pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0255777**
Facility Type	**Industrial**	APS ID	**1086035**
Major / Minor	**Minor**	Authorization ID	**1435370**

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

Applicant and Facility Information

Applicant Name	**Harwick Operating Co., LLC**	Facility Name	**Monarch Mine Dewatering Plant & Cheswick Ash Disposal Site**
Applicant Address	12601 Plantside Drive	Facility Address	Duquesne Light Lane
	Louisville, KY 40299-6386		Rural Ridge, PA 15075
Applicant Contact	Norman Divers	Facility Contact	Rick Ravotti
Applicant Phone	(502) 245-1353	Facility Phone	(502) 377-4228
Client ID	369108	Site ID	245779
SIC Code	4911	Municipality	Springdale Borough
SIC Description	Trans. & Utilities - Electric Services	County	Allegheny
Date Application Received	March 31, 2023	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: NPDES Permit renewal, with prior portions of Cheswick Gen. Sta. coverage in areas near Rural Ridge

Summary of Review

The Department received a NPDES renewal application from the Harwick Operating Company, LLC (Harwick), a subsidiary of Louisville, Kentucky based Charah Solutions, Inc., for their Monarch Mine Dewatering Plant (MMDP) and the adjacent, former Lefever Landfill, now called the Cheswick Ash Disposal Site (CADS) on March 31, 2023. Harwick operates the MMDP and the closed CADS which were previously part of a much larger facility, originally developed circa 1970 by the Duquesne Light Company to support the Cheswick Generating Station (Cheswick) in Springdale and other former coal fired electrical power generation facilities in the local area.

More recently, the former owner of Cheswick, GenOn Power Midwest, LP (GenOn), separated off from their Cheswick permit (PA0001627) the MMDP and CADS into this NPDES permit. This new permit, **PA0255777** was originally issued on January 14, 2022, along with a new Water Quality Management (WQM) Part II permit, **0221205**. This WQM permit encompassed portions of a prior permit, 0270205, which had been associated with Cheswick. Both **PA0255777** and WQM **0221205** were transferred from GenOn to Harwick on June 14, 2022. Since then, WQM **0221205** was amended to allow a swap out of the main MMDP mine pool pumps, essentially down-rating these to optimize their operating position on their pump curves in order to improve the plant's operational reliability. This WQM permit amendment was issued on November 16, 2023.

The MMDP is a wastewater treatment facility owned and operated by Harwick pursuant to fulfilling a Consent Order and Agreement (COA) between the Department and NRG Power Midwest LP (later GenOn), signed on September 21, 2014. Chief among the obligations under this COA that now falls to Harwick is to maintain the Harwick Mine Complex pool level at or below a monthly average elevation of 720 feet above mean sea level (AMSL) and maintain an operative Automated Pool Elevation Monitoring System with sensors located approximately 500 feet south of the MMDP intake pump borehole. This treatment is credited with treatment of coal combustion residual (CCR) leachate from the CADS and, also from the Kissick

Approve	Deny	Signatures	Date
X		John L Duryea, Jr., P.E. / Environmental Engineer	October 2, 2024
X		Michael E. Fifth, P.E. / Environmental Engineer Manager	October 18, 2024

Summary of Review

Ash Disposal Site, still owned by Duquesne Light Company. However, it primarily treats abandoned mine drainage (AMD) from the mine complex whose name it bears – Harwick.

In the transfer of **PA0255777**, the Fact Sheet includes this excerpt:

> Importantly, the analyses which forms the bases for PA0255777 will need be updated to include the changes which have occurred to Department effluent limitation standard operating procedures since 2018. This will need to be addressed during the NPDES permit renewal in 2023.

Because the expiration date for the original issuance of **PA0255777** was set to match that of its predecessor, PA0001627, it expired on July 31, 2023, but is considered administratively extended until this renewal can be processed.

The current status of the MMDP is that the replacement mine dewatering pumps, permitted under WQM **0221205** amendment 2, issued November 16, 2023, have been installed and placed into operation earlier in December 2023. The previous pumps had a combined capacity to discharge 3.4 MGD. The new variable speed pumps have a reduced capacity of about 1.8 – 2.0 MGD. This change is hoped to improve the reliability of the system's operation.

In addition, an outage and maintenance on the leachate transfer pumps emerged in March 2024. This was soon thereafter completed, but for only one of the two replacement leachate transfer pumps which by mid-May 2024 had been installed, tested and was ready to run. The second leachate transfer pump is on order, but not yet delivered as of this date.

Subsequently, one of the 14 clarifier radial pipes had a fault. The repair plan, shared on May 22, 2024, was to remove this faulted component with the load being redistributed to the remaining radial pipes. This repair is now completed. A picture of the fault and an annotated satellite image illustrating the location of the damaged radial pipe is shown in Figure 1 below:

Figure 1: MMDP Clarifier highlighting the location of the faulted radial pipe and an image of the fault.

As can be seen in Figure 1, corrosion damage to the radial pipe rendered it inoperable. Removal of the damaged radial pipe and plugging of its end openings, was documented by Charah personnel in weekly reports that they have been supplying to

Summary of Review

Department operations personnel. The repairs were in progress on May 24, 2024. When completed the flow is expected to be redistributed through the remaining radial pipes.

The permittee has complied with Act 14.

It is recommended that a draft permit be published for public comment in response to this application.

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.	002	Design Flow (MGD)	1.42
Latitude	40º 35' 8"	Longitude	-79º 49' 43"
Quad Name	1407	Quad Code	New Kensington West
Wastewater Description:	Treated Mine Water and CCR Landfill leachate		
Receiving Waters	Little Deer Creek	Stream Code	42289
NHD Com ID	123972685	RMI	2.79
Drainage Area	10.7	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	0.145	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	844	Slope (ft/ft)	
Watershed No.	18-A	Chapter 93 Class.	TSF
Existing Use	TSF – Trout Sticking Fishery	Existing Use Qualifier	
Exceptions to Use	None	Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Flow Alterations, Metals, Siltation, TDS, Turbidity		
Source(s) of Impairment	Abandoned Mine Drainage, Construction, Subsurface Mining		
TMDL Status	Final	Name	Little Deer Creek Watershed
Nearest Downstream Public Water Supply (PWS) Intake	Wilkinsburg – Penn Joint Water Authority		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2390
PWS RMI	8.67	Distance from Outfall (mi)	10.1

Changes: Note that the replacement MMDP mine pool pumps, approved under WQM **0221205-A2T1**, on November 16, 2023, results in a reduced design flow capacity versus the prior MMDP pumps. The treatment process has also been altered, using hydrogen peroxide and alternate chemicals, detailed below, to promote precipitation of metals. The downstream PWS has been updated to factor in that Twelve Mile Island shields the Oakmont Water Authority plant from the confluence of Deer Creek and the Allegheny River. This change clarifies that the Wilkinsburg – Penn Joint Water Authority is actually the nearest, downstream Public Water Supply intake, a little more than 10 river miles downstream from both MMDP and CADS.

On September 20, 2024, Harwick's consultant supplied more detailed data, including that the "actual average flow conditions" at Outfall 002 is 1.42 MGD.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	005	Design Flow (MGD)	0
Latitude	40º 35' 8"	Longitude	-79º 49' 43 "
Quad Name	1407	Quad Code	New Kensington West
Wastewater Description:	Stormwater		
Receiving Waters	Little Deer Creek	Stream Code	42289
NHD Com ID	123972685	RMI	2.8
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	18-A	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Flow Alterations, Metals, Siltation, TDS, Turbidity		
Source(s) of Impairment	Abandoned Mine Drainage, Construction, Subsurface Mining		
TMDL Status	Final	Name	Little Deer Creek Watershed
Nearest Downstream Public Water Supply Intake	Wilkinsburg – Penn Joint Water Authority		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2390
PWS RMI	8.67	Distance from Outfall (mi)	~10

Figure 2: Photograph of Outfall 005, taken during the Site Inspection, April 2022

Discharge, Receiving Waters and Water Supply Information

Outfall No.	010	Design Flow (MGD)	0
Latitude	40º 35' 0"	Longitude	-79º 50' 0"
Quad Name	1407	Quad Code	New Kensington West
Wastewater Description:	Stormwater		
Receiving Waters	UNT to Little Deer Creek	Stream Code	42289
NHD Com ID	123972685	RMI	2.1
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	18-A	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Flow Alterations, Metals, Siltation, TDS, Turbidity		
Source(s) of Impairment	Abandoned Mine Drainage, Abandoned Mine Drainage, Construction, Construction, Construction, Subsurface Mining		
TMDL Status	Final	Name	Little Deer Creek Watershed
Nearest Downstream Public Water Supply Intake	Wilkinsburg – Penn Joint Water Authority		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2390
PWS RMI	8.67	Distance from Outfall (mi)	~10

Figure 3: Satellite Image of the CADS Sedimentation Pond, Landfill benches and MMDP in the Background

Discharge, Receiving Waters and Water Supply Information

Outfall No.	011	Design Flow (MGD)	0
Latitude	40º 35' 0"	Longitude	-79º 50' 0"
Quad Name	1407	Quad Code	New Kensington West
Wastewater Description:	Stormwater		
Receiving Waters	Little Deer Creek	Stream Code	42289
NHD Com ID	123972685	RMI	2.1
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	18-A	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Flow Alterations, Metals, Siltation, TDS, TDS, Turbidity		
Source(s) of Impairment	Abandoned Mine Drainage, Abandoned Mine Drainage, Construction, Construction, Construction, Subsurface Mining		
TMDL Status	Final	Name	Little Deer Creek Watershed
Nearest Downstream Public Water Supply Intake	Wilkinsburg – Penn Joint Water Authority		
PWS Waters	Allegheny River	Flow at Intake (cfs)	2390
PWS RMI	8.67	Distance from Outfall (mi)	~10

Figure 4: Satellite Image Facing South for Rural Ridge Showing MMDP and CADS

Treatment Facility Summary				
Treatment Facility Name: Monarch Mine Dewatering Plant				
WQM Permit No.	**Issuance Date**			
0221205	Jan. 14, 2022			
0221205 - A2T1	Nov. 16, 2023			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Industrial	Tertiary	Chem Add/Settling/Clarification	N/A	2.0
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
2.6	N/A	N/A	N/A	N/A

Changes Since Last Permit Issuance: Under WQM 0221205 amendment, replacement mine dewatering pumps were installed. Subsequent leachate transfer pump maintenance has also been completed.

Other Comments: The MMDP layout is shown in Figure 5 with the process illustrated in Figure 6, below:

