Pennsylvania Department of Environmental Protection

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0206075**
Facility Type	**Industrial**	APS ID	**1125432**
Major / Minor	**Minor**	Authorization ID	**1556562**

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

Applicant and Facility Information

Applicant Name	**D & B Gas Production LLC**	Facility Name	**Howard Treatment Facility**
Applicant Address	233 North Park Drive	Facility Address	2130 Campbells Mill Road
	Kittanning, PA 16201		Blairsville, PA 15717-8725
Applicant Contact	Paul Kimmell	Facility Contact	
Applicant Phone	(724) 543-5743 (p.kimmell@blxinc.net)	Facility Phone	
Client ID	349284	Site ID	611104
SIC Code	1389	Municipality	Burrell Township
SIC Description	Mining - Oil and Gas Field Services, Nec	County	Indiana
Date Application Received	November 6, 2024	EPA Waived?	No
Date Application Accepted	November 12, 2024	If No, Reason	O&G wastewater

Purpose of Application: Renewal of a NPDES Permit for an existing discharge of industrial waste

Summary of Review

This facility is an existing passive water treatment facility of coalbed methane wastewater. The wastewater is generated by the production of coalbed methane gas from a field of 104 coalbed methane wells. The gas is extracted by dewatering the coal seams with the use of pump jacks which remove the water from the wells, known as coalbed methane connate water ("connate"). The connate is then pumped underground through a pipeline system to the water treatment facility prior to discharge.

Since this permit was last issued, the NPDES and WQM Permit were transferred from Fate Ventures, LLC to D & B Gas Production LLC on October 23, 2020.

A PPC Plan, dated 2024, was submitted with the renewal application.

There are currently (113) open violations listed in EFACTS for this client (1/28/2026)

Public Participation

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

Approve	Deny	Signatures	Date
X		Adam J. Pesek Adam J. Pesek, E.I.T. / Project Manager	December 17, 2025
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	January 29, 2026

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.0207
Latitude	40º 28' 13"	Longitude	-79º 13' 49"
Quad Name	Bolivar	Quad Code	1512
Wastewater Description:	Coalbed methane production water		
Receiving Waters	Blacklick Creek	Stream Code	43979
NHD Com ID	123715217	RMI	6.1
Drainage Area	396.1	Yield (cfs/mi^2)	0.1385
Q_{7-10} Flow (cfs)	54.86	Q_{7-10} Basis	USGS #03042000 ('52-'08)
Elevation (ft)	960	Slope (ft/ft)	0.002
Watershed No.	18-D	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	METALS		
Source(s) of Impairment	ACID MINE DRAINAGE		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Background/Ambient Data		Data Source
pH (SU)	7.33	7/24/17 Watershed Monitoring sample on Blacklick Creek Campbells Mill Road Bridge
Temperature (°C)	25	Default (TSF)
Hardness (mg/L)	86.7	Sample result for 2024 NPDES Renewal Application
Manganese (mg/l)	0.239	7/24/17 Watershed Monitoring sample on Blacklick Creek Campbells Mill Road Bridge
Total Iron (mg/l)	0.327	7/24/17 Watershed Monitoring sample on Blacklick Creek Campbells Mill Road Bridge

Nearest Downstream Public Water Supply Intake		Buffalo Township Municipal Authority - Freeport	
PWS Waters	Allegheny River	Flow at Intake (cfs)	2070
PWS RMI	29.4	Distance from Outfall (mi)	51

Changes Since Last Permit Issuance: As predicted in the Fact Sheet for the previous renewal, production wastewater has continued to decline as coal seams are dewatered.

Other Comments:

Treatment Facility Summary

Treatment Facility Name: Howard Treatment Facility

WQM Permit No.	Issuance Date
3292203 -T-3	10/23/2020

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Industrial	Primary	Settling	None	

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Sludge Disposal
0.48				Landfill

Changes Since Last Permit Issuance: None

Other Comments: The original permit was issued on 3/29/1993.

