pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0002992**
Facility Type	**Industrial**	APS ID	**740500**
Major / Minor	**Minor**	Authorization ID	**865297**

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

Applicant and Facility Information

Applicant Name	**Tecumseh Redevelopment Inc.**	Facility Name	**Johnstown Plant**
Applicant Address	4020 Kinross Lakes Parkway	Facility Address	Riders Area Iron Street
	Richfield, OH 44286-9084		Johnstown, PA 15901-1610
Applicant Contact	Keith Nagel	Facility Contact	Keith Nagel
Applicant Phone	(330) 659-9165	Facility Phone	(330) 659-9165
Client ID	249722	Site ID	239065
SIC Code	3312	Municipality	Johnstown City
SIC Description	Manufacturing - Blast Furnaces And Steel Mills	County	Cambria
Date Application Received	July 29, 2005	EPA Waived?	Yes
Date Application Accepted	July 29, 2005	If No, Reason	

Purpose of Application: Renewal of an NPDES permit application for minor facility without ELG

Summary of Review

Permitting History

Tecumseh Redevelopment Inc. (TRI) holds an Individual permit for its Johnstown Plant facility located in Johnstown City, Cambria County. The previous permit expired on January 31, 2006. A timely permit renewal application was received by the Department on July 29, 2005. A draft NPDES permit was issued to the permittee on May 2, 2006. The final permit was never issued. The Department received modifications to the permit application on August 23, 2019.

Facility Overview

The Johnstown Plant, Bethlehem Steel Corporation, operated electric steelmaking furnaces and finishing facilities for producing bars, rods, wires, railroad cars, and necessary manufacturing shops to serve the steel plant. In July 1992, Bethlehem Steel Corporation curtailed its steel making operations in the Johnstown area and began to sell several steel manufacturing divisions and their associated outfalls to BRW Steel Corporation (BRW), Johnstown America Corporation (JAC), J-Pitt Steel (J-Pitt), Johnstown Wire Technologies (JWT), and ALMAC Machine Company (ALMAC). There are no steel production and/or operations currently at the site. However, the permittee is still responsible for stormwater discharges emanating from the properties it owns.

The facility is generally flat and built on historical slag fill, which is very porous per the permittee. There is very little buildup of water on the property. Appendix A displays the locations of the current stormwater outfalls (i.e., 45 in total). Outfall 309 at the

Approve	Deny	Signatures	Date
X		 Curtis Holes, P.E. / Environmental Engineer	April 10, 2024
X		 Michael E. Fifth, P.E. / Environmental Engineer Manager	April 23, 2024

Summary of Review

former Lower Works Area previously received non-contact cooling water from the neighboring Standard Forged Products, Inc.'s (SFP) IMP 399 (NPDES Permit No. PA0216097) for the General Forging Machine (GFM) operations in the axle forge shop. The operations at SFP have been idled since 2007. The production equipment was removed from the SFP facility in 2011. Therefore, non-contact cooling water is no longer discharged through this Outfall 309 (i.e., stormwater and groundwater discharge only). All other TRI outfalls also receive and discharge stormwater and groundwater only. Table 1 outlines the drainage area details of the outfalls. The outfalls discharge to Little Conemaugh River, Conemaugh River, and Hinckston Run (Appendix B). The streams/rivers are designated as warm water fishes (WWF) per Chapter 93 Designated Use.

Table 1. Details of Outfalls

Outfall	Representative Outfall	Type of Water - Drainage Details	Receiving Water of the Representative Outfall
119	119	Stormwater and groundwater - Former Franklin Coke Plant area	Little Conemaugh River
309	309	Stormwater and groundwater – shared discharge – from neighboring SFP property and TRI property from Former Lower Division Industrial Plant Area	Conemaugh River
305	305	Stormwater and groundwater - Former Lower Division Industrial Plant Area	Conemaugh River
404, 405, 406, 407, 408, 409, 410, 411, 412, 413	406	Stormwater and groundwater – Former Lower Division Industrial Plant Area – Coke Plant Area	Hinckston Run
501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525	509	Stormwater and groundwater – Former Rosedale Division Industrial Plant Area – Coke Plant Area	Hinckston Run
801, 802, 803, 804, 805	805	Stormwater and groundwater – no slag mining/processing - Park Hill Slag Recovery area	Little Conemaugh River
1000, 1001	1001 (101)	Stormwater and groundwater - former hazardous and ferromanganese landfill area – no active slag mining/processing currently - Riders Area	Hinckston Run