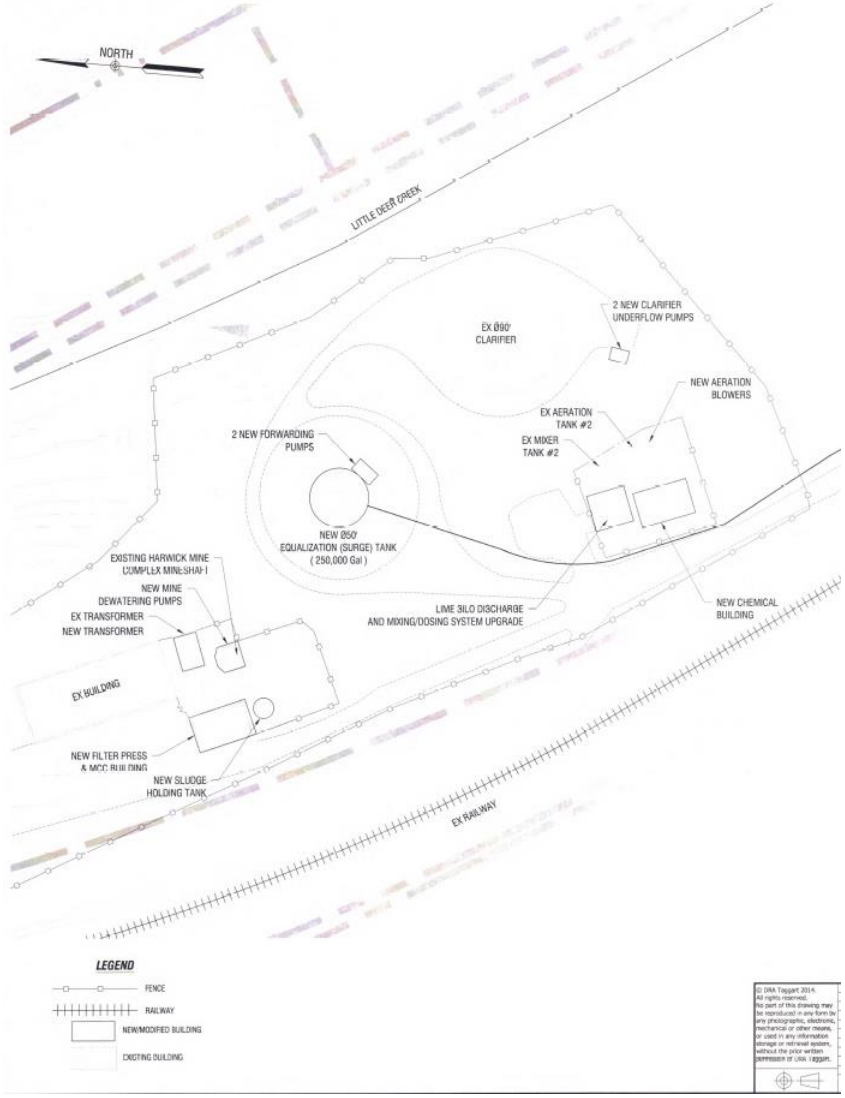

Figure 5: MMDP Layout

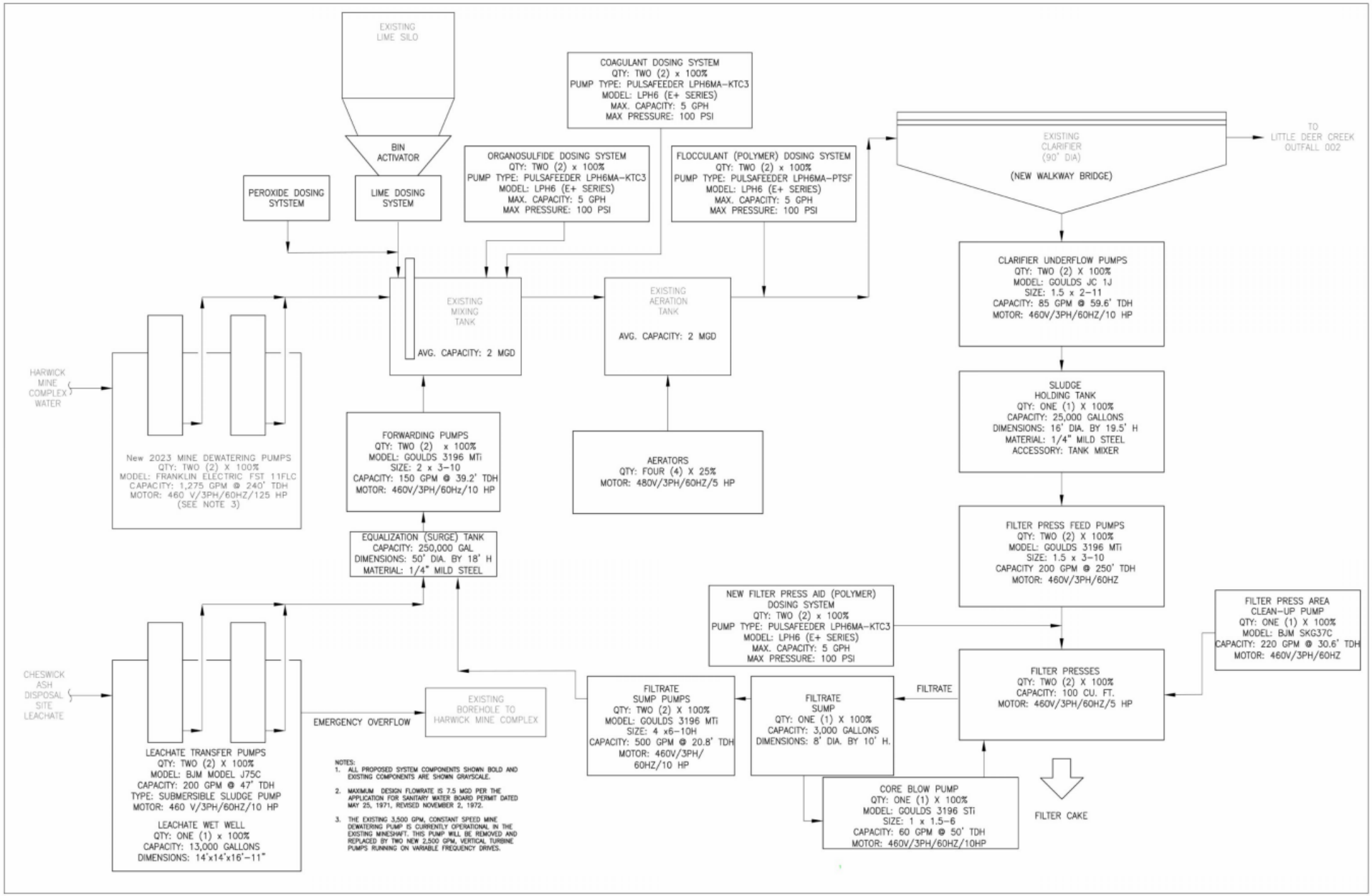

Figure 6: MMDP Process Flow Diagram

Figures 1 above shows the layout of the CADS leachate and AMD collection and treatment systems at Harwick's MMDP site. Figure 2 shows an overview of the process flow used at MMDP. Prior to the transfer from GenOn to Harwick, the MMDP modified the process used. The MMDP now has both the former infrastructure to add lime and an upgraded chemical addition infrastructure. The former practice of adding lime has been curtailed, replaced by hydrogen peroxide addition; as well as, other chemicals to promote rapid precipitation of oxidized metals.

Mechanical aeration has also been fortified before AMD enters the clarifier. Clarifier underflow sludge then enters a belt filter press (BFP). Pressed solids are then accumulated as filter cake which is accumulated and eventually shipped offsite for disposal. Filtrate is processed for discharge at Outfall 002. The various chemical additives documented as being used in Harwick's 2023 renewal application are shown in Table 1 below:

Table 1: Chemical Additives in Use for Harwick's MMDP Treatment

Chemical Name	Purpose	Max. Usage Rate	Comment
Hydrogen Peroxide	pH adjustment and oxidizer to precipitate metals	1320 gal./month	Replaced Lime Addition for pH adjustment
Liquidfloc 2000AE	Flocculation	180 gal./month	Promotes Precipitation of metal oxides
EnviroFloc CF-533	Coagulant	750 gal./month	Promotes Precipitation of solids to enhance BFP performance

Compliance History	
Summary of DMRs:	**The Department has received and retained electronic Discharge Monitoring Report (eDMR) records since this permit was originally issued to GenOn in January 2022. Although recent records show outage periods during MMDP plant maintenance periods in 2023, noted previously, subsequently there have been no compliance issues or effluent limit violations since these maintenance periods were completed.**
Summary of Inspections:	**Since the original issuance of this permit on January 14, 2022, there has been one onsite compliance inspection in April 2022 and one routine partial inspection, plus an administrative file review, both in June 2023. In all of these, no violations were noted.** **There are no outstanding enforcement actions for this facility.**

Development of Effluent Limitations

Outfall No.	002	**Design Flow (MGD)**	0
Latitude	40º 35' 8.00"	**Longitude**	-79º 49' 43.00"

Wastewater Description: IW Process Effluent with ELG

Outfall 002 is the discharge from the MMDP to Little Deer Creek. The MMDP treats water from the Monarch Mine, part of the "Harwick" mine complex. Leachate from the CADS "landfill", a captive waste landfill which accepted CCR only from the former Cheswick Generating Station. Based on the COA in 2014, several updates were made to the plant. Harwick is now required by the 2014 COA to maintain a maximum mine pool elevation of 720 feet AMSL. Operationally they attempt to set their new variable speed mine pumps to maintain the mine pool level at a target just below 700 feet AMSL, while both trying to sustainably keep the pumps running and also avoiding drawing down the mine level to avoid a loss of pump suction.

Technology-Based Limitations

Federal involvement in the regulation of discharges of industrial wastes significantly advanced with the enactment of the 1965 amendments to the Federal Water Pollution Control Act (PL 84-660). These amendments required states to initiate water quality standards for interstate waters and gave states additional authority to require control/treatment of wastes from sewage and industrial dischargers.

The primary objective of such technology-based effluent limitations (TBELs) is to decrease the total pollution load to all streams, while dealing equitably with discharges in a given class or category.

TBELs should not be considered from the viewpoint of whether they will or will not protect water quality; rather they should be considered as the baseline for decreasing pollution with stricter requirements being imposed as needed to protect the water quality of a receiving stream.

Harwick's site has been previously held as subject to Federal Effluent Limitation Guidelines (ELGs), applying coal mine drainage effluent limitations listed under 40 CFR part 434.

Federal Effluent Limitation Guidelines (ELGs)

As noted above, prior permit renewals applied Federal ELGs. The most applicable of these is under 40 CFR 434.52 (Subpart E – Post-Mining Areas). This category was established by U. S. Environmental Protection Agency (EPA) for previously active coal mines as the ELGs representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT). Previously imposed was also 40 CFR 434.53 which is the equivalent limitations representing the degree of effluent reductions attainable by application of the best available technology economically achievable (BAT). In current Federal regulations, these are currently equivalent. The resultant values are shown in Table 2 below.

Table 2: Federal ELGs under 40 CFR 434.52

Parameter	Limitations in Federal ELGs	
	Monthly Average	Maximum Daily
Total Suspended Solids (TSS)	35.0	70.0
Iron, total	3.5	7.0
Manganese, total	2.0	4.0
pH	Within the range of 6.0 to 9.0	

Since the mine water treated at Harwick's site was from an active coal mine; now in a post-mining condition, this ELG is applicable. The EPA developed this ELG from survey data of mine drainage sites that are also representative of this site. Therefore, application of this ELG can be considered using Best Professional Judgement (BPJ).

Other Regulatory Effluent Standards and Monitoring Requirements

The pH effluent range for all IW process and non-process discharges pursuant of 25 Pa. Code § 92a.48(a)(2) and 25 Pa. Code § 95.2 is indicated in Table 3 below.

Flow monitoring is required pursuant to 25 Pa. Code § 92a.61(d)(1); effluent standards for pH are also imposed on industrial wastes by 25 Pa. Code §§ 95.2(1). These limits are displayed in Table 3 below.

Pursuant to 25 Pa. Code § 95.2(4) effluent standards for industrial wastes may not contain more than 7 mg/L of dissolved iron as indicated in Table 3 below.

Pennsylvania regulations at 25 Pa. Code § 92a.48(b) require the imposition of technology-based Total Residual Chlorine (TRC) limits for facilities that use chlorinated sources and that are not already subject to TRC limits based on applicable federal ELGs or a facility-specific Best Professional Judgement (BPJ) evaluation which is displayed in Table 3 below. As Outfall 002 treatments have not documented the use to chlorine, no TRC limitations will be applied.

Table 3. Applicable Pennsylvania Regulatory Effluent Standards

Parameter	Monthly Avg.	Daily Max	IMAX
Flow (MGD)	Monitor	Monitor	----
Iron, Dissolved	----	----	7.0 mg/L
pH (S.U.)	6.0 – 9.0 at all times		

Total Dissolved Solids (TDS)

Integral to the implementation of 25 Pa. Code § 95.10 is the principle that existing, authorized mass loadings of TDS are exempt from any treatment requirements under these provisions. Existing mass loadings of TDS up to and including the maximum daily discharge loading for any existing discharges, provided that the loading was authorized prior to August 21, 2010 are exempt. Discharge loadings of TDS authorized by the Department are typically exempt from the treatment requirements of Chapter 95.10 until the net TDS loading is increased, an existing discharge proposes a hydraulic expansion or a change in the waste stream. If there are existing mass or production-based TDS effluent limits, then these are used as the basis for the existing mass loading. The facility is neither new nor expanding its waste loading of TDS, therefore, the facility is exempt from 25 Pa. Code § 95.10 treatment requirements.

Summary of TBELs

In the future, TBELs could be considered in line with the performance of the site's newly implemented treatment. A future review of available eDMR data may consider a statistical analysis to establish appropriate effluent limitations; however, with the treatment system changes only recently accomplished, this study is deferred until a future permit renewal cycle

These recommendations for TBELs are included in Table 4 below.

Table 4: Recommended TBELs for Outfall 001

Parameter	Monthly Avg.	Daily Max	IMAX	Units
Flow	Monitor/Report		----	MGD
TSS	35.0	70.0	----	mg/L
Manganese, Total	2.0	4.0	----	mg/L
pH	6.0 – 9.0 at all times			S.U.
Iron, Total	3.5	7.0	----	mg/L
Iron, Dissolved	---	7.0	----	mg/L

Note that the obvious redundancy of daily maximum limits for both total iron and dissolved iron means that the dissolved value may be neglected.

