pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**New**	Application No.	**PA0255777**
Facility Type	**Industrial**	APS ID	**1023887**
Major / Minor	**Minor**	Authorization ID	**1328141**

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

Applicant and Facility Information

Applicant Name	**GenOn Power Midwest LP**	Facility Name	**Monarch Mine Dewatering Plant & Cheswick Ash Disposal Site**
Applicant Address	PO Box 65	Facility Address	Duquesne Light Lane
	Cheswick, PA 15024-0065		Rural Ridge, PA 15075
Applicant Contact	William McGraw	Facility Contact	William McGraw
Applicant Phone	(724) 275-1595	Facility Phone	(724) 275-1595
Client ID	141195	Site ID	245779
SIC Code	4911	Municipality	Springdale Borough
SIC Description	Trans. & Utilities - Electric Services	County	Allegheny
Date Application Received	September 18, 2020	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

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

Summary of Review

Permit History of the Cheswick Site

On September 15, 2020, the Department received an application for a major amendment from GenOn Power Midwest LP (GenOn) and their consultant, Aptim Environmental & Infrastructure, LLC to amend the Cheswick Generating Station (Cheswick) NPDES permit, splitting off portions into new NPDES permits. As originally proposed these new permits would have separated off the Cheswick Ash Handling Site on the opposite side of Pittsburgh Street from the Cheswick Station, and two areas in Indiana Township near Rural Ridge, including the Monarch Mine Dewatering Plant (MMDP) (aka Monarch Mine Treatment Plant) and the Cheswick Ash Disposal Site ("landfill" aka Lefever landfill or LeFever Landfill). This permit, as updated, is intended to cover the excised, Indiana Township portions, of the prior Cheswick Generating Station, also called Cheswick Power Station, in Springdale Borough, Allegheny County (Cheswick).

This permit has some history which will be outlined here, in brief. Cheswick is a coal fired steam electric power plant built for Duquesne Light Company (DLC) circa 1970. It may have been rerated at some point and is rated circa 565 MW. It is located along the northern shore of the Allegheny River. Under some of the earliest applicable permits, this site was included along with the nearby prior site of the Colfax Power Station (Colfax) in Springdale. At the time of construction of Cheswick, Colfax was operating units 3 and 4 with combined output capacity of 156 MW. Water Quality Management (WQM) Part II permits (or equivalent) at that time included two issued from the Allegheny County Health Department, **466M067**, issued June 19, 1967 and **467I021**, issued April 17, 1968.

Approve	Deny	Signatures	Date
X		John L Duryea, Jr., P.E. / Environmental Engineer	October 29, 2021
X		Michael E. Fifth, P.E. / Environmental Engineer Manager	November 2, 2021

Summary of Review

The Department began issuing permits circa 1970 and initially issued two WQM permits associated with this site, **0270201** and **0270205**. The former was approved and established an Emergency Ash Pond at Cheswick. The latter was originally issued February 16, 1971 and covered the MMDP located north of Cheswick in Rural Ridge, PA. This plant treats mine pool wastewater before discharge to Little Deer Creek. WQM **0270205** also allowed injection of flyash into the Greater Harwick Mine complex ("Harwick"), portions of which were closed just prior to this timeframe. It was later determined that the bottom ash and other combustion byproducts were not conducive to mine injection. In response, two offsite disposal locations were covered under **0270205** including the Kissick (still held by DLC) and former Lefever landfills.

Since Cheswick startup, a number of WQM permits and amendments have been issued. Most of these represent modifications to the Cheswick site or in the surrounding areas to provide various means to capture, store or dispose of flyash and other byproducts of coal combustion. The first of these relates to improvements and expansion of the MMDP. Changes proposed for the MMDP under permit **0271208** included adding another clarifier and another aeration tank along with added pumping capacity, motors and other upgrades. The original permit application was dated May 25, 1971. The application was subsequently amended on July 29, 1971, November 3, 1971 and April 21, 1972. This permit was eventually approved on April 10,1973. Later modifications and upgrades to the MMDP were permitted by amendments to the original WQM permit **0270205**. It has more recently been determined that permit **0271208** had been effectively made obsolete by these later amendments to 0270205 and the 0271208 permit was then terminated on 12/17/2019.

Later in the 1970's, additional WQM Part II permits included **0272216** issued on August 9, 1973 covering an upgrade to the Station's wastewater treatment facilities as part of a Bottom Ash Water Recycle System (BAWRS) and an application for permit **0277206** which was dated April 5, 1977 to cover site modifications and discharges not covered up to that date under existing permits.

On March 23, 2000, DLC sent a letter to the Department requesting that these permits be split up and or transferred to facilitate the sale of portions, including Cheswick, to Orion Power Midwest. A facsimile message received by the Department on April 28, 2000 confirmed closure of this sale. Consequently, new permits were created and/or transferred in this time frame. Additional WQM permits still active, associated with the Station and included in GenOn's transfer request include **467I021** (Cheswick site), **0270205** (MMDP), **0271208 (**expansion of the MMDP), **0272216** (Bottom Ash Water Recycle System), **0277206** (Coal Pile Runoff and Miscellaneous Station Waste Basins) and **0206202** (Flue Gas Desulfurization wastewater treatment and emission control systems) and **0213200** (mobile water treatment system). None of these later WQM permits are associated with MMDP or the adjacent, active coal combustion residuals (CCR) landfill near Rural Ridge and, therefore, are not associated with this NPDES permit.

The original NPDES permit **PA0001627**, post-2000 split, was issued by the Department on August 9, 2007. The subsequent permit history is detailed in the following table. The permit was amended once, to incorporate changes required in the Consent Order and Adjudication of October 2008 and transferred three times before this permit amendment to split off portions which initiated this new NPDES permit, the subject of this Fact Sheet.

Table 1: Permit History of Cheswick Generating Station (PA0001627)

Permit	Date Issued	Original Permittee	New Permittee	Comments
PA0001627	Aug. 9, 2007	Orion Power Midwest, L.P.	N/A	Original Issue
PA0001627 (first amendment)	Feb. 6, 2009	Orion Power Midwest, L.P.	N/A	Incorporates a Consent Order and Adjudication settlement agreement.
PA0001627 (first transfer)	May 25, 2011	Orion Power Midwest, L.P.	GenOn Power Midwest, L.P.	Transfer only
PA0001627 (second transfer)	July 19, 2018	GenOn Power Midwest, LP	NRG Power Midwest LP	Permit Renewal and Transfer
PA0001627-A1 (third transfer)	Jan. 15, 2020	NRG Power Midwest LP	GenOn Power Midwest, LP	Transfer only

Summary of Review

After several communications on their latest, September 2020 permit split request, GenOn revised their request, via email on June 8, 2021, to split the permitted areas into just two, including the second amendment of permit PA0001627 – A2 since its most recent renewal on July 19, 2018, including all permitted areas near Springdale, PA and this new permit (**PA0255777**) including all the previously permitted areas under PA0001627 that are located in Indiana Township, Allegheny County. GenOn supplied maps showing these latter two areas which are shown in Figures 1 and 2 below:

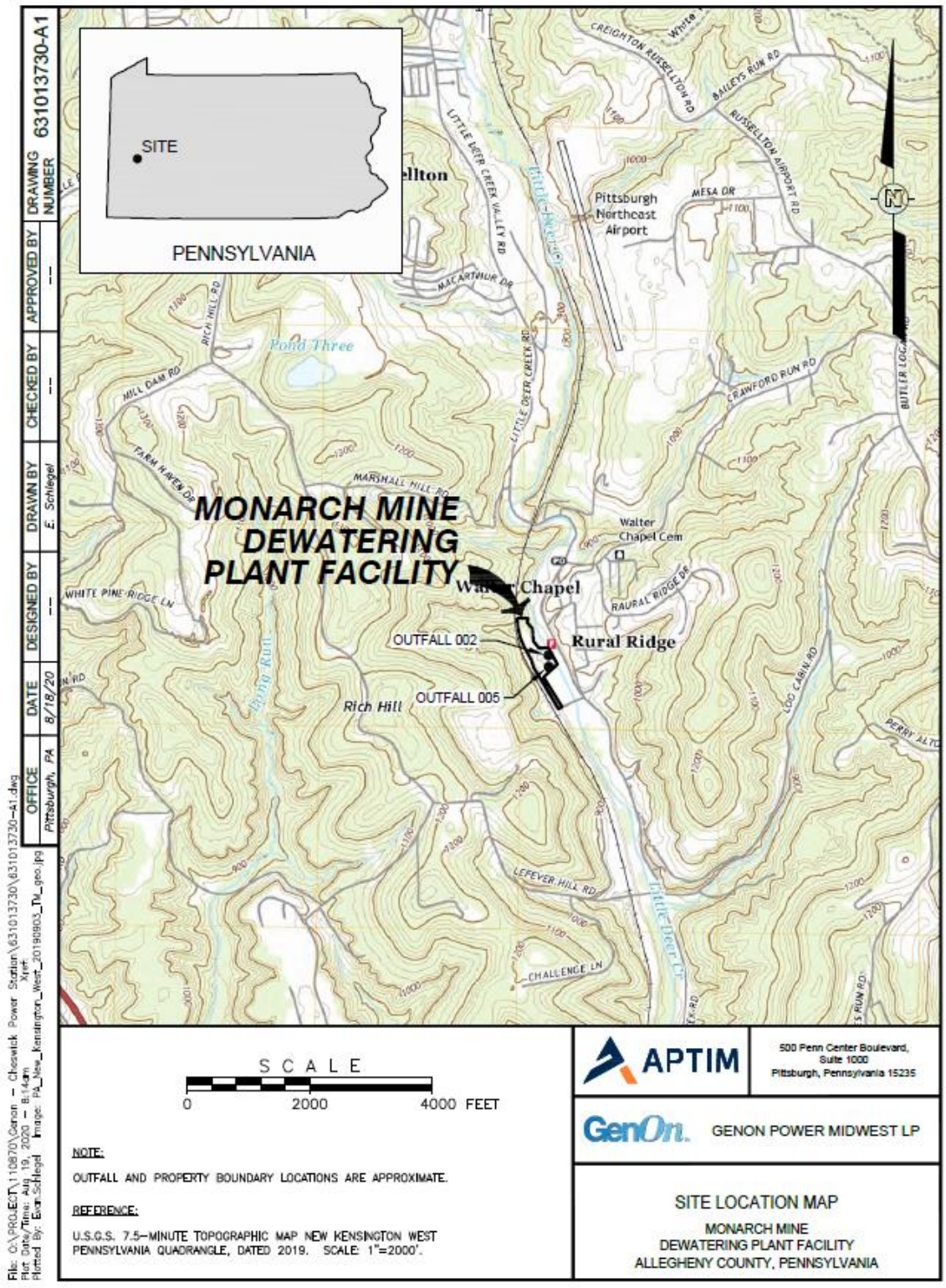


Figure 1: GenOn Site Location Map Showing the Monarch Mine Dewatering Plant

Summary of Review

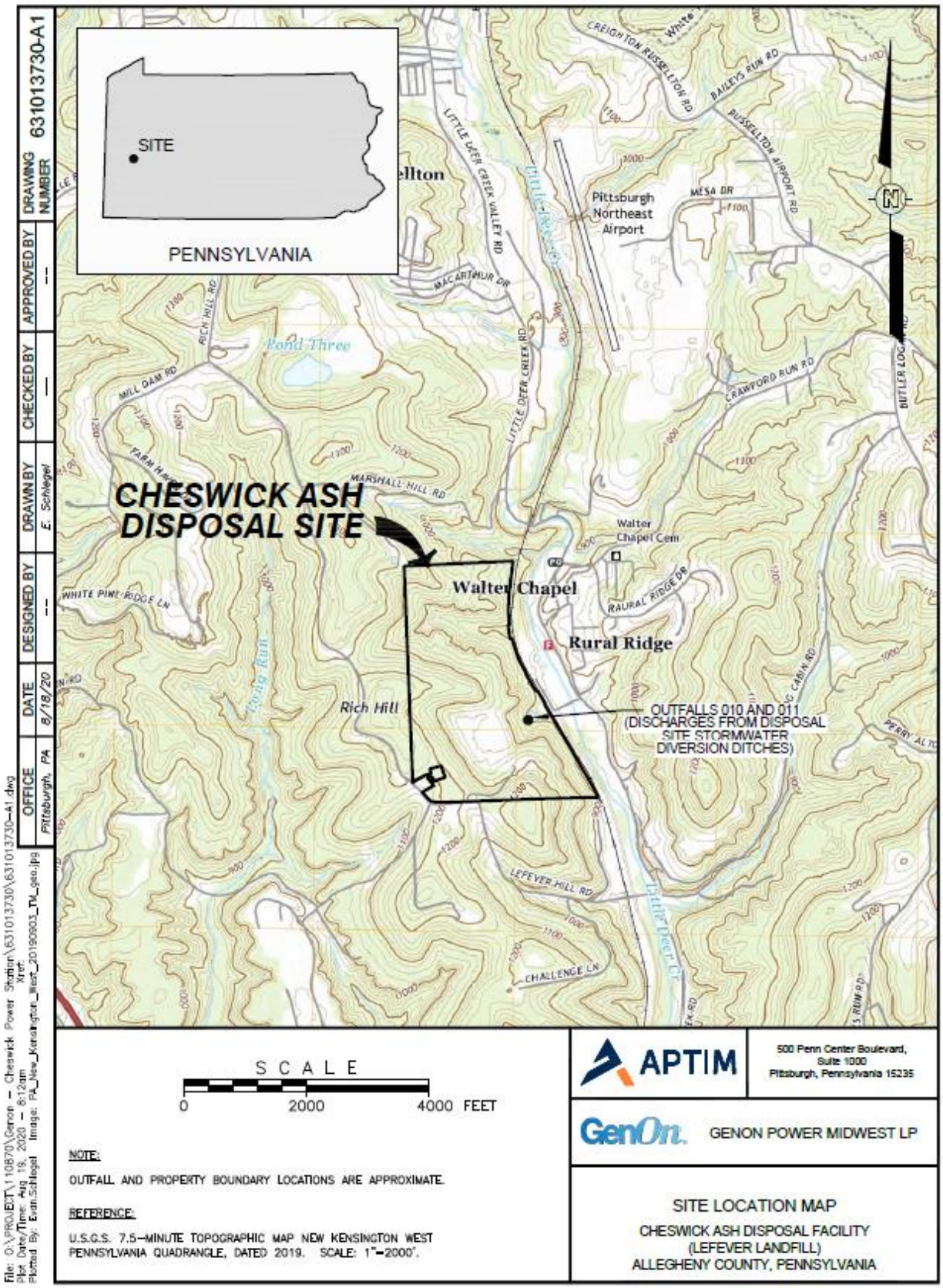


Figure 2: GenOn Site Location Map Cheswick Ash Disposal Site (formerly Lefever landfill)

Summary of Review

As can be seen in Figures 1 and 2, the Indiana Township areas formerly covered under NPDES permit PA0001627 will now be covered under this NPDES permit, including two land parcels on opposite sides of Little Deer Creek near Rural Ridge, Pennsylvania. Outfalls 002 and 005 are associated with the MMDP and prior Outfalls 010 and 011 are associated with the "landfill". The changes then become a straight-forward extraction of the prior **Outfalls 002, 005, 010 and 011** from the most recent 2018 permit renewal documentation for **PA0001627**. These outfalls, and associated documentation then become the bases for this new NPDES permit **PA0255777**. The Department proposes that this new permit be administratively treated as an amendment associated with the segregated portions from PA0001627 – A1 and have the same permit expiration date as that most recent renewal and amendment, matching that of the predecessor permit. The newly created permit, **PA0255777** with the extracted portions for the prior Outfalls 002, 005, 010 and 011 from **PA0001627** will share the common expiration date of the prior PA0001627 and its A1 and **A2** amendments of July 31. 2023. These two successor permits, PA0001627 – A2 and PA0255777, will be issued as final simultaneously. That said, the pathways up to that point of final issuance will inevitably differ, perhaps significantly.

The association of the remaining half-dozen Water Quality Management (WQM) Part II permits associated with the Station is also straight-forward. WQM permits still active, associated with GenOn's Station include **467I021** (Cheswick site), **0270205** (MMDP), **0272216** (Bottom Ash Water Recycle System), **0277206** (Coal Pile Runoff and Miscellaneous Station Waste Basins) and **0206202** (Flue Gas Desulfurization wastewater treatment and emission control systems) and **0213200** (mobile water treatment system). Of these, only WQM **0270205** should be associated with the new permit **PA0255777**. All other WQM permits will remain with the Station. To better serve the Department's needs, a new WQM Part II permit will be created to cover the remaining active portions of WQM 0270205. The new WQM Part II permit is **0221205**. Once the new NPDES and WQM permits are made final, WQM 0270205 will be terminated.

Extracted portions of the PA0001627 renewal Fact Sheet and Addendum are included herein to establish the basis for this new permit and prior rationale is provided for reference to preserve the record of determination. Importantly, the analyses which form the bases for PA0255777 have not been updated to include the changes which have occurred to Department effluent limitation standard operating procedures since 2018. This will be addressed during the first renewal in 2023. A satellite image of the site covered by this new permit is shown in Figure 3 below:

Figure 3: Satellite Image of the Coverage Area of PA0255777

Summary of Review

Visible in Figure 3 above are both the MMDP toward the upper right (northeast) and the active and already covered portions of the CCR landfill in the lower portion of the image toward the south. Between these two facilities runs the receiving surface waters which is a culvert leading to Little Deer Creek, just on the landfill side of the railway line and Little Deer Creek itself. An expanded image of this culvert, stream and outfalls is shown as Figure 4 below:

Figure 4: Cheswick Ash Disposal Site Sedimentation Pond and MMDP

Pictured in the satellite image above is the sedimentation pond onsite of the "landfill", an uphill covered portion of the landfill and its diversion, concrete culverts discharging to the sedimentation pond. The discharge structures from the pond, leading to Little Deer Creek are also shown. Portions of the MMDP can be seen in the upper left of this image as well.

The discharges covered under this permit consist of 4 outfalls:

- Outfall 002 – Discharge of treated mine pool water from the MMDP
- Outfall 005 – Stormwater discharge from the MMDP
- Outfalls 010 & 011 – Stormwater from the "landfill"

Little Deer Creek TMDL

The Little Deer Creek TMDL for Acid Mine Drainage (AMD) was approved by EPA on April 4, 2007. Little Deer Creek is also listed as impaired for turbidity, siltation and flow alterations caused by construction. However, all construction activities occurring at the time of the assessment were completed; therefore, those pollutants were not included in the TMDL.

Summary of Review

Outfalls 002, 005, 010 and 011 discharge to segments of Little Deer Creek covered by the TMDL. The TMDL for Little Deer Creek consists of load allocations for four tributaries and three sampling sites along the stream. The point applicable to each of Cheswick's Outfalls is LTDR04. The water quality analysis conducted during the TMDL assessment determined that the measured and allowable metals loadings were equal. Because WQS are met, WLAs for metals were not developed for discharges above LTDR04, shown in Table 2 below.