Connate enters the facility via several collection pipelines. It passes through two lined settling basins in series where it is treated using setting, metals, oxidation and passive aeration. A minimum of two feet of freeboard is maintained. After passing through the second settling basin the water discharges to Blacklick Creek via outfall 001. Stormwater is diverted around the ponds to the greatest extent possible. The ponds are the only infrastructure at the facility so there are no other outfalls associated with the facility.

Compliance History	
Summary of DMRs:	There are 12 effluent violations report since the beginning of 2020 at this facility, all during three monitoring periods (July 2020, August 2020 & February 2021). Seven violations for total suspended solids, three for total manganese, and two for total iron.
Summary of Inspections:	The last Compliance Evaluation Inspection was conducted on 6/4/2025. The inspection report did not note any violations.

Other Comments:

Compliance History

DMR Data for Outfall 001 (from November 1, 2024 to October 31, 2025)

Parameter	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24
Flow (MGD) Average Monthly					0.0020	0.0096	0.0108	0.0160	0.0192	0.0276		
Flow (MGD) Daily Maximum					0.0024	0.0192	0.0192	0.024	0.0384	0.0432		
pH (S.U.) Daily Minimum					7.8	7.58	7.66	7.5	7.4	7.4		
pH (S.U.) Daily Maximum					7.99	7.84	7.84	7.68	7.8	7.8		
TSS (mg/L) Average Monthly					9.3	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
TSS (mg/L) Instantaneous Maximum					12.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
Total Dissolved Solids (lbs/day) Annual Average											185	
Total Dissolved Solids (lbs/day) Average Monthly					35	129	127	235	160	170		
Total Dissolved Solids (lbs/day) Daily Maximum					37	145	143	252	178	203		
Total Dissolved Solids (mg/L) Average Monthly					2080	1605	1415	1760	1000	737		
Total Dissolved Solids (mg/L) Daily Maximum					2210	1810	1590	1890	1110	880		
Oil and Grease (mg/L) Average Monthly					< 5.0	< 5.0	< 5.0	< 5.1	< 5.3	< 5.1		
Oil and Grease (mg/L) Instantaneous Maximum					5.1	< 5.0	< 5.0	5.2	< 5.6	< 5.2		
Total Acidity (mg/L) Average Monthly					-210	NULL99	NULL77	NULL56	NULL39	NULL34		

Total Alkalinity (mg/L) Effluent Net Instantaneous Minimum					436	365	339	263	319	276		
Total Alkalinity (mg/L) Average Monthly					202	183	172	182	147	142		
Total Aluminum (mg/L) Average Monthly					0.02	0.03	0.02	0.02	0.02	0.01		
Total Aluminum (mg/L) Daily Maximum					0.03	0.05	0.03	0.03	0.03	0.02		
Total Iron (mg/L) Average Monthly					0.1	0.3	0.1	0.2	0.1	0.1		
Total Iron (mg/L) Daily Maximum					0.2	0.7	0.2	0.3	0.1	0.2		
Total Manganese (mg/L) Average Monthly					0.036	0.037	0.022	0.041	0.022	0.015		
Total Manganese (mg/L) Daily Maximum					0.046	0.080	0.069	0.073	0.047	0.027		
Sulfate (lbs/day) Average Monthly					5	22	21	32	39	45		
Sulfate (mg/L) Average Monthly					482	417	345	363	364	291		
Chloride (lbs/day) Average Monthly					7	25	26	48	26	28		
Chloride (mg/L) Average Monthly					608	471	431	541	242	180		
Bromide (lbs/day) Average Monthly					0.05	0.2	0.21	0.39	0.2	0.22		
Bromide (mg/L) Average Monthly					5.0	4	3	4	2	1		

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.0207
Latitude 40º 28' 13.07" **Longitude** -79º 13' 49.00"
Wastewater Description: Coalbed Methane Production Water