Water Quality-Based Limitations

Total Maximum Daily Load (TMDL)

Wastewater discharges from the facility are located within the Little Deer Creek Watershed for which the Department has developed a TMDL. Originally listed on the 1996 Pennsylvania Section 303(d) as impaired waters, Little Deer Creek was later included in an TMDL developed by the Department which was finalized on August 23, 2006. It establishes waste load allocations for the discharge of aluminum, manganese and iron within the segment associated with Harwick's site. Although the receiving stream segment, LTDR04, is listed in the TMDL, neither this facility's permit, nor its predecessors are explicitly listed with a Waste Load Allocation (WLA) in this TMDL.

Section 303(d) of the Clean Water Act and the EPA's Water Quality Planning and Management Regulations (codified at Title 40 of the *Code of Federal Regulations* Part 130) require states to develop a TMDL for impaired water bodies. A TMDL establishes the amount of a pollutant that a water body can assimilate without exceeding the water quality criteria for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and non-point sources in order to restore and maintain the quality of the state's water resources (EPA 1991a). Stream reaches within the Little Deer Creek Watershed are included in the state's 2014 PA Integrated Water Quality Monitoring and Assessment Report identified high levels of metals (primarily aluminum and iron) associated with abandoned mine drainage (AMD) as causes of the Little Deer Creek impairment. The TMDL includes consideration for each river segment and tributary within the watershed and its impairment sources. Stream data is then used to calculate minimum pollutant reductions that are necessary to attain water quality criteria levels. Target concentrations published in the TMDL were based on established water quality criteria of 0.750 mg/L total recoverable aluminum, 1.5 mg/L total recoverable iron based on a 30-day average. The reduction needed to meet the minimum water quality standards is then divided between each known point and non-point pollutant source in the form of a watershed allocation. TMDLs prescribe allocations that achieve water quality criteria using a stream's assimilative capacity.

Aluminum: The specific water quality criterion for aluminum is expressed as an acute risk with a maximum daily limit in 25 Pa. Code Chapter 93. Discharges of aluminum may only be authorized to the extent that they will not cause or contribute to any violation of the water quality standards. Therefore, the water quality criterion for aluminum (0.75 mg/L) is imposed as a maximum daily effluent limit (MDL). Whenever the most stringent criterion is selected for the MDL, the Department should also impose an average monthly limit (AML) and instantaneous maximum limit (IMAX) if applicable. The imposition of an AML that is more stringent than the MDL is typically not appropriate because the water quality concerns have already been fully addressed by setting the MDL equal to the most stringent applicable criterion. Therefore, where the MDL is set at the value of the most stringent applicable criterion, the AML should be set equal to the MDL. Accordingly, TMDL aluminum limits are proposed for the Outfalls.

Iron: The specific water quality criterion for iron is expressed as a 30-day average of 1.5 mg/L in 25 Pa. Code § 93.7(a). The criterion is based on the protection of aquatic life and is associated with chronic exposure. There are no other criteria for total iron. Since the duration of the total iron criterion coincides with the 30-day duration of the AML, the 30-day average criterion for total iron is set equal to the AML. In addition, because the total iron criterion is associated with chronic exposure, the MDL (representing acute exposure) and the IMAX may be made less stringent according to established procedures described in Section III.C.3.h on Page 13 of the Water Quality Toxics Management Strategy (Doc. # 361-0100-003). These procedures state that a MDL and IMAX may be set at 2 times and 2.5 times the AML, respectively, or there is the option to use multipliers from EPA's Technical Support Document for Water Quality-based Toxics Control, if data are available to support the use of alternative multipliers. Accordingly, TMDL iron limits are proposed for the Outfalls.

All new or revised NPDES permits discharging into the Little Deer Creek Watershed have to be consistent with the TMDL Waste Load Allocation based on 40 CFR 122.44(d)(1)(vii)(B). The Department reviewed the TMDL and this facility has no explicit Waste Load Allocation (WLA) under this permit but does discharge to an impaired segment that is included. Therefore, effluent limitations are required in order to meet the requirements of the TMDL. Refer to Table 5 below, for a summary of the TMDL Water Quality Criteria. Those metals listed and associated water quality limits will be imposed, to ensure compliance with the TMDL.

Table 5: Summary of the TMDL Water Quality Criteria

Parameter	Monthly Average ($^{mg}/_{L}$)	Daily Maximum ($^{mg}/_{L}$)
Aluminum	0.75	0.75
Iron	1.5	3.0
Manganese	1.0	2.0

Toxics Screening Analysis – Procedures for Evaluating Reasonable Potential and Developing WQBELs

Pursuant to consideration of the Water Quality Based Effluent Limitations (WQBELs) at Outfall 002, water quality modeling was created following DEP's procedures for evaluating reasonable potential which are as follows:

1. For IW discharges, the design flow used in the modeling is the average flow during production or operation and may be taken from the permit application.

2. All toxic pollutants with discharge concentrations reported in the permit application or on DMRs, are modeled and compared to the most stringent applicable water quality criterion as potential pollutants of concern. [This includes pollutants reported as "Not Detectable" or as "<MDL" where the method detection limit for the analytical method used by the applicant is greater than the most stringent water quality criterion]. The highest reported concentration is entered into the most recent version of the Department's Toxics Management Spreadsheet (TMS) analysis (refer to Attachment A).

3. For any outfall with an applicable design flow, perform TMS modeling for all pollutants reported in the discharge. Use the maximum reported value from the application form or from DMRs as the input concentration for the TMS model.

4. Compare the actual WQBEL from TMS with the maximum concentration reported on DMRs or the permit application. Use WQN data or another source to establish the existing or background concentration for naturally occurring pollutants, but generally assume zero background concentration for non-naturally occurring pollutants
    - Establish limits in the draft permit where the maximum reported concentration equals or exceeds 50% of the WQBEL. Use the average monthly and maximum daily limits for the permit as recommended by TMS. In some cases, establish an IMAX limit at 2.5 times the average monthly limit.

    - For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.

    - For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10% - 50% of the WQBEL.

The information described above including the maximum reported discharge concentrations, the most stringent water quality criteria, the pollutant-of-concern (reasonable potential) determinations, the calculated WQBELs, and the WQBEL/monitoring recommendations are displayed in the results presentation from TMS spreadsheet (refer to Attachment A).

Water Quality Modeling Programs

TMS, Version 1.4 is a single discharge, mass-balance water quality modeling program that includes consideration for mixing, first-order decay and other factors to determine recommended WQBELs for toxic substances and several non-toxic substances. Required input data including stream code, river mile index, elevation, drainage area, discharge name, NPDES permit number and discharge flow rate are entered into TMS to establish site-specific discharge conditions. Other data such as low flow yield, reach dimensions and partial mix factors may also be entered to further characterize the conditions of the discharge and receiving water. The modeling approach outlined above is used to determine if any pollutants are present or likely to be present in a discharge at levels that may cause, have the reasonable potential to cause, or contribute to excursions above state water quality standards (i.e., a reasonable potential analysis). Discharge concentrations for the selected pollutants are chosen to represent the "worst case" quality of the discharge (i.e., maximum reported discharge concentrations). TMS evaluates each pollutant by computing a Waste Load Allocation (WLA) for each applicable criterion and associated WQ objective, determining a recommended maximum WQBEL and comparing that recommended WQBEL with the input discharge concentration to determine which is more stringent. Based on this evaluation, TMS recommends average monthly and maximum daily WQBELs.

Reasonable Potential Analysis and WQBEL Development for the Holcim's Duquesne site discharge at Outfall 001

Discharges from Outfall 002 were evaluated based on concentrations reported on the application. The TMS model was run for Outfall 002 using the modeled discharge and receiving stream characteristics shown in Table 6

Table 6: TMS Inputs

Parameter	Value
River Mile Index	2.794
Discharge Flow (MGD)	1.42
Basin/Stream Characteristics	
Parameter	**Value**
Area (mi^2)	10.7
Q_{7-10} (cfs)	0.145
Low-flow yield (cfs/mi^2)	0.01355
Elevation (ft.)	844
Slope	0.00132

WQBELs are calculated by TMS by allocating the established Water Quality (WQ) criteria for the receiving surface water from 25 PA Code § 93. The criteria are then converted to a WQ objective. For metals with criteria established for its dissolved form, a translator is used to determine the criteria for the total metal which is then used as the WQ objective.

From this calculated objective for each pollutant concentration the discharge allocation is then reduced by available data of existing pollutant loads in the receiving waters using actual concentration data from instream monitoring. In this case, no upstream water quality data was available, so none was entered. The assumption of zero background concentration is therefore used for non-naturally occurring pollutants or where background data is insufficient to determine the background concentration.

The TMS model calculates and applies partial mixing factors for CFC, THH and CRL. The most limiting criteria is selected and, finally, WLAs are calculated for the IW discharger and compared to its reported discharge concentrations.

Note that the downstream public water intake on the Allegheny River at RMI 8.67 miles is the Wilkinsburg-Penn Joint Water. This is greater than 10 miles downstream from this Harwick MMDP site discharge. This PWS is both drawing from a much larger river and at a distance from the Harwick site which is considered sufficient for PWS related pollutants (e.g. phenolics) to dissipate. Therefore, PWS data was not explicitly incorporated into the model.

The TMS model results are included as Attachment A. These results include recommended effluent limits and/or reporting requirements for the parameters shown in Table 7. Note that some undetected parameters' input values were set to the reported testing laboratory MDL. Also included in Table 7 for reference are the Department's target Quantitation Limits (QLs) as specified in DEP's most recent *Application for Permit to Discharge Industrial Wastewater*. The target QLs are the means by which DEP is implementing EPA's September 18, 2014 revisions to 40 CFR Parts 122 and 136 requiring applicants and permittees to use "sufficiently sensitive" EPA-approved analytical methods that are capable of detecting and measuring the pollutants at, or below, the applicable water quality criteria or permit limits.

Table 7: Outfall 002 WQBELs (with Governing Criteria and Target QLs)

Parameter	Concentration (µg/L)		Governing WQBEL (µg/L)	Target QL (µg/L)
	Monthly Avg	Maximum Daily		
Acrylamide*	0.16	0.24	0.13	--
Aluminum, Total	750	**800**	750	10
Boron, Total	**1,706**	**2,661**	1.706	200
Dissolved Iron	Monitor	Monitor	320	20
Iron, Total	Monitor	Monitor	1,599	20
Manganese, Total	1,047	**1,633**	1,047	2.0
Selenium, Total	Monitor	Monitor	5.32	5.0

***** The renewal application reported Acrylamid**e** was not detected at an MDL < 10 µg/L. The facility contacted their supplier who "determined there is one additive that contains trace amounts of Acrylamide; however, the Acrylamide is not a primary constituent and any trace amounts are consumed during the treatment process and thus would not be discharged in effluent." Since Acrylamide was not detected and is not in the facility's effluent, the reasonable potential for Acrylamide is removed. No Acrylamide effluent limitations are imposed.

The approach taken was to use the reported laboratory MDL values if supplied data indicated the pollutant was not detected. If the data indicated that the parameter was detected, then the highest reported value was used in the TMS analysis spreadsheet. Shown in Table 7 are the model's recommended limits or monitoring. New pollutants, not previously monitored in the permit, and more stringent limitations are shown in **bold** In Table 7 above

As can be seen in Table 7, for some pollutants required establishing WQBELs. In other cases, only monitoring is required as the results did not exceed 50% of the most stringent WQBEL value, but the reported results were too high to rule out the possibility that discharges will result in excursions above Pennsylvania's water quality standards

WQM 7.0 Model

The computer model WQM 7.0 is run to determine wasteload allocations and effluent limitations for $CBOD_5$, NH_3-N and Dissolved Oxygen for single and multiple point source discharge scenarios. In general, WQM 7.0 is run if the maximum BOD_5/$CBOD_5$ concentrations exceeds 30/25 mg/L respectively in the permit application or the DMRs. The permit application reports a peak BOD_5 concentration of 9.33 mg/L, and a peak COD concentration of 5.67 mg/L. As these discharge values do not approach the criteria requiring the use of the WQM 7.0 Model, no run was made, and no related effluent limitations imposed.

Anti-Backsliding

Section 402(o) of the Clean Water Act (CWA), enacted in the Water Quality Act of 1987, establishes anti-backsliding rules governing two situations. The first situation occurs when a permittee seeks to revise a Technology-Based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent. The second situation addressed by Section 402(o) arises when a permittee seeks relaxation of an effluent limitation which is based upon a State treatment standard or water quality standard. Previous limits can be used pursuant to EPA's anti-backsliding regulation 40 CFR § 122.44 (l) Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued. Interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62). (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit. The facility has not sought to revise the previously permitted effluent limits which are included in Table 8 below.