Table 2 (ref. C7.) TMDL Calculations at Point LTDR04

Measured Sample Data			Allowable	
Parameter	Conc. (mg/l)	Load (lbs/day)	LTA Conc. (mg/l)	Load (lbs/day)
Al	0.50	23.8	0.50	23.8
Fe	0.45	21.2	0.45	21.2
Mn	0.18	8.8	0.18	8.8
Acidity	0.00	0.0	0.00	0.0
Alkalinity	156.36	7,417.8		

Miscellaneous Permit Related Developments

In addition to the October 2008 Consent Order and Adjudication mentioned earlier, GenOn ownership of "Harwick" and its commitments pursuant to managing the "Harwick" pool water levels required altering the agreements between the permittee and the Department. Consequently, the Department entered into a Consent Order and Agreement (COA) under GenOn's prior fictitious name, NRG Power Midwest LP, on September 21, 2014. One relevant change in the arrangement was the management of the Monarch Mine pool level to less than 720 feet above mean sea level. This replaced a prior provision requiring pumping and treating of 5 MGD from the mine pool.

In addition, several updates were made to the "landfill" and MMDP facilities. Upgrades included limiting the use of a borehole into the Monarch Mine at the "landfill" to emergency use. Instead equipment was installed to convey CCR leachate from the "landfill" directly to the MMDP. At the MMDP, a plate and frame filter press was installed along with other MMDP facility upgrades.

In response to a Department inquiry into GenOn's continuing need to maintain the provision, now for emergency use, of this discharge into the mine borehole at the "landfill", GenOn supplied, on September 15, 2021, a background paper on this topic. This is provided as Attachment E. As authorized in the September 21, 2014 COA, this provision will remain in the renewed NPDES permit but with the addition of reporting requirements documenting the frequency and duration of discharges to the borehole occur.

On June 9, 2021, GenOn Holdings, LLC, GenOn's parent company, announced that the 565MW Cheswick Generating Station would retire by September 15, 2021. On July 14, 2021, GenOn informed the Department via email that the Cheswick deactivation date was pushed back to April 1, 2022. Finally, on September 20, 2021, GenOn informed the Department that the organizations that control the electrical power market and grid in the area have effectively approved this closure, received on July 15, 2021.

The applicant complied with Act 14.

Publication of the draft permit for public comment is recommended.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	12.4
Latitude	40º 35' 8.0"	Longitude	-79º 49' 43.00"
Quad Name	1407	Quad Code	New Kensington West
Wastewater Description:	Treated Mine Water		
Receiving Waters	Little Deer Creek	Stream Code	42289
NHD Com ID	123972685	RMI	0.87
Drainage Area	10.69	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	0.1069	Q_{7-10} Basis	StreamStats/Pollution Report
Elevation (ft)	850	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 Intake	Oakmont Borough		
PWS Waters	Allegheny River	Flow at Intake (cfs)	9.2
PWS RMI	13	Distance from Outfall (mi)	~3

Discharge, Receiving Waters and Water Supply Information

Outfall No.	005	Design Flow (MGD)	0
Latitude	40º 35' 8.0"	Longitude	-79º 49' 43.0 "
Quad Name	1407	Quad Code	New Kensington West
Wastewater Description:	Stormwater		
Receiving Waters	Little Deer Creek	Stream Code	42289
NHD Com ID	123972685	RMI	
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	Oakmont Borough		
PWS Waters	Allegheny River	Flow at Intake (cfs)	9.2
PWS RMI	13	Distance from Outfall (mi)	~3

Discharge, Receiving Waters and Water Supply Information

Outfall No.	010	Design Flow (MGD)	0
Latitude	40º 35' 0.0"	Longitude	-79º 50' 0.0"
Quad Name	1407	Quad Code	New Kensington West
Wastewater Description:	Stormwater		
Receiving Waters	Little Deer Creek	Stream Code	42289
NHD Com ID	123972685	RMI	
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	Oakmont Borough		
PWS Waters	Allegheny River	Flow at Intake (cfs)	9.2
PWS RMI	13	Distance from Outfall (mi)	~3

Discharge, Receiving Waters and Water Supply Information

Outfall No.	011	Design Flow (MGD)	0
Latitude	40º 35' 0.0"	Longitude	-79º 50' 0.0"
Quad Name	1407	Quad Code	New Kensington West
Wastewater Description:	Stormwater		

Receiving Waters	Little Deer Creek	Stream Code	42289
NHD Com ID	123972685	RMI	
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	Oakmont Borough		
PWS Waters	Allegheny River	Flow at Intake (cfs)	9.2
PWS RMI	13	Distance from Outfall (mi)	~3

Treatment Facility Summary

Treatment Facility Name: Monarch Mine Dewatering Plant (aka Monarch Mine Treatment Plant)

WQM Permit No.	Issuance Date
0270205	February 16, 1971
0221205	Pending

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Industrial	Tertiary	Settling/Clarification	N/A	2.34

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
7.2	N/A	N/A	N/A	N/A

Changes Since Last Permit Issuance: These facilities were part of the Cheswick NPDES permit (PA0001627) which was last renewed in July 2018 and was subsequently transferred on January 15, 2020. The treatment system has been operating for many years and has undergone multiple modifications, but since its last outage/construction from August 2016 until March 2017, no changes have been reported. Currently there are two installed mine pumps, both of 2,500 gpm capacity, both designed for variable speed and with a variable speed controller. The plant uses a plate and frame filter press. The solids are collected into roll-off boxes and taken to the Cheswick Ash Disposal Site, still covered under NPDES permit PA0001627.

Other Comments: MMDP treats CCR leachate conveyed from the “landfill” which is an active, captured landfill dedicated to receiving waste from Cheswick. MMDP also treats the Monarch Mine (part of the “Harwick”) pool. MMDP is also known to receive leachate from Kissick Ash Disposal site (owned by DLC), among others.

Compliance History

Cheswick agreed to a Consent Assessment of Civil Penalty on December 4, 2017 based on an incident that occurred on August 15, 2017. On that date an unauthorized discharge of underflow solids at the MMDP was found to be discharging to Little Deer Creek. The incident caused sludge to settle in the stream bed for approximately 2500 feet downstream of the discharge. Cleanup began on August 21, 2017 after an emergency encroachment permit was granted by the Department. Cleanup concluded on September 21, 2017. An NOV was issued on October 16, 2017.

DMR Data for Outfall 002 (from August 1, 2016 to July 31, 2017)

Parameter	JUL-17	JUN-17	MAY-17	APR-17	MAR-17	FEB-17	JAN-17	DEC-16	NOV-16	OCT-16	SEP-16	AUG-16
Flow (MGD) Average Monthly	3.72	3.27	2.88	4.18	3.43	3.71						
Flow (MGD) Daily Maximum	4.02	4.02	4.02	4.67	4.02	4.02						
pH (S.U.) Minimum	8.2	8.2	8.2	8.1	8.1	8.2						
pH (S.U.) Maximum	8.6	8.4	8.4	8.5	8.5	8.2						
TRC (mg/L) Average Monthly	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1						
TRC (mg/L) Daily Maximum	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1						
TSS (mg/L) Average Monthly	11	11	10	11	10	13						
TSS (mg/L) Daily Maximum	13	14	14	12	18	14						
Osmotic Pressure (mOs/kg) Average Monthly	34	35	36	38	35	33						
Osmotic Pressure (mOs/kg) Daily Maximum	37	37	38	40	38	33						
Total Aluminum (mg/L) Average Monthly	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10						
Total Aluminum (mg/L) Daily Maximum	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10						
Total Beryllium (mg/L) Average Monthly	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005						
Total Beryllium (mg/L) Daily Maximum	< 0.0005	< 0.0005	0.0005	< 0.0005	< 0.0005	< 0.0005						

Total Cadmium (mg/L) Average Monthly	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002						
Total Cadmium (mg/L) Daily Maximum	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002						
Hexavalent Chromium (mg/L) Average Monthly	< 0.002	< 0.004	< 0.002	< 0.002	< 0.002	< 0.002						
Hexavalent Chromium (mg/L) Daily Maximum	< 0.002	< 0.010	< 0.002	< 0.002	< 0.002	< 0.002						
Total Copper (mg/L) Average Monthly	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001						
Total Copper (mg/L) Daily Maximum	0.004	< 0.001	0.002	0.001	< 0.001	< 0.001						
Free Cyanide (mg/L) Average Monthly	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02						
Free Cyanide (mg/L) Daily Maximum	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02						
Total Iron (mg/L) Average Monthly	0.39	0.33	0.29	0.31	0.2	0.25						
Total Iron (mg/L) Daily Maximum	0.44	0.41	0.37	0.43	0.3	0.32						
Total Manganese (mg/L) Average Monthly	0.02	0.02	0.04	0.03	0.04	0.05						
Total Manganese (mg/L) Daily Maximum	0.02	0.02	0.07	0.04	0.06	0.05						
Total Selenium (mg/L) Average Monthly	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.003						
Total Selenium (mg/L) Daily Maximum	< 0.002	< 0.002	0.002	< 0.002	0.003	0.003						
Total Silver (mg/L) Average Monthly	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005						
Total Silver (mg/L) Daily Maximum	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005						
Total Thallium (mg/L) Average Monthly	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005						
Total Thallium (mg/L) Daily Maximum	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005						
Pentachloro-phenol (mg/L) Average Monthly	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002						
Pentachloro-phenol (mg/L) Daily Maximum	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002						

Outfall 002 is the discharge from the MMDP. The plant was under construction from August 2016 until March 2017. During that time, there was no discharge from the MMDP.

DMR Data for Outfall 005 (from August 1, 2016 to July 31, 2017)

Parameter	JUL-17	JUN-17	MAY-17	APR-17	MAR-17	FEB-17	JAN-17	DEC-16	NOV-16	OCT-16	SEP-16	AUG-16
pH (S.U.) Minimum	8.2	8.0	8.1	7.4	7.4	7.8	8.1	8.0	8.1	7.9		8.2
pH (S.U.) Maximum	8.2	8.0	8.1	7.4	7.4	7.8	8.1	8.0	8.1	7.9		8.2
TSS (mg/L) Average Monthly	26	273	24	40	373	1750	47	702	1220	744		156
TSS (mg/L) Daily Maximum	26	273	24	40	373	1750	47	702	1220	744		156

Development of Effluent Limitations

Outfall No. 002 **Design Flow (MGD)** 12.4
Latitude 40º 35' 08.00" **Longitude** -79º 49' 43.00"
Wastewater Description: Wastewater from the Monarch Mine Dewatering Plant

Outfall 002 is the discharge from the MMDP to Little Deer Creek. The MMDP treats water from the Monarch Mine, part of the "Harwick" complex. Leachate from the "landfill", a captive waste landfill accepting CCR only from Cheswick. Based on the Consent Order and Agreement (COA) in 2014, several updates were made to the plant. GenOn is now required by the 2014 COA to maintain a maximum mine pool elevation of 720 feet. Operationally they attempt to set their variable speed mine pumps to maintain the mine pool level at a target just below 700 feet above mean sea level, trying to run the pumps consistently while avoiding loss of pump suction.

Technology-Based Limitations

During the prior permit renewal of PA0001627, the Effluent Limitation Guidelines (ELGs) for the Coal Mining Point Source Category at 40 CFR Part 434 were applied at Outfall 002. The limits are at 40 CFR §§ 434.52 and 434.53 for acid mine drainage discharges are:

Pollutant	Daily Maximum	Monthly Average
	Concentration in mg/L	
Total Iron	7.0	3.5
Total Manganese	4.0	2.0
TSS	70.0	35.0
pH	Within the range of 6.0 to 9.0 at all times	

In addition, during a previous permit renewal the following BPJ TBELs were developed:

Pollutant	Average Monthly (mg/L)	Daily Maximum (mg/L)
Total Beryllium	0.01	0.02
Total Cadmium	0.0003	0.0006
Hexavalent Chromium	0.006	0.012

According to eDMR data the MMDP is able to meet the BPJ limits.

Water Quality-Based Limitations

A reasonable potential (RP) analysis was conducted using the Department's Toxics Screening Analysis (Attachment D) and the sampling results submitted by Cheswick in the 2012 permit application. Antimony, Arsenic, Lead, Benzo(a)Anthracene, Benzo(a)Pyrene, 3,4-Benzofluoranthene, Benzo(k)Fluoranthene, Chrysene, Dibenzo(a,h)Anthrancene, Hexachlorobutadiene, Indeno(1,2,3-cd)Pyrene, n-Nitrosodiphenylamine, and Phenanthrene were determined to be candidates for modeling in PENTOXSD (Attachment D).

A discharge flow of 12.4 MGD as reported on the permit application was used in PENTOXSD. A Q_{7-10} flow of 0.1069 cfs used in the last permit, which is consistent with the value calculated by PA StreamStats, was used in the modeling.

The PENTOXSD results and Toxics Screening Analysis Spreadsheet determined that WQBELs were necessary for the pollutants listed below. Mass-based limits were determined by multiplying the concentration-based limit by the flow and a conversion factor of 8.34.

Pollutant	Mass (lb/day)		Concentration (mg/L)	
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum
Total Antimony	0.582	0.909	0.00563	0.00879
Total Arsenic	1.04	1.624	0.01006	0.01570
Total Lead	0.331	0.516	0.0032	0.00499
Benzo(a)Anthracene	0.00041	0.00062	0.000004	0.000006
Benzo(a)Pyrene	0.00041	0.00062	0.000004	0.000006
3,4-Benzofluoranthene	0.00041	0.00062	0.000004	0.000006
Benzo(k)Fluoranthene	0.00041	0.00062	0.000004	0.000006
Chrysene	0.00041	0.00062	0.000004	0.000006
Dibenzo(a,h)Anthrancene	0.00041	0.00062	0.000004	0.000006
Hexachlorobutadiene	0.048	0.074	0.00046	0.00072
Indeno(1,2,3-cd)Pyrene	0.00041	0.00062	0.000004	0.000006
n-Nitrosodiphenylamine	0.36	0.56	0.035	0.054
Phenanthrene	0.103	0.16	0.001	0.0016

The Toxics Screening Analysis recommended WQBELs for Antimony, Arsenic, Lead, Benzo(a)Anthracene, Benzo(a)Pyrene, 3,4-Benzofluoranthene, Benzo(k)Fluoranthene, Chrysene, Dibenzo(a,h)Anthrancene, Hexachlorobutadiene, Indeno(1,2,3-cd)Pyrene, n-Nitrosodiphenylamine, and Phenanthrene because non-detect results were reported, but Target Quantitation Limits (TQLs) were not met. The QLs reported were more than 50% of the WQBEL, and therefore the recommendation is to establish WQBELs as limits. The draft permit cover letter will offer the permittee the opportunity to retest these parameters at lower QLs so that the Department can reevaluate the need for effluent limits.

Little Deer Creek Impairment and TMDL

There is no WLA listed in the Little Creek TMDL for Cheswick, however the Average Monthly Limits (AMLs) in the current permit are consistent with the TMDL because they are not above water quality criteria. The AML for Total Iron is 1.5 mg/L and will remain unchanged. The AMLs for Total Aluminum and Total Manganese are both below criteria; 0.48 mg/L and 0.87 mg/L, respectively. While it is generally not appropriate for the Department to establish WQBELs below water quality criteria, the limits will remain in place due to anti-backsliding considerations. The originally developed Maximum Daily Limits of 0.96 mg/L and 1.74 mg/L for Aluminum and Manganese, respectively, will remain in the permit. Mass-based limits will be developed for each of these parameters by multiplying the concentration-based limit by the flow and a conversion factor of 8.34.

Little Deer Creek is also impaired for TDS, siltation and turbidity. Monitoring for TDS and its constituents (Chloride, Bromide and Sulfide) were included in the prior PA0001627 permit.

TBELs vs. WQBELs

For pollutants that have both WQBELs and TBELs, an analysis of Average Monthly WQBELs vs. Average Monthly TBELs is outlined in Table 3 below. The more stringent of the two is presented as bold and shaded values and will be implemented in the permit.

Table 3: Comparison of WQBELs and TBELs

Pollutant	WQBEL (mg/L)[1]	WQBEL (lbs/day)[1]	TBEL (mg/L)	TBEL (lbs/day)
Total Iron	**1.5**	**155.124**	3.5	N/A
Total Manganese	**0.87**	**89.97**	2.0	N/A

1) The WQBELs for Total Iron and Total Manganese were developed based on the Little Deer Creek Impairment and TMDL.

Anti-Backsliding

The limits in the current permit are outlined in Table 4 below. The bolded parameters are WQBELs in the current permit but were not determined to be parameters of concern during the renewal evaluation because the maximum reported value on the application and DMRs was either below criteria or below the Target Quantitation Limit. However, due to anti-backsliding requirements these highlighted WQBELs will remain in the permit. Mass-based limits will not be developed for these parameters.

Table 4: Prior Permit Effluent Limitations for the Predecessor Portion of PA0001627

Pollutant	Average Monthly (mg/L)	Maximum Daily (mg/L)	Basis
TSS	35	70	ELG TBEL
TRC	M&R	M&R	WQBEL
Total Aluminum	0.48	0.96	WQBEL
Total Iron	1.5	3.0	WQBEL
Total Manganese	0.87	1.74	WQBEL
Total Beryllium	0.01	0.02	BPJ TBEL
Total Cadmium	0.0003	0.0006	BPJ TBEL
Hexavalent Chromium	0.006	0.012	BPJ TBEL
Total Silver	**0.003**	**0.006**	**WQBEL**
Total Thallium	**0.002**	**0.004**	**WQBEL**
Total Copper	**0.009**	**0.018**	**WQBEL**
Pentachlorophenol	**0.0003**	**0.0006**	**WQBEL**
Total Selenium	**0.005**	**0.01**	**WQBEL**
Free Cyanide	**M&R**	**M&R**	**WQBEL**
Sulfate	**M&R**	**M&R**	**WQBEL**
Osmotic Pressure (mOs/kg)	**50**	**100**	**WQBEL**

Sample Type and Frequency

Sample types and frequencies are designated as outlined in Chapter 6 of the Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (362-0400-001). All parameters with a sample type of 24-hour composite will have an instantaneous maximum developed by multiplying the AML by 2.5.

Alterations to the Monitoring Requirements During the Prior Permit's Comment Period:

The following sections for NPDES permit **PA0001627**, Outfall 002 were included in the Fact Sheet Addendum, written to address submitted comments and signed on July 11, 2018. The following portions identified changes made to the monitoring requirements for Outfall 002. The text has been adapted from applicable portions of that document. Note that the applicable excerpts from that document are included, unaltered, in Attachment D.

Monitoring Frequency at Outfall 002

Cheswick requested a performance-based reduction in monitoring frequency at Outfall 002, the discharge from the Monarch Mine Dewatering Plant (MMDP). DEP reviewed Cheswick's request using EPA's Interim Guidance for Performance-Based Reductions of NPDES Permit Monitoring Frequencies (April 1996). A performance analysis was completed and is provided in **Table 5** below.

