Activity" that would normally authorize such discharges is currently expired. Due to its expired status, DEP cannot approve any new coverage under the PAG-03 until it is renewed. Therefore, the Facility will be issued an individual industrial storm water permit. DEP further notes that the requirements of the individual permit deviate from the requirements of the PAG-03 due to site-specific factors, including, but not limited to, monitoring requirements that account for the impairment of the receiving stream, Deer Creek. The imposition of additional requirements warrants the issuance of an individual industrial storm water permit.

#### Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

**Discharge, Receiving Waters and Water Supply Information**

Outfall No.	<u>001</u>	Design Flow (MGD)	<u>Variable</u>
Latitude	<u>40° 33' 58"</u>	Longitude	<u>-79° 51' 26"</u>
Quad Name	<u>New Kensington West</u>	Quad Code	<u>1407</u>
Wastewater Description: <u>Storm water runoff from Outfalls 002, 004, 005, and 006</u>			

Receiving Waters	<u>Deer Creek (CWF)</u>	Stream Code	<u>42285</u>
NHD Com ID	<u>123972676</u>	RMI	<u>4.25</u>
Drainage Area	<u>29.8</u>	Yield (cfs/mi <sup>2</sup> )	<u></u>
Q <sub>7-10</sub> Flow (cfs)	<u>0.513</u>	Q <sub>7-10</sub> Basis	<u>USGS StreamStats</u>
Elevation (ft)	<u></u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>18-A</u>	Chapter 93 Class.	<u>CWF</u>
Existing Use	<u></u>	Existing Use Qualifier	<u></u>
Exceptions to Use	<u></u>	Exceptions to Criteria	<u></u>

Assessment Status Aquatic Life: Impaired

Cause(s) of Impairment 1) Siltation (Sediment); 2) Flow Regime Modification (Hydrological Alteration); 3) Turbidity; 4) Total Dissolved Solids (TDS); 5) Metals (Other Than Mercury); 6) Total Dissolved Solids (TDS); 7) Nutrients

Source(s) of Impairment 1) Construction; 2) Construction; 3) Construction; 4) Subsurface (Hardrock) Mining; 5) Acid Mine Drainage; 6) Acid Mine Drainage; 7) Source Unknown

TMDL Status No TMDL Name N/A

Background/Ambient Data	Data Source
pH (SU)	<u></u>
Temperature (°F)	<u></u>
Hardness (mg/L)	<u></u>
Other:	<u></u>

Nearest Downstream Public Water Supply Intake	<u>Wilksburg-Penn Joint Water Authority</u>		
PWS ID	<u>5020056</u>	PWS Withdrawal (MGD)	<u>66.0</u>
PWS Waters	<u>Allegheny River</u>	Flow at Intake (cfs)	<u>2,390</u>
PWS RMI	<u>8.78</u>	Distance from Outfall (mi)	<u>8.78</u>

**Discharge, Receiving Waters and Water Supply Information**

Outfall No.	<u>002</u>	Design Flow (MGD)	<u>Variable</u>
Latitude	<u>40° 33' 58"</u>	Longitude	<u>-79° 51' 21"</u>
Quad Name	<u>New Kensington West</u>	Quad Code	<u>1407</u>

Wastewater Description: Storm water runoff from concrete driveway

Receiving Waters	<u>Deer Creek (CWF)</u>	Stream Code	<u>42285</u>
NHD Com ID	<u>123972676</u>	RMI	<u>4.25 (Outfall 001)</u>
Drainage Area	<u>29.8</u>	Yield (cfs/mi <sup>2</sup> )	<u></u>
Q <sub>7-10</sub> Flow (cfs)	<u>0.513</u>	Q <sub>7-10</sub> Basis	<u>USGS StreamStats</u>
Elevation (ft)	<u></u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>18-A</u>	Chapter 93 Class.	<u>CWF</u>
Existing Use	<u></u>	Existing Use Qualifier	<u></u>
Exceptions to Use	<u></u>	Exceptions to Criteria	<u></u>

Assessment Status Aquatic Life: Impaired

Cause(s) of Impairment 1) Siltation (Sediment); 2) Flow Regime Modification (Hydrological Alteration); 3) Turbidity; 4) Total Dissolved Solids (TDS); 5) Metals (Other Than Mercury); 6) Total Dissolved Solids (TDS); 7) Nutrients

Source(s) of Impairment 1) Construction; 2) Construction; 3) Construction; 4) Subsurface (Hardrock) Mining; 5) Acid Mine Drainage; 6) Acid Mine Drainage; 7) Source Unknown

TMDL Status No TMDL Name N/A

Background/Ambient Data	Data Source
pH (SU)	<u></u>
Temperature (°F)	<u></u>
Hardness (mg/L)	<u></u>
Other:	<u></u>

Nearest Downstream Public Water Supply Intake	<u>Wilksburg-Penn Joint Water Authority</u>
PWS ID	<u>5020056</u>
PWS Waters	<u>Allegheny River</u>
PWS RMI	<u>8.78</u>
PWS Withdrawal (MGD)	<u>66.0</u>
Flow at Intake (cfs)	<u>2,390</u>
Distance from Outfall (mi)	<u>8.78</u>

**Discharge, Receiving Waters and Water Supply Information**

Outfall No.	<u>003</u>	Design Flow (MGD)	<u>Variable</u>
Latitude	<u>40° 33' 56"</u>	Longitude	<u>-79° 51' 20"</u>
Quad Name	<u>New Kensington West</u>	Quad Code	<u>1407</u>

Wastewater Description: Storm water runoff from fueling area, roof drains, topsoil processing and storage, finished mulch storage, and gravel parking lot

Receiving Waters	<u>Deer Creek (CWF)</u>	Stream Code	<u>42285</u>
NHD Com ID	<u>123972673</u>	RMI	<u>4.16</u>
Drainage Area	<u>29.8</u>	Yield (cfs/mi <sup>2</sup> )	<u></u>
Q <sub>7-10</sub> Flow (cfs)	<u>0.513</u>	Q <sub>7-10</sub> Basis	<u>USGS StreamStats</u>
Elevation (ft)	<u></u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>18-A</u>	Chapter 93 Class.	<u>CWF</u>
Existing Use	<u></u>	Existing Use Qualifier	<u></u>
Exceptions to Use	<u></u>	Exceptions to Criteria	<u></u>

Assessment Status Aquatic Life: Impaired

Cause(s) of Impairment 1) Siltation (Sediment); 2) Flow Regime Modification (Hydrological Alteration); 3) Turbidity; 4) Total Dissolved Solids (TDS); 5) Metals (Other Than Mercury); 6) Total Dissolved Solids (TDS); 7) Nutrients

Source(s) of Impairment 1) Construction; 2) Construction; 3) Construction; 4) Subsurface (Hardrock) Mining; 5) Acid Mine Drainage; 6) Acid Mine Drainage; 7) Source Unknown

TMDL Status No TMDL Name N/A

Background/Ambient Data	Data Source
pH (SU)	<u></u>
Temperature (°F)	<u></u>
Hardness (mg/L)	<u></u>
Other:	<u></u>

Nearest Downstream Public Water Supply Intake	<u>Wilksburg-Penn Joint Water Authority</u>		
PWS ID	<u>5020056</u>	PWS Withdrawal (MGD)	<u>66.0</u>
PWS Waters	<u>Allegheny River</u>	Flow at Intake (cfs)	<u>2,390</u>
PWS RMI	<u>8.78</u>	Distance from Outfall (mi)	<u>8.69</u>

**Discharge, Receiving Waters and Water Supply Information**

Outfall No.	<u>004</u>	Design Flow (MGD)	<u>Variable</u>
Latitude	<u>40° 34' 00"</u>	Longitude	<u>-79° 51' 18"</u>
Quad Name	<u>New Kensington West</u>	Quad Code	<u>1407</u>

Wastewater Description: Storm water runoff from topsoil processing and storage areas

Receiving Waters	<u>Deer Creek (CWF)</u>	Stream Code	<u>42285</u>
NHD Com ID	<u>123972676</u>	RMI	<u>4.25 (Outfall 001)</u>
Drainage Area	<u>29.8</u>	Yield (cfs/mi <sup>2</sup> )	<u></u>
Q <sub>7-10</sub> Flow (cfs)	<u>0.513</u>	Q <sub>7-10</sub> Basis	<u>USGS StreamStats</u>
Elevation (ft)	<u></u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>18-A</u>	Chapter 93 Class.	<u>CWF</u>
Existing Use	<u></u>	Existing Use Qualifier	<u></u>
Exceptions to Use	<u></u>	Exceptions to Criteria	<u></u>

Assessment Status Aquatic Life: Impaired

Cause(s) of Impairment 1) Siltation (Sediment); 2) Flow Regime Modification (Hydrological Alteration); 3) Turbidity; 4) Total Dissolved Solids (TDS); 5) Metals (Other Than Mercury); 6) Total Dissolved Solids (TDS); 7) Nutrients

Source(s) of Impairment 1) Construction; 2) Construction; 3) Construction; 4) Subsurface (Hardrock) Mining; 5) Acid Mine Drainage; 6) Acid Mine Drainage; 7) Source Unknown

TMDL Status No TMDL Name N/A

Background/Ambient Data	Data Source
pH (SU)	<u></u>
Temperature (°F)	<u></u>
Hardness (mg/L)	<u></u>
Other:	<u></u>

Nearest Downstream Public Water Supply Intake	<u>Wilksburg-Penn Joint Water Authority</u>
PWS ID	<u>5020056</u>
PWS Waters	<u>Allegheny River</u>
PWS RMI	<u>8.78</u>
PWS Withdrawal (MGD)	<u>66.0</u>
Flow at Intake (cfs)	<u>2,390</u>
Distance from Outfall (mi)	<u>8.78</u>

**Discharge, Receiving Waters and Water Supply Information**

IMP No.	<u>104</u>	Design Flow (MGD)	<u>Variable</u>
Latitude	<u>40° 33' 58"</u>	Longitude	<u>-79° 51' 17"</u>

Wastewater Description: Storm water runoff collected in catch basins near the topsoil processing and storage area and runoff from the compacted soil road

**Discharge, Receiving Waters and Water Supply Information**

Outfall No.	<u>005</u>	Design Flow (MGD)	<u>Variable</u>
Latitude	<u>40° 34' 00"</u>	Longitude	<u>-79° 51' 18"</u>
Quad Name	<u>New Kensington West</u>	Quad Code	<u>1407</u>

Wastewater Description: Storm water runoff from topsoil storage area

Receiving Waters	<u>Deer Creek (CWF)</u>	Stream Code	<u>42285</u>
NHD Com ID	<u>123972676</u>	RMI	<u>4.25 (Outfall 001)</u>
Drainage Area	<u>29.8</u>	Yield (cfs/mi <sup>2</sup> )	<u></u>
Q <sub>7-10</sub> Flow (cfs)	<u>0.513</u>	Q <sub>7-10</sub> Basis	<u>USGS StreamStats</u>
Elevation (ft)	<u></u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>18-A</u>	Chapter 93 Class.	<u>CWF</u>
Existing Use	<u></u>	Existing Use Qualifier	<u></u>
Exceptions to Use	<u></u>	Exceptions to Criteria	<u></u>

Assessment Status Aquatic Life: Impaired

Cause(s) of Impairment 1) Siltation (Sediment); 2) Flow Regime Modification (Hydrological Alteration); 3) Turbidity; 4) Total Dissolved Solids (TDS); 5) Metals (Other Than Mercury); 6) Total Dissolved Solids (TDS); 7) Nutrients