Table 8: Prior NPDES Permit Outfall 002 Effluent Limitations*

Parameter	Mass / Loading ($^{lb.}/_{day}$)		Concentration / Quality ($^{mg}/_{L}$)				Units
	Monthly Average	Daily Maximum	Instant. Minimum	Monthly Average	Daily Maximum	Instant Max*	
Flow	Monitor & Report		---	---	---	---	MGD
Total Suspended Solids	---	---	---	35	70	88	$^{mg}/_{L}$
Total Dissolved Solids	Report	Report	---	Report	Report	---	$^{mg}/_{L}$
Total Residual Chlorine	---	---	---	Report	Report	---	S.U.
Osmotic Pressure	---	---	---	50	100	---	mOs/kg
Aluminum, Total	49.64	99.28	---	**0.48**	0.96	1.2	$^{mg}/_{L}$
Beryllium, Total	---	---	---	0.01	0.02	0.025	$^{mg}/_{L}$
Cadmium, Total	---	---	---	0.0003	0.0006	0.00075	$^{mg}/_{L}$
Chromium, Hexavalent	---	---	---	0.006	0.012	---	$^{mg}/_{L}$
Copper, Total	---	---	---	0.009	0.018	0.023	$^{mg}/_{L}$
Cyanide, Free	---	---	---	Report	Report	---	$^{mg}/_{L}$
Iron, Total	155.24	310.25	---	1.5	3.0	3.75	$^{mg}/_{L}$
Manganese, Total	89.97	179.95	---	**0.87**	1.74	2.18	$^{mg}/_{L}$
Selenium, Total				0.005	0.01	0.0125	$^{mg}/_{L}$
Silver, Total	---	---	---	0.003	0.006	0.0075	$^{mg}/_{L}$
Sulfate, Total	Report	Report	---	Report	Report	---	$^{mg}/_{L}$
Thallium, Total	---	---	---	0.002	0.004	0.005	$^{mg}/_{L}$
Pentachlorophenol	---	---	---	0.0003	0.0006	0.00075	$^{mg}/_{L}$
Chloride	Report	Report	---	Report	Report	---	$^{mg}/_{L}$
Bromide	Report	Report	---	Report	Report	---	$^{mg}/_{L}$
pH	---	---	6.0	---	---	9.0	S.U.

* Instantaneous maximum limitations are imposed to allow for a grab sample to be collected by the appropriate regulatory agency to determine compliance. The permittee is not required to monitor for the instantaneous maximum limitations. However, if grab samples are collected by the permittee, the results must be reported.

Note that the Average Monthly Limit (AML) for metals aluminum and manganese are in **bold** in Table 8 above to signify that these values are below state Water Quality Criteria (WQC), specifically 0.75 mg/L and 1.0 mg/L, respectively.

A review of the historic development of these two limits point to their development circa the turn of the century. These limits were initially set to match limits those found in 40 CFR 434.33 for acid mine drainage discharges and then promulgated as TBELs. However, these TBEL values were then used as inputs into the Toxics Screening Analysis Spreadsheet and also the PENTOXSD (mass balance) model to develop WQBELs.

Contemporary correspondence documents that the PENTOXSD model would recommend Average Monthly Limits (AMLs) that were below state WQC. However, by current policy, effluent limitations would now be set to the WQC in these cases. The historic record was reviewed and confirmed this scenario to be the case for the aluminum limit promulgated in the November 2001 draft permit. The lower limit for manganese predates this 2001 draft permit, having been promulgated in the 1990's.

As noted above, the Federal CWA, Section 402(o)(1) prohibits renewals "to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit." This statute was cited in the 2018 renewal of PA0001627 for Outfall 002 for maintaining the aluminum and manganese AMLs below state WQC.

However, the CWA also provides exceptions, including under Section 402(o)(2)(B)(ii) when the permitting authority "determines that technical mistakes or mistaken interpretations of law were made in issuing the permit…." Such was the case in calculating and promulgating WQBELs that were below state WQC. Therefore, these AMLs will be increased to match state WQC, correcting a prior error for these limits.

Effluent Limitations and Monitoring Requirements for Outfall 002 – Pre-Draft Survey

Effluent limits applicable at Outfall 002 are the more stringent of those currently enforced in the prior permit, TBELs, WQBELs, and other regulatory effluent standards, shown in Tables 4, 5, 7 and 8. Note that with the reduced flow capacity of the MMDP, prior mass limitations have been changed to report only, but will be enforced solely as concentration limits.

Prior to publishing their draft permit renewal, the Department provided a Pre-Draft Survey (**Attachment B**) to the permittee to initiate their review of the proposed new effluent limits. In reply, the permittee supplied their completed survey on September 19, 2024 via email attachment. This response has been included at **Attachment C**.

On September 20, 2024, the permittee also supplied questions/comments on the Pre-Draft effluent limitations proposed for monitoring at Outfall 002. These comments to the implied WQBELS from the Pre-Draft Survey are included as **Attachment D**.

Based on these comments, a few corrections and adjustments were made to the TMS model which was subsequently rerun. These adjustments included corrections to the discharge flow rate to match the lower value supplied by Harwick's consultant for the average discharge flow rate at Outfall 002 of 1.42 MGD which is consistent with the newly installed pumps and the associated reduced capacity of these pumps.

In addition, input errors were corrected for the model inputs for copper and zinc, consistent with the TMS model's input units of mg/L. This resulted in a factor of 1000 reduction from the input values of the prior run. In addition, a review of the previous renewal's analyses was conducted to determine if this same error was made previously; however, the previous analysis was conducted with an earlier model version (PENTOXSD) and an associated spreadsheet that did not have the same ergonomic challenges as the current TMS version. Thus, no similar errors were found.

This Fact Sheet has been updated with the adjustments noted above, including in Table 9 below. In this table proposed new or more stringent effluent limitations for Outfall 002 are shown in **bold**:

Table 9: Effluent Limitations and Bases for Outfall 002

Parameter	Mass (pounds)		Concentration (mg/L)			Basis
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Instant Maximum	
Flow (MGD)	Report	Report	—	—	—	25 Pa. Code § 92a.61(d)(1)
Total Suspended Solids	—	—	35.0	70.0	88*	40 CFR §§ 125.3 & 122.44(l)
Total Dissolved Solids	Report	Report	Report	Report		40 CFR §§ 122.44(l)
Total Residual Chlorine	—	—	Report	Report	—	40 CFR §§ 122.44(l)
Osmotic Pressure	—	—	50.0	100.0	—	40 CFR §§ 122.44(l)
Aluminum, Total	Report	Report	0.75	**0.75**	1.2*	40 CFR § 122.44(l), TMDL
Beryllium, Total	—	—	0.01	0.02	0.025*	40 CFR §§ 122.44(l)
Boron, Total	—	—	**1.706**	**2.661**	—	WQBELs, Reasonable Pot.
Cadmium, Total	—	—	0.0003	0.0006	0.00075*	40 CFR §§ 122.44(l)
Chromium, Hexavalent	—	—	0.006	0.012	—	40 CFR §§ 122.44(l)
Copper, Total	—	—	0.009	0.018	0.023*	40 CFR §§ 122.44(l)
Cyanide, Free	—	—	Report	Report	—	40 CFR §§ 122.44(l)
Dissolved Iron	—	—	Report	Report	—	WQBELs, Reasonable Pot.
Iron, Total	Report	Report	1.5	3.0	3.75*	40 CFR §§ 122.44(l), TMDL
Manganese, Total	Report	Report	1.0	**1.663**	2.18*	WQBELs, Reasonable Pot.
Selenium, Total	—	—	0.005	0.01	0.0125*	40 CFR §§ 122.44(l)
Silver, Total	—	—	0.003	0.006	0.0075*	40 CFR §§ 122.44(l)
Thallium, Total	—	—	0.002	0.004	0.005*	40 CFR §§ 122.44(l)
Bromide	Report	Report	Report	Report	—	40 CFR §§ 122.44(l)
Chloride	Report	Report	Report	Report	—	40 CFR §§ 122.44(l)
Pentachlorophenol	—	—	0.0003	0.0006	0.00075*	40 CFR §§ 122.44(l)
Sulfate, Total	Report	Report	Report	Report	—	40 CFR §§ 122.44(l)
pH (S.U.)	Within the range of 6.0 to 9.0					25 Pa. Code § 95.2

* Instantaneous maximum limitations are imposed to allow for a grab sample to be collected by the appropriate regulatory agency to determine compliance. The permittee is not required to monitor for the instantaneous maximum limitations. However, if grab samples are collected by the permittee, the results must be reported.

In Table 9 above, items displayed in **bold** are new or more restrictive than effluent limits enforced in Harwick's previous permit as shown in Table 8. In contrast, the AML for metals aluminum and manganese were raised to 0.75 mg/L and 1.0 mg/L, respectively, to match state WQC.

After the changes noted above, the remaining new WQBEL parameters, shown in Table 9 above (in **bold**) which include new effluent limitations for Boron, and new monitoring for Dissolved Iron. Monitoring for these is set to include grab samples taken twice per month, consistent with the bulk of the site's monitoring frequencies. All other monitoring frequency and sample types were maintained consistent with prior permits. Also note that prior mass limitations were changed to monitoring only based on the concentration limits.

Effluent Limitation Compliance Schedule

Whenever the Department proposes the imposition of WQBELs on existing sources, the NPDES permit may include a schedule of compliance to achieve the WQBELs. Any compliance schedule contained in an NPDES permit must be an "enforceable sequence of actions or operations leading to compliance with the water quality-based effluent limitations ("WQBELs"). In accordance with 40 CFR 122.47(a)(3) and PA Code, Chapter 92a.51, compliance schedules that are longer than one year in duration must set forth interim requirements and dates for their achievement. In order to grant a compliance schedule in an NPDES permit, the permitting authority has to make a reasonable finding, adequately supported by the administrative record and described in the fact sheet, that a compliance schedule is "appropriate" and that compliance with the final WQBEL is required "as soon as possible".

In this case, As noted above, based on the prior WQBELs proposed, documented in the Pre-Draft Survey sent on August 23, 2024, and Harwick's replies on September 19 and 20, 2024, the permittee believes the current controls may **not** be sufficient to meet the new Boron limits. On October 1, 2024, Harwick's consultant requested a three-year compliance schedule. Therefore, a three-year compliance schedule is being proposed for these new Boron limits at Outfall 002.

Development of Effluent Limitations

Outfall No.	005	**Design Flow (MGD)**	0
Latitude	40º 35' 8"	**Longitude**	-79º 49' 43"
Wastewater Description:	IW Process Effluent with ELG		

Outfall 005 consists of stormwater runoff from the MMDP and environs which discharge to Little Deer Creek, in proximity to but separate from Outfall 002. A prior renewal required Cheswick to complete a Stormwater Pollution Prevention Plan (SWPPP). This prior permit also required sampling for TSS and Hexavalent Chromium. After implementation of the SWPPP and one year of sampling the permittee was able to demonstrate that the stormwater was no longer contaminated with Hexavalent Chromium and this monitoring was removed from the permit.

In the most recent permit, a condition in Part C prescribed benchmark values for stormwater discharges. Benchmark values are a concept in more recent versions of the PAG-03, the Department's General Permit for Stormwater Discharges Associated with Industrial Activity. The benchmark values are not permit limits, however, if they are exceeded in two consecutive monitoring periods, these trigger a requirement for a corrective action plan to be submitted to the Department to monitor efforts to reduce the discharged pollutant concentrations. These same benchmark values were also made applicable to the other stormwater discharges at Outfalls 010 and 011. Outfalls 010 and 011 discharge to an onsite culvert leading to Little Deer Creek which is also included in the Little Deer Creek TMDL. WLAs for the discharges are not assigned in the TMDL so the benchmark values for the AMD constituents, Aluminum, Iron and Manganese, were be set to the criteria shown in Table 5.

Technology-Based Limitations

The PAG-03 contains several appendices listing benchmark values for the associated Industrial Activity. Coal mining is not included in the PAG-03, but it is included in EPA's Multi-Sector General Permit (MSGP) for Discharges of Stormwater Associated with Industrial Activity. The pollutants listed in Sector H for Coal Mines and Coal Mine Related Facilities were included in the prior NPDES permit at Outfall 005. The Sector H pollutants include Total Aluminum, Total Iron and TSS. The benchmark value for Total Aluminum in the MSGP is equal to the Department's criterion of 0.75 mg/L. The benchmark values of 1.5 mg/L and 1.0 mg/L were established as benchmark values for Total Iron and Total Manganese, respectively, reflecting the most stringent water quality standard. The benchmark value of 100 mg/L for TSS in the MSGP is the same as the value listed in the Appendices for the PAG-03 and was also included in the prior permit. These benchmarks will continue to be applied to Outfalls 005, 010 and 011 and are listed below.