Long-Term Effluent Averages were calculated using the Average Monthly values reported on DMRs from May 2012 - April 2018. Note that a majority of the data was reported as non-detect. Where the ratio of the Long-Term Monthly Average (LTA) to the Monthly Average Limit (AML) is below 50%, the Interim Guidance states monitoring frequency may be reduced. As shown in Table 1, the LTA/AML ratio is less than 50% for Total Beryllium, Total Copper, Total Selenium, Total Silver and Total Thallium. DEP will provide a reduction in monitoring frequency from 1/week to 2/month for these pollutants, as well as for Free Cyanide and TRC, which are not subject to numeric effluent limits.

Neither Total Cadmium nor Hexavalent Chromium meet that threshold by the above calculations. For Cadmium, Cheswick reported a non-detect using a quantitation limit (QL) of 0.0002 mg/L on each of their DMRs, which is DEP's Target QL (TQL) for Cadmium. Since the TQL was consistently met and non-detect results are not addressed by the Interim Guidance, DEP will allow a reduction in monitoring frequency to 2/month for Cadmium.

The results for Hexavalent Chromium were also consistently reported as non-detect. Until January 2016, a QL of 0.005 mg/L was used by Cheswick. Beginning in February of 2016, results were reported with a more sensitive a QL of 0.002 mg/L. The Interim Guidance allows for the use of a minimum of 2 years of data; since Cheswick has consistently reported non-detects for Hexavalent Chromium, DEP will allow the Long-Term Monthly Average to be calculated using only the two most recent years. If a Long-Term Monthly Average of 0.002 mg/L is used to calculate the ratio, the result is 33%, which provides for reduced monitoring. DEP agrees to reduce monitoring to 2/month.

Table 5 – Evaluation of Outfall 002 Pollutants for Reduced Monitoring Frequency

Parameter	LTA (mg/L)	AML (mg/L)	(LTA / AML)
Osmotic Pressure	36.92	50	74%
Total Beryllium	<0.0005	0.01	5%
Total Cadmium	<0.0002	0.0003	67%
Hexavalent Chromium	<0.0039	0.006	64%
Total Copper	<0.0012	0.009	13%
Free Cyanide	<0.02	M&R	N/A
Total Selenium	<0.0022	0.005	43%
Total Silver	<0.0005	0.003	17%
Total Thallium	<0.0005	0.004	25%
TRC	<0.083	M&R	N/A

Monitoring frequencies for the parameters for which Little Deer Creek is impaired, including Total Aluminum, Total Iron, and Total Manganese, will remain at weekly monitoring. Total Suspended Solids (TSS), Osmotic Pressure, Total Dissolved Solids (TDS) and its constituents Sulfate, Bromide and Chloride will also remain at weekly monitoring.

Parameter Removal from Outfall 002

As noted in the discussion above, some of the QLs used by Cheswick for the permit application were not sensitive enough to rule out reasonable potential. Those parameters include:

Total Antimony,
Total Arsenic,
Total Lead,
Benzo(a)Anthracene,
Benzo(a)Pyrene,
3,4-Benzofluoranthene,
Benzo(k)Fluoranthene,
Chrysene,
Dibenzo(a,h)Anthrancene,
Hexachlorobutadiene,
Indeno(1,2,3-cd)Pyrene.
n-Nitrosodiphenylamine, and
Phenanthrene.

As previously shown in the updated Toxics Screening Analysis (see Attachment B of the July 11, 2018 Fact Sheet Addendum, applicable portions which are also included in Attachment D of this Fact Sheet), those parameters are no longer parameters of concern based on updated sampling results submitted by Cheswick and were removed.

Flow Monitoring Outfalls 002

Flow monitoring at Outfall 002 was established as “Recorded” for Sample Type and “Continuous” for Sample Frequency in the draft permit. In the previous permit, flow monitoring requirements were “Measured” and 1/week for Sample Type and Frequency, respectively. Cheswick has indicated it does not currently have technology at either outfall to measure flow continuously. DEP has determined that it is not critical for these discharges to be monitored continuously; therefore, flow monitoring requirements will be updated to “Measured” for Sample Type and 1/day for Frequency.

Table 6: Proposed Effluent Limits

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/day	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	9.0 Max	XXX	1/week	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	Report	Report	XXX	1/month	Grab
Total Suspended Solids	XXX	XXX	XXX	35	70	XXX	1/week	24-Hr Composite
Total Dissolved Solids	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
Osmotic Pressure (mOs/kg)	XXX	XXX	XXX	50	100	XXX	1/week	Grab
Aluminum, Total	49.64	99.28	XXX	0.48	0.96	1.2	1/week	24-Hr Composite
Beryllium, Total	XXX	XXX	XXX	0.01	0.02	0.025	2/month	24-Hr Composite
Cadmium, Total	XXX	XXX	XXX	0.0003	0.0006	0.00075	2/month	24-Hr Composite
Chromium, Hexavalent	XXX	XXX	XXX	0.006	0.012	XXX	2/month	24-Hr Composite
Copper, Total	XXX	XXX	XXX	0.009	0.018	0.023	2/month	24-Hr Composite
Cyanide, Free	XXX	XXX	XXX	Report	Report	XXX	2/month	24-Hr Composite
Iron, Total	155.24	310.25	XXX	1.5	3.0	3.75	1/week	24-Hr Composite
Manganese, Total	89.97	179.95	XXX	0.87	1.74	2.18	1/week	24-Hr Composite
Selenium, Total	XXX	XXX	XXX	0.005	0.01	0.0125	2/month	24-Hr Composite
Silver, Total	XXX	XXX	XXX	0.003	0.006	0.0075	2/month	24-Hr Composite
Sulfate, Total	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
Thallium, Total	XXX	XXX	XXX	0.002	0.004	0.005	2/month	24-Hr Composite
Pentachlorophenol	XXX	XXX	XXX	0.0003	0.0006	0.00075	1/month	24-Hr Composite
Chloride	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite

Table 6: Proposed Effluent Limits

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Bromide	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite

Development of Effluent Limitations

Outfall No.	005	**Design Flow (MGD)**	0
Latitude	40º 35' 8.00"	**Longitude**	-79º 49' 43.00"
Wastewater Description:	Stormwater		

Outfall 005 consists of stormwater from the MMDP and discharges to Little Deer Creek downstream of Outfall 002. The previous renewal required Cheswick to complete a Stormwater Pollution Prevention Plan (SWPPP). The permit also required sampling for TSS and Hexavalent Chromium. After implementation of the SWPPP and one year of sampling Cheswick was able demonstrate that the stormwater was no longer contaminated with Hexavalent Chromium and monitoring was removed from the permit.

A condition in Part C of the permit will prescribe benchmark values for stormwater discharges. Benchmark values are a concept in the most recent version of the PAG-03 for Stormwater Discharges Associated with Industrial Activity. The benchmark values are not permit limits, however, if they are exceeded in two consecutive monitoring periods it will trigger a requirement for a corrective action plan to reduce the pollutant concentration. These values will also be 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, will be set to criteria.

The PAG-03 contains several appendices listing benchmark values for the associated Industrial Activity. Coal-mining is not included in the PAG-03, but 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 will be included at Outfall 005. The pollutants are 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 will be established 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 will also be included. The benchmarks that will apply to Outfalls 005, 010 and 011 are listed below.

Table 6: 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

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 "landfill" that discharges to a culvert leading to Little Deer Creek. Analytical results submitted with the application are indicative of no exposure and fall below the no exposure benchmarks outlined in the current industrial and industrial stormwater permit applications. Since the stream is impaired and is a part of the Little Deer Creek TMDL, semi-annual monitoring requirements for Total Aluminum, Total Iron, and Total Manganese will be included in this new permit, along with pH and TSS. Benchmark values will be established as discussed previously for Outfall 005.

The orientation of the two "landfill" outfalls is shown in Figure 5 below

Figure 5: Details of the Relative Orientation of Outfalls 010 and 011 as previously permitted in PA0001627

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 "landfill" that discharges to a culvert leading to Little Deer Creek. Analytical results submitted with the application were not indicative of no exposure and showed elevated levels of Aluminum and Iron. Monitoring at Outfall 011 will be required monthly for the parameters listed in the Little Deer Creek TMDL, along with pH and TSS. Benchmark values will be established as discussed previously for Outfall 005.

Figure 6: Cheswick Ash Disposal Site – Settling Pond and Discharge Structures

An electronic communication from the permittee on July 20, 2021 requested that Outfall 011 be eliminated, and Outfall 010 be moved to the discharge side of the Sedimentation Pond. The proposed new location for this outfall is Latitude 40.582538º and Longitude -79.829271º, where the supernatant enters the Sedimentation Pond outlet structure. This new proposed location is detailed in Figure 7 below.

Figure 7: Cheswick Ash Disposal Site – Revised Outfall 010, Settling Pond and Discharge Structures

In order to facilitate approval of this NPDES permit and because the variation of the discharge quality of Outfall 010 and 011, it seemed best to defer Department action on the combination and relocation of Outfall 010 at this time, until the next renewal of this permit.

Tools and References Used to Develop Permit	
☐	WQM for Windows Model
☒	PENTOXSD for Windows Model (see Attachment B)
☐	TRC Model Spreadsheet
☒	Toxics Screening Analysis Spreadsheet (see Attachment B)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 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, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 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, 391-2000-022, 3/1999.
☐	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: New and Reissuance Industrial Waste and Industrial Stormwater Individual NPDES Permit Applications
☒	Other: (1.) Bureau of Clean Water, NPDES Permit Fact Sheet, Individual Industrial Waste (IW) and IW Stormwater for the NRG Power Midwest LP, Cheswick Generating Station, December 27, 20217. (2.) Bureau of Clean Water, NPDES Permitting Division, NPDES Permit Fact Sheet, Addendum, July 11, 2018.

Attachments

Attachment A: Prior PA0001627 Fact Sheet, Attachment A – Facility Map

Attachment B: Prior Water Quality Analysis – Outfall 002

Attachment C: Prior Effluent Limitation Guideline Limitation Justification

Attachment D: Applicable Excerpts from the Prior NPDES PA0001627 Permit Fact Sheet Addendum, July 11, 2018

Attachment E: Cheswick Ash Disposal Site, Leachate Conveyance System Contingency

ATTACHMENT A:
Prior PA0001627 Fact Sheet, Attachment A – Facility Map


Outfall 002
Outfall 005
Outfalls 010 & 011
MMDP
LeFever Landfill
Lefever Hill Rd
Volunteer Fire

ATTACHMENT B:
Prior PA0001627 Fact Sheet, Water Quality Analysis – Outfall 002

Outfall 002

TOXICS SCREENING ANALYSIS
WATER QUALITY POLLUTANTS OF CONCERN
VERSION 2.4

Facility: **Cheswick** NPDES Permit No.: **PA0001627** Outfall: **002**
Analysis Hardness (mg/L): **100** Discharge Flow (MGD): **12.4** Analysis pH (SU): **7**

	Parameter		Maximum Concentration in Application or DMRs (µg/L)	Most Stringent Criterion (µg/L)	Candidate for PENTOXSD Modeling?	Most Stringent WQBEL (µg/L)	Screening Recommendation
Group 1	Total Dissolved Solids		1630000	500000	Yes		Monitor
	Chloride			250000			Monitor
	Bromide		900	N/A	No		Monitor
	Sulfate		638000	250000	Yes		Monitor
	Fluoride			2000			
Group 2	Total Aluminum	<	50	750	No		
	Total Antimony	<	10	5.6	Yes	5.631	Establish Limits
	Total Arsenic	<	10	10	Yes	10.056	Establish Limits
	Total Barium		8.2	2400	No		
	Total Beryllium	<	0.5	N/A	No (Value < QL)		
	Total Boron		1030	1600	No		
	Total Cadmium	<	0.1	0.271	No (Value < QL)		
	Total Chromium			N/A			
	Hexavalent Chromium	<	2	10.4	No		
	Total Cobalt	<	2	19	No		
	Total Copper	<	5	9.3	No		
	Total Cyanide		7	N/A	No		
	Total Iron		687	1500	No		
	Dissolved Iron	<	10	300	No (Value < QL)		
	Total Lead	<	10	3.2	Yes	3.199	Establish Limits
	Total Manganese		109	1000	No		
	Total Mercury	<	0.005	0.05	No (Value < QL)		
	Total Molybdenum		66	N/A	No		
	Total Nickel	<	5	52.2	No		
	Total Phenols (Phenolics)	<	10	5	Yes		
	Total Selenium		2.3	5.0	No		
	Total Silver	<	2	3.8	No		
	Total Thallium	<	0.1	0.24	No (Value < QL)		
	Total Zinc		9.5	119.8	No		
Group 3	Acrolein	<	2	3	No (Value < QL)		
	Acrylamide	<		0.07			
	Acrylonitrile	<	0.5	0.051	No (Value < QL)		
	Benzene	<	0.2	1.2	No (Value < QL)		
	Bromoform	<	0.2	4.3	No (Value < QL)		
	Carbon Tetrachloride		0.2	0.23	No		
	Chlorobenzene	<	0.2	130	No (Value < QL)		
	Chlorodibromomethane	<	0.4	0.4	No (Value < QL)		
	Chloroethane	<	0.2	N/A	No (Value < QL)		
	2-Chloroethyl Vinyl Ether	<	0.5	3500	No (Value < QL)		
	Chloroform	<	0.2	5.7	No (Value < QL)		
	Dichlorobromomethane	<	0.2	0.55	No (Value < QL)		
	1,1-Dichloroethane	<	0.2	N/A	No (Value < QL)		
	1,2-Dichloroethane	<	0.2	0.38	No (Value < QL)		
	1,1-Dichloroethylene	<	0.2	33	No (Value < QL)		
	1,2-Dichloropropane	<	0.2	2200	No (Value < QL)		
	1,3-Dichloropropylene	<	0.2	0.34	No (Value < QL)		
	Ethylbenzene	<	0.2	530	No (Value < QL)		
	Methyl Bromide	<	0.5	47	No (Value < QL)		
	Methyl Chloride	<	0.2	5500	No (Value < QL)		
	Methylene Chloride	<	0.2	4.6	No (Value < QL)		
	1,1,2,2-Tetrachloroethane	<	0.2	0.17	No (Value < QL)		
	Tetrachloroethylene	<	0.2	0.69	No (Value < QL)		
	Toluene	<	0.2	330	No (Value < QL)		
	1,2-trans-Dichloroethylene	<	0.5	140	No (Value < QL)		
	1,1,1-Trichloroethane	<	0.2	610	No (Value < QL)		
	1,1,2-Trichloroethane	<	0.5	0.59	No (Value < QL)		
	Trichloroethylene	<	0.2	2.5	No (Value < QL)		
	Vinyl Chloride	<	0.2	0.025	No (Value < QL)		
Group 4	2-Chlorophenol	<	4.7	81	No (Value < QL)		
	2,4-Dichlorophenol	<	4.7	77	No (Value < QL)		
	2,4-Dimethylphenol	<	4.7	130	No (Value < QL)		
	4,6-Dinitro-o-Cresol	<	4.7	13	No (Value < QL)		
	2,4-Dinitrophenol	<	4.7	69	No (Value < QL)		
	2-Nitrophenol	<	4.7	1600	No (Value < QL)		
	4-Nitrophenol	<	4.7	470	No (Value < QL)		
	p-Chloro-m-Cresol	<	4.7	30	No (Value < QL)		
	Pentachlorophenol	<	0.28	0.27	No (Value < QL)		
	Phenol	<	4.7	10400	No (Value < QL)		
	2,4,6-Trichlorophenol	<	4.7	1.4	No (Value < QL)		
	Acenaphthene	<	4.7	17	No		

Group 5	Acenaphthylene	<	4.7	N/A	No		
	Anthracene	<	4.7	8300	No		
	Benzidine	<	4.7	0.000086	No (Value < QL)		
	Benzo(a)Anthracene	<	4.7	0.0038	Yes	0.004	Establish Limits
	Benzo(a)Pyrene	<	4.7	0.0038	Yes	0.004	Establish Limits
	3,4-Benzofluoranthene	<	4.7	0.0038	Yes	0.004	Establish Limits
	Benzo(ghi)Perylene	<	4.7	N/A	No		
	Benzo(k)Fluoranthene	<	4.7	0.0038	Yes	0.004	Establish Limits
	Bis(2-Chloroethoxy)Methane	<	4.7	N/A	No (Value < QL)		
	Bis(2-Chloroethyl)Ether	<	4.7	0.03	No (Value < QL)		
	Bis(2-Chloroisopropyl)Ether	<	4.7	1400	No (Value < QL)		
	Bis(2-Ethylhexyl)Phthalate	<	1.9	1.2	No (Value < QL)		
	4-Bromophenyl Phenyl Ether	<	4.7	54	No (Value < QL)		
	Butyl Benzyl Phthalate	<	4.7	35	No (Value < QL)		
	2-Chloronaphthalene	<	4.7	1000	No (Value < QL)		
	4-Chlorophenyl Phenyl Ether	<	4.7	N/A	No (Value < QL)		
	Chrysene	<	4.7	0.0038	Yes	0.004	Establish Limits
	Dibenzo(a,h)Anthrancene	<	4.7	0.0038	Yes	0.004	Establish Limits
	1,2-Dichlorobenzene	<	4.7	160	No		
	1,3-Dichlorobenzene	<	4.7	69	No		
	1,4-Dichlorobenzene	<	4.7	150	No		
	3,3-Dichlorobenzidine	<	4.7	0.021	No (Value < QL)		
	Diethyl Phthalate	<	4.7	800	No (Value < QL)		
	Dimethyl Phthalate	<	4.7	500	No (Value < QL)		
	Di-n-Butyl Phthalate	<	4.7	21	No (Value < QL)		
	2,4-Dinitrotoluene	<	4.7	0.05	No (Value < QL)		
	2,6-Dinitrotoluene	<	4.7	0.05	No (Value < QL)		
	1,4-Dioxane	<	4.7	N/A	No		
	Di-n-Octyl Phthalate	<	4.7	N/A	No (Value < QL)		
	1,2-Diphenylhydrazine	<	4.7	0.036	No (Value < QL)		
	Fluoranthene	<	4.7	40	No		
	Fluorene	<	4.7	1100	No		
	Hexachlorobenzene	<	4.7	0.00028	No (Value < QL)		
	Hexachlorobutadiene	<	4.7	0.44	Yes	0.464	Establish Limits
	Hexachlorocyclopentadiene	<	4.7	1	No (Value < QL)		
	Hexachloroethane	<	4.7	1.4	No (Value < QL)		
	Indeno(1,2,3-cd)Pyrene	<	4.7	0.0038	Yes	0.004	Establish Limits
	Isophorone	<	4.7	35	No (Value < QL)		
	Naphthalene	<	4.7	43	No		
	Nitrobenzene	<	4.7	17	No (Value < QL)		
	n-Nitrosodimethylamine	<	4.7	0.00069	No (Value < QL)		
	n-Nitrosodi-n-Propylamine	<	4.7	0.005	No (Value < QL)		
	n-Nitrosodiphenylamine	<	9.3	3.3	Yes	3.481	Establish Limits
	Phenanthrene	<	4.7	1	Yes	1.006	Establish Limits
	Pyrene	<	4.7	830	No		
	1,2,4-Trichlorobenzene	<	4.7	26	No		