Source(s) of Impairment 1) Construction; 2) Construction; 3) Construction; 4) Subsurface (Hardrock) Mining; 5) Acid Mine Drainage; 6) Acid Mine Drainage; 7) Source Unknown

TMDL Status No TMDL Name N/A

Background/Ambient Data	Data Source
pH (SU)	<u></u>
Temperature (°F)	<u></u>
Hardness (mg/L)	<u></u>
Other:	<u></u>

Nearest Downstream Public Water Supply Intake	<u>Wilksburg-Penn Joint Water Authority</u>
PWS ID	<u>5020056</u>
PWS Waters	<u>Allegheny River</u>
PWS RMI	<u>8.78</u>
PWS Withdrawal (MGD)	<u>66.0</u>
Flow at Intake (cfs)	<u>2,390</u>
Distance from Outfall (mi)	<u>8.78</u>



**Discharge, Receiving Waters and Water Supply Information**

Outfall No.	<u>006</u>	Design Flow (MGD)	<u>Variable</u>
Latitude	<u>40° 34' 4"</u>	Longitude	<u>-79° 51' 20"</u>
Quad Name	<u>New Kensington West</u>	Quad Code	<u>1407</u>

Wastewater Description: Storm water runoff from topsoil storage area

Receiving Waters	<u>Deer Creek (CWF)</u>	Stream Code	<u>42285</u>
NHD Com ID	<u>123972676</u>	RMI	<u>4.25 (Outfall 001)</u>
Drainage Area	<u>29.8</u>	Yield (cfs/mi <sup>2</sup> )	<u></u>
Q <sub>7-10</sub> Flow (cfs)	<u>0.513</u>	Q <sub>7-10</sub> Basis	<u>USGS StreamStats</u>
Elevation (ft)	<u></u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>18-A</u>	Chapter 93 Class.	<u>CWF</u>
Existing Use	<u></u>	Existing Use Qualifier	<u></u>
Exceptions to Use	<u></u>	Exceptions to Criteria	<u></u>

Assessment Status Aquatic Life: Impaired

Cause(s) of Impairment 1) Siltation (Sediment); 2) Flow Regime Modification (Hydrological Alteration); 3) Turbidity; 4) Total Dissolved Solids (TDS); 5) Metals (Other Than Mercury); 6) Total Dissolved Solids (TDS); 7) Nutrients

Source(s) of Impairment 1) Construction; 2) Construction; 3) Construction; 4) Subsurface (Hardrock) Mining; 5) Acid Mine Drainage; 6) Acid Mine Drainage; 7) Source Unknown

TMDL Status No TMDL Name N/A

Background/Ambient Data	Data Source
pH (SU)	<u></u>
Temperature (°F)	<u></u>
Hardness (mg/L)	<u></u>
Other:	<u></u>

Nearest Downstream Public Water Supply Intake	<u>Wilksburg-Penn Joint Water Authority</u>
PWS ID	<u>5020056</u>
PWS Waters	<u>Allegheny River</u>
PWS RMI	<u>8.78</u>
PWS Withdrawal (MGD)	<u>66.0</u>
Flow at Intake (cfs)	<u>2,390</u>
Distance from Outfall (mi)	<u>8.78</u>

**Deer Creek-123972673**  
 Assessment Unit ID: PA-SCR-123972673

**Waterbody Condition:** Impaired (Issues Identified)

**Existing Plans for Restoration:** No

**303(d) Listed:** Yes

**Year Reported:** 2022

**Organization Name (ID):** Pennsylvania (21PA)

**What type of water is this?**  
 Stream/creek/river (0.4455 Miles)

**Where is this water located?**  
 INDIANA TWP, 15051 (county: Allegheny)



**Assessment Information from 2022**

**State or Tribal Nation specific designated uses:** Expand All

**Cold Water Fishes** Impaired

Identified Issues for Use

<u>Impaired Parameters</u>	<u>Plan in Place</u>
Flow Regime Modification	No
Metals	No
Nutrients	No
Siltation	No
Total Dissolved Solids (TDS)	No
Turbidity	No

Other Water Quality Parameters Evaluated  
 No other parameters evaluated for this use.

**Probable sources contributing to impairment from 2022:** Clear Filters

Source	Parameter	Confirmed
Filter...	Filter...	Filter...
Acid Mine Drainage	Metals	Yes
Acid Mine Drainage	Total Dissolved Solids (TDS)	Yes
Construction	Flow Regime Modification	Yes
Construction	Siltation	Yes
Construction	Turbidity	Yes
Source Unknown	Nutrients	Yes
Subsurface (Hardrock) Mining	Total Dissolved Solids (TDS)	Yes

Clear Filters

**Assessment Documents**

No documents are available

**Plans to Restore Water Quality**

**What plans are in place to protect or restore water quality?**  
 No plans specified for this waterbody.

<https://mywaterway.epa.gov/waterbody-report/21PA/PA-SCR-123972673/2022>



Image Source and Date: Google Earth Pro; November 2021. Annotations by DEP.