There are existing slag piles at the Riders Area and Park Hill Area of the facility (Appendix A). The Riders Area slag piles consist of lime rich slag which were used to treat spent liquor from the sulfuric acid and hydrochloric acid pickling operations at the Johnstown Plant. The Park Hill Area slags consist of slags from open hearth, blast furnace, and electric ore furnace operations at the Johnstown Plant. Per PPC plan, stormwater controls in these two areas are inspected for sediment debris accumulation. The materials are removed, and controls are maintained to ensure adequate control of run-on and run-off. Seep discharges in the Riders Area are monitored under the Atoll Mining Permit. Run-off/outfalls in the Park Hill Area are monitored under the TCIMS Mining Permit.

The Department conducted an inspection on April 25, 2022 at the TRI facility. Dave Layman, Amber Walters and Tyler Hughes from JEMCOR and Lisa Milsop and Curt Holes from PA-DEP were present during the inspection. No violations noted during the inspection. The previous permit did not have requirements to sample stormwater. When the current permit renewal is issued, the facility will have the option to perform representative sampling.

Site Specific Part C Conditions

Based on the previous history of the site and the current conditions at the TRI Johnstown facility, the best management practices (BMPs) will be proposed that are applicable for the iron and steel manufacturing facilities.

Summary of Review

Due to the high number of stormwater outfalls, the facility will be allowed to perform representative sampling. On June 28, 2005, the Department received a letter from the facility that identified representative outfalls. The modifications to the renewal application received on August 23, 2019 also included the representative outfalls. Upon review of the analytical data and the history/conditions at the site, a Part C condition will be added in the permit (as shown in Appendix C) that will list all the outfalls, their locational coordinates, drainage area details, and the representative outfalls.

Public Notifications and Zoning Approval

TRI submitted Act 14 notification to East Taylor Township Supervisors, City of Johnstown, and the Cambria County Commissioners on June 28, 2005. A newspaper publication is not required during the current renewal since no new discharge is added.

Conclusion

There is one open violation by Client ID – Failure to pay annual fee. This violation will need to be resolved to issue the final NPDES permit. There is no current outstanding effluent non-compliance.

Permit issuance is recommended.

Based on the analytical results and applicable requirements, the rationale for the development of effluent limitations are arranged and presented in the following manner: a) Outfall 309, b) Outfall 305, c) Outfalls 119 and 406, d) Outfall 509, e) Outfall 805 and f) Outfall 1001.

Public Participation

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

Discharge, Receiving Waters and Water Supply Information

Outfall No.	309	Design Flow (MGD)	0 (varied)
Latitude	40º 20' 10"	Longitude	-78º 55' 28"
Quad Name	Johnstown	Quad Code	1614
Wastewater Description:	Stormwater and groundwater		
Receiving Waters	Conemaugh River (WWF)	Stream Code	43832
NHD Com ID	123720455	RMI	52.0
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	18-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Not Assessed		
Cause(s) of Impairment	Metals, pH, Siltation, Total Suspended Solids, Turbidity, Iron, Manganese, Low pH, Aluminum		
Source(s) of Impairment			
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL
Nearest Downstream Public Water Supply Intake	Saltsburg Municipality Waterworks		
PWS Waters	Conemaugh River	Flow at Intake (cfs)	
PWS RMI	0.54	Distance from Outfall (mi)	➢ 50 miles approx..

Changes Since Last Permit Issuance: TRI currently does not discharge non-contact cooling water, only stormwater and groundwater are discharged. Therefore, the temperature limit/monitoring requirement for cooling water discharge for Outfall 309 will be removed from the renewed permit. No non-contact cooling water is discharged from the neighboring facility, Standard Forged Products, Inc.