PENTOXSD

Modeling Input Data

Stream Code	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope	PWS With (mgd)	Apply FC
33846	2.48	1180.00	11.10	0.00000	0.00	☑

Stream Data

	LFY	Trib Flow	Stream Flow	WD Ratio	Rch Width	Rch Depth	Rch Velocity	Rch Trav Time	Tributary Hard	Tributary pH	Stream Hard	Stream pH	Analysis Hard	Analysis pH
	(cfsm)	(cfs)	(cfs)		(ft)	(ft)	(fps)	(days)	(mg/L)		(mg/L)		(mg/L)	
Q7-10	0.1	0.567	0	0	0	0	0	0	100	7	0	0	0	0
Qh		0	0	0	0	0	0	0	100	7	0	0	0	0

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	AFC PMF	CFC PMF	THH PMF	CRL PMF	Disc Hard (mg/L)	Disc pH
Langeloth	PA0004219	0.024	0	0	0	0	0	0	0	100	7

Parameter Data

Parameter Name	Disc Conc (µg/L)	Trib Conc (µg/L)	Disc Daily CV	Disc Hourly CV	Steam Conc (µg/L)	Stream CV	Fate Coef	FOS	Crit Mod	Max Disc Conc (µg/L)
ANTIMONY	500	0	0.5	0.5	0	0	0	0	1	0
ARSENIC	184	0	0.5	0.5	0	0	0	0	1	0
BORON	2720	0	0.5	0.5	0	0	0	0	1	0
CADMIUM	30	0	0.5	0.5	0	0	0	0	1	0
CHROMIUM, VI	64	0	0.5	0.5	0	0	0	0	1	0
COBALT	100	0	0.5	0.5	0	0	0	0	1	0
COPPER	100	0	0.5	0.5	0	0	0	0	1	0
DISSOLVED IRON	500	0	0.5	0.5	0	0	0	0	1	0
FLUORIDE (PWS)	78800	0	0.5	0.5	0	0	0	0	1	0
LEAD	114	0	0.5	0.5	0	0	0	0	1	0
MANGANESE	1950	0	0.5	0.5	0	0	0	0	1	0
NICKEL	750	0	0.5	0.5	0	0	0	0	1	0
PHENOLICS (PWS)	10	0	0.5	0.5	0	0	0	0	1	0
SELENIUM	28	0	0.5	0.5	0	0	0	0	1	0
SILVER	100	0	0.5	0.5	0	0	0	0	1	0
SULFATE (PWS)	44	0	0.5	0.5	0	0	0	0	1	0

PENTOXSD

Modeling Input Data

Stream Code	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope	PWS With (mgd)	Apply FC
42289	2.81	850.00	10.69	0.00500	0.00	☑

Stream Data

	LFY	Trib Flow	Stream Flow	WD Ratio	Rch Width	Rch Depth	Rch Velocity	Rch Trav Time	Tributary Hard	Tributary pH	Stream Hard	Stream pH	Analysis Hard	Analysis pH
	(cfsm)	(cfs)	(cfs)		(ft)	(ft)	(fps)	(days)	(mg/L)		(mg/L)		(mg/L)	
Q7-10	0.1	0.1069	0	0	0	0	0	0	100	7	0	0	0	0
Qh		0	0	0	0	0	0	0	100	7	0	0	0	0

Discharge Data

Name	Permit Number	Existing Disc Flow	Permitted Disc Flow	Design Disc Flow	Reserve Factor	AFC PMF	CFC PMF	THH PMF	CRL PMF	Disc Hard	Disc pH
		(mgd)	(mgd)	(mgd)						(mg/L)	
Cheswick	)001627-MM	12.4	0	0	0	0	0	0	0	100	7

Parameter Data

Parameter Name	Disc Conc (µg/L)	Trib Conc (µg/L)	Disc Daily CV	Disc Hourly CV	Steam Conc (µg/L)	Stream CV	Fate Coef	FOS	Crit Mod	Max Disc Conc (µg/L)
3,4-BENZOFLUORANTHENE	1E+09	0	0.5	0.5	0	0	0	0	1	0
ANTIMONY	1E+09	0	0.5	0.5	0	0	0	0	1	0
ARSENIC	1E+09	0	0.5	0.5	0	0	0	0	1	0
BENZO(a)ANTHRACENE	1E+09	0	0.5	0.5	0	0	0	0	1	0
BENZO(a)PYRENE	1E+09	0	0.5	0.5	0	0	0	0	1	0
BENZO(k)-FLUORANTHENE	1E+09	0	0.5	0.5	0	0	0	0	1	0
CHRYSENE	1E+09	0	0.5	0.5	0	0	0	0	1	0
DIBENZO(a,h) ANTHRACENE	1E+09	0	0.5	0.5	0	0	0	0	1	0
HEXACHLOROBUTA-DIENE	1E+09	0	0.5	0.5	0	0	0	0	1	0
INDENO(1,2,3-cd)PYRENE	1E+09	0	0.5	0.5	0	0	0	0	1	0
LEAD	1E+09	0	0.5	0.5	0	0	0	0	1	0
N-NITROSODI-PHENYLAMINE	1E+09	0	0.5	0.5	0	0	0	0	1	0
PHENANTHRENE	1E+09	0	0.5	0.5	0	0	0	0	1	0

Stream Code	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope	PWS With (mgd)	Apply FC
42289	0.00	770.00	14.03	0.00600	0.00	☑

Stream Data

	LFY	Trib Flow	Stream Flow	WD Ratio	Rch Width	Rch Depth	Rch Velocity	Rch Trav Time	Tributary Hard	Tributary pH	Stream Hard	Stream pH	Analysis Hard	Analysis pH
	(cfsm)	(cfs)	(cfs)		(ft)	(ft)	(fps)	(days)	(mg/L)		(mg/L)		(mg/L)	
Q7-10	0.1	0	0	0	0	0	0	0	100	7	0	0	0	0
Qh		0	0	0	0	0	0	0	100	7	0	0	0	0

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	AFC PMF	CFC PMF	THH PMF	CRL PMF	Disc Hard (mg/L)	Disc pH
		0	0	0	0	0	0	0	0	100	7

Parameter Data

Parameter Name	Disc Conc (µg/L)	Trib Conc (µg/L)	Disc Daily CV	Disc Hourly CV	Steam Conc (µg/L)	Stream CV	Fate Coef	FOS	Crit Mod	Max Disc Conc (µg/L)
3,4-BENZOFLUORANTHENE	0	0	0.5	0.5	0	0	0	0	1	0
ANTIMONY	0	0	0.5	0.5	0	0	0	0	1	0
ARSENIC	0	0	0.5	0.5	0	0	0	0	1	0
BENZO(a)ANTHRACENE	0	0	0.5	0.5	0	0	0	0	1	0
BENZO(a)PYRENE	0	0	0.5	0.5	0	0	0	0	1	0
BENZO(k)-FLUORANTHENE	0	0	0.5	0.5	0	0	0	0	1	0
CHRYSENE	0	0	0.5	0.5	0	0	0	0	1	0
DIBENZO(a,h) ANTHRACENE	0	0	0.5	0.5	0	0	0	0	1	0
HEXACHLOROBUTA-DIENE	0	0	0.5	0.5	0	0	0	0	1	0
INDENO(1,2,3-cd)PYRENE	0	0	0.5	0.5	0	0	0	0	1	0
LEAD	0	0	0.5	0.5	0	0	0	0	1	0
N-NITROSODI-PHENYLAMINE	0	0	0.5	0.5	0	0	0	0	1	0
PHENANTHRENE	0	0	0.5	0.5	0	0	0	0	1	0

PENTOXSD Analysis Results

Hydrodynamics

SWP Basin	Stream Code:	Stream Name:
18A	42289	LITTLE DEER CREEK

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope	Depth (ft)	Width (ft)	WD Ratio	Velocity (fps)	Reach Trav Time (days)	CMT (min)
Q7-10 Hydrodynamics											
2.810	0.1069	0	0.1069	19.1828	0.005	0.7578	38.9	51.332	0.6544	0.2624	.001
0.000	0.4409	0	0.4409	NA	0	0	0	0	0	0	NA
Qh Hydrodynamics											
2.810	1.0527	0	1.0527	19.1828	0.005	0.7739	38.9	50.262	0.6721	0.2555	.116
0.000	3.632	0	3.632	NA	0	0	0	0	0	0	NA

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number
2.81	**Cheswick**	**MMDP - 002**

AFC

Q7-10: **CCT (min)** 0.001 **PMF** 1 **Analysis pH** 7 **Analysis Hardness** 100

Parameter	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
ANTIMONY	0	0	0	0	1100	1100	1106.13
ARSENIC	0	0	0	0	340	340	341.895
	Dissolved WQC. Chemical translator of 1 applied.						
LEAD	0	0	0	0	64.581	81.645	82.1
	Dissolved WQC. Chemical translator of 0.791 applied.						
BENZO(a)ANTHRACENE	0	0	0	0	0.5	0.5	0.503
BENZO(a)PYRENE	0	0	0	0	NA	NA	NA
3,4-BENZOFLUORANTHENE	0	0	0	0	NA	NA	NA
BENZO(k)-FLUORANTHENE	0	0	0	0	NA	NA	NA
CHRYSENE	0	0	0	0	NA	NA	NA
DIBENZO(a,h) ANTHRACENE	0	0	0	0	NA	NA	NA
HEXACHLOROBUTA-DIENE	0	0	0	0	10	10	10.056
INDENO(1,2,3-cd)PYRENE	0	0	0	0	NA	NA	NA
N-NITROSODI-PHENYLAMINE	0	0	0	0	300	300	301.672
PHENANTHRENE	0	0	0	0	5	5	5.028

CFC

Q7-10: **CCT (min)** 0.001 **PMF** 1 **Analysis pH** 7 **Analysis Hardness** 100

Parameter	Stream Conc. (µg/L)	Stream CV	Trib Conc. (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
ANTIMONY	0	0	0	0	220	220	221.226
ARSENIC	0	0	0	0	150	150	150.836
	Dissolved WQC. Chemical translator of 1 applied.						
LEAD	0	0	0	0	2.517	3.182	3.199
	Dissolved WQC. Chemical translator of 0.791 applied.						
BENZO(a)ANTHRACENE	0	0	0	0	0.1	0.1	0.101

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number						
2.81	**Cheswick**	**MMDP - 002**						
	BENZO(a)PYRENE		0	0	0	0	NA	NA	NA
	3,4-BENZOFLUORANTHENE		0	0	0	0	NA	NA	NA
	BENZO(k)-FLUORANTHENE		0	0	0	0	NA	NA	NA
	CHRYSENE		0	0	0	0	NA	NA	NA
	DIBENZO(a,h) ANTHRACENE		0	0	0	0	NA	NA	NA
	HEXACHLOROBUTA-DIENE		0	0	0	0	2	2	2.011
	INDENO(1,2,3-cd)PYRENE		0	0	0	0	NA	NA	NA
	N-NITROSODI-PHENYLAMINE		0	0	0	0	59	59	59.329
	PHENANTHRENE		0	0	0	0	1	1	1.006

THH

Q7-10: **CCT (min)** 0.001 **PMF** 1 **Analysis pH** NA **Analysis Hardness** NA

Parameter	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
ANTIMONY	0	0	0	0	5.6	5.6	5.631
ARSENIC	0	0	0	0	10	10	10.056
LEAD	0	0	0	0	NA	NA	NA
BENZO(a)ANTHRACENE	0	0	0	0	NA	NA	NA
BENZO(a)PYRENE	0	0	0	0	NA	NA	NA
3,4-BENZOFLUORANTHENE	0	0	0	0	NA	NA	NA
BENZO(k)-FLUORANTHENE	0	0	0	0	NA	NA	NA
CHRYSENE	0	0	0	0	NA	NA	NA
DIBENZO(a,h) ANTHRACENE	0	0	0	0	NA	NA	NA
HEXACHLOROBUTA-DIENE	0	0	0	0	NA	NA	NA
INDENO(1,2,3-cd)PYRENE	0	0	0	0	NA	NA	NA

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number						
2.81	**Cheswick**	**MMDP - 002**						
N-NITROSODI-PHENYLAMINE			0	0	0	0	NA	NA	NA
PHENANTHRENE			0	0	0	0	NA	NA	NA

CRL

Qh: **CCT (min)** 0.116 **PMF** 1

Parameter	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
ANTIMONY	0	0	0	0	NA	NA	NA
ARSENIC	0	0	0	0	NA	NA	NA
LEAD	0	0	0	0	NA	NA	NA
BENZO(a)ANTHRACENE	0	0	0	0	0.004	0.004	0.004
BENZO(a)PYRENE	0	0	0	0	0.004	0.004	0.004
3,4-BENZOFLUORANTHENE	0	0	0	0	0.004	0.004	0.004
BENZO(k)-FLUORANTHENE	0	0	0	0	0.004	0.004	0.004
CHRYSENE	0	0	0	0	0.004	0.004	0.004
DIBENZO(a,h) ANTHRACENE	0	0	0	0	0.004	0.004	0.004
HEXACHLOROBUTA-DIENE	0	0	0	0	0.44	0.44	0.464
INDENO(1,2,3-cd)PYRENE	0	0	0	0	0.004	0.004	0.004
N-NITROSODI-PHENYLAMINE	0	0	0	0	3.3	3.3	3.481
PHENANTHRENE	0	0	0	0	NA	NA	NA

PENTOXSD Analysis Results

Recommended Effluent Limitations

SWP Basin	Stream Code:	Stream Name:
18A	42289	LITTLE DEER CREEK

RMI	Name	Permit Number	Disc Flow (mgd)
2.81	Cheswick	MMDP - 002	12.4000

Parameter	Effluent Limit (µg/L)	Governing Criterion	Max. Daily Limit (µg/L)	Most Stringent WQBEL (µg/L)	Most Stringent WQBEL Criterion
3,4-BENZOFLUORANTHENE	0.004	CRL	0.006	0.004	CRL
ANTIMONY	5.631	THH	8.786	5.631	THH
ARSENIC	10.056	THH	15.689	10.056	THH
BENZO(a)ANTHRACENE	0.004	CRL	0.006	0.004	CRL
BENZO(a)PYRENE	0.004	CRL	0.006	0.004	CRL
BENZO(k)-FLUORANTHENE	0.004	CRL	0.006	0.004	CRL
CHRYSENE	0.004	CRL	0.006	0.004	CRL
DIBENZO(a,h) ANTHRACENE	0.004	CRL	0.006	0.004	CRL
HEXACHLOROBUTA-DIENE	0.464	CRL	0.724	0.464	CRL
INDENO(1,2,3-cd)PYRENE	0.004	CRL	0.006	0.004	CRL
LEAD	3.199	CFC	4.991	3.199	CFC
N-NITROSODI-PHENYLAMINE	3.481	CRL	5.431	3.481	CRL
PHENANTHRENE	1.006	CFC	1.569	1.006	CFC

ATTACHMENT C:
Prior PA0001627 Fact Sheet, Attachment E – Effluent Limitation Guideline Limitation Justification

Submitted by NRG for Cheswick Generating Station
Applicability Date Extension Narrative

The renewal NPDES for the Cheswick Power Station should not include the new "BAT" limitations for the bottom ash transport water (BATW) and/or flue gas desulfurization (FGD) wastewaters.

The U.S. EPA promulgated a new rule related to the ELGs on November 3, 2015. This rule imposed a number of new effluent guidelines and related conditions, including new "Best Available Technology Economically Achievable" or "BAT" limitations for BATW and FGD wastewater. See, 40 C.F.R. §§ 423.13 (g) and (k). As originally promulgated, the new BATW and FGD limitations were to be achieved "by a date determined by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than November 31, 2023." Id. The rule also defined the phrase "as soon as possible" to mean November 1, 2018, unless the permitting authority establishes a later date, after receiving information from the discharger, which reflects a consideration of the following factors:

(1) Time to expeditiously plan (including to raise capital), design, procure, and install equipment to comply with the requirements of the rule.
(2) Changes being made or planned at the plant in response to:
    a. New source performance standards for greenhouse gases from new fossil fuel-fired electric generating units, under sections 111, 301, 302, and 307(d)(1)(C) of the Clean Air Act, as amended, 42 U.S.C. 7411, 7601, 7602, 7607(d)(1)(C);
    b. Emission guidelines for greenhouse gases from existing fossil fuel-fired electric generating units, under sections 111, 301, 302, and 307(d) of the Clean Air Act, as amended, 42 U.S.C. 7411, 7601, 7602, 7607(d); or
    c. Regulations that address the disposal of coal combustion residuals as solid waste, under sections 1006(b), 1008(a), 2002(a), 3001, 4004, and 4005(a) of the Solid Waste Disposal Act of 1970, as amended by the Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. 6906(b),
(3) For FGD wastewater requirements only, an initial commissioning period for the treatment system to optimize the installed equipment.
(4) Other factors as appropriate.

See, 40 C.F.R. § 423.11(t) (November 2015 version).

On March 24, 2017, an industry group representing steam electric power generators (the Utility Water Act Group (UWAG)) filed with the Administrator a petition for reconsideration of the 2015 Rule (EPA-HQ-OW-2009-0819-6478). On April 5, 2017, the U.S. Small Business Administration (SBA) filed a separate petition for reconsideration on much the same grounds. Those petitions stressed, among other issues, that (1) new information indicated that the 2015 rule's limits for FGD wastewater cannot be met by all facilities; (2) the 2015 rule partially relied on unreliable data in developing the "zero discharge" limit for BATW; and (3) the 2015 rule was the second most cost-ineffective ELG Rule ever and therefore deserved to be reconsidered.

On April 11, 2017, the Administrator sent to each Governor and State permitting agency a letter notifying each of the petitions for reconsideration, reminding them that the ELG Rule applies only when implemented in an NPDES permit in accordance with applicability dates determined under the rule and encouraging them to make use of the flexibility that § 423.11(t) of the ELG Rule affords to consider "other factors" in selecting an appropriate applicability date. Then on April 12, 2017, Administrator Pruitt issued a letter granting the SBA and UWAG petitions and indicating that the Agency would (1) promptly issue a stay, pursuant to § 705 of the Administrative Procedure Act, of the ELG Rule's applicability dates; and (2) consider which portions of the ELG Rule warrant a remand and/or further rulemaking. On April 25, 2017, EPA issued a

Federal Register notice staying the applicability dates for all new and more restrictive limits, including those for FGD wastewater and BATW (82 Fed. Reg. 19005).