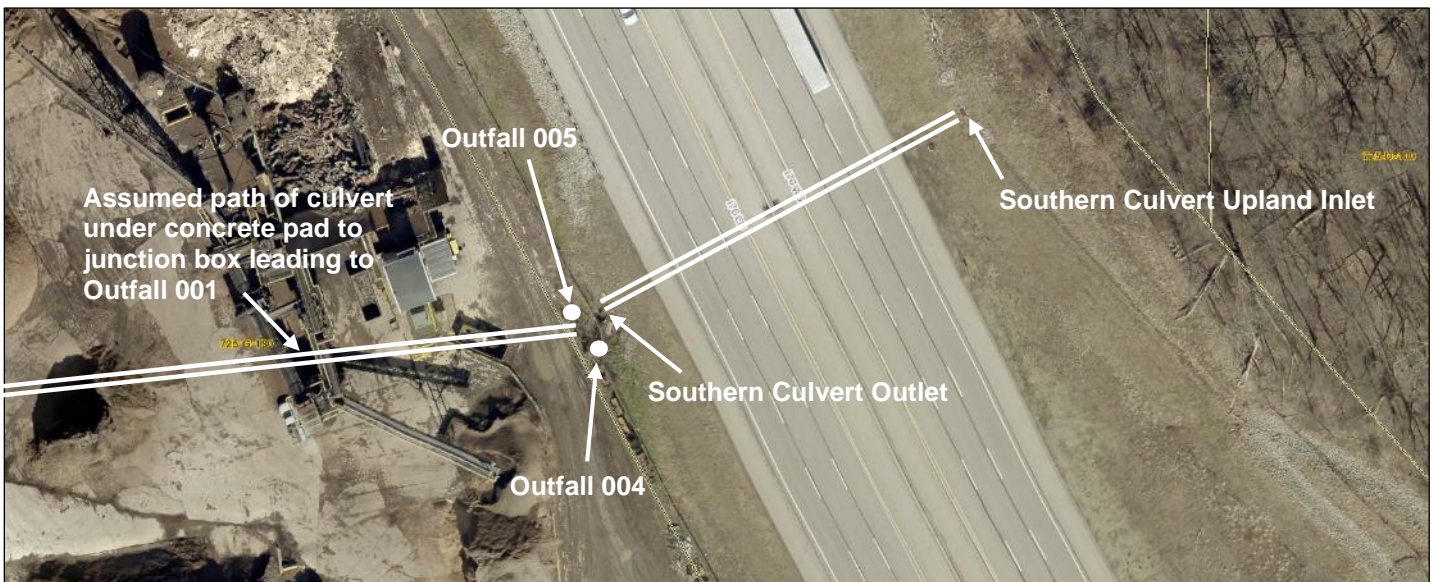
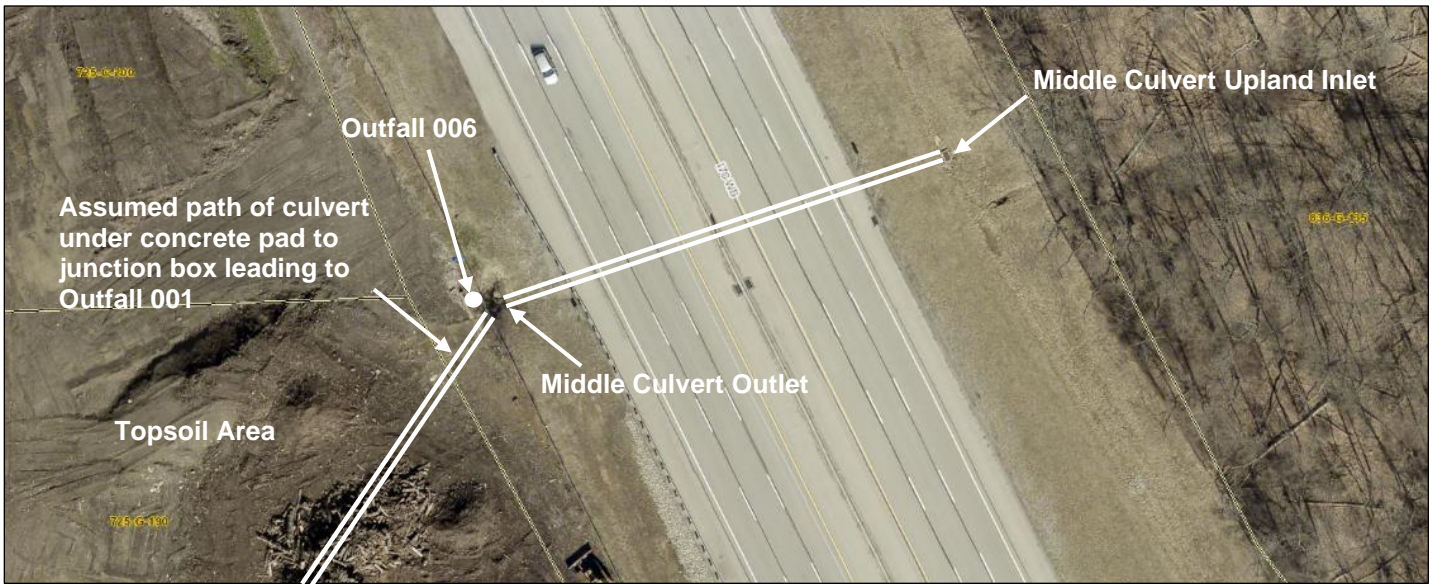
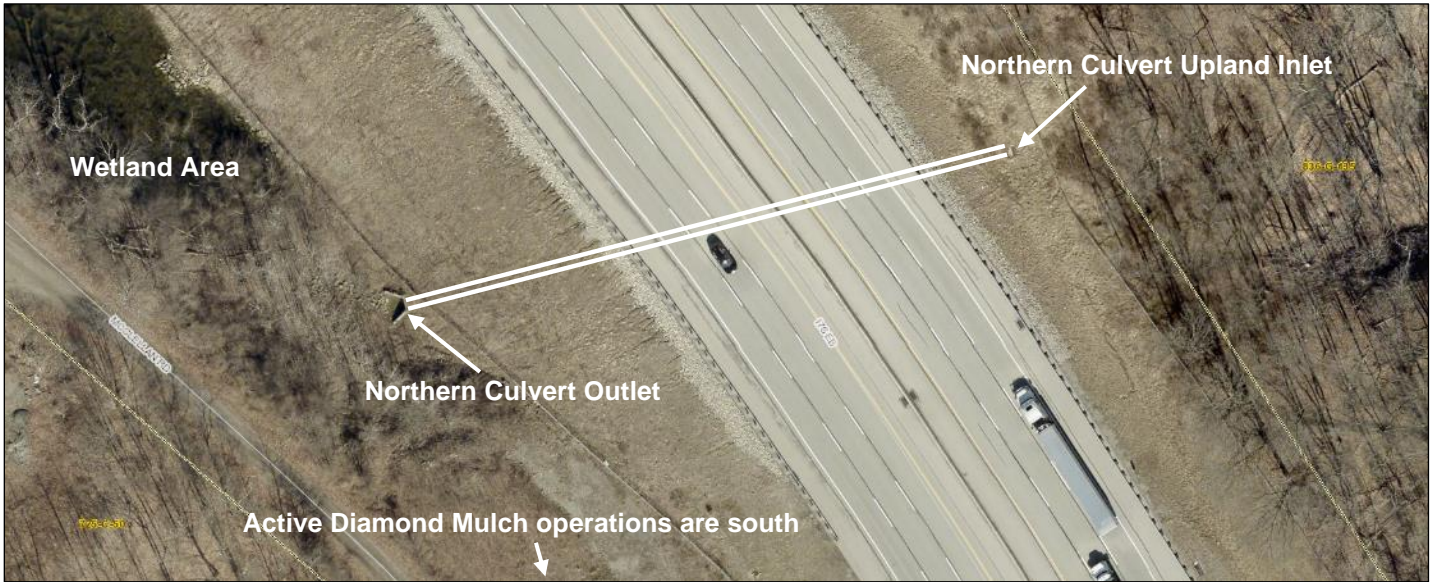
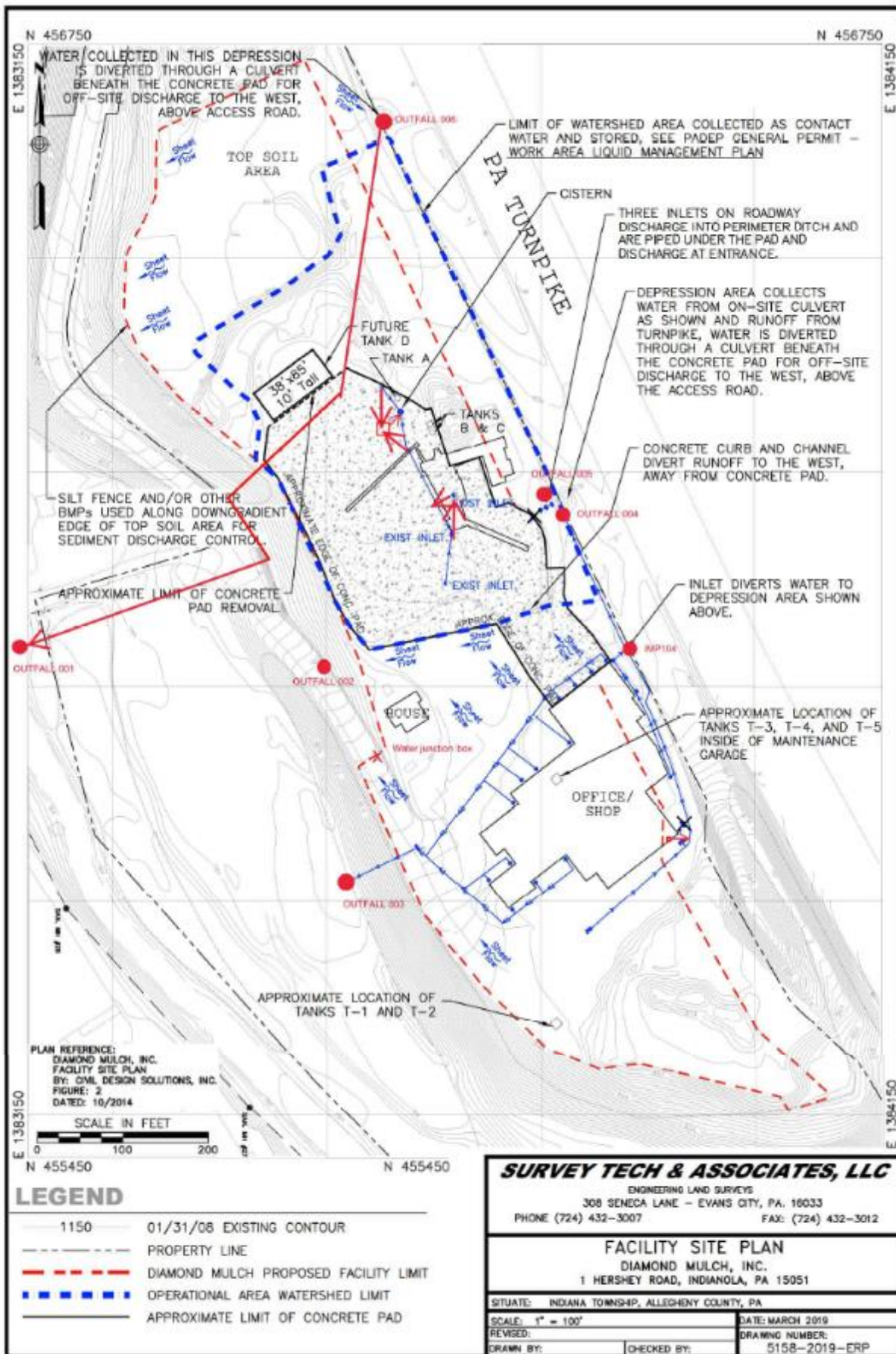
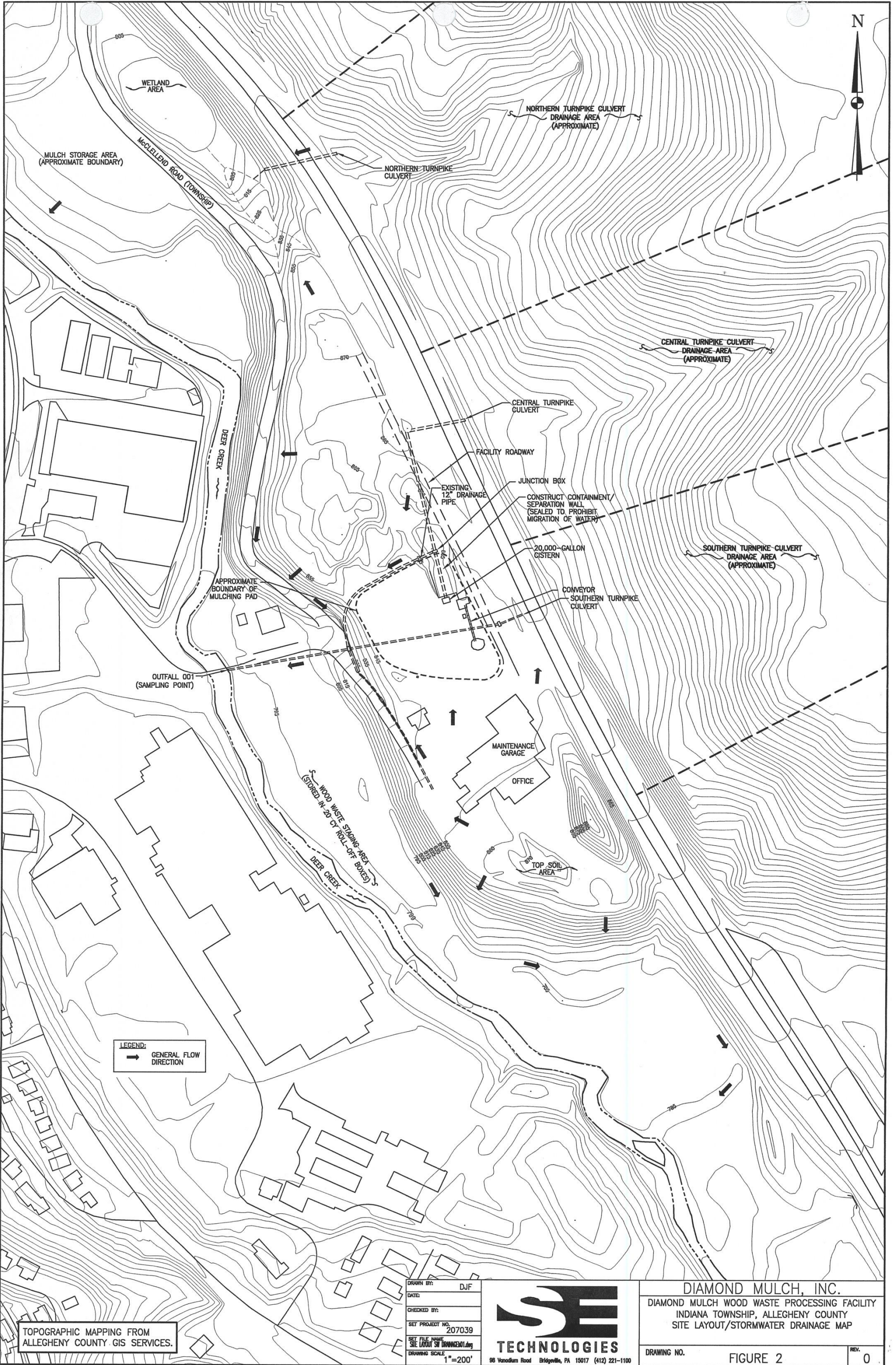


Image Source and Date: Allegheny County GIS Viewer, 2021 Imagery. Annotations by DEP.









TOPOGRAPHIC MAPPING FROM ALLEGHENY COUNTY GIS SERVICES.

DRAWN BY: DJF  
 DATE:  
 CHECKED BY:  
 SET PROJECT NO. 207039  
 SET FILE NAME: SITE LAYOUT SW DRAINAGE.dwg  
 DRAWING SCALE: 1"=200'



DIAMOND MULCH, INC.  
 DIAMOND MULCH WOOD WASTE PROCESSING FACILITY  
 INDIANA TOWNSHIP, ALLEGHENY COUNTY  
 SITE LAYOUT/STORMWATER DRAINAGE MAP

DRAWING NO. FIGURE 2 REV. 0



**Development of Effluent Limitations**

<b>Outfall No.</b> <u>001</u>	<b>Design Flow (MGD)</b> <u>Variable</u>
<b>Latitude</b> <u>40° 33' 58.00"</u>	<b>Longitude</b> <u>-79° 51' 18.00"</u>
<b>Wastewater Description:</b> _____	

**001.A. Technology-Based Effluent Limitations (TBELs)**

There are no Federal Effluent Limitations Guidelines (ELGs) that apply to storm water discharges from this facility. In the absence of applicable ELGs, effluent limits are developed on a case-by-case basis using Best Professional Judgment.

Consistent with 25 Pa. Code § 92a.61(h) and DEP’s policy for permitting storm water discharges associated with industrial activities, minimum standards described in the PAG-03 will be applied to the facility’s storm water discharges.<sup>1</sup> The SIC Code of the Facility identified on the application is 4953 – Refuse Systems, which encompasses facilities that collect and dispose of refuse by processing or destruction. DMI’s Facility collects and processes wood waste materials, but the processing results in mulch that is beneficially reused and not disposed. A secondary SIC Code for the facility would be 2499 – Wood Products, Not Elsewhere Classified, which includes establishments primarily engaged in manufacturing miscellaneous wood products (e.g., mulch). SIC Code 4953 classifies the facility under Appendix C – Landfills and Land Application Sites of the PAG-03 General Permit and SIC Code 2499 classifies the facility under Appendix D – Timber Products of the PAG-03 General Permit.<sup>2</sup> To ensure that there is baseline consistency across the state for all facilities managing waste materials and producing timber products that discharge storm water associated with their industrial activities, the monitoring requirements of Appendices C and D of the PAG-03 will be imposed on the Facility’s storm water discharges. The Appendix C and D monitoring requirements are shown in Tables 1 and 2.