Other Comments: None.

Development of Effluent Limitations

Outfall No.	309	**Design Flow (MGD)**	0.0 (varied)
Latitude	40º 20' 10"	**Longitude**	-78º 55' 28"
Wastewater Description:	Stormwater and groundwater		

Overview

Outfall 309 stormwater and groundwater discharges are shared with the neighboring Standard Forged Products, Inc. (SFP) property. TRI currently does not discharge NCCW. The analytical results of Outfall 309 sample are presented in Appendix D. The SIC code of SFP, Inc. is 3462 – Iron and Steel Forging.

Technology-Based Effluent Limitations (TBELs)

Outfall 309 effluent consists of stormwater runoff and groundwater from TRI and the neighboring property. There are no Federal Effluent Limitation Guidelines (ELGs) or state regulations requiring effluent limitations for this type of discharge. In lieu of a federal ELG, Section III of DEP's IW Effluent Limit SOP recommends that permit writers consider the following when evaluating the need for effluent limits and monitoring requirements for industrial stormwater discharges:

A. Effluent limits and monitoring requirements for industrial stormwater discharges may be important for ensuring that Best Management Practices (BMPs) are adequately implemented.

B. Application managers will consider, where appropriate, applying treatment standards contained in Chapter 95.

C. The PAG-03 General Permit should be considered when evaluating the minimum standards for limits and monitoring requirements for industrial stormwater discharges. The application manager may include other limits and monitoring requirements as justified in the fact sheet.

D. In general, if actual stormwater concentrations exceed 100 times the most stringent Chapter 93 criterion (or a lesser amount for large industrial areas that drain to small streams), or exceed 100 mg/L for pollutants without criteria, the application manager should consider applying effluent limits for the applicable parameters and/or the implementation of BMPs with compliance schedules as necessary to achieve the limits or otherwise reduce stormwater concentrations.

Consistent with the recommendations in Section III.C of the IW Effluent Limit SOP cited above, minimum standards described in the PAG-03 General Permit for "Discharges of Stormwater Associated with Industrial Activity" will be applied to SFP's stormwater discharges. Based on SFP's SIC Code, the facility would be classified under Appendix U – Fabricated Metal Products.[1] The monitoring requirements of Appendix U of the PAG-03 are displayed in Table 2.

Table 2. PAG-03 – Appendix U Minimum Monitoring Requirements

Discharge Parameter	Units	Sample Type	Benchmark Values
pH	S.U.	Grab	9.0
Total Suspended Solids	mg/L	Grab	100
Nitrate + Nitrite-Nitrogen	mg/L	Grab	3.0
Total Aluminum	mg/L	Grab	XXX
Total Iron	mg/L	Grab	XXX
Total Zinc	mg/L	Grab	XXX
Total Nitrogen	mg/L	Calculation	XXX
Total Phosphorus	mg/L	Grab	XXX
Oil and Grease	mg/L	Grab	30

[1] The determination of which of the PAG-03 General Permit's appendices applies to a facility is based on a facility's SIC Code.

In addition, based on the SIC code of the TRI facility, the facility would be classified under Appendix B – Primary Metals for the rest of the premises within the Lower Works Area. The monitoring requirements of Appendix B are displayed in Table 3.

Table 3. PAG-03 – Appendix B Minimum Monitoring Requirements

Discharge Parameter	Units	Sample Type	Benchmark Values
Total Suspended Solids	mg/L	Grab	100
Total Aluminum	mg/L	Grab	XXX
Total Zinc	mg/L	Grab	XXX
Total Copper	mg/L	Grab	XXX
Total Iron	mg/L	Grab	XXX
Total Lead	mg/L	Grab	XXX
Total Nitrogen	mg/L	Calculation	XXX
Total Phosphorus	mg/L	Grab	XXX
Oil and Grease	mg/L	Grab	30

To the extent that effluent limits would be necessary to ensure that the BMPs are adequately implemented, DEP's *Permit Writer's Manual* recommends that effluent limits be developed for industrial stormwater discharges based on a determination of Best Available Technology (BAT) using Best Professional Judgment (BPJ). Although BPJ of BAT typically involves the evaluation of end-of-pipe wastewater treatment technologies, DEP considers the use of BMPs to be BAT for TRI's stormwater in this current renewal process.