On June 6, 2017, EPA solicited comment on whether it should postpone by rule the applicability dates that have not yet passed for some or all of the new, more restrictive ELG limits in order to "preserve the regulatory status quo … while reconsideration is ongoing" and avoid "imminent planning and capital expenditures" that companies would otherwise be required to make in order to meet those applicability deadlines (82 Fed. Reg. 26017).

On August 11, 2017, EPA announced its intention to conduct further rulemaking to potentially revise the new, more stringent effluent limitations guidelines and pretreatment standards for existing facilities (PSES) established by the 2015 steam electric guidelines rule for two waste streams: FGD scrubber blowdown (FGD wastewater) (§ 423.13(g)(1)(i)) and BATW (§ 423.13(k)(1)(i)).

On September 18, 2017, EPA issued a final rule (Postponement Rule) postponing the near-term applicability dates for FGD wastewater and BATW from November 1, 2018, to November 1, 2020 (82 Fed. Reg. 43494). The rule became effective upon publication. EPA's stated purpose for the Postponement Rule is to authorize permit writers to select applicability dates that will avoid any expenditures to comply with the 2015 ELGs for FGD wastewater and BATW until EPA completes further rulemaking for those waste streams. The preamble accompanying the Postponement Rule indicates that EPA will conduct further rulemaking to revise the applicability dates if it has not completed its reconsideration of the FGD wastewater and BATW limits by November 1, 2020.

Achieving the central purpose of the Postponement Rule means that NPDES permit writers must use the November 1, 2020 deadline (the date by which EPA intends to complete the rulemaking) as the starting point, not the endpoint, for compliance expenditures. Determining what is "as soon as possible" by assuming that companies will continue their compliance expenditures during the three-year period EPA estimates it will need to complete further rulemaking is inconsistent with achieving the central purpose of the Postponement Rule.

In light of the acknowledged uncertainty associated with the guidelines, the Department should not include the new BAT limitations in the Cheswick NPDES permit renewal for the BATW and/or FGD wastewaters. Rather, a "re-opener" should be included so that the Department can modify the permit after the guideline issues are conclusively and finally resolved. Imposing the limits in the permit would serve no beneficial purpose, and instead could subject Cheswick Generating Station to stringent and unlawful limitations (e.g., because the limits were included, subsequently revised by EPA or further postponed, but no action was taken by the Department to modify them in the permit). This re-opener approach is consistent with all of the facts, the U.S. EPA September 18, 2017 rulemaking, and the informal guidance that we understand Region III of U.S. EPA has been issuing. Perhaps even more important, it is consistent with how we understand neighboring states are addressing the issue. To do otherwise would once again place Pennsylvania jobs and families at a competitive disadvantage, with no attendant environmental benefit.

Alternatively, although Cheswick Generating Station does not believe that this is the appropriate course of action, the Department should at least defer all compliance with the new BAT limitations for the BATW and the FGD wastewaters until December 31, 2023 because:

- Cheswick is equipped with an effective wastewater treatment system for FGD wastewater that is discharged at Internal Monitoring Point (IMP 503) and complies with stringent water quality based effluent limitations for selenium, arsenic and mercury. Since October 2014 monthly average:
    - Selenium concentrations have been consistently less than 0.35 mg/l.
    - Arsenic concentrations have been consistently less than 0.010 mg/l, and

- Mercury concentrations have been consistently less than 0.00025 mg/l.

- An applicability date sooner than December 31, 2023 will require Cheswick to incur compliance expenditures beginning as early as 2018 to initiate engineering work to evaluate biological treatment technologies. At this time, only one full scale biological system (i.e., GE AbMet) has the potential to comply with the 2015 rule's limits for selenium and nitrate/nitrite. As noted in industry petitions, new information was presented that indicated that the 2015 rule's limits for FGD wastewater cannot be met by all facilities using the GE AbMet System. As a result of this uncertainty in the effectiveness of selenium treatment, Cheswick anticipates the need to further evaluate whether the GE AbMet System or other equivalent biological system can, in fact, meet the 2015 rule's limits. This evaluation (e.g., pilot testing) could become unnecessary should US EPA increase or eliminate the 2015 FGD wastewater limits.

- The proposed effluent limitation for boron will require modifications to the operation of the FGD absorber system, coal supply, limestone supply, and/or Cheswick's FGD wastewater treatment system. To identify the most effective and economic alternatives for compliance, detailed engineering studies will be required. Potential changes to fuel and material supplies, the FGD absorber chemistry, and/or the FGD WWTP operations will then need to be assessed to determine how these changes would impact the existing physical/chemical WWTP with respect to arsenic, mercury, and selenium and any proposed FGD biological treatment system.

- An applicability date sooner than December 31, 2023, for the new BAT limitations for BATW will also require compliance expenditures. Cheswick has replaced the bottom ash transport system with a remote drag chain system (remote MDS) that can recycle BATW. However, under the new 2015 rules, Cheswick would need to further evaluate system chemistry and the need to tie the bottom ash recycle system to the FGD Scrubber for use as makeup water. Furthermore, EPA does not consider any activity that requires draining the majority of the water volume from a wet sluicing, closed-loop system containment vessel (e.g., bottom ash hopper, remote MDS, dewatering bin, settling tank, surge tank) a minor maintenance event. Therefore, significant costs may be incurred to capture BATW associated with equipment maintenance and leaks. Additionally, significant costs would be incurred upon station retirement and final decommissioning of the new BATW recycle system.

<u>We suggest as an alternative that the Department include the following provision:</u>

> Cheswick Generating Station is required to continue to minimize the discharge of BATW through operation of the new remote MDS and to notify the Department of bypasses or shutdowns of the BATW recycle system. If the Steam Electric Power Generating Effluent Guidelines compliance dates or requirements for pollutants in BATW and/or FGD wastewater are further delayed or modified, the Cheswick shall comply with the ELGs as soon as possible, but no later than the final timeline established in 40 CFR 423.

GenOn appreciates the opportunity to provide this information for the Department's consideration, and we look forward to further discussions on these issues.

ATTACHMENT D:
Applicable Excerpts from the Prior NPDES PA0001627 Permit Fact Sheet Addendum
July 11, 2018

Monitoring Frequency at Outfall 002

Cheswick has requested a performance-based reduction in monitoring frequency at Outfall 002, the discharge from the MMDP. The Department reviewed Cheswick's request using EPA's Interim Guidance for Performance-Based Reductions of NPDES Permit Monitoring Frequencies (April 1996). A performance analysis was completed and is provided in **Table 1** below.

Long-Term Effluent Averages were calculated using the Average Monthly values reported on DMRs from May 2012 - April 2018. Note that a majority of the data was reported as non-detect. Where the ratio of the Long-Term Monthly Average (LTA) to the Monthly Average Limit (AML) is below 50%, the Interim Guidance states monitoring frequency may be reduced. As shown in Table 1, the LTA/AML ratio is less than 50% for Total Beryllium, Total Copper, Total Selenium, Total Silver and Total Thallium. The Department will provide a reduction in monitoring frequency from 1/week to 2/month for these pollutants, as well as for Free Cyanide and TRC, which are not subject to numeric effluent limits.

Neither Total Cadmium nor Hexavalent Chromium meet that threshold by the above calculations. For Cadmium, Cheswick reported a non-detect using a quantitation limit (QL) of 0.0002 mg/L on each of their DMRs, which is the Department's Target QL (TQL) for Cadmium. Since the TQL was consistently met and non-detect results are not addressed by the Interim Guidance, the Department will allow a reduction in monitoring frequency to 2/month for Cadmium.

The results for Hexavalent Chromium were also consistently reported as non-detect. Until January 2016, a QL of 0.005 mg/L was used by Cheswick. Beginning in February of 2016, results were reported with a more sensitive a QL of 0.002 mg/L. The Interim Guidance allows for the use of a minimum of 2 years of data; since Cheswick has consistently reported non-detects for Hexavalent Chromium, the Department will allow the Long-Term Monthly Average to be calculated using only the two most recent years. If a Long-Term Monthly Average of 0.002 mg/L is used to calculate the ratio, the result is 33%, which provides for reduced monitoring. The Department agrees to reduce monitoring to 2/month.

Table 1 – Evaluation of Outfall 002 Pollutants for Reduced Monitoring Frequency

Parameter	LTA (mg/L)	AML (mg/L)	(LTA / AML)
Osmotic Pressure	36.92	50	74%
Total Beryllium	<0.0005	0.01	5%
Total Cadmium	<0.0002	0.0003	67%
Hexavalent Chromium	<0.0039	0.006	64%
Total Copper	<0.0012	0.009	13%
Free Cyanide	<0.02	M&R	N/A
Total Selenium	<0.0022	0.005	43%
Total Silver	<0.0005	0.003	17%
Total Thallium	<0.0005	0.004	25%
TRC	<0.083	M&R	N/A

Monitoring frequencies for the parameters for which Little Deer Creek is impaired, including Total Aluminum, Total Iron, and Total Manganese, will remain at weekly monitoring. Total Suspended Solids (TSS), Osmotic Pressure, Total Dissolved Solids (TDS) and its constituents Sulfate, Bromide and Chloride will also remain at weekly monitoring.

Parameter Removal from Outfall 002

As discussed in the Fact Sheet for the draft permit, some of the QLs used by Cheswick for the permit application were not sensitive enough to rule out reasonable potential. Those parameters are Total Antimony, Total Arsenic, Total Lead, Benzo(a)Anthracene, Benzo(a)Pyrene, 3,4-Benzofluoranthene, Benzo(k)Fluoranthene, Chrysene, Dibenzo(a,h)Anthrancene, Hexachlorobutadiene, Indeno(1,2,3-cd)Pyrene. n-Nitrosodiphenylamine, and Phenanthrene. As shown in the updated Toxics Screening Analysis (see **Attachment B**), those parameters are no longer parameters of concern based on updated sampling results submitted by Cheswick and will be removed.

Flow Monitoring Outfalls 002 & 004

Flow monitoring at Outfalls 002 and 004 was established as "Recorded" for Sample Type and "Continuous" for Sample Frequency in the draft permit. In the previous permit, flow monitoring requirements were "Measured" and 1/week for Sample Type and Frequency, respectively. Cheswick has indicated it does not currently have technology at either outfall to measure

flow continuously. The Department has determined that it is not critical for these discharges to be monitored continuously; therefore, flow monitoring requirements will be updated to "Measured" for Sample Type and 1/day for Frequency.

Applicable Comments and Responses

(Below are excerpts from **Attachment A** from the Permit Fact Sheet Addendum, Comments 6, 7, 13, 14, 16, 17, 22, 24 – 31. Note that the annotation "**(2)**" means that the com06/08ment was submitted by Kevin P. Panzino, Plant Manager, Cheswick Generating Station.)

Comment: The Design Flow of the MMDP was modified during construction work in 2016 to refurbish the plant. Based on the Water Quality Management (WQM) Permit No. 0270205 A-3 T-3 issued March 17, 2016, the Design Hydraulic Capacity of MMDP is 7.5 million gallons per day (MGD). As presented in the March 2016 Design Engineer's Report (WQM 0270205 A-2), the repaired and modified system is expected to typically operate at 2 MGD to manage the expected mine dewatering needs and leachate with a maximum design capacity of 7.5 MGD. In 2017, the maximum flow reported on the Discharge Monitoring Reports was 4.67 MGD. Based on operations in 2017 after returning the system to service, NRG anticipated that the MMDP would only be operated with one of two mine dewatering pumps at a maximum rate of 5.5 MGD. Therefore, considering this physical change in operations, NRG request that water quality based effluent limitations (WQBELs) be based on and modeled on the Design flow rate of 7.5 MGD or the anticipated maximum flow rate of 5.5 MGD. **(2)**

Response: The limits have been carried over into the renewed permit because of anti-backsliding requirements. DMR data submitted after the modifications show that the MMDP is still able to meet the all of the limits established in the permit. The limits for TSS, pH, Total Beryllium, Total Cadmium, and Hexavalent Chromium are technology-based and independent of the design flow. The existing WQBELs are for Total Silver, Total Thallium, Total Copper, Pentachlorophenol and Total Selenium. DEP determined that the use of a design flow of 7.5 MGD would not provide any relaxation of the limits because of the lack of dilution available in Little Deer Creek.

Comment: Because of unanticipated maintenance activities, sampling was initiated the week of February 18th to support the Department's reasonable potential (RP) analysis to evaluate the need for WQBELs using DEP's Toxics Screening Analysis for Antimony, Arsenic, Lead, Benzo (k) Fluoranthene, Chrysene, Dibenzo (a,h) Anthracene, Hexachlorobutadiene, Indeno (1,2,3-cd) Pyrene, n-Nitrosodiphenylamine, and Phenanthrene. The results of these analyses will be provided upon receipt from NRG's laboratory. **(2)**

Response: The analytical results of sampling conducted February 22 & 27, 2018 and March 7, 2018 were submitted to DEP on March 6 & 16, 2018. All of the results were non-detect with QLs that were at or below the Target QL for each parameter. As such, the above parameters are no longer considered to be parameters of concern (see **Attachment B**). As discussed in the fact sheet, these parameters will be removed from the final permit.

Comment: NRG requested that the average monthly limits (AMLs) for Total Aluminum and Total Manganese be set at water quality criteria; 0.75 mg/L and 1.0 mg/L respectively or eliminated because reasonable potential for these constituents does not exist and mistaken interpretations of the law were made in issuing these limitations. The originally developed Maximum Daily Limits should also be adjusted as well. **(2)**

Response: The limits will remain in the permit because of anti-backsliding requirements; MMDP has demonstrated the ability to meet the current effluent limits for Total Aluminum and Total Manganese.

Comment: The Department notes that Little Deer Creek is also impaired for TDS, siltation and turbidity and the Monitoring for TDS and its constituents "(Chloride, Bromide, and Sulfide)' will be included in the permit. We believe "Sulfide" should be Sulfate and was perhaps a typographical error. **(2)**

Response: Thank you for identifying this error. It has been corrected for the final permit

Comment: The Draft Permit imposes monitoring requirements for all parameters identified for Outfall 002 that require "1/week" measurement frequencies. Because the effluent quality has remained relatively consistent over the last 10 years (and indeed during the life of the facility), and because the effluent quality is expected to remain consistent, once per week

sampling is neither necessary nor appropriate. The Draft Permit should be revised to reduce the monitoring frequency for Outfall 002 from "1/week" to "twice/month." **(2)**

Response: DMR data for Outfall 002 indicate that in general, effluent variability is low, with no effluent violations. DEP has evaluated this request in accordance with interim EPA guidance and has agreed to reduce monitoring frequencies for TRC, Beryllium, Cadmium, Thallium, Silver, Selenium, Free Cyanide, Copper and Hexavalent Chromium to 2/month. The effluent data for Osmotic Pressure did not meet the requirements in the interim guidance to allow a reduction in sample frequency. Sampling frequency for Aluminum, Iron, Manganese, TSS, and TDS and its constituents will remain 1/week due to the stream impairment and TMDL for AMD parameters.

Comment: The minimum frequency of once per month for stormwater at Outfall 005 is burdensome for Cheswick and inconsistent with Department guidelines. NRG requested that the frequency be once per 6 months, which will allow for sampling of Outfalls 010 and 011 during the same event. **(2)**

Response: The minimum frequency of 1/month is not a change from the current permit. In addition, the reported concentration values for TSS have been highly variable, warranting the more frequent monitoring.

Comment: The "Existing Use" of Little Deer Creek does not appear to be a Trout Stocking Fishery. However, the "Designated Use" is identified as a Trout Stocking Fishery. Deer Creek's Existing Use, which is located farther downstream, is identified as a Trout Stocking Fishery. **(2)**

Response: DEP acknowledges this comment. Both Existing and Designated Uses are protected.

Comment: The landfill is referred to as the Cheswick Ash Disposal Site. The mine water and leachate treatment plant is referred to as the Monarch Mine Dewatering Plant (MMDP). **(2)**

Response: Thank you for the clarification.

Comment: In December 2012, GenOn merged with NRG. The owner and operator is NRG Power Midwest LP and is a wholly owned subsidiary of GenOn Energy Inc., which is itself a wholly owned subsidiary of NRG Energy, Inc. The merger in 2012 did not result in an ownership change, just a name change. GenOn is expected to divest from NRG Energy later in 2018. **(2)**

Response: Thank you for the clarification. An application for a minor amendment to the permit must be submitted in the event there is another name change. If there is an ownership change, an application for a transfer of the permit must be submitted.

Comment: The wastewater description should include both Treated Mine Water and Leachate from the Cheswick Ash Disposal Site. Also note that leachate from the Kissick Ash Disposal Site that is not owned by GenOn is injected into the Harwick Mine Complex for treatment at the MMDP. **(2)**

Response: Thank you for the clarification.

Comment: Flow to the pipeline associated with the unauthorized discharge was permanently terminated in August 2017 to prevent reoccurrence. **(2)**

Response: Thank you for the information.

Comment: Condition 13 of the 2014 Consent Order and Agreement (COA) state that water elevation in the Harwick Mine Complex at the MMDP Intake Pump be maintained at or less than a monthly average of 720 ft msl. The wording in the WQM Part II Permit No. 0270205 A-2 T-3 that was issued on May 16, 2014 was modified in a minor revision by the Department that occurred on or about May 29, 2014 and received by Cheswick on May 30, 2104. The description on Page 19 of the fact sheet should be modified to reflect that GenON will maintain the mine pool at or less than a monthly average of 720 ft msl. **(2)**

Response: Thank you for the information.

Comment: Condition 5 of the 2011 COA allows emergency injections of leachate into the Harwick Mine Complex that would exceed the storage capacity during emergency conditions. “Emergency conditions” means a power failure or equipment malfunction that precludes pumping to or treatment of the leachate at the MMDP. This condition was included as a part of WQM Part II Permit No. 0270205 A-4 T-3 issued on March 17, 2016 with the WQM permit amendment application dated February 27, 2015 and its supporting documentation and addendums dated March 2, 2916 and March 15, 2016, which were made a part of this amendment. The description on Page 19 of the fact sheet should be modified to reflect that GenOn is authorized to discharge leachate from the Cheswick Ash Disposal Site to the mine pool during Emergency Conditions. **(2)**

Response: DEP acknowledges the comment. As authorized by the 2011 COA, emergency injections of leachate into the Harwick Mine Complex are authorized.

Comment: NRG also requested authorization to allow emergency injection into the mine pool of mine pool water that is present in wastewater treatment equipment during emergencies. The emergency injection would occur via the same mine shaft that is used to extract mine pool water. The type of emergencies would generally include repair to components of the clarifier that would otherwise be submerged and other upsets requiring the clarifier to be partially drained. The ability to empty the MMDP to facilitate repairs would allow for a more expedited return to service. **(2)**

Response: A request for authorization to allow emergency injection into the mine pool of mine pool water that is present in wastewater treatment equipment during emergencies should be submitted via a WQM permit amendment.