**Table 1. PAG-03 Appendix C – Minimum Monitoring Requirements**

Discharge Parameter	Units	Sample Type	Minimum Measurement Frequency	Benchmark Values
Total Nitrogen	mg/L	1 Grab	1/6 months	—
Total Phosphorus	mg/L	1 Grab	1/6 months	—
pH	S.U.	1 Grab	1/6 months	9.0
Total Suspended Solids	mg/L	1 Grab	1/6 months	100
Chemical Oxygen Demand	mg/L	1 Grab	1/6 months	120
Ammonia-Nitrogen	mg/L	1 Grab	1/6 months	—
Total Iron	mg/L	1 Grab	1/6 months	—

**Table 2. PAG-03 Appendix D – Minimum Monitoring Requirements**

Discharge Parameter	Units	Sample Type	Minimum Measurement Frequency	Benchmark Values
Total Nitrogen	mg/L	1 Grab	1/6 months	—
Total Phosphorus	mg/L	1 Grab	1/6 months	—
pH	S.U.	1 Grab	1/6 months	9.0
Total Suspended Solids	mg/L	1 Grab	1/6 months	100
Chemical Oxygen Demand	mg/L	1 Grab	1/6 months	120

The sampling requirements for Appendix C include all parameters in Appendix D, so the Appendix C sampling requirements will control. Sector-specific Best Management Practices (BMPs) from both appendices will be included in the permit to the extent that they relate to the Facility’s operations. Applicable BMPs will be tailored to DMI’s operations. Flow monitoring also will be required pursuant to 25 Pa. Code § 92a.61(h). The monitoring requirements in Tables 1 and 2 are based on a published draft reissuance version of the PAG-03 General Permit (see **Attachment A** to this Fact Sheet). However, DEP considers the monitoring requirements to be reasonable and does not expect those permit requirements to change for the final version of that permit.

<sup>1</sup> “Standard Operating Procedure (SOP) for Clean Water Program Establishing Effluent Limitations for Individual Industrial Permits” (SOP No. BCW-PMT-032, October 1, 2020, Version 1.6), Part III.C: “The applicable appendix of the PAG-03 General Permit should be considered the minimum standards for limits, benchmarks and monitoring requirements for individual industrial stormwater permits. The application manager may include other limits, benchmarks and monitoring requirements as justified in the fact sheet.”

<sup>2</sup> The determination of which of the PAG-03 General Permit’s appendices applies to a facility is based on a facility’s SIC Code. The PAG-03 is currently in effect under administrative extension.

To the extent that effluent limits are needed to ensure that storm water BMPs are adequately implemented, DEP's Permit Writers' Manual recommends that effluent limits be developed for industrial storm water discharges based on a determination of Best Available Technology (BAT) using Best Professional Judgment (BPJ). BPJ of BAT typically involves the evaluation of end-of-pipe wastewater treatment technologies, but DEP considers the use of BMPs to be BAT for storm water outfalls unless effluent concentrations indicate that BMPs provide inadequate pollution control.

As explained in the introduction to this Fact Sheet, DMI and DEP entered into a Consent Order & Agreement dated October 26, 2007 that required DMI to collect monthly samples and report analytical results for various pollutants. Tables 3 and 4 summarize the monthly analytical results for Outfall 001's discharges between January 2020 and October 2022. Benchmark values representing levels of concern for either ineffective BMP implementation or the potential for acute water quality impacts are shown at the bottom of each table. Results dating back to February 2010 are summarized in **Attachment B** to this Fact Sheet.

**Table 3. Outfall 001 Sampling Results (January 2020 – October 2022)**

Sample Date	pH	TDS	TSS	BOD <sub>5</sub>	COD	Ammonia-N	Phenolics	Aluminum
	s.u.	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1/9/2020	8.38	612	4	2	34	0.25	<0.020	<0.1
7/23/2020	8.51	1070	15	6	110	<0.10	<0.020	<0.1
8/18/2020	8.15	262	5	<2	11	0.22	<0.020	<0.1
9/9/2020	8.43	740	14	3	45	<0.1	<0.020	1.7
10/13/2020	8.41	612	175	7	45	<0.1	<0.020	0.5
11/10/2020	8.44	730	70	3	42	0.1	<0.020	0.2
12/8/2020	8.35	994	48	<2	47	0.21	<0.020	0.3
1/5/2021	8.36	1960	<4	3	63	0.4	<0.020	0.2
2/9/2021	8.12	6290	230	12	159	0.23	<0.020	3.7
3/11/2021	8.36	1630	18	2	31	0.36	<0.020	0.1
4/6/2021	8.4	1720	24	<3	33	0.18	<0.020	<0.1
5/11/2021	8.18	622	12	2	112	0.16	<0.020	0.9
6/8/2021	8.44	1050	116	3	52	0.26	<0.020	1
7/7/2021	8.14	956	584	13	87	<0.10	<0.020	1.6
8/11/2021	8.44	1080	16	2	42	<0.10	<0.020	0.3
9/9/2021	8.53	812	14	4	53	<0.10	<0.020	0.2
10/5/2021	8.45	660	10	<2	35	<0.10	<0.020	0.4
11/16/2021	8.4	794	89	3	66	0.11	<0.020	3.6
12/7/2021	7.98	1620	114	63	282	<0.10	<0.020	2.3
1/4/2022	8.34	396	<2	<2	14	0.32	<0.020	0.3
2/8/2022	8.17	1430	5	<2	18	0.12	<0.020	0.4
3/8/2022	8.33	1540	5	<2	37	0.1	<0.020	2
4/5/2022	8.33	2090	60	<2	31	0.12	<0.020	0.4
5/19/2022	8	618	8	<4.0	13.5	<0.30	<0.0056	0.225
6/27/2022	8.3	1250	6.5	<4.0	23.9	<0.30	<0.005	<0.200
7/21/2022	8.2	1330	6.5	<4.0	19.1	<0.30	<0.0055	<0.200
8/17/2022	7.9	748	38	<4.0	71.5	2.73	0.0067	6.69
9/15/2022	8	768	48.5	<4.0	72.6	<0.30	<0.005	1.24
10/19/2022	8.2	968	<5.0	<4.0	32.6	<0.30	<0.0055	<0.200
<b>Benchmark</b>	<b>6.0 to 9.0<sup>a</sup></b>	<b>—</b>	<b>100<sup>a</sup></b>	<b>30<sup>a</sup></b>	<b>120<sup>a</sup></b>	<b>2.14<sup>b</sup></b>	<b>—</b>	<b>0.75<sup>c</sup></b>

     = result exceeds corresponding benchmark value

<sup>a</sup> PAG-03 benchmark value

<sup>b</sup> EPA MSGP 2021 benchmark value

<sup>c</sup> Acute criterion from 25 Pa. Code § 93.8c

**Table 4. Outfall 001 Sampling Results (January 2020 – October 2022)**

Sample Date	Barium	Cobalt	Copper	Iron	Lead	Manganese	Nickel	Zinc	F. Coliform
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	No./100ml
1/9/2020	0.1	<0.005	<0.01	1.16	<0.02	1.02	<0.01	<0.01	28.6
7/23/2020	0.13	<0.005	<0.01	1.39	<0.02	1.23	<0.01	<0.01	19599.5
8/18/2020	0.05	<0.005	<0.01	0.58	<0.02	0.17	<0.01	<0.01	6.3
9/9/2020	0.21	<0.005	0.01	9.05	<0.02	3.65	<0.01	0.05	465.7



Table 4 (continued). Outfall 001 Sampling Results (January 2020 – October 2022)

Sample Date	Barium	Cobalt	Copper	Iron	Lead	Manganese	Nickel	Zinc	F. Coliform
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	No./100ml
10/13/2020	0.09	<0.005	<0.01	1.31	<0.02	0.23	<0.01	<0.01	48.5
11/10/2020	0.12	<0.005	<0.01	1.37	<0.02	0.72	<0.01	<0.01	53.4
12/8/2020	0.17	<0.005	<0.01	1.66	<0.02	1.57	<0.01	<0.01	55.3
1/5/2021	0.2	<0.005	<0.01	1.56	<0.02	1.01	<0.01	<0.01	286.2
2/9/2021	0.6	<0.005	0.02	17.9	<0.02	3.4	<0.01	0.15	38730
3/11/2021	0.22	<0.005	<0.01	3.66	<0.02	2.28	<0.01	0.01	11
4/6/2021	0.17	<0.005	<0.01	0.65	<0.02	1.96	<0.01	<0.01	21.4
5/11/2021	0.1	<0.005	<0.01	2.49	<0.02	0.49	<0.01	0.01	16115.5
6/8/2021	0.17	<0.005	<0.01	4.15	<0.02	1.79	<0.01	0.02	267.1
7/7/2021	0.21	<0.005	<0.01	5.84	<0.02	3.63	<0.01	0.03	380.1
8/11/2021	0.09	<0.005	<0.01	1.29	<0.02	0.33	<0.01	0.01	12548.5
9/9/2021	0.12	<0.005	<0.01	2.62	<0.02	0.81	<0.01	<0.01	239.3
10/5/2021	0.08	<0.005	<0.01	1.29	<0.02	0.47	<0.01	<0.01	1105.7
11/16/2021	0.12	<0.005	<0.01	4.98	<0.02	0.89	<0.01	0.03	1442.9
12/7/2021	0.2	<0.005	0.01	7.2	<0.02	1.75	<0.01	0.04	3013
1/4/2022	0.08	<0.005	<0.01	0.71	<0.02	0.31	<0.01	<0.01	17.9
2/8/2022	0.12	<0.005	<0.01	0.72	<0.02	0.25	<0.01	<0.01	56.3
3/8/2022	0.11	<0.005	<0.01	1.81	<0.02	0.3	<0.01	0.01	70.3
4/5/2022	0.16	<0.005	<0.01	1.36	<0.02	0.77	<0.01	<0.01	47.4
5/19/2022	0.0836	<0.004	<0.007	0.838	<0.007	0.409	<0.0065	<0.01	15
6/27/2022	0.0997	<0.004	<0.007	0.345	<0.007	0.0895	<0.0065	<0.010	>2420
7/21/2022	0.111	<0.004	<0.007	0.709	<0.007	0.116	0.0407	<0.010	548
8/17/2022	0.117	<0.004	0.0138	6.15	<0.007	0.473	<0.0065	0.033	>2420
9/15/2022	0.112	<0.004	<0.007	1.72	<0.007	0.262	<0.0065	<0.010	>2420
10/19/2022	0.0902	<0.004	<0.007	0.47	<0.007	0.212	<0.0065	<0.010	387
<b>Benchmark</b>	<b>—</b>	<b>—</b>	<b>0.013<sup>a</sup></b>	<b>3.75<sup>b</sup></b>	<b>0.065<sup>a</sup></b>	<b>2.5<sup>a</sup></b>	<b>0.47<sup>a</sup></b>	<b>0.12<sup>a</sup></b>	<b>1,000<sup>a</sup></b>

= result exceeds corresponding benchmark value

<sup>a</sup> Acute criterion from 25 Pa. Code § 93.8c (assuming a hardness of 100 mg/L)

<sup>b</sup> Chronic criterion x 2.0 (estimate of level exhibiting acute impacts)

<sup>c</sup> Instantaneous maximum limit for sewage

Based on the results in Tables 3 and 4, BOD<sub>5</sub>, phenolics, barium, cobalt, copper, lead, nickel, and zinc will not require monitoring under the terms and conditions of the NPDES permit. Monitoring for COD will capture the effects of oxygen-depleting pollutants (e.g., decaying organic wastes) in place of BOD<sub>5</sub>. Phenolics, barium, cobalt, copper, lead, nickel, and zinc were not detectable in the effluent or were not present in significant concentrations when detected.