Water Quality-Based Effluent Limitations (WQBELs)

A water quality analysis for Outfall 309 using TMS was not performed because Outfall 001 is a precipitation-based discharge and will not discharge continuously.

TMDL Considerations

The discharges from TRI outfalls are located within the Kiskiminetas-Conemaugh River watersheds for which the U.S. Environmental Protection Agency (EPA), Region III, developed a final TMDL in 2010 per *TMDLs for Streams Impaired by Acid Mine Drainage in the Kiskiminetas-Conemaugh River Watershed, Pennsylvania* document. The TMDL was established to address metals, pH, and sediment impairments associated with abandoned mine drainage or discharges in the Kiskiminetas-Conemaugh River Watershed in southwestern Pennsylvania. These TMDLs were established in accordance with Section 303(d)(1)(c) and (2) of the Clean Water Act to address impairments of water quality as identified on Pennsylvania's Section 303(d) lists. The TMDL applies to all the streams covered by the 1998 Consent Decree in the Kiskiminetas River watershed. These segments were listed for their failure to attain the aquatic life use.

A TMDL establishes the amount of a pollutant that a water body can assimilate without exceeding the water quality criteria for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and non-point sources in order to restore and maintain the quality of the state's water resources (USEPA, 1991a). The Kiskiminetas-Conemaugh River Watersheds TMDL established waste load allocations for the discharge of aluminum, iron, and manganese within the Kiskiminetas-Conemaugh river watersheds. The TMDL includes consideration for each river and tributary within the target watershed and its impairment sources. The stream data is then used to calculate the minimum pollutant reductions that are necessary to attain water quality criteria levels. The target concentrations published in the TMDL were based on established water quality criteria of 0.750 $^{mg}/_{L}$ total recoverable aluminum, 1.5 $^{mg}/_{L}$ total recoverable iron based on a 30-day average and 1.0 $^{mg}/_{L}$ total recoverable manganese. The reduction needed to meet the minimum water quality standards is then divided between each known point and non-point pollutant source in the form of a watershed allocation.

Appendix E outlines the waste load allocations for the outfalls listed as "pipe" from Appendix *G* of the 2010 TMDL document – *TMDLs for Streams Impaired by Acid Mine Drainage in the Kiskiminetas-Conemaugh River Watershed, Pennsylvania*. Per Appendix D of the current Fact Sheet, the facility discharges 0.0175 mg/L of aluminum, 0.354 mg/L of total iron, and 0.144 mg/L of total manganese as daily maximum. Since the facility is currently not in operation and the Outfall 309 analytical results show that the concentrations of the TMDL parameters are significantly lower than the allocated concentrations (i.e., water quality criteria), no limits or monitoring requirements will be applied in the current permit to comply with the TMDL

requirements. In addition, the total suspended solids concentration in the Outfall 309 effluent is < 2.0 mg/L. Therefore, no limits for total suspended solids would also be necessary.

WQM 7.0

Per *SOP – Establishing Effluent Limitations for Individual Industrial Permits*, analysis with the WQM 7.0 Model is needed if the maximum BOD_5/$CBOD_5$ concentration exceeds 30/25 mg/L. The maximum BOD_5 concentration reported in the application is 3 mg/L, and therefore, WQM 7.0 Model analysis is not required.

Summary of Effluent Limitations for Outfall 309

Effluent limits imposed at the outfalls are the most stringent of TBELs, WQBELs, regulatory effluent standards and monitoring requirements as discussed in the sections above. The applicable requirements for Outfall 309 are summarized in Table 4. The minimum sampling frequencies are chosen per PAG-03 guidelines and requirements and sampling types are applied based on Table 6-4 of *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document No. 362-0400-001, 10/97)*.