Table 10: MSGP Benchmarks for Stormwater Outfalls 005, 010 and 011

Parameter	Benchmark Value (mg/L)
Total Suspended Solids	100
Total Aluminum	0.75
Total Iron	1.5
Total Manganese	1.0

Storm Water Outfalls

The Department's policy for stormwater discharges is to either (1) require that the stormwater is uncontaminated, (2) impose "Monitor and Report", to establish effluent goals and require the permittee to submit a Stormwater Pollution Prevention Plan (SWPPP), or (3) impose effluent limits. In all cases, a storm water special condition is placed in the permit in Part C.

Stormwater effluent data reported in the application are compared to stream criteria, EPA's Multi-Sector General Permit "benchmark values", ELGs and other references while considering site specific conditions such as stream flow and location to determine if actual discharge concentrations of various pollutants in stormwater warrant further controls. If there is insufficient data available, or if pollutant levels are excessive, monitoring for specific pollutants and/or a SWPPP are required in the permit. Otherwise, the storm water outfalls are simply listed as discharge points. In either case, a special condition is added to the permit to include some of the key components of the Department's General Permit (PAG-03) for Discharges of Stormwater Associated with Industrial Activities.

To the extent that monitoring would be necessary to ensure that storm water BMPs are adequately implemented, DEP's Permit Writers' Manual recommends that monitoring of stormwater runoff be established if there is evidence of that the stormwater may be contaminated with pollutants of interest to observe the impact of the facility's BMPs on storm water effluent quality.

Stormwater data was contained in the original NPDES renewal application submittal from March 31, 2023 for Outfall 005 is summarized in Table 11 below:

Table 11: Selected Analytical Results Reported for Outfall 005 Storm Water

Parameter	Conc. Reported on 2023 Application (mg/L)	Parameter	Conc. Reported on 2023 Application (mg/L)
Total Suspended Solids	**153**	pH (s.u.)	Not Reported (NR)
Oil and Grease	<1.4	Aluminum	**2.09**
BOD_5	2	Arsenic	0.0029
COD	45	Iron, Total	**3.91**
Nitrate+Nitrite Nitrogen	0.60	Magnesium	0.216
Phosphorus	**185**	Selenium	< 0.0005
Total Nitrogen	1.1	Total Kjeldahl Nitrogen	< 0.50

Values that exceeded the MSGP benchmarks or other reference values are highlighted in **bold** in the table above.

In addition, a review of eDMR data since the most recent permit issuance on January 14, 2022 through May 2024 is summarized in Table 12 below:

Table 12 eDMR Maximum Reported Analytical Results for Outfall 005 Storm Water

Parameter	Max. Reported Value (mg/L)	Permit Benchmark Value (mg/L)	Month/Year Max. Sample Collected
Total Suspended Solids	**714**	100	July 2022
Aluminum, Total	**2.28**	0.75	July 2022
Iron, Total	**4.7**	1.5	July 2022
Manganese, Total	0.45	1.0	July 2022
pH (s.u.)	8.4	Between 6.0 -9.0	March 2023

Values that exceeded the MSGP benchmark values are highlighted in **bold** in the table above. As can be seen in Tables 11 and 12 above, the reported results for stormwater have, at least on occasion, exceeded the permitted benchmark values or EPA MSGP values, including in the sampling submitted with the renewal application.

In a discussion with Harwick representatives, they revealed that eDMR data for Outfall 005 was noted as exceeding consecutive benchmark values in the August – September 2022 timeframe. In the submission of their 2022 Annual Stormwater Report, they documented that corrective action plans had been submitted for all of their three stormwater outfalls, 005, 010 and 011. However, none of these outfalls have had a repeat of these exceedances since December 2023. Tentatively the BMPs in place to prevent contamination of stormwater being discharged from the site appears to now be effective.

Water Quality-Based Limitations

No mathematical modeling was performed for toxic pollutants at Outfall 005 since storm water is only discharged intermittently and generally not at times when the receiving stream is flowing at the $Q_{7\text{-}10}$ design flow conditions required for modeling. Since no specific WLA is included in the Little Deer Creek Watershed TMDL for this facility's stormwater outfalls, monitoring for the limiting parameters (aluminum, iron and manganese) will be continued to demonstrate that site BMPs are being managed effectively to prevent discharge values in excess of the TMDL concentrations in Table 5.

Monitoring Requirements for Outfall 005

Since the sampling at this outfall indicates that pollutants of concern may be present in excess of TMDL values, the TMDL target concentrations are being imposed as effluent limits, along with other parameters established to monitor the effectiveness of BMPs implemented. These are shown in Table 13 below:

Table 13: Permit Effluent Limits and Monitoring Requirements for Outfall 005

Parameter	Mass (pounds)		Concentration (mg/L)			Monitoring Requirements
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Instant Maximum	
Total Suspended Solids	—	—	—	Report	—	Grab sample; 1/month
Aluminum (total)	—	—	**0.75**	**0.75**	—	Grab sample; 1/month
Iron (total)	—	—	**1.5**	**3.0**	—	Grab sample; 1/month
Manganese (total)	—	—	**1.0**	**2.0**	—	Grab sample; 1/month
pH (S.U.)	Report					Grab sample; 1/month

In Table 13 above, items displayed in **bold** are new or more restrictive than effluent limits enforced in the MMDP's previous permit. The monthly monitoring frequency has been retained, matching the prior permit.

Effluent Limitation Compliance Schedule

Whenever the Department proposes the imposition of WQBELs on existing sources, the NPDES permit may include a schedule of compliance to achieve the WQBELs. Any compliance schedule contained in an NPDES permit must be an "enforceable sequence of actions or operations leading to compliance with the water quality-based effluent limitations ("WQBELs"). In accordance with 40 CFR 122.47(a)(3) and PA Code, Chapter 92a.51, compliance schedules that are longer than one year in duration must set forth interim requirements and dates for their achievement. In order to grant a compliance schedule in an NPDES permit, the permitting authority has to make a reasonable finding, adequately supported by the administrative record and described in the fact sheet, that a compliance schedule is "appropriate" and that compliance with the final WQBEL is required "as soon as possible".

In this case, based on recent eDMR data, the site's BMPs appear to be effective in preventing exceedances of the newly implemented effluent limitations. Therefore, no compliance schedule is being proposed for this outfall.

Development of Effluent Limitations

Outfall No.	010	**Design Flow (MGD)**	0
Latitude	40º 35' 0.00"	**Longitude**	-79º 50' 0.00"
Wastewater Description:	Stormwater		

Outfall 010 is a stormwater outfall at the CADS that discharges stormwater runoff to a culvert leading to Little Deer Creek. The orientation of the two CADS outfalls is shown in Figure 7 below.

Figure 7: Details of the Relative Orientation of Harwick Outfalls 010 and 011 permitted in PA0255777

Technology-Based Limitations

The technology-based limitations that apply to Outfall 010 are shown in Table 10.

Storm Water Outfalls

The Department's policy for stormwater discharges is to either (1) require that the stormwater is uncontaminated, (2) impose "Monitor and Report", to establish effluent goals and require the permittee to submit a Stormwater Pollution Prevention Plan (SWPPP), or (3) impose effluent limits. In all cases, a storm water special condition is placed in the permit in Part C.

Stormwater effluent data reported in the application are compared to stream criteria, EPA's Multi-Sector General Permit "benchmark values", ELGs and other references while considering site specific conditions such as stream flow and location to determine if actual discharge concentrations of various pollutants in stormwater warrant further controls. If there is insufficient data available, or if pollutant levels are excessive, monitoring for specific pollutants and/or a SWPPP are required

in the permit. Otherwise, the storm water outfalls are simply listed as discharge points. In either case, a special condition is added to the permit to include some of the key components of the Department's General Permit (PAG-03) for Discharges of Stormwater Associated with Industrial Activities.

To the extent that monitoring would be necessary to ensure that storm water BMPs are adequately implemented, DEP's Permit Writers' Manual recommends that monitoring of stormwater runoff be established if there is evidence of that the stormwater may be contaminated with pollutants of interest to observe the impact of the facility's BMPs on storm water effluent quality.

No stormwater data was contained in the original NPDES renewal application submittal from March 31, 2023 for Outfall 010. However, semi-annual stormwater sampling was required in the recent permit term. A review of eDMR data since the most recent permit issuance on January 14, 2022 through May 2024 is summarized in Table 14 below:

Table 14 eDMR Maximum Reported Analytical Results for Outfall 010 Storm Water

Parameter	Max. Reported Value (mg/L)	Permit Benchmark Value (mg/L)	Month/Year Max. Sample Collected
Total Suspended Solids	**332**	100	First half 2023
Aluminum, Total	**2.28**	0.75	First half 2023
Iron, Total	**3.43**	1.5	First half 2023
Manganese, Total	0.44	1.0	First half 2023
pH (s.u.)	8.27	Between 6.0 -9.0	First half 2022

Values that exceeded the MSGP benchmark values are highlighted in **bold** in the table above. As can be seen in Table 14 above, the reported results for stormwater have, at least on occasion, exceeded the permitted benchmark values or EPA MSGP values, including in the sampling submitted with the renewal application.

In a discussion with Harwick representatives, they revealed that corrective action plans had been submitted for all of their three stormwater outfalls, 005, 010 and 011. However, none of these outfalls have had a repeat of these exceedances since December 2023. Tentatively the BMPs in place to prevent contamination of stormwater being discharged from the site appears to now be effective.

Water Quality-Based Limitations

No mathematical modeling was performed for toxic pollutants at Outfall 005 since storm water is only discharged intermittently and generally not at times when the receiving stream is flowing at the Q_{7-10} design flow conditions required for modeling. Since no specific WLA is included in the Little Deer Creek Watershed TMDL for this facility's stormwater outfalls, monitoring for the limiting parameters (aluminum, iron and manganese) will be continued to demonstrate that site BMPs are being managed effectively to prevent discharge values in excess of the TMDL concentrations in Table 5.

Monitoring Requirements for Outfall 010

Since the sampling at this outfall indicates that pollutants of concern may be present in excess of TMDL values, the TMDL target concentrations are being imposed as effluent limits, along with other parameters established to monitor the effectiveness of BMPs implemented. These are shown in Table 15 below:

Table 15: Permit Effluent Limits and Monitoring Requirements for Outfall 010

Parameter	Mass (pounds)		Concentration (mg/L)			Monitoring Requirements
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Instant Maximum	
Total Suspended Solids	—	—	—	Report	—	Grab sample; 1/month
Aluminum (total)	—	—	**0.75**	**0.75**	—	Grab sample; 1/month
Iron (total)	—	—	**1.5**	**3.0**	—	Grab sample; 1/month
Manganese (total)	—	—	**1.0**	**2.0**	—	Grab sample; 1/month
pH (S.U.)	Report					Grab sample; 1/month

In Table 15 above, items displayed in **bold** are new or more restrictive than effluent limits enforced in the MMDP's previous permit. A higher frequency is also being established to match the monthly monitoring frequency for Harwick's other stormwater outfalls.

Effluent Limitation Compliance Schedule

Whenever the Department proposes the imposition of WQBELs on existing sources, the NPDES permit may include a schedule of compliance to achieve the WQBELs. Any compliance schedule contained in an NPDES permit must be an "enforceable sequence of actions or operations leading to compliance with the water quality-based effluent limitations ("WQBELs"). In accordance with 40 CFR 122.47(a)(3) and PA Code, Chapter 92a.51, compliance schedules that are longer than one year in duration must set forth interim requirements and dates for their achievement. In order to grant a compliance schedule in an NPDES permit, the permitting authority has to make a reasonable finding, adequately supported by the administrative record and described in the fact sheet, that a compliance schedule is "appropriate" and that compliance with the final WQBEL is required "as soon as possible".

In this case, based on recent eDMR data, the site's BMPs appear to be effective in preventing exceedances of the newly implemented effluent limitations. Therefore, no compliance schedule is being proposed for this outfall.

Development of Effluent Limitations

Outfall No.	011	**Design Flow (MGD)**	0
Latitude	40º 35' 0.00"	**Longitude**	-79º 50' 0.00"
Wastewater Description:	Stormwater		

Outfall 011 is a stormwater outfall at the CADS that discharges stormwater runoff to a culvert leading to Little Deer Creek. The orientation of the two CADS outfalls is shown in Figure 7 above.

Technology-Based Limitations

The technology-based limitations that apply to Outfall 011 are shown in Table 10 in a previous section.