Monitoring will be required for TDS, aluminum, manganese, and fecal coliform in addition to the baseline monitoring requirements from Appendices C and D of the PAG-03. As discussed in Section 001.B of this Fact Sheet (see below), TDS, aluminum, and manganese are pollutants of concern for the Deer Creek watershed (in combination with total iron, which must be monitored according to the requirements incorporated from Appendix C of the PAG-03). Analytical results collected under the COA indicate that discharges from Outfall 001 may contribute to Deer Creek’s impairment.

Monitoring for fecal coliform bacteria was included among the COA’s sampling requirements due to the potential for high fecal coliform counts from composting operations (e.g., manure feedstocks). DMI does not conducting composting at the Facility, but fecal counts are frequently high, which warrants continued monitoring under the permit. As noted in DEP’s inspection reports, a residence at the site has an onlot sewage system that may contribute to the high fecal coliform counts.

The site maintains various tanks and drums of diesel fuel, hydraulic oil, lube oil, waste oil, transmission fluid, grease, etc. The shredder plant and heavy equipment/vehicles also contain oil. Small tanks and drums are in the maintenance garage. Large diesel tanks are located south of the main building. Since oils and greases are present at the site, monitoring for “oil and grease” will be required.

As explained in the introduction to this Fact Sheet, Outfall 001 is sampled at the outlet of a culvert that drains most of the Facility and areas east of the Facility including a portion of the Pennsylvania Turnpike and upland areas east of the turnpike. DMI generally attributes elevated effluent concentrations at Outfall 001 to run-on from the turnpike and the upland areas.

EPA explains how storm water run-on is handled in a regulatory setting in Table 2, Page 11 of EPA's "Industrial Stormwater Monitoring and Sampling Guide" [EPA 832-B-09-003, April 2021] reproduced below:

**Table 2. Solutions to Typical Stormwater Sampling Problems**

Problem	Solution
Run-on from Neighboring Properties	Ideally, your stormwater samples will contain only stormwater discharge from your site. However, stormwater from a neighboring facility can "run on" and commingle with your own regulated discharge, possibly adding contaminants not found at your facility. You are responsible for any and all pollutants discharged from your site irrespective of the pollutants' origin and whether the other facility has permit coverage. This responsibility includes run-on discharges from neighboring properties if this discharge commingles with your own regulated discharge. To accommodate stormwater run-on, EPA requires as part of the SWPPP site description that you document the locations and sources of run-on. As part of this documentation, if you collect and analyze samples of the run-on, you will need to report all such findings in your SWPPP.

DMI has not characterized run-on from the turnpike, but the run-on sources are documented in DMI's SWPPP. Analyses at Outfall 001 combined with analyses at the other outfall locations where the Facility contributes to Outfall 001 will allow DEP to determine DMI's impact on discharges to Deer Creek.

**001.B. Water Quality-Based Effluent Limitations (WQBELs)**

Generally, DEP does not develop numerical WQBELs for storm water discharges. Pursuant to 25 Pa. Code § 96.4(g), mathematical modeling used to develop WQBELs must be performed at Q<sub>7-10</sub> low flow conditions. Since discharges of storm water would not occur during low flow conditions in the receiving stream, there should be no reasonable potential for storm water discharges to cause or contribute to an exceedance of water quality criteria. When storm water is discharging, stream flow should be augmented above the Q<sub>7-10</sub> design flow by the same storm event that caused the storm water discharge and the augmented stream flow should provide additional assimilative capacity during the storm event. That does not preclude the imposition of numerical WQBELs based on waste load allocations for point source discharges from a Total Maximum Daily Load or the need to control potential violations of general (narrative) water quality criteria in 25 Pa. Code § 93.6 such as dye releases.<sup>3</sup>

Even though no mathematical modeling is performed, the permit will ensure compliance with water quality standards through a combination of BMPs including pollution prevention and exposure minimization, good housekeeping, erosion and sediment control, and spill prevention and response.

Deer Creek Aquatic Life Use Impairment

Deer Creek's aquatic life use is impaired from a variety of sources including siltation, flow regime modification, and turbidity from construction activities; TDS from non-coal mining activities; metals and TDS from acid mine drainage; and nutrients from an unknown source. There is no TMDL to restore Deer Creek's aquatic life use.

To prevent DMI from contributing to Deer Creek's impairment, benchmark monitoring will be required. The PAG-03 General Permit uses benchmark values as indicators of the effectiveness of a facility's BMPs. Benchmark values from the PAG-03 and benchmark values based on DEP's BPJ are shown in Tables 1 through 4. Benchmark values are not effluent limitations and exceedances do not constitute permit violations. However, if sampling demonstrates exceedances of benchmark values for two consecutive monitoring periods, the permittee must submit a corrective action plan within 90 days of the end of the monitoring period triggering the plan. The corrective action plan requirement and the benchmark values will be specified in a condition in Part C of the permit.

<sup>3</sup> § 93.6. **General water quality criteria.**

- (a) Water may not contain substances attributable to point or nonpoint source discharges in concentration or amounts sufficient to be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life.
- (b) In addition to other substances listed within or addressed by this chapter, specific substances to be controlled include, but are not limited to, floating materials, oil, grease, scum and substances that produce color, tastes, odors, turbidity or settle to form deposits.

Benchmark values for TSS, COD, and pH are specified in Appendix C of the PAG-03 (with the addition of a 6.0 s.u. minimum benchmark for pH because Deer Creek is already impacted by acid mine drainage). Additional benchmark values will be specified for aluminum, iron, and manganese based on the potential for acute water quality impacts resulting from DMI's discharges. The benchmark value for total aluminum will be 0.75 mg/L, which is the acute aquatic life criterion for aluminum in 25 Pa. Code § 93.8c. The benchmark value for total iron will be 3.75 mg/L, which is the 30-day average criterion for total iron in 25 Pa. Code § 93.7 multiplied by a factor of 2.5, which approximates an instantaneous maximum value based on the multipliers in Chapter 2, Section C of DEP's "Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits" [Doc. No. 362-0400-001, October 1, 1997]. The benchmark value for manganese will be 2.5 mg/L using the same multiplier with manganese's 1.0 mg/L human health criterion.

Benchmark values will not apply to discharges from Outfall 001 because exceedances of the benchmarks may not be attributable to DMI. However, the benchmark values will apply to Outfalls 002, 003, 004, 005, and 006 and IMP 104.

The nitrogen and phosphorus monitoring imposed pursuant to Appendices C and D of the PAG-03 will be used to evaluate contributions to Deer Creek's nutrient impairment.

**001.C. Effluent Limitations and Monitoring Requirements for Outfall 001**

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61, permit requirements for Outfall 001 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements as summarized in the table below. Since TBELs, WQBELs, and regulatory effluent standards are not being imposed, only monitoring and reporting is required with benchmark monitoring and BMPs.

**Table 5. Effluent Limits and Monitoring Requirements for Outfall 001**

Parameter	Mass (pounds/day)		Concentration (mg/L)			Basis
	Average Monthly	Daily Maximum	Average Monthly	Maximum Daily	Instant Maximum	
Flow (MGD)	—	Report	—	—	—	25 Pa. Code § 92a.61(h)
Total Suspended Solids	—	—	—	—	Report	25 Pa. Code § 92a.61(h); PAG-03, Appendix C & D
Oil and Grease	—	—	—	—	Report	25 Pa. Code § 92a.61(h)
Chemical Oxygen Demand	—	—	—	—	Report	25 Pa. Code § 92a.61(h); PAG-03, Appendix C & D
Ammonia-Nitrogen	—	—	—	—	Report	25 Pa. Code § 92a.61(h); PAG-03, Appendix C & D
Total Nitrogen	—	—	—	—	Report	25 Pa. Code § 92a.61(h); PAG-03, Appendix C & D
Total Phosphorus	—	—	—	—	Report	25 Pa. Code § 92a.61(h); PAG-03, Appendix C & D
Fecal Coliform (No./100mL)	—	—	—	—	Report	25 Pa. Code § 92a.61(h)
Aluminum, Total	—	—	—	—	Report	25 Pa. Code § 92a.61(h)
Iron, Total	—	—	—	—	Report	25 Pa. Code § 92a.61(h); PAG-03, Appendix C & D
Manganese, Total	—	—	—	—	Report	25 Pa. Code § 92a.61(h)
pH	—	—	—	—	Report	25 Pa. Code § 92a.61(h); PAG-03, Appendix C & D

Based on the minimum measurement frequency in Appendices C and D of the PAG-03 General Permit, the sampling frequency and sample type for all parameters (including parameters that must be monitored that are not listed in those appendices) will be 1/6 months using grab samples. Flow should be estimated at the time of sampling.

**Development of Effluent Limitations**

<b>Outfall Nos.</b>	<u>002, 003, 004, 005, &amp; 006, IMP 104</u>	<b>Design Flow (MGD)</b>	<u>Variable</u>
<b>Wastewater Description:</b>	002: storm water runoff from concrete driveway; 003: storm water runoff from fueling area, roof drains, topsoil processing and storage, finished mulch storage, and gravel parking lot; 004: storm water runoff from topsoil processing and storage areas; 005: storm water runoff from topsoil storage area; 006: storm water runoff from topsoil storage area; 104: storm water runoff collected in catch basins near the topsoil processing and storage area and runoff from the compacted soil road		

As explained at the beginning of this Fact Sheet, Outfalls 002, 003, 004, 005, and 006 and IMP 104 were created to separate the impacts of DMI's industrial operations from offsite impacts at combined Outfall 001, which discharges runoff from both the Facility and upland areas that are not on DMI's property.

**SWO.A. Technology-Based Effluent Limitations (TBELs)**

Pursuant to the rationale in Section 001.A of this Fact Sheet, discharges from Outfalls 002, 003, 004, 005, and 006 and IMP 104 will be subject to the semi-annual monitoring requirements and applicable BMPs from Appendices C and D of the PAG-03 General Permit. Monitoring also is required for flow, TDS, aluminum, manganese, fecal coliform, and oil and grease.

**SWO.B. Water Quality-Based Effluent Limitations (WQBELs)**

Pursuant to the rationale in Section 001.B of this Fact Sheet, benchmark monitoring will apply to Outfalls 002, 003, 004, 005, and 006 and IMP 104 as a means for water quality protection. Benchmark values will be identified for TSS, COD, pH, aluminum, iron, and manganese.

**001.C. Effluent Limitations and Monitoring Requirements for Outfall 001**

In accordance with 25 Pa. Code §§ 92a.12 and 92a.61, permit requirements for Outfalls 002, 003, 004, 005, and 006 and IMP 104 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements as summarized in the table below. Since TBELs, WQBELs, and regulatory effluent standards are not being imposed, only monitoring and reporting is required with benchmark monitoring and BMPs.