Table 4. Outfall 309 Effluent Limitations and Monitoring

Parameter	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Sample Frequency	Sample Type
Flow (MGD)	-	-	Report	-	1/ 6 months	Estimated
pH (S.U.)	-	-	Report	-	1/ 6 months	Grab
Total Suspended Solids	-	-	Report	-	1/ 6 months	Grab
Nitrate + Nitrite - Nitrogen	-	-	Report	-	1/ 6 months	Grab
Total Aluminum	-	-	Report	-	1/ 6 months	Grab
Total Nitrogen	-	-	Report	-	1/ 6 months	Calculation
Total Phosphorus	-	-	Report	-	1/ 6 months	Grab
Oil & Grease	-	-	Report	-	1/ 6 months	Grab
Total Iron	-	-	Report	-	1/ 6 months	Grab
Total Zinc	-	-	Report	-	1/ 6 months	Grab
Total Copper	-	-	Report	-	1/ 6 months	Grab
Total Lead	-	-	Report	-	1/ 6 months	Grab

Discharge, Receiving Waters and Water Supply Information

Outfall No.	305	Design Flow (MGD)	0 (varied)
Latitude	40º 20' 02"	Longitude	-78º 55' 28"
Quad Name	Johnstown	Quad Code	1614
Wastewater Description:	Stormwater and groundwater		
Receiving Waters	Conemaugh River	Stream Code	43832
NHD Com ID	123720455	RMI	52.16
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	18-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Not Assessed		
Cause(s) of Impairment	Metals, pH, Siltation, Total Suspended Solids, Turbidity, Iron, Manganese, Low pH, Aluminum		
Source(s) of Impairment			
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL
Nearest Downstream Public Water Supply Intake	Saltsburg Municipality Waterworks		
PWS Waters	Conemaugh River	Flow at Intake (cfs)	
PWS RMI	0.54	Distance from Outfall (mi)	➢ 50 miles approx.. ➢

Development of Effluent Limitations

Outfall No.	305	**Design Flow (MGD)**	0 (varied)
Latitude	40º 20' 02"	**Longitude**	-78º 55' 28"
Wastewater Description:	Stormwater and groundwater		

Overview

Outfall 305 discharges stormwater and groundwater from the Former Lower Works Area (Appendix A). In the previous Draft Permit issued in May 2, 2006, limits were proposed for total iron and pH at Outfall 305. The rationale for total iron limit was water quality based, and therefore, a 35 months of compliance schedule was proposed after permit effective date to achieve the proposed limit. The updated analytical data submitted for the current renewal show total iron content of 3.61 mg/L and total manganese content of 0.328 mg/L as presented in Table 5. The receiving stream (i.e., Conemaugh River) is impaired for metals, pH, siltation, total suspended solids, iron, aluminum, manganese, and low pH. Therefore, the receiving stream is considered to have zero assimilative capacity available for total iron and total manganese per *Standard Operating Procedure (SOP) for Clean Water Program – Establishing Water Quality-Based Effluent Limitations (WQBELs) and Permit Conditions for Toxic Pollutants in NPDES Permits for Existing Dischargers (SOP No. BCW-PMT-037)*. When there is zero assimilative capacity, average monthly limit (AML) is set equal to the most stringent applicable water quality criterion. The most stringent applicable water quality criterion for total iron is 1.5 $^{mg}/_{L}$ total recoverable iron based on a 30-day average and for total manganese is 1.0 $^{mg}/_{L}$ total recoverable manganese. Upon comparing the quality of water discharge with the water quality criteria, a maximum daily limit (MDL) of 3.0 mg/L will be applied at Outfall 305. An MDL, instead of AML, will be applied because of the frequency of monitoring (i.e., once per six months). The MDL was determined by an AML multiplier of 2.0 per procedures established in *Section III.C.2.h. of the Water Quality Toxics Management Strategy*. A three years (i.e., 36 months) compliance schedule will be allowed to achieve the water quality-based effluent limit for total iron.

Technology based effluent limitations were determined per the rationale presented in Outfall 309 Development of Effluent Limitations – TBELs section. Per the SIC code and the history of operations in the lower works area, the requirements under Appendix B of the PAG-03 General Permit as presented in Table 3 will be applied at Outfall 305.