Comment: The Department stated that through an agreement with Duquesne Light, a small flow of leachate from the Kissick Landfill and leachate from the closed emergency fly ash pond is also treated in the ponds. Note that only leachate from the off-site closed emergency fly ash pond is conveyed into these ponds. The leachate from the off-site Kissick Landfill near the Cheswick Ash Disposal Site is conveyed directly through a borehole into the Harwick Mine Complex. By maintaining the mine pool level, MMDP is used to treat and discharge the leachate from the Duquesne Light Company owned Kissick Landfill at Outfall 002. **(2)**

Response: Thank you for the clarification.

Applicable Addendum Changes to Toxics Screening Analysis for Outfall 002

(Below are excerpts from **Attachment B** from the Permit Fact Sheet Addendum.)

TOXICS SCREENING ANALYSIS
WATER QUALITY POLLUTANTS OF CONCERN
VERSION 2.4

Facility: **Cheswick** NPDES Permit No.: **PA0001627** Outfall: **002**
Analysis Hardness (mg/L): **100** Discharge Flow (MGD): **12.4** Analysis pH (SU): **7**

Parameter	Maximum Concentration in Application or DMRs (µg/L)		Most Stringent Criterion (µg/L)	Candidate for PENTOXSD Modeling?	Most Stringent WQBEL (µg/L)	Screening Recommendation
Total Dissolved Solids		1630000	500000	Yes		Monitor
Chloride			250000			Monitor
Bromide		900	N/A	No		Monitor
Sulfate		638000	250000	Yes		Monitor
Fluoride			2000			
Total Aluminum	<	50	750	No		
Total Antimony	<	1	5.6	No (Value < QL)	5.631	
Total Arsenic	<	1	10	No (Value < QL)	10.056	
Total Barium		8.2	2400	No		
Total Beryllium	<	0.5	N/A	No (Value < QL)		
Total Boron		1030	1600	No		
Total Cadmium	<	0.1	0.271	No (Value < QL)		
Total Chromium			N/A			
Hexavalent Chromium	<	2	10.4	No		
Total Cobalt	<	2	19	No		
Total Copper	<	5	9.3	No		
Total Cyanide		7	N/A	No		
Total Iron		687	1500	No		
Dissolved Iron	<	10	300	No (Value < QL)		
Total Lead	<	1	3.2	No (Value < QL)	3.199	
Total Manganese		109	1000	No		
Total Mercury	<	0.005	0.05	No (Value < QL)		
Total Molybdenum		66	N/A	No		
Total Nickel	<	5	52.2	No		
Total Phenols (Phenolics)	<	10	5	Yes		
Total Selenium		2.3	5.0	No		
Total Silver	<	2	3.8	No		
Total Thallium	<	0.1	0.24	No (Value < QL)		
Total Zinc		9.5	119.8	No		
Acrolein	<	2	3	No (Value < QL)		
Acrylamide	<		0.07			
Acrylonitrile	<	0.5	0.051	No (Value < QL)		
Benzene	<	0.2	1.2	No (Value < QL)		
Bromoform	<	0.2	4.3	No (Value < QL)		
Carbon Tetrachloride		0.2	15	No		
Chlorobenzene	<	0.2	130	No (Value < QL)		
Chlorodibromomethane	<	0.4	0.4	No (Value < QL)		
Chloroethane	<	0.2	N/A	No (Value < QL)		
2-Chloroethyl Vinyl Ether	<	0.5	3500	No (Value < QL)		
Chloroform	<	0.2	5.7	No (Value < QL)		
Dichlorobromomethane	<	0.2	0.55	No (Value < QL)		
1,1-Dichloroethane	<	0.2	N/A	No (Value < QL)		
1,2-Dichloroethane	<	0.2	0.38	No (Value < QL)		
1,1-Dichloroethylene	<	0.2	33	No (Value < QL)		
1,2-Dichloropropane	<	0.2	2200	No (Value < QL)		
1,3-Dichloropropylene	<	0.2	0.34	No (Value < QL)		
Ethylbenzene	<	0.2	530	No (Value < QL)		
Methyl Bromide	<	0.5	47	No (Value < QL)		
Methyl Chloride	<	0.2	5500	No (Value < QL)		

Methylene Chloride	<	0.2	4.6	No (Value < QL)		
1,1,2,2-Tetrachloroethane	<	0.2	0.17	No (Value < QL)		
Tetrachloroethylene	<	0.2	0.69	No (Value < QL)		
Toluene	<	0.2	330	No (Value < QL)		
1,2-trans-Dichloroethylene	<	0.5	140	No (Value < QL)		
1,1,1-Trichloroethane	<	0.2	610	No (Value < QL)		
1,1,2-Trichloroethane	<	0.5	0.59	No (Value < QL)		
Trichloroethylene	<	0.2	2.5	No (Value < QL)		
Vinyl Chloride	<	0.2	0.025	No (Value < QL)		
2-Chlorophenol	<	4.7	81	No (Value < QL)		
2,4-Dichlorophenol	<	4.7	77	No (Value < QL)		
2,4-Dimethylphenol	<	4.7	130	No (Value < QL)		
4,6-Dinitro-o-Cresol	<	4.7	13	No (Value < QL)		
2,4-Dinitrophenol	<	4.7	69	No (Value < QL)		
2-Nitrophenol	<	4.7	1600	No (Value < QL)		
4-Nitrophenol	<	4.7	470	No (Value < QL)		
p-Chloro-m-Cresol	<	4.7	30	No (Value < QL)		
Pentachlorophenol	<	0.28	0.27	No (Value < QL)		
Phenol	<	4.7	10400	No (Value < QL)		
2,4,6-Trichlorophenol	<	4.7	1.4	No (Value < QL)		
Acenaphthene	<	4.7	17	No		
Acenaphthylene	<	4.7	N/A	No		
Anthracene	<	4.7	8300	No		
Benzidine	<	4.7	0.000086	No (Value < QL)		
Benzo(a)Anthracene	<	0.2	0.0038	No (Value < QL)	0.004	
Benzo(a)Pyrene	<	0.2	0.0038	No (Value < QL)	0.004	
3,4-Benzofluoranthene	<	0.2	0.0038	No (Value < QL)	0.004	
Benzo(ghi)Perylene	<	0.2	N/A	No (Value < QL)		
Benzo(k)Fluoranthene	<	0.2	0.0038	No (Value < QL)	0.004	
Bis(2-Chloroethoxy)Methane	<	4.7	N/A	No (Value < QL)		
Bis(2-Chloroethyl)Ether	<	4.7	0.03	No (Value < QL)		
Bis(2-Chloroisopropyl)Ether	<	4.7	1400	No (Value < QL)		
Bis(2-Ethylhexyl)Phthalate	<	1.9	1.2	No (Value < QL)		
4-Bromophenyl Phenyl Ether	<	4.7	54	No (Value < QL)		
Butyl Benzyl Phthalate	<	4.7	35	No (Value < QL)		
2-Chloronaphthalene	<	4.7	1000	No (Value < QL)		
4-Chlorophenyl Phenyl Ether	<	4.7	N/A	No (Value < QL)		
Chrysene	<	0.2	0.0038	No (Value < QL)	0.004	
Dibenzo(a,h)Anthrancene	<	0.2	0.0038	No (Value < QL)	0.004	
1,2-Dichlorobenzene	<	4.7	160	No		
1,3-Dichlorobenzene	<	4.7	69	No		
1,4-Dichlorobenzene	<	4.7	150	No		
3,3-Dichlorobenzidine	<	4.7	0.021	No (Value < QL)		
Diethyl Phthalate	<	4.7	800	No (Value < QL)		
Dimethyl Phthalate	<	4.7	500	No (Value < QL)		
Di-n-Butyl Phthalate	<	4.7	21	No (Value < QL)		
2,4-Dinitrotoluene	<	4.7	0.05	No (Value < QL)		
2,6-Dinitrotoluene	<	4.7	0.05	No (Value < QL)		
1,4-Dioxane	<	4.7	N/A	No		
Di-n-Octyl Phthalate	<	4.7	N/A	No (Value < QL)		
1,2-Diphenylhydrazine	<	4.7	0.036	No (Value < QL)		
Fluoranthene	<	4.7	40	No		
Fluorene	<	4.7	1100	No		
Hexachlorobenzene	<	4.7	0.00028	No (Value < QL)		
Hexachlorobutadiene	<	0.2	0.44	No (Value < QL)	0.464	
Hexachlorocyclopentadiene	<	4.7	1	No (Value < QL)		
Hexachloroethane	<	4.7	1.4	No (Value < QL)		
Indeno(1,2,3-cd)Pyrene	<	0.2	0.0038	No (Value < QL)	0.004	
Isophorone	<	4.7	35	No (Value < QL)		
Naphthalene	<	4.7	43	No		
Nitrobenzene	<	4.7	17	No (Value < QL)		
n-Nitrosodimethylamine	<	4.7	0.00069	No (Value < QL)		
n-Nitrosodi-n-Propylamine	<	4.7	0.005	No (Value < QL)		
n-Nitrosodiphenylamine	<	0.2	3.3	No (Value < QL)	3.481	
Phenanthrene	<	0.2	1	No (Value < QL)	1.006	
Pyrene	<	4.7	830	No		
1,2,4-Trichlorobenzene	<	4.7	26	No		

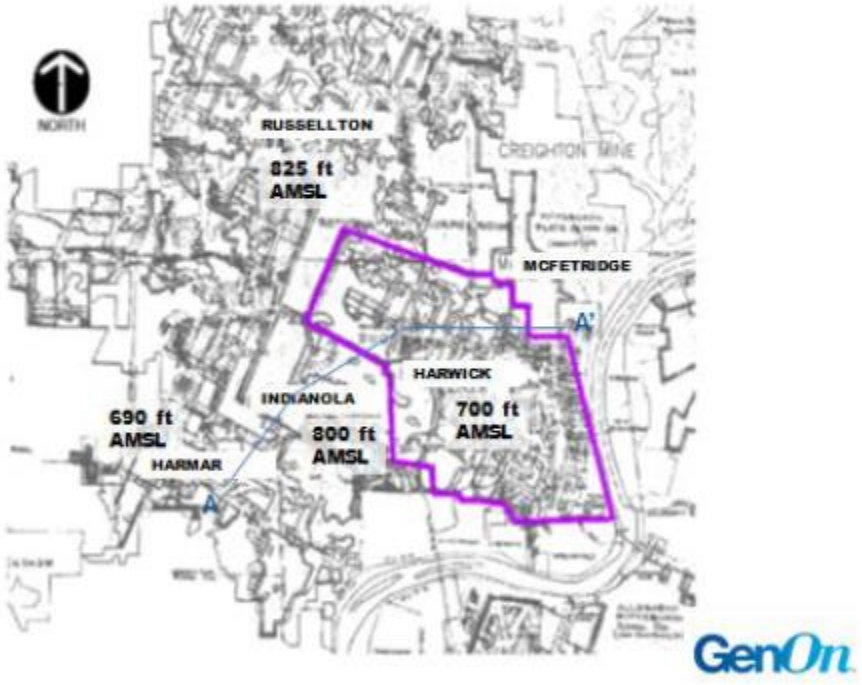
ATTACHMENT E:
Cheswick Ash Disposal Site
Leachate Conveyance System Contingency
(supplied by GenOn via email attachment on September 15, 2021)

Cheswick Ash Disposal Site
Leachate Conveyance System Contingency

GenOn Power Midwest, LP ("GenOn", previously NRG) owns and operates the Monarch Mine Dewatering Plant (MMDP), which dewaters a portion of the Upper Freeport Coal Seam in the former Harwick Mine Complex, also owned by GenOn. On May 16, 2014, the Department issued modified Part II Permit 0270205-A2 (Pumping Amendment) with a requirement to pump sufficient water from the Harwick Mine Complex for treatment at the MMTP to maintain the Harwick Mine Complex pool level at or below a monthly average of 720 feet msl.

The former Harwick Mine Complex consists of the Monarch Mine, the Cornell Mine, and the Harwick Mine. The Harwick Mine Complex is bordered to the north and northwest by the Russellton Mine, to the west by the Indianola Mine and to the northeast by the McFetridge and Creighton Mines. The Monarch Mine is the lowest point in the coal seam amongst these adjacent mines. Coal barriers also exist between the Harwick Mine Complex and the Russellton and Indianola Mines. See, **Figure 1**.

Figure 1



GenOn and the Department entered into a 2014 Consent Order and Agreement ("2014 COA") memorializing the commitments and resolving GenOn's liability regarding several issues. On April 12, 2017 in accordance with the 2014 CD, GenOn completed the installation of the Leachate Transport System under Permit No. 0270205 A4-T3 and a modification to Solid Waste Permit No. 300720. GenOn completed upgrades to the Monarch Mine Dewater Plant resolving all the

obligations under the 2014 CD on December 7, 2017. The 2014 CD self-terminated in September 2019.

GenOn is authorized to discharge one wastewater stream into the Harwick Mine Complex, which is leachate from the Lefever/Cheswick Landfill during emergency conditions. Analytical results from a sample of leachate from the Cheswick Ash Disposal Site is included in Attachment A. Quarterly leachate sampling is required under the solid waste permit and reported on Form 14R. The results demonstrate that the leachate is not a RCRA hazardous waste. In addition, Duquesne Light Company (DLC) is authorized by the Department to discharge leachate from the closed Kissick Landfill into the Harwick Mine Complex pool. GenOn does not have information regarding any agreement that may be in place between DLC and the Department.

Under the 2014 CD, Condition 5 required GenOn to include drawings and calculations for Department approval concerning emergency injection of leachate that would exceed the 24-hour equalization tank storage capacity (250,000 gallons) during emergency conditions. "Emergency conditions" were defined to mean "a power failure or equipment malfunction that precludes pumping to or treatment of the leachate at the MMTP."

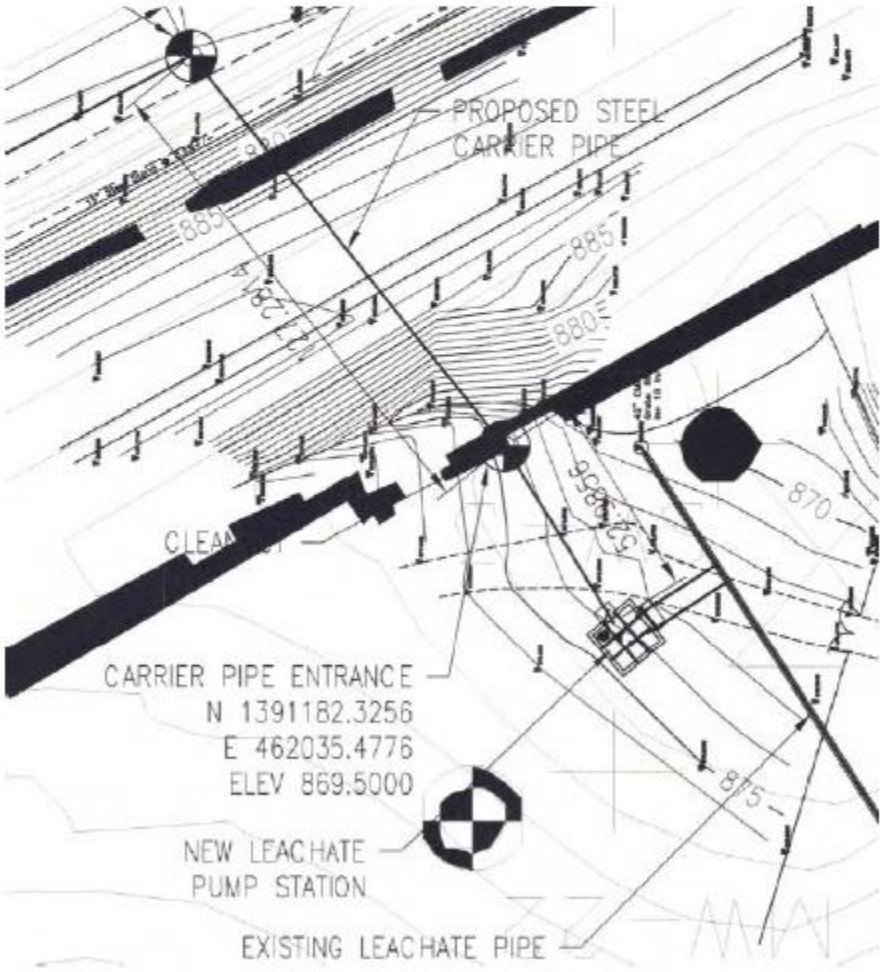
In February and June 2015, GenOn applied and responded to comments for the Minor Modification to Solid Waste Permit No. 300720. Form 17R Leachate Management – Phase II included a narrative indicating that the leachate will drain to a wet well, from where it will be pumped to a 250,000-gallon capacity equalization (surge) tank at the MMDP via two 100% capacity pumps. Each pump is sized for 200 gallons per minute (gpm). The pumps will have a back-up generator and pump spares will be kept in stock. The wet well will also have an emergency overflow to the existing mine borehole where the leachate would be pumped through the mine dewatering pumps and directed to the MMDP for treatment. The proposed changes are addressed as part of an amendment to WQM permit 0270205. The Department issued this minor modification to Solid Waste Permit No. 300720 on March 3, 2016.

On February 27, 2015, GenOn applied to modify WQM Part II Permit No. 0270205 as amended on March 2 and 15, 2016. As described in the application, the Project included the installation of a leachate wet well, leachate transfer pumps, and a pump discharge line. Two new leachate transfer pumps were installed at the base of the existing Cheswick Ash Disposal Site in a new sump, having secondary containment, referred to as the leachate wet well. Two submersible pumps operate on level control in the wet well and pump to the equalization (surge) tank (one operational and one as backup). The pump discharge lines consist of double-walled, high density polyethylene pipe and be equipped with a flow meter, pH monitor, and pressure gauge. Cleanouts along the leachate discharge line were also provided.

A diesel-fueled emergency generator, within secondary containment, for the leachate transfer pumps was provided and installed at the MMDP. An emergency overflow was installed from the leachate wet well to the existing Harwick Mine Complex borehole. When sludge builds up in the wet well, a vacuum truck is used to remove the sludge build up. The schedule for cleanout is dependent on the rate of buildup in the system.

In the WQM Part II application, the Contingency Plan during facility shutdown was described as followed:

- In the event that a leachate transfer pump fails, the backup leachate transfer pump will be utilized to convey leachate from the leachate wet well to the equalization (surge) tank. Should the backup leachate transfer pump also fail, the wet well will contain leachate for up to 104 minutes, depending on the level in the wet well at the time of failure. The excess leachate will be conveyed into the Harwick Mine Pool through the existing borehole via the emergency leachate overflow.
- In the event that the MMDP is inoperable, the leachate may be stored in the equalization tank until further provisions can be made. If the effluent quality is not compliant, the leachate flow from the leachate wet well will be directed into the Harwick Mine Pool. Note that the water quality of the leachate does not allow direct discharge to Outfall 002 due to the low effluent limitations associated with the much higher mine water effluent flows. The below figure depicts the new Leachate Pump Station, existing Leachate Pipe, force main to MMDP, and the existing borehole to the Harwick Mine Complex.