Storm Water Outfalls

The Department's policy for stormwater discharges is to either (1) require that the stormwater is uncontaminated, (2) impose "Monitor and Report", to establish effluent goals and require the permittee to submit a Stormwater Pollution Prevention Plan (SWPPP), or (3) impose effluent limits. In all cases, a storm water special condition is placed in the permit in Part C.

Stormwater effluent data reported in the application are compared to stream criteria, EPA's Multi-Sector General Permit "benchmark values", ELGs and other references while considering site specific conditions such as stream flow and location to determine if actual discharge concentrations of various pollutants in stormwater warrant further controls. If there is insufficient data available, or if pollutant levels are excessive, monitoring for specific pollutants and/or a SWPPP are required in the permit. Otherwise, the storm water outfalls are simply listed as discharge points. In either case, a special condition is added to the permit to include some of the key components of the Department's General Permit (PAG-03) for Discharges of Stormwater Associated with Industrial Activities.

To the extent that monitoring would be necessary to ensure that storm water BMPs are adequately implemented, DEP's Permit Writers' Manual recommends that monitoring of stormwater runoff be established if there is evidence of that the stormwater may be contaminated with pollutants of interest to observe the impact of the facility's BMPs on storm water effluent quality.

No stormwater data was contained in the original NPDES renewal application submittal from March 31, 2023 for Outfall 011. However, semi-annual stormwater sampling was required in the recent permit term. A review of eDMR data since the most recent permit issuance on January 14, 2022 through May 2024 is summarized in Table 16 below:

Table 16 eDMR Maximum Reported Analytical Results for Outfall 011 Storm Water

Parameter	Max. Reported Value (mg/L)	Permit Benchmark Value (mg/L)	Month/Year Max. Sample Collected
Total Suspended Solids	**843**	100	May 2022
Aluminum, Total	**12.7**	0.75	May 2022
Iron, Total	**13.5**	1.5	May 2022
Manganese, Total	**1.36**	1.0	May 2022
pH (s.u.)	8.52	Between 6.0 -9.0	March 2024

Values that exceeded the MSGP benchmark values are highlighted in **bold** in the table above. As can be seen in Table 16 above, the reported results for stormwater have, at least on occasion, exceeded the permitted benchmark values or EPA MSGP values, including in the sampling submitted with the renewal application.

In a discussion with Harwick representatives, they revealed that corrective action plans had been submitted for all of their three stormwater outfalls, 005, 010 and 011. However, none of these outfalls have had a repeat of these exceedances since December 2023. Tentatively the BMPs in place to prevent contamination of stormwater being discharged from the site appears to now be effective.

Water Quality-Based Limitations

No mathematical modeling was performed for toxic pollutants at Outfall 011 since storm water is only discharged intermittently and generally not at times when the receiving stream is flowing at the Q_{7-10} design flow conditions required for modeling. Since no specific WLA is included in the Little Deer Creek Watershed TMDL for this facility's stormwater outfalls, monitoring for the limiting parameters (aluminum, iron and manganese) will be continued to demonstrate that site BMPs are being managed effectively to prevent discharge values in excess of the TMDL concentrations in Table 5.

Monitoring Requirements for Outfall 011

Since the sampling at this outfall indicates that pollutants of concern may be present in excess of TMDL values, the TMDL target concentrations are being imposed as effluent limits, along with other parameters established to monitor the effectiveness of BMPs implemented. These are shown in Table 17 below:

Table 17: Permit Effluent Limits and Monitoring Requirements for Outfall 011

Parameter	Mass (pounds)		Concentration (mg/L)			Monitoring Requirements
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Instant Maximum	
Total Suspended Solids	—	—	—	Report	—	Grab sample; 1/month
Aluminum (total)	—	—	**0.75**	**0.75**	—	Grab sample; 1/month
Iron (total)	—	—	**1.5**	**3.0**	—	Grab sample; 1/month
Manganese (total)	—	—	**1.0**	**2.0**	—	Grab sample; 1/month
pH (S.U.)	Report					Grab sample; 1/month

In Table 17 above, items displayed in **bold** are new or more restrictive than effluent limits enforced in the MMDP's previous permit. The monitoring frequency is being maintained to match the monthly monitoring frequency previously established for this and other of Harwick's stormwater outfalls.

Effluent Limitation Compliance Schedule

Whenever the Department proposes the imposition of WQBELs on existing sources, the NPDES permit may include a schedule of compliance to achieve the WQBELs. Any compliance schedule contained in an NPDES permit must be an "enforceable sequence of actions or operations leading to compliance with the water quality-based effluent limitations ("WQBELs"). In accordance with 40 CFR 122.47(a)(3) and PA Code, Chapter 92a.51, compliance schedules that are longer than one year in duration must set forth interim requirements and dates for their achievement. In order to grant a compliance schedule in an NPDES permit, the permitting authority has to make a reasonable finding, adequately supported by the administrative record and described in the fact sheet, that a compliance schedule is "appropriate" and that compliance with the final WQBEL is required "as soon as possible".

In this case, based on recent eDMR data, the site's BMPs appear to be effective in preventing exceedances of the newly implemented effluent limitations. Therefore, no compliance schedule is being proposed for this outfall.

Tools and References Used to Develop Permit	
☐	WQM for Windows Model
☒	Toxics Management Spreadsheet (see Attachment A)
☐	TRC Model Spreadsheet
☐	Temperature Model Spreadsheet
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
☐	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, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
☐	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, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: SOP for Clean Water Program, New and Reissuance IW and Industrial Stormwater, Individual NPDES Permit Applications, BPBPSM-PMT-001; SOP for Clean Water Program, Establishing WQBELs and Permit Conditions for Toxic Pollutants in NPDES Permits for Existing Dischargers, SOP No. BCW-PMT-037, Revised May20, 2021, Version 1.5.
☐	Other:

ATTACHMENTS

ATTACHMENT A: TOXICS MANAGEMENT SPREADSHEET, VERSION 1.4
ATTACHMENT B: PRE-DRAFT SURVEY LETTER AND ATTACHMENTS
ATTACHMENT C: HARWICK RESPONSE TO PRE-DRAFT SURVEY
ATTACHMENT D: HARWICK COMMENTS ON PRE-DRAFT DOCUMENTS

ATTACHMENT A

TOXICS MANAGEMENT SPREADSHEET, VERSION 1.4

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Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

CLEAR PROJECT | CLEAR FORM | CALCULATE

Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
1.42	392.33	7.4						

	Discharge Pollutant	Units	Max Discharge Conc		0 if left blank: Trib Conc	0 if left blank: Stream Conc	0.5 if left blank: Daily CV	0.5 if left blank: Hourly CV	0 if left blank: Stream CV	0 if left blank: Fate Coeff	0 if left blank: FOS	1 if left blank: Criteria Mod	1 if left blank: Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		1630									
	Chloride (PWS)	mg/L		162									
	Bromide	mg/L		1.6									
	Sulfate (PWS)	mg/L		582.67									
	Fluoride (PWS)	mg/L		0.37									
Group 2	Total Aluminum	µg/L	<	500									
	Total Antimony	µg/L	<	1									
	Total Arsenic	µg/L	<	1									
	Total Barium	µg/L		17.4									
	Total Beryllium	µg/L	<	1									
	Total Boron	µg/L		2673									
	Total Cadmium	µg/L	<	0.2									
	Total Chromium (III)	µg/L	<	1									
	Hexavalent Chromium	µg/L	<	0.001									
	Total Cobalt	µg/L	<	0.5									
	Total Copper	mg/L	<	0.001									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L	<	0.02									
	Dissolved Iron	µg/L	<	50									
	Total Iron	µg/L		612.33									
	Total Lead	µg/L	<	1									
	Total Manganese	µg/L		672									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L		0.63									
	Total Phenols (Phenolics) (PWS)	µg/L	<	10									
	Total Selenium	µg/L		1.3									
	Total Silver	µg/L	<	0.2									
	Total Thallium	µg/L	<	0.2									
	Total Zinc	mg/L	<	0.005									
	Total Molybdenum	µg/L		82.77									
Group 3	Acrolein	µg/L	<	2									
	Acrylamide	µg/L	<	10									
	Acrylonitrile	µg/L	<	1									
	Benzene	µg/L	<	0.5									
	Bromoform	µg/L	<	1									
	Carbon Tetrachloride	µg/L	<	0.5									
	Chlorobenzene	µg/L		0.5									
	Chlorodibromomethane	µg/L	<	0.4									
	Chloroethane	µg/L	<	0.5									
	2-Chloroethyl Vinyl Ether	µg/L	<	1									
	Chloroform	µg/L	<	0.5									
	Dichlorobromomethane	µg/L	<	0.5									
	1,1-Dichloroethane	µg/L	<	0.5									
	1,2-Dichloroethane	µg/L	<	0.5									
	1,1-Dichloroethylene	µg/L	<	0.5									
	1,2-Dichloropropane	µg/L	<	0.5									
	1,3-Dichloropropylene	µg/L	<	0.5									
	1,4-Dioxane	µg/L	<	0.2									
	Ethylbenzene	µg/L	<	0.5									
	Methyl Bromide	µg/L	<	1									
	Methyl Chloride	µg/L	<	0.5									
	Methylene Chloride	µg/L	<	0.5									
	1,1,2,2-Tetrachloroethane	µg/L	<	0.5									
	Tetrachloroethylene	µg/L	<	0.5									
	Toluene	µg/L	<	0.5									
	1,2-trans-Dichloroethylene	µg/L	<	1									
	1,1,1-Trichloroethane	µg/L	<	0.5									
	1,1,2-Trichloroethane	µg/L	<	0.5									
	Trichloroethylene	µg/L	<	0.5									
	Vinyl Chloride	µg/L	<	0.5									

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Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

CLEAR PROJECT | CLEAR FORM | CALCULATE

Group 4	2-Chlorophenol	µg/L	<	0.5										
	2,4-Dichlorophenol	µg/L	<	0.5										
	2,4-Dimethylphenol	µg/L	<	0.5										
	4,6-Dinitro-o-Cresol	µg/L	<											
	2,4-Dinitrophenol	µg/L	<	2										
	2-Nitrophenol	µg/L	<	1										
	4-Nitrophenol	µg/L	<	1										
	p-Chloro-m-Cresol	µg/L	<											
	Pentachlorophenol	µg/L	<	1										
	Phenol	µg/L	<	0.5										
	2,4,6-Trichlorophenol	µg/L	<	0.5										
Group 5	Acenaphthene	µg/L	<	0.2										
	Acenaphthylene	µg/L	<	0.2										
	Anthracene	µg/L	<	0.2										
	Benzidine	µg/L	<	1										
	Benzo(a)Anthracene	µg/L	<	0.2										
	Benzo(a)Pyrene	µg/L	<	0.2										
	3,4-Benzofluoranthene	µg/L	<											
	Benzo(ghi)Perylene	µg/L	<	0.2										
	Benzo(k)Fluoranthene	µg/L	<	0.2										
	Bis(2-Chloroethoxy)Methane	µg/L	<	0.2										
	Bis(2-Chloroethyl)Ether	µg/L	<	0.2										
	Bis(2-Chloroisopropyl)Ether	µg/L	<	0.2										
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	3										
	4-Bromophenyl Phenyl Ether	µg/L	<	0.2										
	Butyl Benzyl Phthalate	µg/L	<	2										
	2-Chloronaphthalene	µg/L	<	0.2										
	4-Chlorophenyl Phenyl Ether	µg/L	<	0.2										
	Chrysene	µg/L	<	0.2										
	Dibenzo(a,h)Anthrancene	µg/L	<	0.2										
	1,2-Dichlorobenzene	µg/L	<	0.2										
	1,3-Dichlorobenzene	µg/L	<	0.2										
	1,4-Dichlorobenzene	µg/L	<	0.2										
	3,3-Dichlorobenzidine	µg/L	<	1										
	Diethyl Phthalate	µg/L	<	2										
	Dimethyl Phthalate	µg/L	<	2										
	Di-n-Butyl Phthalate	µg/L	<	2										
	2,4-Dinitrotoluene	µg/L	<	0.5										
	2,6-Dinitrotoluene	µg/L	<	0.5										
	Di-n-Octyl Phthalate	µg/L	<	2										
	1,2-Diphenylhydrazine	µg/L	<	0.2										
	Fluoranthene	µg/L	<	0.2										
	Fluorene	µg/L	<	0.2										
	Hexachlorobenzene	µg/L	<	0.2										
	Hexachlorobutadiene	µg/L	<	0.2										
	Hexachlorocyclopentadiene	µg/L	<	1										
	Hexachloroethane	µg/L	<	0.2										
	Indeno(1,2,3-cd)Pyrene	µg/L	<	0.2										
	Isophorone	µg/L	<	0.5										
	Naphthalene	µg/L	<	0.2										
	Nitrobenzene	µg/L	<	0.2										
	n-Nitrosodimethylamine	µg/L	<	0.2										
	n-Nitrosodi-n-Propylamine	µg/L	<	0.2										
	n-Nitrosodiphenylamine	µg/L	<	0.2										
	Phenanthrene	µg/L	<	0.2										
	Pyrene	µg/L	<	0.2										
	1,2,4-Trichlorobenzene	µg/L	<	0.2										