Table 5. Analytical Results for Stormwater through Outfall 305

Parameter	Concentration
pH	7.54
Oil and Grease (mg/L)	< 5.0
Biochemical Oxygen Demand (5-day) (mg/L)	5.0
Chemical Oxygen Demand (mg/L)	< 10.0
Total Suspended Solids (mg/L)	12.0
Total Nitrogen (mg/L)	1.4
Total Phosphorus (mg/L)	0.023
Chromium (mg/L)	<0.01
Copper (mg/L)	<0.01
Iron, total (mg/L)	3.61
Lead, total (mg/L)	<0.02
Manganese, total (mg/L)	0.328
Nickel (mg/L)	<0.01
Zinc, total (mg/L)	0.01

Summary of Effluent Limitations for Outfall 305

Effluent limits imposed at the outfalls are the most stringent of TBELs, WQBELs, regulatory effluent standards and monitoring requirements as discussed in the sections above. The applicable requirements for Outfall 305 are summarized in Table 6. The minimum sampling frequencies are chosen per PAG-03 guidelines and requirements and sampling types are applied based on Table 6-4 of *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document No. 362-0400-001, 10/97)*. The total iron limit will become effective after 36 months from the permit effective date.

Table 6. Outfall 305 Effluent Limitations and Monitoring

Parameter	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Sample Frequency	Sample Type
Flow (MGD)	-	-	Report	-	1/ 6 months	Estimated
pH (S.U.)	-	-	Report	-	1/ 6 months	Grab
Total Suspended Solids	-	-	Report	-	1/ 6 months	Grab
Total Aluminum	-	-	Report	-	1/ 6 months	Grab
Total Iron	-	-	3.0	-	1/ 6 months	Grab
Total Zinc	-	-	Report	-	1/ 6 months	Grab
Total Copper	-	-	Report	-	1/ 6 months	Grab
Total Lead	-	-	Report	-	1/ 6 months	Grab
Total Nitrogen	-	-	Report	-	1/ 6 months	Calculation
Total Phosphorus	-	-	Report	-	1/ 6 months	Grab

Compliance Schedule for Total Iron:

The permittee will be given a schedule of compliance as outlined below to achieve compliance with the water quality-based limitation of total iron at Outfall 305:

SCHEDULE OF COMPLIANCE – Total Iron

A. The permittee shall achieve compliance with final effluent limitations for total iron at Outfall 305 or terminate this discharge in accordance with the following schedule:

1.	Feasibility study completion	6 months following permit effective date (PED)
2.	Final plan completion and submit WQM permit application if applicable	1 year following PED
3.	Start construction	1.5 years following PED
4.	Construction progress report(s)	2 years following PED
5.	End construction	2.5 following PED
6.	Compliance with effluent limitations	3 years following PED

B. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit to DEP a written notice of compliance or non-compliance with the specific schedule requirement. Each notice of non-compliance shall include the following information:

1. A short description of the non-compliance.

2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule requirement.

3. A description of any factors which tend to explain or mitigate the non-compliance.

4. An estimate of the date that compliance with the elapsed schedule requirement will be achieved and an assessment of the probability that the next scheduled requirement will be met on time."

Discharge, Receiving Waters and Water Supply Information

Outfall No.	119 and 406 (representative for the group mentioned in Table 7)	Design Flow (MGD)	0.0 (varied)
Latitude	40º 20' 02"; 40º 20' 33"	Longitude	-78º 53' 50"; -78º 55' 24"
Quad Name	Johnstown	Quad Code	1614
Wastewater Description:	Stormwater		
Receiving Waters	Little Conemaugh River (WWF)	Stream Code	45815
NHD Com ID	123720199	RMI	1.62
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	18-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Not Assessed		
Cause(s) of Impairment	Metals, pH, Siltation, Total Suspended Solids, Turbidity, Iron, Manganese, Low pH, Aluminum		
Source(s) of Impairment			
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL
Nearest Downstream Public Water Supply Intake	Saltsburg Municipality Waterworks		
PWS Waters	Conemaugh River	Flow at Intake (cfs)	
PWS RMI	0.54	Distance from Outfall (mi)	50 miles approx..