Current Permit Effluent Limitations

Parameters	Average Monthly (lbs/day)	Daily Maximum (lbs/day)	Minimum (mg/L)	Average Monthly (mg/L)	Daily Maximum (mg/L)	IMAX (mg/L)
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX
Total Aluminum	XXX	XXX	XXX	0.75	0.75	XXX
Total Iron	XXX	XXX	XXX	1.5	3.0	XXX
Total Manganese	XXX	XXX	XXX	1.0	2.0	XXX
Total Suspended Solids	XXX	XXX	XXX	30	XXX	60
Total Dissolved Solids	Report	Report	XXX	Report	Report	XXX
Total Dissolved Solids	Report Annl Avg	XXX	XXX	XXX	XXX	XXX
Bromide	Report	XXX	XXX	Report	XXX	XXX
Chloride	Report	XXX	XXX	Report	XXX	XXX
Sulfate	Report	XXX	XXX	Report	XXX	XXX
Oil and Grease	XXX	XXX	XXX	15	XXX	30
Total Acidity	XXX	XXX	XXX	Report	XXX	XXX
Total Alkalinity	XXX	XXX	XXX	Report	XXX	XXX
Alkalinity (Effluent Net)	XXX	XXX	0.0	XXX	XXX	XXX
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0	XXX

Technology-Based Limitations

While this facility does collect and treat connate from multiple wells it is not a centralized waste treatment facility subject to the effluent limit guideline ("ELG") 40 CFR 437. The applicability section of the ELG, 40 CFR 437.1(b), states, "This part does not apply to the following discharges of wastewater from a CWT facility: … (3) Wastewater from the treatment of wastes received from off-site via conduit (e.g., pipelines, channels, ditches, trenches, etc.) from the facility that generates the wastes unless the resulting wastewaters are commingled with other wastewaters subject to this provision." In this case the connate is being generated at the well and then delivered via a conduit (pipelines) to the treatment facility where it is processed and discharged.

Outfall 001 is no longer subject to 40 CFR 435, the Oil and Gas Extraction Point Source discharge ELG, as EPA has not promulgated effluent limitation guidelines and standards for pollutant discharges from coalbed methane extraction facilities. EPA had initiated a coalbed methane rulemaking but announced its decision to discontinue this effort in Fall 2014.

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Oil & Grease	15.0	Average Monthly	-	95.2(2)(ii)
Oil & Grease	30.0	IMAX	-	95.2(2)(ii)
Dissolved Iron	7.0	7.0	-	95.2(4)-

Comments: Because there is a total iron limit with a maximum of 7.0 also applicable to the discharge (see below) the dissolved iron limit is not necessary and will not be imposed.

The production water is subject to the provisions in the oil & gas wastewater permitting manual ("OGPM").

The OGPM stipulates technology based effluent limitations as least as stringent as the following:

Parameter	Minimum	Average Monthly	Instantaneous Maximum
Total Suspended Solids (mg/L)	-	30	60
Oil and Grease (mg/L)	-	15	30
Iron, Total (mg/L)	-	3.5	7.0
Acidity (mg/L)	-	Less than Alkalinity.	
pH (s.u.)	6.0	-	9.0

Table 1: Technology based effluent limitations from the Oil & Gas Wastewater Permitting Manual

Additionally, the OGPM stipulates that the treatment facilities must incorporate the following:

- Flow equalization to ensure optimum treatment efficiency of the facilities and minimization of water quality impacts.
- Gravity separation and surface skimming, or equivalent technology, for oil and grease removal.
- Chemical addition for pH control and metals removal, if necessary (a pH range of 8.0-8.5 is desirable).
- Aeration, or equivalent technology, for reducing volatile petroleum hydrocarbons and oxidation for metals removal.
- Settling (retention) or filtration for removal of solids, including oxidized metals.

This facility is also subject to the effluent standards for Total Dissolved Solids (TDS) set forth in PA Code Chapter 95.10. This facility is not considered a new or expanding mass load as it was an authorized discharge prior to August 21, 2010. In the previous permit application, the average and maximum discharge flows were reported in Module 3 of the permit application to be 0.16 and 0.48 MGD, respectively. Likewise, the average and maximum concentration of TDS were reported on module 4 of the permit application. Using this data an average and maximum TDS loading were calculated and the calculations are attached. This is the authorized loading. It will continue to be included as a special condition in the permit. If Howard discharges over this loading it will be considered an expanding load and must be reevaluated under Chapter 95.10. The average and maximum loadings are shown in table 2, below.