Since the Leachate Conveyance System and upgrades to the MMDP were brought into operation on December 7, 2017, emergency leachate overflows to the Harwick Mine Pool have occurred. No emergency overflows to the mine pool occurred as a result of equipment failures associated with the Leachate Conveyance System. However, multiple emergency overflows to the mine pool have occurred and were associated with equipment failures at the MMDP. Failures were primarily associated with solids buildup and scaling in the aerator, and the quantity of solids being handled by the clarifier. On December 2, 2019, GenOn responded in a letter to a Department request regarding MMDP operations. A copy of this letter is included as Attachment 2.

The mixers in the aerator vessel were replaced in Q3 and Q4 of 2019 resulting in less buildup of solids. Based on the successful conversion of similar abandon mine treatment systems by the Bureau of Abandoned Mines Reclamation (BAMR), laboratory testing, and pilot testing, the use of lime for oxidation of dissolved iron was replaced with hydrogen peroxide in October 2020. The transition to hydrogen peroxide has decreased the quantity of solids by more than 80 percent reducing scaling, solids buildup in the system and system failures overall. The total days the MMDP has been down since conversion 11 months ago is 28 days. A summary of the days when MMDP was out of service since 2018 and the cause for longer term outages is provided in the table below. If more details are needed for all outages, GenOn can conduct a more through review of operating logs and submit an update.

The use of the emergency overflow to the Harwick Mine Pool is necessary when the MMDP is inoperable. The water quality of the leachate (i.e., selenium) does not allow direct discharge to Outfall 002 due to the low effluent limitations associated with the much higher mine water effluent flows and baseflow of Little Deer Creek. The placement of clarifier underflow solids back into mines is common practice in the mining industry. Furthermore, the Cheswick Generating Station will be retired in 2022. As a result, the closure of the Cheswick Ash Disposal Site is expected to follow the retirement and decommissioning of the station. The post-closure leachate generation by the Cheswick Ash Disposal Site after installing a regulatory cap as calculated using the EPA's computer model "Hydrologic Evaluation of Landfill Performance" (HELP), version 4.0, is estimated to decrease the estimated leachate flow to 14.6 gallons per minute. At this flow rate, the 250,000-gallon capacity equalization tank will be able to hold more than 10 days of leachate flow as repairs are being made significantly decreasing use of the emergency overflow.

Days Out of Service
Monarch Mine Dewater Plant

Month		Days with Emergency Overflow	Cause
January 2018		31	Aerator Shaft Buildup/Scaling
February 2018		19	See above
March 2018		0	
April 2018		0	
May 2018		7	
June 2018		0	
July 2018		4	Aerator Shaft Buildup/Scaling
August 2018		10	See above
September 2018		10	See above
October 2018		1	
November 2018		6	Aeration Tank cleanout
December 2018		7	See above
	Total Days	**95**	
January 2019		0	
February 2019		0	
March 2019		7	
April 2019		6	
May 2019		0	
June 2019		2	Rake Failure/aeration mixers repl.
July 2019		27	See above
August 2019		31	See above
September 2019		30	See above
October 2019		31	See above
November 2019		5	See above
December 2019		19	Sludge pump seal failure, restarted and DLC had a power outage to replace insulators which shut rake down and rake would not restart requiring clarifier cleanout.
	Total Days	**158**	
January 2020		29	See above
Feb 2020		28	See above
March 2020		14	Rake failure requiring clarifier cleanout, Covid effected repair time
April 2020		31	See above
May 2020		10	See above
June 2020		2	

Month	Days with Emergency Overflow	Cause
July 2020	28	Clarifier cleanout and switch from lime to peroxide to alleviate sludge/scaling issues
August 2020	31	See above
September 2020	28	See above
October 2020	0	Startup w/ peroxide
November 2020	0	
December 20	0	
	Total Days 201	
January 2021	18	Recirc Line from clarifier fill pipe froze and broke
February 2021	0	
March 2021	0	
April 2021	0	
May 2021	0	
June 2021	2	Power Outage at MMDP
July 2021	8	Polymer lines plugged, lines and pumps replaced
August 2021	0	
	Total Days 28	

Attachment A

Cheswick Leachate Analytical Results (1/18/2021)

GEOCHEMICAL TESTING
Environmental and Energy Analysis

2005 N. Center Ave.
Somerset PA 15501

814-443-1671
814-445-6666
FAX:814-445-6729

Client: GENON- CHESWICK POWER STATION - GW
Project: Cheswick Ash Disposal 221A
Lab Order: G2101919

CASE NARRATIVE

No problems were encountered during analysis of this workorder, except if noted in this report.

Legend: ND - Not Detected at the Quantitation Limit
J - Indicates an estimated value
U - The analyte was not detected at or above the listed concentration, which is below the laboratory quantitation limit
B - Analyte detected in the associated Method Blank
Q - Qualifier QL - Quantitation Limit DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
** - Value exceeds Action Limit
H - Method Hold Time Exceeded
MCL - Contaminant Limit

ACCREDITED IN ACCORDANCE WITH nelac
I.D. 66-00306 PA DEP

Laboratory Results

GEOCHEMICAL TESTING
Environmental and Energy Analysis

2005 N. Center Ave.
Somerset PA 15501

814-443-1671
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FAX:814-445-6729

Client:	GENON- CHESWICK POWER STATION - GW	**Client Sample ID:**	Leachate
Lab Order:	G2101919		
Project:	Cheswick Ash Disposal 221A	**Sampled By:**	J Kovatch
Lab ID:	G2101919-001	**Collection Date:**	01/18/2021 14:00
Matrix:	Groundwater	**Received Date:**	01/20/2021 05:29

Analyses	Result	QL	Q	Units	DF	Date Analyzed
Field Parameters		**Field Determined**				**Analyst:**
Depth To Water	NA			Ft		01/18/2021 14:00
Flow	NA			GPM		01/18/2021 14:00
pH (Field)	7.79			S.U.		01/18/2021 14:00
Sample Depth	NA			Ft		01/18/2021 14:00
Specific Conductance (Field)	2517			µmhos/cm		01/18/2021 14:00
Temperature (Field)	9.5			deg C		01/18/2021 14:00
Turbidity (Field)	3.22			NTU		01/18/2021 14:00
Volume Purged	NA			Gallons		01/18/2021 14:00
Well Volume Purged	NA			Well Volumes		01/18/2021 14:00
Indicator Organic Parameters		**HACH 8000**				**Analyst: AVH**
Chemical Oxygen Demand	< 10	10		mg/L	1	01/22/2021 15:31
Inorganic Non-Metals		**EPA 300.0**				**Analyst: MBG**
Nitrate Nitrogen	4.62	0.05		mg/L as N	1	01/20/2021 12:02
Inorganic Non-Metals		**EPA 300.0**				**Analyst: MBG**
Chloride	176	1.0		mg/L	1	01/20/2021 12:02
Fluoride	0.2	0.1		mg/L	1	01/20/2021 12:02
Sulfate	953	2.0		mg/L	1	01/20/2021 12:02
Inorganic Non-Metals		**EPA 350.1**				**Analyst: DMM**
Ammonia Nitrogen	2.25	0.10		mg/L as N	1	01/21/2021 12:52
Inorganic Non-Metals		**EPA 180.1**				**Analyst: AMV**
Turbidity	3.3	0.1		NTU	1	01/20/2021 13:15
Inorganic Metals		**EPA 6010 D**				**Analyst: TMY**
Calcium, dissolved	312	0.1		mg/L	1	01/21/2021 14:07
Magnesium, dissolved	43.8	0.1		mg/L	1	01/21/2021 14:07
Potassium, dissolved	51.4	0.5		mg/L	1	01/21/2021 14:07
Sodium, dissolved	178	0.2		mg/L	1	01/21/2021 14:07

Laboratory Results

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Lab ID:	G2101919-001	**Collection Date:**	01/18/2021 14:00
Matrix:	Groundwater	**Received Date:**	01/20/2021 05:29

Analyses	Result	QL	Q	Units	DF	Date Analyzed
Inorganic Metals		**EPA 6020 B**				**Analyst: MEG**
Arsenic, dissolved	1.7	1.0		µg/L	1	01/25/2021 11:43
Lead, dissolved	< 1.0	1.0		µg/L	1	01/25/2021 11:43
Selenium, dissolved	29.4	1.0		µg/L	1	01/25/2021 11:43
Inorganic Metals		**SM 3112 B**				**Analyst: LXM**
Mercury	< 0.20	0.20		µg/L	1	01/22/2021 08:55
Inorganic Metals		**SM 3112 B**				**Analyst: LXM**
Mercury, dissolved	< 0.20	0.20		µg/L	1	01/22/2021 08:57
Inorganic Metals		**EPA 6010 D**				**Analyst: TMY**
Calcium	318	0.10		mg/L	1	01/21/2021 14:21
Magnesium	44.4	0.10		mg/L	1	01/21/2021 14:21
Potassium	52.4	0.5		mg/L	1	01/21/2021 14:21
Sodium	182	0.2		mg/L	1	01/21/2021 14:21
Inorganic Metals		**EPA 6020 B**				**Analyst: MEG**
Arsenic	3.2	1.0		µg/L	1	01/25/2021 11:47
Lead	< 1.0	1.0		µg/L	1	01/25/2021 11:47
Selenium	31.6	1.0		µg/L	1	01/25/2021 11:47
Inorganic Metals		**EPA 6010 D**				**Analyst: TMY**
Aluminum, dissolved	< 100	100		µg/L	1	01/21/2021 14:07
Barium, dissolved	33	10		µg/L	1	01/21/2021 14:07
Boron, dissolved	21100	500		µg/L	10	01/27/2021 09:39
Cadmium, dissolved	< 2	2		µg/L	1	01/21/2021 14:07
Chromium, dissolved	< 10	10		µg/L	1	01/21/2021 14:07
Copper, dissolved	< 10	10		µg/L	1	01/26/2021 06:38
Iron, dissolved	< 50	50		µg/L	1	01/21/2021 14:07
Manganese, dissolved	333	10		µg/L	1	01/21/2021 14:07
Silver, dissolved	< 5	5		µg/L	1	01/21/2021 14:07
Zinc, dissolved	20	10		µg/L	1	01/21/2021 14:07

Laboratory Results

GEOCHEMICAL TESTING
Environmental and Energy Analysis

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Client:	GENON- CHESWICK POWER STATION - GW	**Client Sample ID:**	Leachate
Lab Order:	G2101919		
Project:	Cheswick Ash Disposal 221A	**Sampled By:**	J Kovatch
Lab ID:	G2101919-001	**Collection Date:**	01/18/2021 14:00
Matrix:	Groundwater	**Received Date:**	01/20/2021 05:29

Analyses	Result	QL	Q	Units	DF	Date Analyzed
Inorganic Metals		**EPA 6010 D**				**Analyst: TMY**
Aluminum	< 100	100		µg/L	1	01/21/2021 14:21
Barium	34	10		µg/L	1	01/21/2021 14:21
Boron	21600	500		µg/L	10	01/27/2021 09:53
Cadmium	< 2	2		µg/L	1	01/21/2021 14:21
Chromium	< 10	10		µg/L	1	01/21/2021 14:21
Copper	< 10	10		µg/L	1	01/26/2021 06:43
Iron	422	50		µg/L	1	01/21/2021 14:21
Manganese	367	10		µg/L	1	01/21/2021 14:21
Silver	< 5	5		µg/L	1	01/21/2021 14:21
Zinc	29	10		µg/L	1	01/21/2021 14:21
Indicator Organic Parameters		**SM 5310 C-11**				**Analyst: HBB**
Total Organic Carbon	< 1.0	1.0		mg/L	1	01/22/2021 06:00
Inorganic Non Metals		**SM 4500-CO2 D**				**Analyst: AM**
Bicarbonate	210	10		mg/L CaCO3	1	01/20/2021 20:23
Physical Tests		**EPA 120.1**				**Analyst: AM**
Specific Conductance	2460	5		µmhos/cm	1	01/20/2021 20:23
pH by SM 4500 H+B		**SM 4500-H+ B**				**Analyst: AM**
Lab pH	8.16			S.U.	1	01/20/2021 20:23
Inorganic Non-Metals		**SM 2540 C**				**Analyst: GMG**
Total dissolved solids	1910	20		mg/L	1	01/20/2021 13:08
Inorganic Non-Metals		**ASTM D 1067-11**				**Analyst: AM**
Alkalinity to pH 4.5	213	10		mg/L CaCO3	1	01/20/2021 20:23

Laboratory Results

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2005 N. Center Ave.
Somerset PA 15501

814-443-1671
814-445-6666
FAX:814-445-6729

Client:	GENON- CHESWICK POWER STATION - GW	**Client Sample ID:**	SW-3
Lab Order:	G2101919		
Project:	Cheswick Ash Disposal 221A	**Sampled By:**	J Kovatch
Lab ID:	G2101919-002	**Collection Date:**	01/18/2021 14:30
Matrix:	Surface Water	**Received Date:**	01/20/2021 05:29

Analyses	Result	QL	Q	Units	DF	Date Analyzed
Field Parameters		**Field Determined**				**Analyst:**
Depth To Water	NA			Ft		01/18/2021 14:30
Flow	NA			GPM		01/18/2021 14:30
pH (Field)	8.05			S.U.		01/18/2021 14:30
Sample Depth	NA			Ft		01/18/2021 14:30
Specific Conductance (Field)	1353			µmhos/cm		01/18/2021 14:30
Temperature (Field)	4.8			deg C		01/18/2021 14:30
Turbidity (Field)	1.49			NTU		01/18/2021 14:30
Volume Purged	NA			Gallons		01/18/2021 14:30
Well Volume Purged	NA			Well Volumes		01/18/2021 14:30
Indicator Organic Parameters		**HACH 8000**				**Analyst: AVH**
Chemical Oxygen Demand	< 10	10		mg/L	1	01/22/2021 15:31
Inorganic Non-Metals		**EPA 300.0**				**Analyst: MBG**
Nitrate Nitrogen	1.31	0.05		mg/L as N	1	01/20/2021 12:44
Inorganic Non-Metals		**EPA 300.0**				**Analyst: MBG**
Chloride	119	1.0		mg/L	1	01/20/2021 12:44
Fluoride	0.2	0.1		mg/L	1	01/20/2021 12:44
Sulfate	402	2.0		mg/L	1	01/20/2021 12:44
Inorganic Non-Metals		**EPA 350.1**				**Analyst: DMM**
Ammonia Nitrogen	< 0.10	0.10		mg/L as N	1	01/21/2021 12:58
Inorganic Non-Metals		**EPA 180.1**				**Analyst: AMV**
Turbidity	1.2	0.1		NTU	1	01/20/2021 13:15
Inorganic Metals		**EPA 6010 D**				**Analyst: TMY**
Calcium, dissolved	178	0.1		mg/L	1	01/21/2021 14:35
Magnesium, dissolved	30.2	0.1		mg/L	1	01/21/2021 14:35
Potassium, dissolved	20.2	0.5		mg/L	1	01/21/2021 14:35
Sodium, dissolved	73.6	0.2		mg/L	1	01/21/2021 14:35

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Laboratory Results

GEOCHEMICAL TESTING
Environmental and Energy Analysis

2005 N. Center Ave.
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Client:	GENON- CHESWICK POWER STATION - GW	**Client Sample ID:**	SW-3
Lab Order:	G2101919		
Project:	Cheswick Ash Disposal 221A	**Sampled By:**	J Kovatch
Lab ID:	G2101919-002	**Collection Date:**	01/18/2021 14:30
Matrix:	Surface Water	**Received Date:**	01/20/2021 05:29

Analyses	Result	QL	Q	Units	DF	Date Analyzed
Inorganic Metals		**EPA 6020 B**				**Analyst: MEG**
Arsenic, dissolved	< 1.0	1.0		µg/L	1	01/25/2021 11:52
Lead, dissolved	< 1.0	1.0		µg/L	1	01/25/2021 11:52
Selenium, dissolved	16.5	1.0		µg/L	1	01/25/2021 11:52
Inorganic Metals		**SM 3112 B**				**Analyst: LXM**
Mercury	< 0.20	0.20		µg/L	1	01/22/2021 08:31
Inorganic Metals		**SM 3112 B**				**Analyst: LXM**
Mercury, dissolved	< 0.20	0.20		µg/L	1	01/22/2021 08:26
Inorganic Metals		**EPA 6010 D**				**Analyst: TMY**
Calcium	176	0.10		mg/L	1	01/21/2021 14:30
Magnesium	29.4	0.10		mg/L	1	01/21/2021 14:30
Potassium	20.0	0.5		mg/L	1	01/21/2021 14:30
Sodium	71.3	0.2		mg/L	1	01/21/2021 14:30
Inorganic Metals		**EPA 6020 B**				**Analyst: MEG**
Arsenic	< 1.0	1.0		µg/L	1	01/25/2021 11:50
Lead	< 1.0	1.0		µg/L	1	01/25/2021 11:50
Selenium	16.6	1.0		µg/L	1	01/25/2021 11:50
Inorganic Metals		**EPA 6010 D**				**Analyst: TMY**
Aluminum, dissolved	< 100	100		µg/L	1	01/21/2021 14:35
Barium, dissolved	45	10		µg/L	1	01/21/2021 14:35
Cadmium, dissolved	< 2	2		µg/L	1	01/21/2021 14:35
Chromium, dissolved	< 10	10		µg/L	1	01/21/2021 14:35
Copper, dissolved	< 10	10		µg/L	1	01/28/2021 09:48
Iron, dissolved	< 50	50		µg/L	1	01/21/2021 14:35
Manganese, dissolved	54	10		µg/L	1	01/21/2021 14:35
Silver, dissolved	< 5	5		µg/L	1	01/21/2021 14:35
Zinc, dissolved	13	10		µg/L	1	01/21/2021 14:35
Inorganic Metals		**EPA 6010 D**				**Analyst: TMY**

Laboratory Results

GEOCHEMICAL TESTING
Environmental and Energy Analysis

2005 N. Center Ave.
Somerset PA 15501

814-443-1671
814-445-6666
FAX:814-445-6729

Client:	GENON- CHESWICK POWER STATION - GW	**Client Sample ID:**	SW-3
Lab Order:	G2101919		
Project:	Cheswick Ash Disposal 221A	**Sampled By:**	J Kovatch
Lab ID:	G2101919-002	**Collection Date:**	01/18/2021 14:30
Matrix:	Surface Water	**Received Date:**	01/20/2021 05:29