Changes Since Last Permit Issuance: None.

Other Comments: None.

Development of Effluent Limitations (Outfalls 119 and 400 Series)			
Outfall No.	119 and 406 (representative for the group mentioned in Table 7)	**Design Flow (MGD)**	0 (varied)
Latitude	40º 20' 02"; 40º 20' 33"	**Longitude**	-78º 53' 50"; -78º 55' 24"
Wastewater Description:	Stormwater and groundwater		

Table 7. Locational Coordinates for Outfall 119 and 400 Series

Outfall (Stormwater and groundwater; Design Flow = 0, varied)	**Locational Coordinates**	
	Latitude	**Longitude**
119	40º 20' 02"	-78º 53' 50"
305	40º 20' 02"	-78º 55' 28"
404	40º 20' 33"	-78º 55' 24"
405	40º 20' 33"	-78º 55' 24"
406	40º 20' 33"	-78º 55' 24"
407	40º 20' 33"	-78º 55' 24"
408	40º 20' 33"	-78º 55' 24"
409	40º 20' 33"	-78º 55' 24"
410	40º 20' 34"	-78º 55' 24"
411	40º 20' 34"	-78º 55' 24"
412	40º 20' 34"	-78º 55' 24"
413	40º 20' 35"	-78º 55' 24"

Overview

The drainage area details for the Outfall 119 and 400 series outfalls are presented in Table 1 of the current Fact Sheet document. Outfall 406 was chosen as the representative outfall for the 400 series outfall group.

Outfall 119 discharges stormwater and groundwater from the former Franklin Coke Plant Area as shown in Appendix A. The 400 series outfalls discharge stormwater and groundwater from the south-western section of the former Rosedale Coke Plant Area. Based on the history of the operations, the stormwater discharges from these areas fall under the requirements of Appendix B of the PAG-03 General Permit as shown in Table 3 of the current Fact Sheet document.

Upon evaluation of the analytical results of the discharges from Outfall 119 and Outfall 406, no additional monitoring will be imposed. Tables 8 and 9 include the analytical results from Outfalls 119 and 406.

Table 8. Analytical Results for Stormwater through Outfall 119

Parameter	Concentration
pH	8.12
Oil and Grease (mg/L)	< 5.0
Biochemical Oxygen Demand (5-day) (mg/L)	2.0
Chemical Oxygen Demand (mg/L)	26.0
Total Suspended Solids (mg/L)	22.0
Total Nitrogen (mg/L)	<1.0
Total Phosphorus (mg/L)	0.0328
Chromium (mg/L)	<0.01
Copper (mg/L)	<0.01
Iron, total (mg/L)	0.706
Lead, total (mg/L)	0.025
Manganese, total (mg/L)	0.123
Nickel (mg/L)	<0.01
Zinc, total (mg/L)	0.021

Table 9. Analytical Results for Stormwater through Outfall 406

Parameter	Concentration
pH	7.67
Oil and Grease (mg/L)	< 5.0
Biochemical Oxygen Demand (5-day) (mg/L)	< 2.0
Chemical Oxygen Demand (mg/L)	11.0
Total Suspended Solids (mg/L)	< 2.0
Total Nitrogen (mg/L)	< 1.0
Total Phosphorus (mg/L)	0.016
Chromium (mg/L)	< 0.01
Copper (mg/L)	< 0.01
Iron, total (mg/L)	< 0.05
Lead, total (mg/L)	< 0.02
Manganese, total (mg/L)	0.012
Nickel (mg/L)	< 0.01
Zinc, total (mg/L)	< 0.01

Summary of Effluent Limitations for Outfalls 119 and 406

Effluent limits imposed at the outfalls are the most stringent of TBELs, WQBELs, regulatory effluent standards and monitoring requirements as discussed in the sections above. The applicable requirements for Outfalls 119 and 406 are summarized in Table 10. The minimum sampling frequencies are chosen per PAG-03 guidelines and requirements and sampling types are applied based on Table 6-4 of *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document No. 362-0400-001, 10/97)*.