**Table 6. Effluent Limits and Monitoring Requirements for Outfalls 002, 003, 004, 005, and 006 and IMP 104**

Parameter	Mass (pounds/day)		Concentration (mg/L)			Basis
	Average Monthly	Daily Maximum	Average Monthly	Maximum Daily	Instant Maximum	
Flow (MGD)	—	Report	—	—	—	25 Pa. Code § 92a.61(h)
Total Suspended Solids	—	—	—	—	Report	25 Pa. Code § 92a.61(h); PAG-03, Appendix C & D
Oil and Grease	—	—	—	—	Report	25 Pa. Code § 92a.61(h)
Chemical Oxygen Demand	—	—	—	—	Report	25 Pa. Code § 92a.61(h); PAG-03, Appendix C & D
Ammonia-Nitrogen	—	—	—	—	Report	25 Pa. Code § 92a.61(h); PAG-03, Appendix C & D
Total Nitrogen	—	—	—	—	Report	25 Pa. Code § 92a.61(h); PAG-03, Appendix C & D
Total Phosphorus	—	—	—	—	Report	25 Pa. Code § 92a.61(h); PAG-03, Appendix C & D
Fecal Coliform (No./100mL)	—	—	—	—	Report	25 Pa. Code § 92a.61(h)
Aluminum, Total	—	—	—	—	Report	25 Pa. Code § 92a.61(h)
Iron, Total	—	—	—	—	Report	25 Pa. Code § 92a.61(h); PAG-03, Appendix C & D
Manganese, Total	—	—	—	—	Report	25 Pa. Code § 92a.61(h)
pH	—	—	—	—	Report	25 Pa. Code § 92a.61(h); PAG-03, Appendix C & D

Based on the minimum measurement frequency in Appendices C and D of the PAG-03 General Permit, the sampling frequency and sample type for all parameters (including parameters that must be monitored that are not listed in those appendices) will be 1/6 months using grab samples. Flow should be estimated at the time of sampling.

Tools and References Used to Develop Permit	
<input type="checkbox"/>	WQM for Windows Model (see Attachment [redacted])
<input type="checkbox"/>	Toxics Management Spreadsheet (see Attachment [redacted])
<input type="checkbox"/>	TRC Model Spreadsheet (see Attachment [redacted])
<input type="checkbox"/>	Temperature Model Spreadsheet (see Attachment [redacted])
<input type="checkbox"/>	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
<input checked="" type="checkbox"/>	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
<input type="checkbox"/>	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
<input type="checkbox"/>	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
<input type="checkbox"/>	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
<input type="checkbox"/>	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
<input type="checkbox"/>	Pennsylvania CSO Policy, 385-2000-011, 9/08.
<input type="checkbox"/>	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
<input type="checkbox"/>	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
<input type="checkbox"/>	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
<input type="checkbox"/>	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
<input type="checkbox"/>	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
<input type="checkbox"/>	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
<input type="checkbox"/>	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
<input type="checkbox"/>	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
<input type="checkbox"/>	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
<input type="checkbox"/>	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
<input type="checkbox"/>	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
<input type="checkbox"/>	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
<input type="checkbox"/>	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
<input type="checkbox"/>	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
<input type="checkbox"/>	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
<input type="checkbox"/>	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
<input type="checkbox"/>	Design Stream Flows, 391-2000-023, 9/98.
<input type="checkbox"/>	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
<input type="checkbox"/>	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
<input type="checkbox"/>	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
<input checked="" type="checkbox"/>	SOP: Establishing Effluent Limitations for Individual Industrial Permits", SOP No. BCW-PMT-032, October 1, 2020, Version 1.6
<input type="checkbox"/>	Other: [redacted]

## ATTACHMENT A

### PAG-03 General Permit Appendices C and D

3800-PM-BCW0083d Rev. 8/2022  
 Permit

Permit No.

**APPENDIX C**

**LANDFILLS AND LAND APPLICATION SITES**

**I. APPLICABILITY**

The requirements in Appendix C apply to stormwater discharges associated with industrial activity from Landfills and Land Application Sites that receive or have received industrial waste, including sites subject to regulation under Subtitle D of RCRA, 42 U.S.C. §§ 6941-6949a. Other facilities may be required to comply with this appendix if notified by DEP in writing.

**II. SECTOR-SPECIFIC DISCHARGE PROHIBITIONS**

This General Permit does not cover the following discharges in this sector and an individual NPDES permit is required for such discharges:

- A. Leachate, gas collection condensate, drained free liquids, contaminated ground water, laboratory-derived wastewater, and contact wash water from washing truck and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.
- B. Discharges from landfills that receive only municipal wastes and discharges from open dumps as defined under RCRA (42 U.S.C. § 6903(14)).
- C. Runoff from non-hazardous waste landfills, subject to effluent limitation guidelines in 40 CFR Part 445, Subpart B.

**III. MONITORING REQUIREMENTS**

The permittee must monitor and report analytical results for the pollutants listed below on Discharge Monitoring Reports (DMRs) for representative outfalls, subject to footnotes provided. The benchmark values listed below are not effluent limitations, and exceedances do not constitute permit violations. However, if the permittee's sampling demonstrates exceedances of benchmark values for two or more consecutive monitoring periods, the permittee shall take action in accordance with Part C V.I of this General Permit.

Pollutant	Monitoring Requirements <sup>(1),(2)</sup>		Benchmark Values
	Minimum Measurement Frequency	Sample Type	
Total Nitrogen (mg/L)	1 / 6 months	Grab	XXX
Total Phosphorus (mg/L)	1 / 6 months	Grab	XXX
pH (S.U.)	1 / 6 months	Grab	9.0
Total Suspended Solids (TSS) (mg/L)	1 / 6 months	Grab	100
Chemical Oxygen Demand (COD) (mg/L)	1 / 6 months	Grab	120
Ammonia-Nitrogen (mg/L)	1 / 6 months	Grab	XXX
Total Iron (mg/L)	1 / 6 months	Grab	XXX

Footnotes

- (1) In accordance with Part C V.C, the permittee shall conduct additional monitoring if specified by DEP in the letter authorizing permit coverage or other correspondence.
- (2) This is the minimum number of sampling events required. Permittees may optionally perform additional sampling.



3800-PM-BCW0083d Rev. 8/2022  
Permit

Permit No.

#### IV. SECTOR-SPECIFIC BMPs

In addition to the BMPs contained in Part C II of the General Permit, the permittee shall implement, at a minimum, all of the following BMPs that are applicable to the processes in place at the facility for which coverage under this General Permit is approved.

- A. The permittee shall implement a preventive maintenance program and shall maintain all elements of leachate collection and treatment systems, to prevent commingling of leachate with stormwater, and the integrity and effectiveness of any intermediate or final cover (including repairing the cover as necessary), to minimize the effects of settlement, sinking, and erosion.
- B. Provide temporary stabilization (e.g., temporary seeding, mulching, and placing geotextiles on the inactive portions of stockpiles) for the following in order to minimize discharges of pollutants in stormwater: materials stockpiled for daily, intermediate, and final cover; inactive areas of the landfill; landfills with final covers but where vegetation has yet to establish itself; and land application sites where waste application has been completed but final vegetation has not yet been established.

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3800-PM-BCW0083d Rev. 8/2022  
 Permit

Permit No.

**APPENDIX D**  
**TIMBER PRODUCTS**

**I. APPLICABILITY**

The requirements in Appendix D apply to stormwater discharges associated with industrial activity from Timber Products facilities as identified by the following SIC Codes: 2411, 2421, 2426, 2429, 2431 – 2439 (except 2434), 2441, 2448, 2449, 2451, 2452, 2491, 2493 and 2499. Other facilities may be required to comply with this appendix if notified by DEP in writing.

**II. SECTOR-SPECIFIC DISCHARGE PROHIBITIONS**

This General Permit does not cover the following discharges in this sector and an individual NPDES permit is required for such discharges:

- A. Stormwater discharges from areas where there may be contact with the chemical formulations sprayed to provide surface protection of timber products.
- B. Leachate from product residue storage piles.
- C. Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas, subject to effluent limitation guidelines in 40 CFR Part 429.

**III. SECTOR-SPECIFIC NON-STORMWATER DISCHARGES**

In addition to the authorized non-stormwater discharges identified in Part C I.B, discharges from the spray down of lumber and wood product storage yards where no chemical additives are used in the spray-down waters, no chemicals are applied to the wood during storage, and no debris is present in the discharge are authorized under this General Permit.

**IV. MONITORING REQUIREMENTS**

The permittee must monitor and report analytical results for the pollutants listed below on Discharge Monitoring Reports (DMRs) for representative outfalls, subject to footnotes provided. The benchmark values listed below are not effluent limitations, and exceedances do not constitute permit violations. However, if the permittee's sampling demonstrates exceedances of benchmark values for two or more consecutive monitoring periods, the permittee shall take action in accordance with Part C V.I of this General Permit.

Pollutant	Monitoring Requirements <sup>(1),(2)</sup>		Benchmark Values
	Minimum Measurement Frequency	Sample Type	
Total Nitrogen (mg/L)	1 / 6 months	Grab	XXX
Total Phosphorus (mg/L)	1 / 6 months	Grab	XXX
pH (S.U.)	1 / 6 months	Grab	9.0
Chemical Oxygen Demand (COD) (mg/L)	1 / 6 months	Grab	120
Total Suspended Solids (TSS) (mg/L)	1 / 6 months	Grab	100
Pentachlorophenol (mg/L) <sup>(3)</sup>	1 / 6 months	Grab	XXX
Total Arsenic (mg/L) <sup>(4)</sup>	1 / 6 months	Grab	XXX
Total Chromium (mg/L) <sup>(4)</sup>	1 / 6 months	Grab	XXX
Total Copper (mg/L) <sup>(4)</sup>	1 / 6 months	Grab	XXX

3800-PM-BCW0083d Rev. 8/2022  
Permit

Permit No.

Footnotes

- (1) In accordance with Part C V.C. the permittee shall conduct additional monitoring if specified by DEP in the letter authorizing permit coverage or other correspondence.
- (2) This is the minimum number of sampling events required. Permittees may optionally perform additional sampling.
- (3) Facilities that use chlorophenolic formulations must monitor for Pentachlorophenol. For all other facilities, monitoring for Pentachlorophenol is optional. If monitoring is not conducted, the permittee shall use a No Data Indicator (NODI) code on the DMR in lieu of sample data.
- (4) Facilities that use chromium/copper/arsenic formulations must monitor for Total Arsenic, Total Chromium and Total Copper. For all other facilities, monitoring for Total Arsenic, Total Chromium and Total Copper is optional. If monitoring is not conducted, the permittee shall use a No Data Indicator (NODI) code on the DMR in lieu of sample data.

**V. SECTOR-SPECIFIC BMPs**

In addition to the BMPs contained in Part C II of the General Permit, the permittee shall implement, at a minimum, all of the following BMPs that are applicable to the processes in place at the facility for which coverage under this General Permit is approved.