Analyses	Result	QL	Q	Units	DF	Date Analyzed
Aluminum	< 100	100		µg/L	1	01/21/2021 14:30
Barium	44	10		µg/L	1	01/21/2021 14:30
Cadmium	< 2	2		µg/L	1	01/21/2021 14:30
Chromium	< 10	10		µg/L	1	01/21/2021 14:30
Copper	< 10	10		µg/L	1	01/28/2021 09:44
Iron	73	50		µg/L	1	01/21/2021 14:30
Manganese	57	10		µg/L	1	01/21/2021 14:30
Silver	< 5	5		µg/L	1	01/21/2021 14:30
Zinc	18	10		µg/L	1	01/21/2021 14:30
Indicator Organic Parameters		**SM 5310 C-11**				**Analyst: HBB**
Total Organic Carbon	1.3	1.0		mg/L	1	01/22/2021 12:39
Inorganic Non Metals		**SM 4500-CO2 D**				**Analyst: AM**
Bicarbonate	169	10		mg/L CaCO3	1	01/20/2021 20:33
Physical Tests		**EPA 120.1**				**Analyst: AM**
Specific Conductance	1380	5		µmhos/cm	1	01/20/2021 20:33
pH by SM 4500 H+B		**SM 4500-H+ B**				**Analyst: AM**
Lab pH	8.36			S.U.	1	01/20/2021 20:33
Inorganic Non-Metals		**SM 2540 C**				**Analyst: GMG**
Total dissolved solids	944	20		mg/L	1	01/20/2021 13:08
Inorganic Non-Metals		**ASTM D 1067-11**				**Analyst: AM**
Alkalinity to pH 4.5	173	10		mg/L CaCO3	1	01/20/2021 20:33

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Client:	GENON- CHESWICK POWER STATION - GW	**Client Sample ID:**	MW-6
Lab Order:	G2101919		
Project:	Cheswick Ash Disposal 221A	**Sampled By:**	J Kovatch
Lab ID:	G2101919-003	**Collection Date:**	01/19/2021 09:20
Matrix:	Groundwater	**Received Date:**	01/20/2021 05:29

Analyses	Result	QL	Q	Units	DF	Date Analyzed
Field Parameters		**Field Determined**				**Analyst:**
Depth To Water	56.89			Ft		01/19/2021 09:20
Flow	NA			GPM		01/19/2021 09:20
pH (Field)	9.24			S.U.		01/19/2021 09:20
Sample Depth	NA			Ft		01/19/2021 09:20
Specific Conductance (Field)	777			µmhos/cm		01/19/2021 09:20
Temperature (Field)	9.4			deg C		01/19/2021 09:20
Turbidity (Field)	1.75			NTU		01/19/2021 09:20
Volume Purged	1.32			Gallons		01/19/2021 09:20
Well Volume Purged	NA			Well Volumes		01/19/2021 09:20
Indicator Organic Parameters		**HACH 8000**				**Analyst: AVH**
Chemical Oxygen Demand	< 10	10		mg/L	1	01/22/2021 15:31
Inorganic Non-Metals		**EPA 300.0**				**Analyst: MBG**
Nitrate Nitrogen	< 0.05	0.05		mg/L as N	1	01/20/2021 18:25
Inorganic Non-Metals		**EPA 300.0**				**Analyst: MBG**
Chloride	1.9	1.0		mg/L	1	01/20/2021 18:25
Fluoride	1.6	0.1		mg/L	1	01/20/2021 18:25
Sulfate	18.5	2.0		mg/L	1	01/20/2021 18:25
Inorganic Non-Metals		**EPA 350.1**				**Analyst: DMM**
Ammonia Nitrogen	0.15	0.10		mg/L as N	1	01/21/2021 13:04
Inorganic Non-Metals		**EPA 180.1**				**Analyst: AMV**
Turbidity	1.8	0.1		NTU	1	01/20/2021 13:15
Inorganic Metals		**EPA 6010 D**				**Analyst: TMY**
Calcium, dissolved	0.7	0.1		mg/L	1	01/21/2021 15:02
Magnesium, dissolved	0.1	0.1		mg/L	1	01/21/2021 15:02
Potassium, dissolved	< 0.5	0.5		mg/L	1	01/21/2021 15:02
Sodium, dissolved	183	0.2		mg/L	1	01/21/2021 15:02

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Client:	GENON- CHESWICK POWER STATION - GW	**Client Sample ID:**	MW-6
Lab Order:	G2101919		
Project:	Cheswick Ash Disposal 221A	**Sampled By:**	J Kovatch
Lab ID:	G2101919-003	**Collection Date:**	01/19/2021 09:20
Matrix:	Groundwater	**Received Date:**	01/20/2021 05:29

Analyses	Result	QL	Q	Units	DF	Date Analyzed
Inorganic Metals		**EPA 6020 B**				**Analyst: MEG**
Arsenic, dissolved	7.8	1.0		µg/L	1	01/25/2021 11:56
Lead, dissolved	< 1.0	1.0		µg/L	1	01/25/2021 11:56
Selenium, dissolved	< 1.0	1.0		µg/L	1	01/25/2021 11:56
Inorganic Metals		**SM 3112 B**				**Analyst: LXM**
Mercury	< 0.20	0.20		µg/L	1	01/22/2021 08:01
Inorganic Metals		**SM 3112 B**				**Analyst: LXM**
Mercury, dissolved	< 0.20	0.20		µg/L	1	01/22/2021 07:56
Inorganic Metals		**EPA 6010 D**				**Analyst: TMY**
Calcium	0.73	0.10		mg/L	1	01/21/2021 14:39
Magnesium	0.13	0.10		mg/L	1	01/21/2021 14:39
Potassium	< 0.5	0.5		mg/L	1	01/21/2021 14:39
Sodium	190	0.2		mg/L	1	01/21/2021 14:39
Inorganic Metals		**EPA 6020 B**				**Analyst: MEG**
Arsenic	8.1	1.0		µg/L	1	01/25/2021 11:54
Lead	< 1.0	1.0		µg/L	1	01/25/2021 11:54
Selenium	< 1.0	1.0		µg/L	1	01/25/2021 11:54
Inorganic Metals		**EPA 6010 D**				**Analyst: TMY**
Aluminum, dissolved	< 100	100		µg/L	1	01/21/2021 15:02
Barium, dissolved	15	10		µg/L	1	01/21/2021 15:02
Boron, dissolved	196	50		µg/L	1	01/26/2021 06:47
Cadmium, dissolved	< 2	2		µg/L	1	01/21/2021 15:02
Chromium, dissolved	< 10	10		µg/L	1	01/21/2021 15:02
Copper, dissolved	< 10	10		µg/L	1	01/21/2021 15:02
Iron, dissolved	< 50	50		µg/L	1	01/21/2021 15:02
Manganese, dissolved	13	10		µg/L	1	01/21/2021 15:02
Silver, dissolved	< 5	5		µg/L	1	01/21/2021 15:02
Zinc, dissolved	< 10	10		µg/L	1	01/21/2021 15:02

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Client:	GENON- CHESWICK POWER STATION - GW	**Client Sample ID:**	MW-6
Lab Order:	G2101919		
Project:	Cheswick Ash Disposal 221A	**Sampled By:**	J Kovatch
Lab ID:	G2101919-003	**Collection Date:**	01/19/2021 09:20
Matrix:	Groundwater	**Received Date:**	01/20/2021 05:29

Analyses	Result	QL	Q	Units	DF	Date Analyzed
Inorganic Metals		**EPA 6010 D**				**Analyst: TMY**
Aluminum	209	100		µg/L	1	01/21/2021 14:39
Barium	16	10		µg/L	1	01/21/2021 14:39
Boron	202	50		µg/L	1	01/26/2021 06:45
Cadmium	< 2	2		µg/L	1	01/21/2021 14:39
Chromium	< 10	10		µg/L	1	01/21/2021 14:39
Copper	< 10	10		µg/L	1	01/21/2021 14:39
Iron	87	50		µg/L	1	01/21/2021 14:39
Manganese	< 10	10		µg/L	1	01/21/2021 14:39
Silver	< 5	5		µg/L	1	01/21/2021 14:39
Zinc	< 10	10		µg/L	1	01/21/2021 14:39
Indicator Organic Parameters		**SM 5310 C-11**				**Analyst: HBB**
Total Organic Carbon	< 1.0	1.0		mg/L	1	01/22/2021 09:50
Inorganic Non Metals		**SM 4500-CO2 D**				**Analyst: AM**
Bicarbonate	327	10		mg/L CaCO3	1	01/20/2021 20:40
Physical Tests		**EPA 120.1**				**Analyst: AM**
Specific Conductance	777	5		µmhos/cm	1	01/20/2021 20:40
pH by SM 4500 H+B		**SM 4500-H+ B**				**Analyst: AM**
Lab pH	9.29			S.U.	1	01/20/2021 20:40
Inorganic Non-Metals		**SM 2540 C**				**Analyst: GMG**
Total dissolved solids	428	20		mg/L	1	01/20/2021 13:08
Inorganic Non-Metals		**ASTM D 1067-11**				**Analyst: AM**
Alkalinity to pH 4.5	388	10		mg/L CaCO3	1	01/20/2021 20:40

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Client:	GENON- CHESWICK POWER STATION - GW	**Client Sample ID:**	MW-20
Lab Order:	G2101919		
Project:	Cheswick Ash Disposal 221A	**Sampled By:**	J Kovatch
Lab ID:	G2101919-004	**Collection Date:**	01/19/2021 10:25
Matrix:	Groundwater	**Received Date:**	01/20/2021 05:29

Analyses	Result	QL	Q	Units	DF	Date Analyzed
Field Parameters		**Field Determined**				**Analyst:**
Depth To Water	20.52			Ft		01/19/2021 10:25
Flow	NA			GPM		01/19/2021 10:25
pH (Field)	7.38			S.U.		01/19/2021 10:25
Sample Depth	NA			Ft		01/19/2021 10:25
Specific Conductance (Field)	873			µmhos/cm		01/19/2021 10:25
Temperature (Field)	9.2			deg C		01/19/2021 10:25
Turbidity (Field)	0.88			NTU		01/19/2021 10:25
Volume Purged	1.48			Gallons		01/19/2021 10:25
Well Volume Purged	NA			Well Volumes		01/19/2021 10:25
Indicator Organic Parameters		**HACH 8000**				**Analyst: AVH**
Chemical Oxygen Demand	< 10	10		mg/L	1	01/22/2021 15:31
Inorganic Non-Metals		**EPA 300.0**				**Analyst: MBG**
Chloride	9.8	1.0		mg/L	1	01/20/2021 18:39
Fluoride	0.4	0.1		mg/L	1	01/20/2021 18:39
Sulfate	53.0	2.0		mg/L	1	01/20/2021 18:39
Inorganic Non-Metals		**EPA 350.1**				**Analyst: DMM**
Ammonia Nitrogen	< 0.10	0.10		mg/L as N	1	01/21/2021 13:06
Inorganic Non-Metals		**EPA 353.2**				**Analyst: AMV**
Nitrate Nitrogen	0.07	0.05		mg/L as N	1	01/22/2021 12:11
Inorganic Non-Metals		**EPA 180.1**				**Analyst: AMV**
Turbidity	0.4	0.1		NTU	1	01/20/2021 13:15
Inorganic Metals		**EPA 6010 D**				**Analyst: TMY**
Calcium, dissolved	9.8	0.1		mg/L	1	01/21/2021 15:12
Magnesium, dissolved	2.1	0.1		mg/L	1	01/21/2021 15:12
Potassium, dissolved	1.0	0.5		mg/L	1	01/21/2021 15:12
Sodium, dissolved	187	0.2		mg/L	1	01/21/2021 15:12

Laboratory Results

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Environmental and Energy Analysis

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Client:	GENON- CHESWICK POWER STATION - GW	**Client Sample ID:**	MW-20
Lab Order:	G2101919		
Project:	Cheswick Ash Disposal 221A	**Sampled By:**	J Kovatch
Lab ID:	G2101919-004	**Collection Date:**	01/19/2021 10:25
Matrix:	Groundwater	**Received Date:**	01/20/2021 05:29

Analyses	Result	QL	Q	Units	DF	Date Analyzed
Inorganic Metals		**EPA 6020 B**				**Analyst: MEG**
Arsenic, dissolved	< 1.0	1.0		µg/L	1	01/25/2021 12:01
Lead, dissolved	< 1.0	1.0		µg/L	1	01/25/2021 12:01
Selenium, dissolved	< 1.0	1.0		µg/L	1	01/25/2021 12:01
Inorganic Metals		**SM 3112 B**				**Analyst: LXM**
Mercury	< 0.20	0.20		µg/L	1	01/22/2021 08:49
Inorganic Metals		**SM 3112 B**				**Analyst: LXM**
Mercury, dissolved	< 0.20	0.20		µg/L	1	01/22/2021 08:51
Inorganic Metals		**EPA 6010 D**				**Analyst: TMY**
Calcium	10.2	0.10		mg/L	1	01/21/2021 15:07
Magnesium	2.18	0.10		mg/L	1	01/21/2021 15:07
Potassium	1.0	0.5		mg/L	1	01/21/2021 15:07
Sodium	194	0.2		mg/L	1	01/21/2021 15:07
Inorganic Metals		**EPA 6020 B**				**Analyst: MEG**
Arsenic	< 1.0	1.0		µg/L	1	01/25/2021 11:59
Lead	< 1.0	1.0		µg/L	1	01/25/2021 11:59
Selenium	< 1.0	1.0		µg/L	1	01/25/2021 11:59
Inorganic Metals		**EPA 6010 D**				**Analyst: TMY**
Aluminum, dissolved	< 100	100		µg/L	1	01/21/2021 15:12
Barium, dissolved	35	10		µg/L	1	01/21/2021 15:12
Boron, dissolved	< 50	50		µg/L	1	01/26/2021 06:50
Cadmium, dissolved	< 2	2		µg/L	1	01/21/2021 15:12
Chromium, dissolved	< 10	10		µg/L	1	01/21/2021 15:12
Copper, dissolved	< 10	10		µg/L	1	01/28/2021 09:51
Iron, dissolved	< 50	50		µg/L	1	01/21/2021 15:12
Manganese, dissolved	< 10	10		µg/L	1	01/21/2021 15:12
Silver, dissolved	< 5	5		µg/L	1	01/21/2021 15:12
Zinc, dissolved	< 10	10		µg/L	1	01/21/2021 15:12

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Somerset PA 15501

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Client:	GENON- CHESWICK POWER STATION - GW	**Client Sample ID:**	MW-20
Lab Order:	G2101919		
Project:	Cheswick Ash Disposal 221A	**Sampled By:**	J Kovatch
Lab ID:	G2101919-004	**Collection Date:**	01/19/2021 10:25
Matrix:	Groundwater	**Received Date:**	01/20/2021 05:29

Analyses	Result	QL	Q	Units	DF	Date Analyzed
Inorganic Metals		**EPA 6010 D**				**Analyst: TMY**
Aluminum	< 100	100		µg/L	1	01/21/2021 15:07
Barium	36	10		µg/L	1	01/21/2021 15:07
Boron	< 50	50		µg/L	1	01/26/2021 06:48
Cadmium	< 2	2		µg/L	1	01/21/2021 15:07
Chromium	< 10	10		µg/L	1	01/21/2021 15:07
Copper	< 10	10		µg/L	1	01/21/2021 15:07
Iron	< 50	50		µg/L	1	01/21/2021 15:07
Manganese	< 10	10		µg/L	1	01/21/2021 15:07
Silver	< 5	5		µg/L	1	01/21/2021 15:07
Zinc	< 10	10		µg/L	1	01/21/2021 15:07
Indicator Organic Parameters		**SM 5310 C-11**				**Analyst: HBB**
Total Organic Carbon	2.4	1.0		mg/L	1	01/22/2021 10:06
Inorganic Non Metals		**SM 4500-CO2 D**				**Analyst: AM**
Bicarbonate	394	10		mg/L CaCO3	1	01/20/2021 20:54
Physical Tests		**EPA 120.1**				**Analyst: AM**
Specific Conductance	878	5		µmhos/cm	1	01/20/2021 20:54
pH by SM 4500 H+B		**SM 4500-H+ B**				**Analyst: AM**
Lab pH	8.29			S.U.	1	01/20/2021 20:54
Inorganic Non-Metals		**SM 2540 C**				**Analyst: GMG**
Total dissolved solids	498	20		mg/L	1	01/20/2021 13:08
Inorganic Non-Metals		**ASTM D 1067-11**				**Analyst: AM**
Alkalinity to pH 4.5	401	10		mg/L CaCO3	1	01/20/2021 20:54

Attachment B

December 2, 2019 Request for Information Response
Monarch Mine Operation

GenOn Power Midwest, LP
PO Box 65
Cheswick, PA 15024

December 2, 2019

Mr. John Murphy
Water Quality Specialist Supervisor
Pennsylvania Department of Environmental Protection
New Stanton District Office
PO Box 133
New Stanton, PA 15672

RE: **NPDES Permit #0001627 Outfall 002**
Request for Information - Monarch Mine Operation

Dear Mr. Murphy:

This letter is in response to your request for information regarding the status of Monarch Mine Water treatment Plant. During an onsite inspection conducted on 10/16/2019 the Monarch Mine was not in operation due to equipment failures. This report is to inform you of the timeline and repairs that took place to re-establish the treatment system to service.

On June 29, 2019 the Water Treatment Clarifier Rake Drive Tripped and required troubleshooting. Based on the troubleshooting it was determined the issue was at the base of the clarifier, and the clarifier would require emptying to access, inspect and repair the structural support of the rake. Below is a chronology of the events required to empty, inspect, and repair the clarifier rake. While Monarch Mine was offline, other equipment was inspected. During these inspections, it was determined that the aeration tank had unacceptable amounts of material that settled and accumulated.

6/29/2019 Clarifier Rake Trip Trouble Shoot
7/5/2019 Begin emptiying clarifier
7/26/2019 clarifier empty to access door
7/28/2019 C&K Industrial sucking remaining water and sludge from clarifier
8/9/2019 Cheswick Mechanics began rake repairs
8/12/2019 C&K completed clarifier sludge removal
8/13/2019 C&K Industrial sucking sediment from aeration tank
8/15/2019 Cheswick Mechanics completed rake repairs
9/10/2019 C&K completed aeration tank cleaning
9/23/2019 Cheswick Mechanics began mixer replacement in aeration tank
10/10/2019 Cheswick Electricians began wiring mixer motors
10/12/2019 Cheswick Mechanics completed mixers
10/24/2019 Service Rep for mixers on site for final mixer adjustments
10/31/2019 Cheswick Electricians completed wiring
11/5/2019 Pumps on, Treatment Sytem in Service, Discharging at 11:30 PM

The Monarch Mine Pool level on 6/28/2019 measured 691.9 ft Elevation and the level measured on 10/31/2019 was 701.8 ft Elevation. The Harwick Mine Pool must be maintained at or below a monthly average elevation of 720 feet above sea level.

Should you have any questions or require additional information regarding the above, please contact Bill McGraw at 724-275-1595 or via email at William.McGraw@GenOn.com.

Regards,

William P. McGraw
Safety and Environmental Manager

cc: Zachery Flannigan, Water Quality Specialist PA DEP
Stephen Frank, GenOn
Kevin Panzino, GenOn Cheswick Plant Manager