Parameter	Average Daily	Maximum Daily
Total Dissolved Solids (lb/day)	5,428	20,016

Table 2: Effluent standards from 25 PA Code Chapter 95.10.

Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
None			

Comments: The Toxics Management Spreadsheet did not determine the need for any effluent limits or monitoring.

Previously, TDS and its major constituents including sulfate, chloride, bromide had emerged as pollutants of concern in several major watersheds in the Commonwealth. The conservative nature of these solids allows them to accumulate in surface waters and they may remain a concern even if the immediate downstream public water supply is not directly impacted. Bromide has been linked to formation of disinfection byproducts at increased levels in public water systems. In addition, as a consequence of actions associated with Triennial Review 13, the Environmental Quality Board had directed DEP to collect additional data related to sulfate, chloride, and 1,4-dioxane. Under a monitoring initiative that was in effect at the time of the previous permit renewal, monitoring was placed in the permit for sulfate, chloride, and bromide.

Since that time, the Department collected enough data and is no longer requiring certain facilities to collect this data. In addition, this facility's average flow rated dramatically decreased, thus putting them under the threshold of the previous monitoring initiative. Therefore, monitoring for chloride, total sulfate, and bromide will be removed from the proposed renewed permit.

Total Maximum Daily Loads

Howard is within the watershed area covered by the Kiskiminetas-Conemaugh watershed TMDL, approved as final by EPA in 2010. This TMDL addresses certain impairments of water quality standards associated with elevated instream concentrations of iron, aluminum, and manganese. A pH impairment is addressed through a surrogate relationship with these metals. This TMDL establishes wasteload allocations for these metals for point sources, and load allocations for these metals for nonpoint sources in the watershed. DEP must assure that any effluent limitations assigned to point sources are consistent with the assumptions and requirements of any available wasteload allocation for the discharge pursuant to 40 CFR 130.7 (i.e., a final TMDL). Howard was designated a wasteload allocation in the TMDL.

The allocated concentrations for Howard are the most stringent applicable water quality criteria (Fe: 1.5 mg/L, Al: 0.75 mg/L, Mn: 1.0 mg/L). Effluent limitations for all continuous discharges other than POTWs must be expressed as both average monthly and maximum daily effluent limits. Accordingly, the appropriate average monthly and maximum daily effluent limits for iron, aluminum, and manganese have been established based on whether the underlying water quality criteria are designed to protect against chronic exposures or acute exposures per DEP policy. The applicable effluent limitations are shown in table 1, below.

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Parameter	Average Monthly (lb/day)	Daily Maximum (lb/day)	Average Monthly (mg/L)	Daily Maximum (mg/L)
Aluminum, total	-	-	0.75	0.75
Iron, total	-	-	1.5	3.0
Manganese, total	-	-	1.0	2.0

Table 1: Effluent limitations based on the Kiskiminetas-Conemaugh watershed TMDL.

Best Professional Judgment (BPJ) Limitations

Comments: None

Other Considerations

Comments: This facility does not use any chemical additives or water treatment chemicals.

There were detections in application sampling for Perfluorooctanoic acid (PFOA). Therefore, in accordance with the Department's SOP entitled "Establishing Effluent Limitations of Individual Industria Waste Permits, quarterly monitoring for PFOA, Perfluorooctanesulfonic acid (PFOS), Perfluorobutanesulfonic acid (PFBS), and Hexafluoropropylene oxide dimer acid (HFPO-DA). A footnote was also for discontinuation of sampling requirements for each PFAS parameter after four consecutive non-detect are reported for all parameters at or below the Target QLs.