- A. Hardwood lumber manufacturers and others who handle hardwood residue must develop and implement (unless otherwise directed by DEP) the applicable BMPs specified in the DEP-approved manual titled "Using Best Management Practices To Prevent And Control Pollution From Hardwood Residue Storage Sites," available through the Pennsylvania Hardwoods Development Council of the Pennsylvania Department of Agriculture.
- B. Substitute non-hazardous wood treatment and preserving chemicals for hazardous chemicals.
- C. Where dip tanks are used, hold wood over collection basins until dripping ceases.
- D. Store treated/preserved wood in covered areas, where practicable, or at a minimum, on impervious surfaces until completely dry.
- E. Expedite remediation of historic outside areas used for wood treating and preserving; remove or cover any contamination sources.
- F. Maximize recycling of treating/preserving solutions and use technologies that minimize fugitive losses.
- G. Provide for run-on and runoff controls in treating/preserving solution application and storage areas.
- H. At mill facilities, use dust control practices to limit fugitive emissions.
- I. Provide specific training to employees in spill prevention and response for hazardous wood treatment chemicals.
- J. In areas where storage, loading and unloading, and material handling occur, perform good housekeeping to minimize the discharge of wood debris, leachate generated from decaying wood materials, and the generation of dust.

## ATTACHMENT B

Consent Order & Agreement  
Monthly Sample Analyses  
February 2010 through October 2022

Sample Date	Field pH	Conductivity	Temp	Lab pH	TDS	TSS	BOD-5	COD	Ammonia-N	Phenolics	Aluminum	Barium	Cobalt	Copper	Iron	Lead	Manganese	Nickel	Zinc	F. Coliform
	s.u.	umhos/cm	deg C	s.u.	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	col/100ml
2/23/2010				8	1900	43	<2	88	5.3	<0.05	2.9	0.16	<0.005	0.007	2.5	0.007	0.46	<0.01	0.038	243
3/31/2010				8.2	3370	15	<2	90	0.8	<0.05	0.15	0.24	<0.005	0.006	2.2	0.003	1.6	<0.01	0.034	<10
4/27/2010				7.9	1400	24	<2	91	0.6	<0.05	0.69	0.14	<0.005	0.006	2.3	0.003	0.8	<0.01	0.029	160000
6/9/2010				7.8	440	76	<2	38	2.6	<0.05	3.4	0.11	<0.005	0.013	6.3	0.008	0.65	<0.01	0.072	110000
9/29/2010				8.3	1300	30	150	520	0.8	0.21	0.84	0.22	<0.005	0.016	4.4	0.01	2.5	<0.01	0.033	>200000
11/30/2010				8.5	500	74	<2	61	0.3	<0.05	4.2	0.099	<0.005	0.016	5.9	0.015	0.29	<0.01	0.057	4000
5/2/2011				8.1	910	8	<2	48	0.8	<0.05	0.3	0.12	<0.005	<0.005	1.5	<0.005	1	<0.01	0.015	160
9/27/2011				8.1	1030	8	2	71.4	0.34	0.05	3.2	0.14	0.005	0.0125	7.13	0.0099	0.565	0.01	0.0495	10
10/14/2011				7.9	764	26	2	68.3	0.43	<0.05	2.74	0.131	0.005	0.0157	4.47	0.0067	0.469	0.01	0.0469	27000
3/27/2013				7.7	2060	6	<60	85.6	0.39	<0.05	0.277	0.141	<0.005	0.0055	1.79	<0.005	0.719	<0.01	0.0225	7000
4/12/2013				8.1	729	19	60	44.3	0.38	<0.05	2.46	0.0679	<0.005	0.0102	3.26	0.0058	0.222	0.01	0.0356	72000
5/23/2013				8	1850	10	60	301	0.5	<0.05	0.245	0.177	<0.005	0.0054	1.78	<0.005	1.02	<0.01	0.0205	2500
6/7/2013				8	1640	8	60	85.6	0.47	<0.05	0.446	0.164	<0.005	0.008	2.11	<0.005	0.718	<0.01	0.0203	38000
7/10/2013				8	272	1380	60	44.3	0.37	<0.05	45.6	0.369	0.0266	0.111	55.9	0.103	1.85	0.0595	0.296	>1200
8/19/2013				7.3	328	82	<60	63.8	0.82	<0.05	6.97	0.122	<0.005	0.016	7.39	0.0118	0.806	0.01	0.0628	<3
9/13/2013				8.1	761	8	60	58.4	0.47	<0.05	0.519	0.109	<0.005	0.0051	2.17	<0.005	0.739	<0.010	0.0197	>6000
10/7/2013				7.8	644	46	60	128	<0.1	<0.05	7.82	0.214	0.0056	0.0105	12.2	0.0164	0.767	0.0125	0.0645	>6000
11/22/2013				8	773	4	60	40.8	0.56	<0.05	0.113	0.104	<0.005	<0.005	0.948	<0.005	0.453	<0.010	0.0176	<3
12/6/2016				7.8	697	14	60	56.2	0.37	<0.05	1.59	0.086	<0.005	0.0071	2.18	<0.005	0.193	<0.010	0.0329	2300
1/10/2014				8	2710	8	60	58.4	0.63	<0.05	0.0942	0.214	<0.005	<0.005	1.08	<0.005	1.04	<0.010	0.0266	290
2/28/2014				7.9	2070	8	60	128	1.1	<0.05	0.162	0.205	<0.005	<0.005	3.9	<0.005	2.03	<0.010	0.0306	450
4/22/2014				6.9	640	80	60	31.5	0.4	<0.05	5.1	0.109	<0.005	0.0155	5.33	0.0122	0.478	<0.010	0.0926	1114
5/6/2014				8	2500	11	20	38.1	0.77	<0.05	0.0949	0.226	<0.005	<0.005	1.55	<0.005	1.72	<0.01	0.0226	47
6/30/2014				8.1	943	6	<10	<25	0.5	<0.05	0.103	0.114	<0.005	<0.005	1.67	<0.005	1.06	<0.010	0.0128	18
7/30/2014				8.2	912	8	13	<25	0.39	<0.05	0.098	0.121	<0.005	<0.005	1.43	<0.005	1.01	<0.010	0.0138	<2
8/26/2014				7.7	627	7	<6	<25	0.29	<0.05	0.128	0.117	<0.005	<0.005	1.59	<0.005	0.894	<0.010	0.0144	42
9/26/2014				8.4	380	6	<6	<25	0.33	<0.05	<0.050	0.097	<0.005	<0.005	0.83	<0.005	0.661	<0.010	0.013	>600
10/27/2014				8.2	849	<4	24	311	1.1	0.11	0.146	0.165	<0.005	<0.005	2.95	<0.005	1.42	<0.010	0.0214	2300
11/25/2014				8.26	1110	6	4	110	0.44	<0.100	<0.1	0.12	<0.005	<0.01	1.61	<0.02	0.71	<0.01	<0.01	13
12/11/2014	8.40	2680.00	7.80	8.41	1400	11	4	65	1.03	<0.020	0.4	0.17	<0.005	<0.01	1.78	<0.02	1.55	<0.01	<0.01	<1
1/12/2015	7.49	9840.00	6.00	8.2	5240	16	6	59	1.11	<0.020	0.2	0.51	<0.005	<0.01	4.78	<0.02	3.88	<0.01	0.02	119.8
2/16/2015	8.46	6540.00	1.70	8.05	3090	12	4	54	2.03	<0.020	<0.1	0.32	<0.005	<0.01	1.96	<0.02	4.46	<0.01	0.02	178.9
3/11/2015	7.55	8090.00	6.10	7.63	4170	15	2	140	0.76	<0.100	0.8	0.19	<0.005	<0.01	2.18	<0.02	0.75	<0.01	0.03	>2419.6
4/9/2015	7.91	2870.00	12.50	8.38	1500	16	2	30	0.47	<0.020	2.4	0.11	<0.005	<0.01	2.86	<0.02	0.6	<0.01	0.01	44.9
6/10/2015	7.63	2570.00	16.50	8.32	1360	<5	2	15	0.43	<0.020	0.1	0.11	<0.005	<0.01	0.92	<0.02	1	<0.01	<0.01	261.3
7/7/2015	7.26	1590.00	18.70	8.26	828	8	4	20	0.47	<0.020	0.2	0.12	<0.005	<0.01	1.33	<0.02	1.44	<0.01	<0.01	14136
8/12/2015	8.80	957.00	19.20	8.22	526	<5	<2	16	0.19	<0.020	<0.1	0.09	<0.005	<0.01	1.18	<0.02	0.73	<0.01	<0.01	3255
9/9/2015	8.70	1197.00	20.00	8.45	744	<5	2	35	<0.10	<0.020	<0.1	0.1	<0.005	<0.01	0.38	<0.02	0.81	<0.01	<0.01	336.6
10/6/2015	8.70	1754.00	16.60	8.43	1030	20	2	35	1.02	<0.020	1.3	0.17	<0.005	<0.01	2.69	<0.02	1.58	<0.01	<0.01	3076
11/10/2015	8.60	806.00	14.20	8.33	416	<5	8	10	0.12	<0.020	<0.1	0.07	<0.005	<0.01	0.97	<0.02	0.56	<0.01	<0.01	220.4
12/8/2015				8.14	498	<5	3	<10	0.19	<0.020	<0.1	0.08	<0.005	<0.01	0.56	<0.02	0.6	<0.01	<0.01	7.5
1/5/2016	9.80	1163.00	6.30	8.11	620	8	5	48	0.57	<0.020	0.2	0.17	<0.005	<0.01	2.43	<0.02	2.12	<0.01	<0.01	315.7
2/9/2016	8.80	5220.00	8.00	8.09	2840	6	3	39	0.71	<0.020	<0.1	0.45	<0.005	<0.01	1.56	<0.02	2.12	<0.01	<0.01	7.4
4/6/2016				7.99	1290	<5	<2	14	0.39	<0.01	<0.1	0.13	<0.005	<0.01	0.8	<0.02	1.03	<0.01	<0.01	245.6
8/10/2016				8.28	434	5	<2	<10	0.12	<0.020	<0.1	0.08	<0.005	<0.01	0.87	<0.02	0.64	<0.01	<0.01	53.3
9/13/2016				8.28	616	<5	<2	13	0.14	<0.020	<0.1	0.1	<0.005	<0.01	0.93	<0.02	0.86	<0.01	<0.01	222.1
10/11/2016				8.23	756	5	<2	21	0.24	<0.020	<0.1	0.14	<0.005	<0.01	1.88	<0.02	1.55	<0.01	<0.01	46.1
11/9/2016				7.99	508	8	3	23	0.15	<0.020	0.5	0.09	<0.005	<0.01	2.42	<0.02	0.68	<0.01	<.01	74.7
12/14/2016	8.70	12.44	6.50	8.02	6570	20	2	50	0.31	<0.020	0.2	0.62	<0.005	<0.01	1.1	<0.05	0.66	<0.01	0.01	103.3
1/12/2017	9.00	5100.00	9.00	8.15	2630	21	4	41	0.4	<0.020	1.7	0.22	<0.005	<0.01	1.39	<0.02	0.43	<0.01	<0.01	424.6