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Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Harwick MMDP, NPDES Permit No. PA0255777, Outfall 002

Instructions | Discharge | *Stream*

CLEAR FORM | CALCULATE

Receiving Surface Water Name: **Little Deer Creek**

No. Reaches to Model: **1**

- (●) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	042289	2.794	844	10.7			Yes
End of Reach 1	042289	1.933	838	11			Yes

$Q_{7\text{-}10}$

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	2.794	0.1	0.145			21.4	3					100	7		
End of Reach 1	1.933	0.1	0.15			18.4	6								

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	2.794		2.72												
End of Reach 1	1.933		2.81												

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Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Harwick MMDP, NPDES Permit No. PA0255777, Outfall 002

Instructions | *Results* | RETURN TO INPUTS | SAVE AS PDF | PRINT | (•) All | ( ) Inputs | ( ) Results | ( ) Limits

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Aluminum	8.88	9.47	750	800	800	µg/L	750	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Boron	20.2	31.5	1,706	2,661	4,264	µg/L	1,706	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Dissolved Iron	Report	Report	Report	Report	Report	µg/L	320	THH	Discharge Conc > 10% WQBEL (no RP)
Total Iron	Report	Report	Report	Report	Report	µg/L	1,599	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Manganese	12.6	19.7	1,066	1,663	2,665	µg/L	1,066	THH	Discharge Conc ≥ 50% WQBEL (RP)
Total Selenium	Report	Report	Report	Report	Report	µg/L	5.32	CFC	Discharge Conc > 10% WQBEL (no RP)
Acrylamide	0.002	0.003	0.16	0.24	0.39	µg/L	0.16	CRL	Discharge Conc ≥ 50% WQBEL (RP)

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Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Harwick MMDP, NPDES Permit No. PA0255777, Outfall 002

Instructions | *Results* | RETURN TO INPUTS | SAVE AS PDF | PRINT | ◉ All ○ Inputs ○ Results ○ Limits

☑ ***Hydrodynamics***

$Q_{7\text{-}10}$

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
2.794	0.15		0.15	2.197	0.001	3.	21.4	7.133	0.036	1.443	0.013
1.933	0.15		0.15								

Q_h

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
2.794	2.72		2.72	2.197	0.001	4.158	21.4	5.147	0.055	0.952	0.624
1.933	2.81		2.81								

ATTACHMENT B

PRE-DRAFT SURVEY LETTER AND ATTACHMENTS

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office

VIA ELECTRONIC MAIL

July 1, 2024

Norman E. Divers III
Vice President, Environmental Health & Safety
Harwick Operating Company
12601 Plantside Drive
Louisville, KY 40299

Re: Pre-Draft Survey NPDES Permit- Industrial Waste
Monarch Mine Dewatering Plant
Application No. PA0255777
Authorization ID No. 1435370
Indiana Twp., Allegheny County

Dear Mr. Divers:

The Department of Environmental Protection (DEP) has reviewed your NPDES permit application and has reached a preliminary finding that the renewal permit requires water quality-based effluent limitations (WQBELs) for toxic pollutant(s) that are either new or are more stringent than in your current NPDES permit. This finding is largely based on DEP's updated modeling of Little Deer Creek and its assimilative capacity in the area of the site's discharge at Outfall 002. This limited capacity impacted Department modeling results indicating that new and more stringent WQBELs are required at Outfall 002 to support aquatic life downstream of the plant. These proposed new or more stringent WQBELs are detailed in the proposed effluent limits as follows:

Outfall No.	Pollutant	Monthly Average (mg/L)	Maximum Daily (mg/L)	IMAX (mg/L)
002	**Acrylamide**	**0.00013**	**0.00021**	—
002	Aluminum, Total	0.48	**0.75**	1.2*
002	**Boron, Total**	**1.675**	**2.613**	—
002	Manganese, Total	0.87	**1.633**	2.18*
002	**Zinc, Total**	**0.37**	**0.39**	—

* Instantaneous maximum limitations are imposed to allow for a grab sample to be collected by the appropriate regulatory agency to determine compliance. The permittee is not required to monitor for the instantaneous maximum limitations. However, if grab samples are collected by the permittee, the results must be reported.

Please note that newly added pollutants and more stringent effluent limitations are marked as **bold**. In addition, the Department's modeling indicates that added monitoring is required for dissolved iron.

Attached are separate surveys for each of the pollutants of concern noted in the table above. The Department requests that you complete and return these surveys to DEP within 30 days. Completion of these surveys will help DEP to progress toward issuing the draft NPDES permit for public comment and allow DEP to understand your current capabilities or plans to treat or control these pollutants. If you

decide not to complete and return the survey, DEP will proceed with developing the draft and final NPDES permits based on all available information and certain assumptions.

Also note that this permit will not be finalized before your confirmation that the permitted Monarch Mine Dewatering Plant's treatment system and the Cheswick Ash Disposal Site's leachate transfer pump maintenance/replacement has been completed and these systems are fully operational.

Your response to this notice does not constitute an official comment on the DEP draft permit but your response will be taken under consideration. When the draft NPDES permit is formally noticed in the *Pennsylvania Bulletin*, you may make official comments for DEP's further consideration and response.

Please contact me at 412.442.4183 if you have any questions about this information or the attached survey.

Sincerely,

John L. Duryea, Jr., P.E.
Environmental Engineer
Clean Water Program

Enclosures

cc: Sam Miller
Richard Ravotti
Bryan Peter, Deigan Associates

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Clean Water

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PRE-DRAFT PERMIT SURVEY FOR TOXIC POLLUTANTS

Permittee Name: **Harwick Operating Company (Harwick), Monarch Mine Dewatering Plant (MMDP), Allegheny County** Permit No.: **PA0255777**

Pollutant(s) identified by DEP that may require WQBELs: **Outfall 002 - Acrylamide**

Is the permittee aware of the source(s) of the pollutant(s)? ☐ Yes ☐ No ☐ Suspected

If Yes or Suspected, describe the known or suspected source(s) of pollutant(s) in the effluent.

Has the permittee completed any studies in the past to control or treat the pollutant(s)? ☐ Yes ☐ No

If Yes, describe prior studies and results:

Does the permittee believe it can achieve the proposed WQBELs now? ☐ Yes ☐ No ☐ Uncertain

If No, describe the activities, upgrades or process changes that would be necessary to achieve the WQBELs, if known.

Estimated date by which the permittee could achieve the proposed WQBELs: _____ ☐ Uncertain

Will the permittee conduct additional sampling for the pollutant(s) to supplement the application? ☐ Yes ☐ No

Check the appropriate box(es) below to indicate site-specific data that have been collected by the permittee in the past. If any of these data have not been submitted to DEP, please attach to this survey.

☐	Discharge pollutant concentration coefficient(s) of variability	Year(s) Studied:
☐	Discharge and background Total Hardness concentrations (metals)	Year(s) Studied:
☐	Background / ambient pollutant concentrations	Year(s) Studied:
☐	Chemical translator(s) (metals)	Year(s) Studied:
☐	Slope and width of receiving waters	Year(s) Studied:
☐	Velocity of receiving waters at design conditions	Year(s) Studied:
☐	Acute and/or chronic partial mix factors (mixing at design conditions)	Year(s) Studied:
☐	Volatilization rates (highly volatile organics)	Year(s) Studied:
☐	Site-specific criteria (e.g., Water Effect Ratio or related study)	Year(s) Studied:

Please submit this survey to the DEP SWRO that is reviewing the permit application within 30 days of receipt.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PRE-DRAFT PERMIT SURVEY FOR TOXIC POLLUTANTS

Permittee Name: **Harwick, MMDP, Allegheny County** Permit No.: **PA0255777**

Pollutant(s) identified by DEP that may require WQBELs: **Outfall 002 – Aluminum, Total**

Is the permittee aware of the source(s) of the pollutant(s)? ☐ Yes ☐ No ☐ Suspected

If Yes or Suspected, describe the known or suspected source(s) of pollutant(s) in the effluent.

Has the permittee completed any studies in the past to control or treat the pollutant(s)? ☐ Yes ☐ No

If Yes, describe prior studies and results:

Does the permittee believe it can achieve the proposed WQBELs now? ☐ Yes ☐ No ☐ Uncertain

If No, describe the activities, upgrades or process changes that would be necessary to achieve the WQBELs, if known.

Estimated date by which the permittee could achieve the proposed WQBELs: _____ ☐ Uncertain

Will the permittee conduct additional sampling for the pollutant(s) to supplement the application? ☐ Yes ☐ No

Check the appropriate box(es) below to indicate site-specific data that have been collected by the permittee in the past. If any of these data have not been submitted to DEP, please attach to this survey.

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☐	Velocity of receiving waters at design conditions	Year(s) Studied:
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☐	Volatilization rates (highly volatile organics)	Year(s) Studied:
☐	Site-specific criteria (e.g., Water Effect Ratio or related study)	Year(s) Studied:

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PRE-DRAFT PERMIT SURVEY FOR TOXIC POLLUTANTS

Permittee Name: **Harwick, MMDP, Allegheny County** Permit No.: **PA0255777**

Pollutant(s) identified by DEP that may require WQBELs: **Outfall 002 – Boron, Total**

Is the permittee aware of the source(s) of the pollutant(s)? ☐ Yes ☐ No ☐ Suspected

If Yes or Suspected, describe the known or suspected source(s) of pollutant(s) in the effluent.

Has the permittee completed any studies in the past to control or treat the pollutant(s)? ☐ Yes ☐ No

If Yes, describe prior studies and results:

Does the permittee believe it can achieve the proposed WQBELs now? ☐ Yes ☐ No ☐ Uncertain

If No, describe the activities, upgrades or process changes that would be necessary to achieve the WQBELs, if known.

Estimated date by which the permittee could achieve the proposed WQBELs: _____ ☐ Uncertain

Will the permittee conduct additional sampling for the pollutant(s) to supplement the application? ☐ Yes ☐ No

Check the appropriate box(es) below to indicate site-specific data that have been collected by the permittee in the past. If any of these data have not been submitted to DEP, please attach to this survey.

☐	Discharge pollutant concentration coefficient(s) of variability	Year(s) Studied:
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☐	Velocity of receiving waters at design conditions	Year(s) Studied:
☐	Acute and/or chronic partial mix factors (mixing at design conditions)	Year(s) Studied:
☐	Volatilization rates (highly volatile organics)	Year(s) Studied:
☐	Site-specific criteria (e.g., Water Effect Ratio or related study)	Year(s) Studied:

Please submit this survey to the DEP SWRO that is reviewing the permit application within 30 days of receipt.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PRE-DRAFT PERMIT SURVEY FOR TOXIC POLLUTANTS

Permittee Name: **Harwick, MMDP, Allegheny County** Permit No.: **PA0255777**

Pollutant(s) identified by DEP that may require WQBELs: **Outfall 002 – Manganese, Total**

Is the permittee aware of the source(s) of the pollutant(s)? ☐ Yes ☐ No ☐ Suspected

If Yes or Suspected, describe the known or suspected source(s) of pollutant(s) in the effluent.

Has the permittee completed any studies in the past to control or treat the pollutant(s)? ☐ Yes ☐ No

If Yes, describe prior studies and results:

Does the permittee believe it can achieve the proposed WQBELs now? ☐ Yes ☐ No ☐ Uncertain

If No, describe the activities, upgrades or process changes that would be necessary to achieve the WQBELs, if known.

Estimated date by which the permittee could achieve the proposed WQBELs: _____ ☐ Uncertain

Will the permittee conduct additional sampling for the pollutant(s) to supplement the application? ☐ Yes ☐ No

Check the appropriate box(es) below to indicate site-specific data that have been collected by the permittee in the past. If any of these data have not been submitted to DEP, please attach to this survey.