Anti-Backsliding

N/A

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (386-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Instantaneous Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/day	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0	XXX	1/week	Grab
TSS	XXX	XXX	XXX	30.0	XXX	60.0	1/week	Grab
Total Dissolved Solids	Report Annl Avg	XXX	XXX	XXX	XXX	XXX	1/year	Calculation
Total Dissolved Solids	Report	Report Daily Max	XXX	Report	Report	XXX	2/month	Grab
Oil and Grease	XXX	XXX	XXX	15.0	XXX	30.0	1/week	Grab
Total Acidity	XXX	XXX	XXX	Report	Report	XXX	1/week	Grab
Total Alkalinity	XXX	XXX	XXX	Report	Report	XXX	1/week	Grab
Total Alkalinity Effluent Net	XXX	XXX	0	XXX	XXX	XXX	1/week	Calculation
Total Aluminum	XXX	XXX	XXX	0.75	0.75	XXX	1/week	Grab
Total Iron	XXX	XXX	XXX	1.5	3.0	XXX	1/week	Grab
Total Manganese	XXX	XXX	XXX	1.0	2.0	XXX	1/week	Grab
PFOA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab

Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Instantaneous Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
PFBS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab

Compliance Sampling Location: Outfall 001 (prior to mixing with any other waters)

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2025

Discharge Information

Instructions | Discharge | Stream

Facility: **Howard Treatment Facility** NPDES Permit No.: **PA0206075** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Treated Connate**

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
0.0207	184	7.9						

					0 if left blank		*0.5 if left blank*		*0 if left blank*			*1 if left blank*	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		2480									
	Chloride (PWS)	mg/L		970									
	Bromide	mg/L		7.5									
	Sulfate (PWS)	mg/L		715									
	Fluoride (PWS)	mg/L		0.259									
Group 2	Total Aluminum	µg/L		68									
	Total Antimony	µg/L	<	0.4									
	Total Arsenic	µg/L	<	10									
	Total Barium	µg/L		83									
	Total Beryllium	µg/L	<	0.4									
	Total Boron	µg/L	<	250									
	Total Cadmium	µg/L	<	0.4									
	Total Chromium (III)	µg/L	<	5									
	Hexavalent Chromium	µg/L	<	100									
	Total Cobalt	µg/L	<	1									
	Total Copper	µg/L	<	2									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L	<	5									
	Dissolved Iron	µg/L		31									
	Total Iron	µg/L		730									
	Total Lead	µg/L	<	1									
	Total Manganese	µg/L		157									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L		5									
	Total Phenols (Phenolics) (PWS)	µg/L		62									
	Total Selenium	µg/L	<	20									
	Total Silver	µg/L	<	5									
	Total Thallium	µg/L	<	10									
	Total Zinc	µg/L	<	10									
	Total Molybdenum	µg/L		28									
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										