Sample Date	Field pH	Conductivity	Temp	Lab pH	TDS	TSS	BOD-5	COD	Ammonia-N	Phenolics	Aluminum	Barium	Cobalt	Copper	Iron	Lead	Manganese	Nickel	Zinc	F. Coliform
	s.u.	umhos/cm	deg C	s.u.	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	col/100ml
2/8/2017				7.94	2940	19	4	46	0.24	<0.020	0.6	0.23	<0.005	<0.01	1.27	<0.02	0.46	<0.01	<0.01	399.3
3/8/2017				7.96	964	34	3	50	0.12	<0.020	1.4	0.1	<0.005	<0.01	2.35	<0.02	0.25	<0.01	0.02	625.1
4/11/2017	840.00	1959.00	11.80	8	1300	<5	<2	16	0.48	<0.020	<0.1	0.13	<0.005	<0.01	1.69	<0.02	1.37	<0.01	<0.01	19.3
5/11/2017				8.2	820	<5	<2	16	0.5	<0.020	0.1	0.12	<0.005	<0.01	1.77	<0.02	1.2	<0.01	<0.01	9.8
6/7/2017				8.23	680	7	<2	13	0.35	<0.020	<0.1	0.11	<0.005	<0.01	1.79	<0.02	1.35	<.01	<0.01	2
7/12/2017				8.3	790	8	2	40	0.23	<0.020	0.6	0.11	<0.005	<0.01	1.36	<0.02	0.73	<0.01	<0.01	409.6
8/8/2017				8.16	436	<5	<2	13	0.18	<0.020	<0.1	0.09	<0.005	<0.01	1.08	<0.02	0.89	<0.01	<0.01	8.6
9/13/2017				8.16	384	<5	2	<10	0.17	<0.020	<0.1	0.09	<0.005	<0.01	1.6	<0.02	0.9	<0.01	<0.01	12.4
10/11/2017				8.2	440	<5	3	12	0.17	<0.020	<0.1	0.07	<0.005	<0.01	0.93	<0.02	0.43	<0.01	<0.01	9.8
11/8/2017				8.34	898	16	4	50	0.35	<0.020	<0.1	0.16	<0.005	<0.01	1.94	<0.02	1.63	<0.01	<0.01	245.6
12/7/2017				8.43	802	8	2	32	0.12	<0.020	<0.1	0.16	<0.005	<0.01	1.6	0.02	1.33	<0.01	<0.01	69.6
1/9/2018				7.84	14800	<5	3	95	0.78	<0.020	<0.1	1.04	0.006	<0.01	1.13	<0.02	1.26	<0.01	0.08	9.2
2/6/2018				7.91	6910	9	<2	47	0.59	0.02	<0.1	0.52	<0.005	<0.01	1.72	<0.02	1.59	<0.01	0.01	8.7
3/6/2018				8.17	1040	<5	<2	29	0.44	<0.020	<0.1	0.13	<0.005	<0.01	1.27	<0.02	1.16	<0.01	<0.01	11.1
4/10/2018				8.27	816	<5	<2	23	0.15	<0.020	<0.1	0.08	<0.005	<0.01	0.62	<0.02	0.38	<0.01	<0.01	2851
6/12/2018				8.48	1540	16	<2	45	0.19	<0.020	0.1	0.16	<0.005	<0.01	2.1	<0.02	1.08	<0.01	<0.01	1417.3
9/18/2018				8.32	470	13	<2	42	0.15	<0.020	0.5	0.07	<0.005	<0.01	0.94	<0.02	0.33	<0.01	0.01	1426.3
10/9/2018				8.53	858	4	2	32	<0.10	<0.020	<0.1	0.13	<0.005	<0.01	0.74	<0.02	0.95	<0.01	<0.01	156.2
11/13/2018				8.28	450	15	<2	20	<0.10	<0.020	1.5	0.07	<0.005	<0.01	1.96	<0.02	0.25	<0.01	0.01	262.3
12/11/2018				8.21	1310	4	6	14	0.18	<0.020	<0.1	0.14	<0.005	<0.01	0.88	<0.02	1.04	<0.01	<0.01	10.5
1/8/2019				8.29	566	<2	<2	35	0.16	<0.020	<0.1	0.11	<0.005	<0.01	0.98	<0.02	0.7	<0.01	<0.01	9.8
2/12/2019				8.11	1600	150	2	35	0.16	<0.020	3.7	0.14	<0.005	0.01	6.21	<0.02	0.26	<0.01	0.05	201.6
3/12/2019				8.19	1600	2	3	39	0.22	<0.020	0.4	0.16	<0.005	<0.01	1.17	<0.02	1.19	<0.01	<0.01	9.8
4/9/2019				8.03	770	<2	<2	13	0.39	<0.020	<0.1	0.09	<0.005	<0.01	0.72	<0.02	0.86	<0.01	<0.01	4.1
5/7/2019				8.42	1160	5	2	48	0.25	<0.020	<0.1	0.15	<0.005	<0.01	2.02	<0.02	1.64	<0.01	<0.01	793.5
6/12/2019				8.46	820	8	6	110	0.26	<0.020	0.2	0.15	<0.005	<0.01	2.18	<0.02	0.86	<0.01	<0.01	24196
7/9/2019				8.2	412	4	2	41	0.21	<0.020	0.1	0.09	<0.005	<0.01	1.18	<0.02	0.42	<0.01	<0.01	4391
8/6/2019				8.18	328	<2	8	<10	0.15	<0.020	<0.1	0.07	<0.005	<0.01	0.34	<0.02	0.36	<0.01	<0.01	20.8
9/10/2019				8.51	798	3	10	56	0.17	<0.020	<0.1	0.13	<0.005	<0.01	0.57	<0.02	0.79	<0.01	<0.01	308.5
10/10/2019				8.34	856	<2	2	69	0.38	<0.020	<0.1	0.16	<0.005	<0.01	2.23	<0.02	1.38	<0.01	<0.01	64880
11/6/2019				8.54	638	163	8	55	0.37	<0.020	1.3	0.16	<0.005	<0.01	4.88	<0.02	2.08	<0.01	0.02	1016.1
12/17/2019				7.95	2300	410	2	46	0.16	<0.020	8.9	0.21	0.007	0.03	16.8	0.04	0.59	0.02	0.15	558.3
1/9/2020				8.38	612	4	2	34	0.25	<0.020	<0.1	0.1	<0.005	<0.01	1.16	<0.02	1.02	<0.01	<0.01	28.6
7/23/2020				8.51	1070	15	6	110	<0.10	<0.020	<0.1	0.13	<0.005	<0.01	1.39	<0.02	1.23	<0.01	<0.01	19599.5
8/18/2020				8.15	262	5	<2	11	0.22	<0.020	<0.1	0.05	<0.005	<0.01	0.58	<0.02	0.17	<0.01	<0.01	6.3
9/9/2020				8.43	740	14	3	45	<0.1	<0.020	1.7	0.21	<0.005	0.01	9.05	<0.02	3.65	<0.01	0.05	465.7
10/13/2020				8.41	612	175	7	45	<0.1	<0.020	0.5	0.09	<0.005	<0.01	1.31	<0.02	0.23	<0.01	<0.01	48.5
11/10/2020				8.44	730	70	3	42	0.1	<0.020	0.2	0.12	<0.005	<0.01	1.37	<0.02	0.72	<0.01	<0.01	53.4
12/8/2020				8.35	994	48	<2	47	0.21	<0.020	0.3	0.17	<0.005	<0.01	1.66	<0.02	1.57	<0.01	<0.01	55.3
1/5/2021				8.36	1960	<4	3	63	0.4	<0.020	0.2	0.2	<0.005	<0.01	1.56	<0.02	1.01	<0.01	<0.01	286.2
2/9/2021				8.12	6290	230	12	159	0.23	<0.020	3.7	0.6	<0.005	0.02	17.9	<0.02	3.4	<0.01	0.15	38730
3/11/2021				8.36	1630	18	2	31	0.36	<0.020	0.1	0.22	<0.005	<0.01	3.66	<0.02	2.28	<0.01	0.01	11
4/6/2021				8.4	1720	24	<3	33	0.18	<0.020	<0.1	0.17	<0.005	<0.01	0.65	<0.02	1.96	<0.01	<0.01	21.4
5/11/2021				8.18	622	12	2	112	0.16	<0.020	0.9	0.1	<0.005	<0.01	2.49	<0.02	0.49	<0.01	0.01	16115.5
6/8/2021	8.10	1625.00	18.50	8.44	1050	116	3	52	0.26	<0.020	1	0.17	<0.005	<0.01	4.15	<0.02	1.79	<0.01	0.02	267.1
7/7/2021	8.80	1502.00	20.40	8.14	956	584	13	87	<0.10	<0.020	1.6	0.21	<0.005	<0.01	5.84	<0.02	3.63	<0.01	0.03	380.1
8/11/2021	8.90	1596.00	20.70	8.44	1080	16	2	42	<0.10	<0.020	0.3	0.09	<0.005	<0.01	1.29	<0.02	0.33	<0.01	0.01	12548.5
9/9/2021	8.70	1433.00	19.10	8.53	812	14	4	53	<0.10	<0.020	0.2	0.12	<0.005	<0.01	2.62	<0.02	0.81	<0.01	<0.01	239.3
10/5/2021	8.30	1216.00	18.30	8.45	660	10	<2	35	<0.10	<0.020	0.4	0.08	<0.005	<0.01	1.29	<0.02	0.47	<0.01	<0.01	1105.7
11/16/2021	8.60	1347.00	8.00	8.4	794	89	3	66	0.11	<0.020	3.6	0.12	<0.005	<0.01	4.98	<0.02	0.89	<0.01	0.03	1442.9

Sample Date	Field pH	Conductivity	Temp	Lab pH	TDS	TSS	BOD-5	COD	Ammonia-N	Phenolics	Aluminum	Barium	Cobalt	Copper	Iron	Lead	Manganese	Nickel	Zinc	F. Coliform
	s.u.	umhos/cm	deg C	s.u.	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	col/100ml
12/7/2021	8.50	2730.00	6.60	7.98	1620	114	63	282	<0.10	<0.020	2.3	0.2	<0.005	0.01	7.2	<0.02	1.75	<0.01	0.04	3013
1/4/2022	8.70	746.00	7.50	8.34	396	<2	<2	14	0.32	<0.020	0.3	0.08	<0.005	<0.01	0.71	<0.02	0.31	<0.01	<0.01	17.9
2/8/2022	7.70	2860.00	5.20	8.17	1430	5	<2	18	0.12	<0.020	0.4	0.12	<0.005	<0.01	0.72	<0.02	0.25	<0.01	<0.01	56.3
3/8/2022	8.60	2810.00	8.10	8.33	1540	5	<2	37	0.1	<0.020	2	0.11	<0.005	<0.01	1.81	<0.02	0.3	<0.01	0.01	70.3
4/5/2022	7.70	3880.00	7.60	8.33	2090	60	<2	31	0.12	<0.020	0.4	0.16	<0.005	<0.01	1.36	<0.02	0.77	<0.01	<0.01	47.4
5/19/2022				8	618	8	<4.0	13.5	<0.30	<0.0056	0.225	0.0836	<0.004	<0.007	0.838	<0.007	0.409	<0.0065	<0.01	15
6/27/2022				8.3	1250	6.5	<4.0	23.9	<0.30	<0.005	<0.200	0.0997	<0.004	<0.007	0.345	<0.007	0.0895	<0.0065	<0.010	>2420
7/21/2022				8.2	1330	6.5	<4.0	19.1	<0.30	<0.0055	<0.200	0.111	<0.004	<0.007	0.709	<0.007	0.116	0.0407	<0.010	548
8/17/2022				7.9	748	38	<4.0	71.5	2.73	0.0067	6.69	0.117	<0.004	0.0138	6.15	<0.007	0.473	<0.0065	0.033	>2420
9/15/2022				8	768	48.5	<4.0	72.6	<0.30	<0.005	1.24	0.112	<0.004	<0.007	1.72	<0.007	0.262	<0.0065	<0.010	>2420
10/19/2022				8.2	968	<5.0	<4.0	32.6	<0.30	<0.0055	<0.200	0.0902	<0.004	<0.007	0.47	<0.007	0.212	<0.0065	<0.010	387