☐	Discharge pollutant concentration coefficient(s) of variability	Year(s) Studied:
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☐	Slope and width of receiving waters	Year(s) Studied:
☐	Velocity of receiving waters at design conditions	Year(s) Studied:
☐	Acute and/or chronic partial mix factors (mixing at design conditions)	Year(s) Studied:
☐	Volatilization rates (highly volatile organics)	Year(s) Studied:
☐	Site-specific criteria (e.g., Water Effect Ratio or related study)	Year(s) Studied:

Please submit this survey to the DEP SWRO that is reviewing the permit application within 30 days of receipt.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PRE-DRAFT PERMIT SURVEY FOR TOXIC POLLUTANTS

Permittee Name: **Harwick, MMDP, Allegheny County** Permit No.: **PA0255777**

Pollutant(s) identified by DEP that may require WQBELs: **Outfall 002 – Zinc, Total**

Is the permittee aware of the source(s) of the pollutant(s)? ☐ Yes ☐ No ☐ Suspected

If Yes or Suspected, describe the known or suspected source(s) of pollutant(s) in the effluent.

Has the permittee completed any studies in the past to control or treat the pollutant(s)? ☐ Yes ☐ No

If Yes, describe prior studies and results:

Does the permittee believe it can achieve the proposed WQBELs now? ☐ Yes ☐ No ☐ Uncertain

If No, describe the activities, upgrades or process changes that would be necessary to achieve the WQBELs, if known.

Estimated date by which the permittee could achieve the proposed WQBELs: _____ ☐ Uncertain

Will the permittee conduct additional sampling for the pollutant(s) to supplement the application? ☐ Yes ☐ No

Check the appropriate box(es) below to indicate site-specific data that have been collected by the permittee in the past. If any of these data have not been submitted to DEP, please attach to this survey.

☐	Discharge pollutant concentration coefficient(s) of variability	Year(s) Studied:
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☐	Volatilization rates (highly volatile organics)	Year(s) Studied:
☐	Site-specific criteria (e.g., Water Effect Ratio or related study)	Year(s) Studied:

Please submit this survey to the DEP SWRO that is reviewing the permit application within 30 days of receipt.

ATTACHMENT C

HARWICK RESPONSE TO PRE-DRAFT SURVEY
(RECEIVED VIA EMAIL ON SEPT. 19, 2024)

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Clean Water

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PRE-DRAFT PERMIT SURVEY FOR TOXIC POLLUTANTS

Permittee Name: **Harwick Operating Company (Harwick), Monarch Mine Dewatering Plant (MMDP), Allegheny County** Permit No.: **PA0255777**

Pollutant(s) identified by DEP that may require WQBELs: **Outfall 002 - Acrylamide**

Is the permittee aware of the source(s) of the pollutant(s)? ☐ Yes ☑ No ☐ Suspected

If Yes or Suspected, describe the known or suspected source(s) of pollutant(s) in the effluent.

Has the permittee completed any studies in the past to control or treat the pollutant(s)? ☐ Yes ☑ No

If Yes, describe prior studies and results:

Does the permittee believe it can achieve the proposed WQBELs now? ☐ Yes ☐ No ☑ Uncertain

If No, describe the activities, upgrades or process changes that would be necessary to achieve the WQBELs, if known.

Estimated date by which the permittee could achieve the proposed WQBELs: ☑ Uncertain

Will the permittee conduct additional sampling for the pollutant(s) to supplement the application? ☑ Yes ☐ No

Check the appropriate box(es) below to indicate site-specific data that have been collected by the permittee in the past. If any of these data have not been submitted to DEP, please attach to this survey.

☐	Discharge pollutant concentration coefficient(s) of variability	Year(s) Studied:
☐	Discharge and background Total Hardness concentrations (metals)	Year(s) Studied:
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☐	Acute and/or chronic partial mix factors (mixing at design conditions)	Year(s) Studied:
☐	Volatilization rates (highly volatile organics)	Year(s) Studied:
☐	Site-specific criteria (e.g., Water Effect Ratio or related study)	Year(s) Studied:

Please submit this survey to the DEP SWRO that is reviewing the permit application within 30 days of receipt.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PRE-DRAFT PERMIT SURVEY FOR TOXIC POLLUTANTS

Permittee Name: **Harwick, MMDP, Allegheny County** Permit No.: **PA0255777**

Pollutant(s) identified by DEP that may require WQBELs: **Outfall 002 – Aluminum, Total**

Is the permittee aware of the source(s) of the pollutant(s)? ☐ Yes ☑ No ☐ Suspected

If Yes or Suspected, describe the known or suspected source(s) of pollutant(s) in the effluent.

Has the permittee completed any studies in the past to control or treat the pollutant(s)? ☐ Yes ☑ No

If Yes, describe prior studies and results:

Does the permittee believe it can achieve the proposed WQBELs now? ☑ Yes ☐ No ☐ Uncertain

If No, describe the activities, upgrades or process changes that would be necessary to achieve the WQBELs, if known.

Estimated date by which the permittee could achieve the proposed WQBELs: _____ ☐ Uncertain

Will the permittee conduct additional sampling for the pollutant(s) to supplement the application? ☐ Yes ☑ No

Check the appropriate box(es) below to indicate site-specific data that have been collected by the permittee in the past. If any of these data have not been submitted to DEP, please attach to this survey.

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PRE-DRAFT PERMIT SURVEY FOR TOXIC POLLUTANTS

Permittee Name: **Harwick, MMDP, Allegheny County** Permit No.: **PA0255777**

Pollutant(s) identified by DEP that may require WQBELs: **Outfall 002 – Boron, Total**

Is the permittee aware of the source(s) of the pollutant(s)? ☐ Yes ☑ No ☐ Suspected

If Yes or Suspected, describe the known or suspected source(s) of pollutant(s) in the effluent.

Has the permittee completed any studies in the past to control or treat the pollutant(s)? ☐ Yes ☑ No

If Yes, describe prior studies and results:

Does the permittee believe it can achieve the proposed WQBELs now? ☐ Yes ☐ No ☑ Uncertain

If No, describe the activities, upgrades or process changes that would be necessary to achieve the WQBELs, if known.

Estimated date by which the permittee could achieve the proposed WQBELs: _____ ☑ Uncertain

Will the permittee conduct additional sampling for the pollutant(s) to supplement the application? ☑ Yes ☐ No

Check the appropriate box(es) below to indicate site-specific data that have been collected by the permittee in the past. If any of these data have not been submitted to DEP, please attach to this survey.

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☐	Acute and/or chronic partial mix factors (mixing at design conditions)	Year(s) Studied:
☐	Volatilization rates (highly volatile organics)	Year(s) Studied:
☐	Site-specific criteria (e.g., Water Effect Ratio or related study)	Year(s) Studied:

Please submit this survey to the DEP SWRO that is reviewing the permit application within 30 days of receipt.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PRE-DRAFT PERMIT SURVEY FOR TOXIC POLLUTANTS

Permittee Name: **Harwick, MMDP, Allegheny County** Permit No.: **PA0255777**

Pollutant(s) identified by DEP that may require WQBELs: **Outfall 002 – Manganese, Total**

Is the permittee aware of the source(s) of the pollutant(s)? ☐ Yes ☑ No ☐ Suspected

If Yes or Suspected, describe the known or suspected source(s) of pollutant(s) in the effluent.

Has the permittee completed any studies in the past to control or treat the pollutant(s)? ☐ Yes ☑ No

If Yes, describe prior studies and results:

Does the permittee believe it can achieve the proposed WQBELs now? ☑ Yes ☐ No ☐ Uncertain

If No, describe the activities, upgrades or process changes that would be necessary to achieve the WQBELs, if known.

Estimated date by which the permittee could achieve the proposed WQBELs: _____ ☐ Uncertain

Will the permittee conduct additional sampling for the pollutant(s) to supplement the application? ☐ Yes ☑ No

Check the appropriate box(es) below to indicate site-specific data that have been collected by the permittee in the past. If any of these data have not been submitted to DEP, please attach to this survey.

☐	Discharge pollutant concentration coefficient(s) of variability	Year(s) Studied:
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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PRE-DRAFT PERMIT SURVEY FOR TOXIC POLLUTANTS

Permittee Name: **Harwick, MMDP, Allegheny County** Permit No.: **PA0255777**

Pollutant(s) identified by DEP that may require WQBELs: **Outfall 002 – Zinc, Total**

Is the permittee aware of the source(s) of the pollutant(s)? ☐ Yes ☑ No ☐ Suspected

If Yes or Suspected, describe the known or suspected source(s) of pollutant(s) in the effluent.

Has the permittee completed any studies in the past to control or treat the pollutant(s)? ☐ Yes ☑ No

If Yes, describe prior studies and results:

Does the permittee believe it can achieve the proposed WQBELs now? ☑ Yes ☐ No ☐ Uncertain

If No, describe the activities, upgrades or process changes that would be necessary to achieve the WQBELs, if known.

Estimated date by which the permittee could achieve the proposed WQBELs: _____ ☐ Uncertain

Will the permittee conduct additional sampling for the pollutant(s) to supplement the application? ☐ Yes ☑ No

Check the appropriate box(es) below to indicate site-specific data that have been collected by the permittee in the past. If any of these data have not been submitted to DEP, please attach to this survey.

☐	Discharge pollutant concentration coefficient(s) of variability	Year(s) Studied:
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☐	Acute and/or chronic partial mix factors (mixing at design conditions)	Year(s) Studied:
☐	Volatilization rates (highly volatile organics)	Year(s) Studied:
☐	Site-specific criteria (e.g., Water Effect Ratio or related study)	Year(s) Studied:

Please submit this survey to the DEP SWRO that is reviewing the permit application within 30 days of receipt.

ATTACHMENT D

HARWICK COMMENTS ON PRE-DRAFT DOCUMENTS
(RECEIVED VIA EMAIL ON SEPT. 20, 2024)

John,

Based on our review of the pre-draft NPDES permit for the Harwick Monarch Mine Dewatering Plant (MMDP) and our phone discussion on September 12, please see the below comments/clarifications.

- In review of the Toxic Management Spreadsheet/Model the calculations are completed using flow at outfall 002 of 2 million gallons per day (MGD). Since the new, updated pumps have been installed and online since December 2023, the average flow at outfall 002 is 1.42 MGD as calculated using eDMR data. We have had no issues maintaining the mine pool at 720 asml, thus this average flow is more applicable to actual conditions at the site. We request the Toxic Management Spreadsheet/Model and Calculations be updated using actual average flow conditions of 1.42 MGD.

Outfall 002 – Acrylamide – Monthly Average (mg/L) 0.00013 – Maximum Daily (mg/L) 0.00021

- Can you provide an explanation as to why acrylamide was identified as a parameter that requires monitoring for our NPDES renewal. It was noted that the fact sheet shows no department target quantitation limit (QL) for acrylamide. Results of our influent and effluent sampling show non-detections between the reporting limit (RL) and the method detection limit (MDL).
- Results of our influent and effluent sampling show non-detections between the reporting limit (RL) and the method detection limit (MDL) for acrylamide. In discussions with the lab used for NPDES sampling, they have a sister lab in Washington State (Pending review of Lab Certifications) that uses a different method with a reporting limit (RL) of 0.0005 mg/L and MDL of 0.000018 mg/L. If it is determined that acrylamide is a parameter that needs to be sampled for follow recalculation using the 1.42 MGD flow, we propose to collect additional samples using this method to show acrylamide should not be a contaminant of concern for the NPDES permit.

Outfall 002 – Aluminum, Total – Monthly Average (mg/L) 0.75 – Maximum Daily (mg/L) 0.75

- No Comment.

Outfall 002 – Boron, Total – Monthly Average (mg/L) 1.675 – Maximum Daily (mg/L) 2.613

- We request the Toxic Management Spreadsheet/Model and Calculations be updated using actual average flow conditions of 1.42 MGD.

Outfall 002 – Manganese, Total – Monthly Average (mg/L) 1.0 – Maximum Daily (mg/L) 1.633

- No Comment.

Outfall 002 – Zinc, Total – Monthly Average (mg/L) 0.37) – Maximum Daily (mg/L) 0.39

- In review of the Toxic Management Spreadsheet/Model it was determined that Zinc is

v

entered into the spreadsheet with the incorrect units. The spreadsheet uses ug/L for all metals, except zinc and copper are entered into the spreadsheet with mg/L. We believe this is a typo and using ug/L will result in zinc not being a parameter requiring monitoring. Additionally, results of the renewal sample show non-detections for zinc.

Supplemental Comment

- During our call while reviewing the Toxic Management Spreadsheet/Model we noticed that Copper also is entered into the spreadsheet with the incorrect units. The spreadsheet uses ug/L for all metals, except zinc and copper are entered into the spreadsheet with mg/L. We believe this is a typo that is possibly a carryover from previous renewals, and using ug/L will result in copper not being a parameter requiring monitoring. Additionally, results of the renewal sample show non-detections for copper.