Group 3	Carbon Tetrachloride	µg/L	<										
	Chlorobenzene	µg/L											
	Chlorodibromomethane	µg/L	<										
	Chloroethane	µg/L	<										
	2-Chloroethyl Vinyl Ether	µg/L	<										
	Chloroform	µg/L	<										
	Dichlorobromomethane	µg/L	<										
	1,1-Dichloroethane	µg/L	<										
	1,2-Dichloroethane	µg/L	<										
	1,1-Dichloroethylene	µg/L	<										
	1,2-Dichloropropane	µg/L	<										
	1,3-Dichloropropylene	µg/L	<										
	1,4-Dioxane	µg/L	<										
	Ethylbenzene	µg/L	<										
	Methyl Bromide	µg/L	<										
	Methyl Chloride	µg/L	<										
	Methylene Chloride	µg/L	<										
	1,1,2,2-Tetrachloroethane	µg/L	<										
	Tetrachloroethylene	µg/L	<										
	Toluene	µg/L	<										
	1,2-trans-Dichloroethylene	µg/L	<										
	1,1,1-Trichloroethane	µg/L	<										
	1,1,2-Trichloroethane	µg/L	<										
	Trichloroethylene	µg/L	<										
	Vinyl Chloride	µg/L	<										
Group 4	2-Chlorophenol	µg/L	<										
	2,4-Dichlorophenol	µg/L	<										
	2,4-Dimethylphenol	µg/L	<										
	4,6-Dinitro-o-Cresol	µg/L	<										
	2,4-Dinitrophenol	µg/L	<										
	2-Nitrophenol	µg/L	<										
	4-Nitrophenol	µg/L	<										
	p-Chloro-m-Cresol	µg/L	<										
	Pentachlorophenol	µg/L	<										
	Phenol	µg/L	<										
	2,4,6-Trichlorophenol	µg/L	<										
Group 5	Acenaphthene	µg/L	<										
	Acenaphthylene	µg/L	<										
	Anthracene	µg/L	<										
	Benzidine	µg/L	<										
	Benzo(a)Anthracene	µg/L	<										
	Benzo(a)Pyrene	µg/L	<										
	3,4-Benzofluoranthene	µg/L	<										
	Benzo(ghi)Perylene	µg/L	<										
	Benzo(k)Fluoranthene	µg/L	<										
	Bis(2-Chloroethoxy)Methane	µg/L	<										
	Bis(2-Chloroethyl)Ether	µg/L	<										
	Bis(2-Chloroisopropyl)Ether	µg/L	<										
	Bis(2-Ethylhexyl)Phthalate	µg/L	<										
	4-Bromophenyl Phenyl Ether	µg/L	<										
	Butyl Benzyl Phthalate	µg/L	<										
	2-Chloronaphthalene	µg/L	<										
	4-Chlorophenyl Phenyl Ether	µg/L	<										
	Chrysene	µg/L	<										
	Dibenzo(a,h)Anthrancene	µg/L	<										
	1,2-Dichlorobenzene	µg/L	<										
	1,3-Dichlorobenzene	µg/L	<										
	1,4-Dichlorobenzene	µg/L	<										
	3,3-Dichlorobenzidine	µg/L	<										
	Diethyl Phthalate	µg/L	<										
	Dimethyl Phthalate	µg/L	<										
	Di-n-Butyl Phthalate	µg/L	<										
	2,4-Dinitrotoluene	µg/L	<										

	2,6-Dinitrotoluene	µg/L	<										
	Di-n-Octyl Phthalate	µg/L	<										
	1,2-Diphenylhydrazine	µg/L	<										
	Fluoranthene	µg/L	<										
	Fluorene	µg/L	<										
	Hexachlorobenzene	µg/L	<										
	Hexachlorobutadiene	µg/L	<										
	Hexachlorocyclopentadiene	µg/L	<										
	Hexachloroethane	µg/L	<										
	Indeno(1,2,3-cd)Pyrene	µg/L	<										
	Isophorone	µg/L	<										
	Naphthalene	µg/L	<										
	Nitrobenzene	µg/L	<										
	n-Nitrosodimethylamine	µg/L	<										
	n-Nitrosodi-n-Propylamine	µg/L	<										
	n-Nitrosodiphenylamine	µg/L	<										
	Phenanthrene	µg/L	<										
	Pyrene	µg/L	<										
	1,2,4-Trichlorobenzene	µg/L	<										
Group 6	Aldrin	µg/L	<										
	alpha-BHC	µg/L	<										
	beta-BHC	µg/L	<										
	gamma-BHC	µg/L	<										
	delta BHC	µg/L	<										
	Chlordane	µg/L	<										
	4,4-DDT	µg/L	<										
	4,4-DDE	µg/L	<										
	4,4-DDD	µg/L	<										
	Dieldrin	µg/L	<										
	alpha-Endosulfan	µg/L	<										
	beta-Endosulfan	µg/L	<										
	Endosulfan Sulfate	µg/L	<										
	Endrin	µg/L	<										
	Endrin Aldehyde	µg/L	<										
	Heptachlor	µg/L	<										
	Heptachlor Epoxide	µg/L	<										
	PCB-1016	µg/L	<										
	PCB-1221	µg/L	<										
	PCB-1232	µg/L	<										
	PCB-1242	µg/L	<										
	PCB-1248	µg/L	<										
	PCB-1254	µg/L	<										
	PCB-1260	µg/L	<										
	PCBs, Total	µg/L	<										
	Toxaphene	µg/L	<										
	2,3,7,8-TCDD	ng/L	<										
Group 7	Gross Alpha	pCi/L		40.1									
	Total Beta	pCi/L	<	11.3									
	Radium 226/228	pCi/L	<	187.6									
	Total Strontium	µg/L		4,410									
	Total Uranium	µg/L	<	0.323									
	Osmotic Pressure	mOs/kg		138									

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2025

Stream / Surface Water Information

Howard Treatment Facility, NPDES Permit No. PA0206075, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Blacklick Creek**

No. Reaches to Model: 1

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	043937	6.1	960	396.1			Yes
End of Reach 1	043937	0.01	906	418		0.0001	Yes

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

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	6.1	0.1385										86.7	7.33		
End of Reach 1	0.01	0.1385										100	7		

Q_h

Location	RMI	LFY (cfs/mi²)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	6.1														
End of Reach 1	0.01														

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Toxics Management Spreadsheet
Version 1.4, May 2025

Model Results

Howard Treatment Facility, NPDES Permit No. PA0206075, Outfall 001

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

☑ ***Hydrodynamics***

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

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
6.1	54.86		54.86	0.032	0.002	0.986	114.825	116.483	0.485	0.767	450.05
0.01	57.89	0.00015	57.8928453								

Q_h

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
6.1	246.09		246.09	0.032	0.002	1.908	114.825	60.192	1.124	0.331	167.328
0.01	257.943	0.00015	257.94								

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.183 Analysis Hardness (mg/l): 87.01 Analysis pH: 7.33

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	235,319	
Total Antimony	0	0		0	1,100	1,100	345,134	
Total Arsenic	0	0		0	340	340	106,678	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	6,588,930	
Total Boron	0	0		0	8,100	8,100	2,541,445	
Total Cadmium	0	0		0	1.759	1.85	581	Chem Translator of 0.95 applied
Total Chromium (III)	0	0		0	508.396	1,609	504,790	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	5,112	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	29,807	
Total Copper	0	0		0	11.788	12.3	3,853	Chem Translator of 0.96 applied

Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	55.484	68.4	21,458	Chem Translator of 0.811 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	517	Chem Translator of 0.85 applied
Total Nickel	0	0		0	416.237	417	130,860	Chem Translator of 0.998 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	Chem Translator of 0.922 applied
Total Silver	0	0		0	2.532	2.98	935	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	20,394	
Total Zinc	0	0		0	104.148	106	33,413	Chem Translator of 0.978 applied
Total Strontium	0	0		0	N/A	N/A	N/A	
Osmotic Pressure	0	0		0	50	50.0	15,688	

☑ ***CFC*** CCT (min): ###### PMF: 1 Analysis Hardness (mg/l): 86.757 Analysis pH: 7.33

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	377,112	
Total Arsenic	0	0		0	150	150	257,122	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	7,027,992	
Total Boron	0	0		0	1,600	1,600	2,742,631	
Total Cadmium	0	0		0	0.223	0.24	418	Chem Translator of 0.915 applied
Total Chromium (III)	0	0		0	65.974	76.7	131,499	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	17,819	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	32,569	
Total Copper	0	0		0	7.932	8.26	14,163	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	2,571,217	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.155	2.66	4,551	Chem Translator of 0.812 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	1,553	Chem Translator of 0.85 applied
Total Nickel	0	0		0	46.117	46.3	79,289	Chem Translator of 0.997 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	4.600	4.99	8,552	Chem Translator of 0.922 applied
Total Silver	0	0		0	N/A	N/A	N/A	Chem Translator of 1 applied
Total Thallium	0	0		0	13	13.0	22,284	
Total Zinc	0	0		0	104.741	106	182,091	Chem Translator of 0.986 applied
Total Strontium	0	0		0	N/A	N/A	N/A	
Osmotic Pressure	0	0		0	N/A	N/A	N/A	

☑ ***THH*** CCT (min): ###### THH PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A PWS PMF: 1

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	#########	WQC applied at RMI 0.01 with a design stream flow of 57.893 cfs
Chloride (PWS)	0	0		0	250,000	250,000	#########	WQC applied at RMI 0.01 with a design stream flow of 57.893 cfs
Sulfate (PWS)	0	0		0	250,000	250,000	#########	WQC applied at RMI 0.01 with a design stream flow of 57.893 cfs
Fluoride (PWS)	0	0		0	2,000	2,000	3,617,725	WQC applied at RMI 0.01 with a design stream flow of 57.893 cfs
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	9,599	
Total Arsenic	0	0		0	10	10.0	17,141	
Total Barium	0	0		0	2,400	2,400	4,113,946	
Total Boron	0	0		0	3,100	3,100	5,313,847	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	300	300	514,243	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	1,000	1,000	1,714,144	
Total Mercury	0	0		0	0.050	0.05	85.7	
Total Nickel	0	0		0	610	610	1,045,628	
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	9,044	WQC applied at RMI 0.01 with a design stream flow of 57.893 cfs
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	0.24	0.24	411	
Total Zinc	0	0		0	N/A	N/A	N/A	
Total Strontium	0	0		0	4,000	4,000	6,856,577	
Osmotic Pressure	0	0		0	N/A	N/A	N/A	

☑ ***CRL*** CCT (min): ###### PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	
Total Boron	0	0		0	N/A	N/A	N/A	

Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	
Total Strontium	0	0		0	N/A	N/A	N/A	
Osmotic Pressure	0	0		0	N/A	N/A	N/A	

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

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments

☑ ***Other Pollutants without Limits or Monitoring***

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	904,431	mg/L	Discharge Conc ≤ 10% WQBEL
Chloride (PWS)	452,216	mg/L	Discharge Conc ≤ 10% WQBEL
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	452,216	mg/L	Discharge Conc ≤ 10% WQBEL
Fluoride (PWS)	3,618	mg/L	Discharge Conc ≤ 10% WQBEL
Total Aluminum	150,830	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Arsenic	17,141	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	4,113,946	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	1,628,963	µg/L	Discharge Conc ≤ 10% WQBEL

Total Cadmium	372	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	131,499	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	3,277	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	19,105	µg/L	Discharge Conc < TQL
Total Copper	2,469	µg/L	Discharge Conc < TQL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	514,243	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	2,571,217	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	4,551	µg/L	Discharge Conc < TQL
Total Manganese	1,714,144	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	85.7	µg/L	Discharge Conc < TQL
Total Nickel	79,289	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)	9,044	µg/L	Discharge Conc ≤ 10% WQBEL
Total Selenium	8,552	µg/L	Discharge Conc ≤ 10% WQBEL
Total Silver	599	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	411	µg/L	Discharge Conc ≤ 10% WQBEL
Total Zinc	21,416	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS
Gross Alpha	N/A	N/A	No WQS
Total Beta	N/A	N/A	No WQS
Radium 226/228	N/A	N/A	No WQS
Total Strontium	6,856,577	µg/L	Discharge Conc ≤ 10% WQBEL
Total Uranium	N/A	N/A	No WQS
Osmotic Pressure	10,055	mOs/kg	Discharge Conc ≤ 10% WQBEL

Howards Treatment Plant
Burrell Township, Indiana County
PA0206075 Discharge pH

Outfall 001

Date	pH min	pH max	10^ -pH min	10^ -pH max	& pH max)	-Log (Ave pH)
Jul-21	7.92	8.07	1.2E-08	8.51E-09	1.03E-08	**8.0**
Aug-21	7.9	8.2	1.26E-08	6.31E-09	9.45E-09	**8.0**
Sep-21	7.87	7.9	1.35E-08	1.26E-08	1.3E-08	**7.9**
Jul-22	7.80	7.97	1.58E-08	1.07E-08	1.33E-08	**7.9**
Aug-22	7.82	7.92	1.51E-08	1.2E-08	1.36E-08	**7.9**
Sep-22	7.60	7.80	2.51E-08	1.58E-08	2.05E-08	**7.7**
Jul-23	7.9	7.9	1.26E-08	1.26E-08	1.26E-08	**7.9**
Aug-23	7.77	8.1	1.7E-08	7.94E-09	1.25E-08	**7.9**
Sep-23	7.71	7.9	1.95E-08	1.26E-08	1.6E-08	**7.8**
					Median:	**7.9**

There were no discharges from July through September in 2024 or 2025.