Table 10. Outfalls 119 and 406 Effluent Limitations and Monitoring

Parameter	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Sample Frequency	Sample Type
Flow (MGD)	-	-	Report	-	1/ 6 months	Estimated
Total Suspended Solids	-	-	Report	-	1/ 6 months	Grab
Total Nitrogen	-	-	Report	-	1/ 6 months	Calculation
Total Phosphorus	-	-	Report	-	1/ 6 months	Grab
Total Aluminum	-	-	Report	-	1/ 6 months	Grab
Total Iron	-	-	Report	-	1/ 6 months	Grab
Total Zinc	-	-	Report	-	1/ 6 months	Grab
Total Copper	-	-	Report	-	1/ 6 months	Grab
Total Lead	-	-	Report	-	1/ 6 months	Grab

Discharge, Receiving Waters and Water Supply Information

Outfall No.	509 (representative for the group mentioned in Table 11)	Design Flow (MGD)	0
Latitude	40º 20' 38"	Longitude	-78º 55' 10"
Quad Name	Johnstown	Quad Code	1614
Wastewater Description:	Stormwater and groundwater		
Receiving Waters	Hinckston Run (WWF)	Stream Code	45058
NHD Com ID	123720199	RMI	0.41
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	18-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Not Assessed		
Cause(s) of Impairment	Metals, pH, Siltation, Total Suspended Solids, Turbidity, Iron, Manganese, Low pH, Aluminum		
Source(s) of Impairment			
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL
Nearest Downstream Public Water Supply Intake	Saltsburg Municipality Waterworks		
PWS Waters	Conemaugh River	Flow at Intake (cfs)	
PWS RMI	0.54	Distance from Outfall (mi)	50 miles approx..

Changes Since Last Permit Issuance: None.

Other Comments: None.

Development of Effluent Limitations (500 Series Outfalls)			
Outfall No.	509 (representative for the group mentioned in Table 11)	**Design Flow (MGD)**	0 (varied)
Latitude	40º 20' 38"	**Longitude**	-78º 55' 10"
Wastewater Description:	Stormwater		

Table 11. Locational Coordinates for 500 Series Outfalls

Outfall (Stormwater and groundwater; Design Flow = 0, varied)	**Locational Coordinates**	
	Latitude	**Longitude**
501	40º 20' 36"	-78º 55' 20"
502	40º 20' 36"	-78º 55' 20"
503	40º 20' 37"	-78º 55' 18"
504	40º 20' 37"	-78º 55' 17"
505	40º 20' 37"	-78º 55' 15"
506	40º 20' 37"	-78º 55' 15"
507	40º 20' 38"	-78º 55' 12"
508	40º 20' 38"	-78º 55' 10"
509	40º 20' 38"	-78º 55' 10"
510	40º 20' 38"	-78º 55' 09"
511	40º 20' 38"	-78º 55' 07"
512	40º 20' 38"	-78º 55' 07"
513	40º 20' 36"	-78º 55' 00"
514	40º 20' 35"	-78º 54' 57"
515	40º 20' 35"	-78º 54' 56"
516	40º 20' 31"	-78º 54' 41"
517	40º 20' 32"	-78º 54' 38"
518	40º 20' 33"	-78º 54' 36"
519	40º 20' 34"	-78º 54' 35"
520	40º 20' 35"	-78º 54' 33"
521	40º 20' 36"	-78º 54' 32"
522	40º 20' 37"	-78º 54' 31"
523	40º 20' 39"	-78º 54' 30"
524	40º 20' 40"	-78º 54' 30"
525	40º 20' 41"	-78º 54' 29"

Overview

Outfall 509 was chosen as the representative outfall for the 500 series group outfalls for sampling purposes. Outfall 509 discharges stormwater and groundwater from the Former Rosedale Coke Plant Area. Per the SIC code and the history of operations in the lower works area, the requirements under Appendix B of the PAG-03 General Permit as presented in Table 3 will be applied at Outfall 509.

Table 12 presents analytical data of the sample collected from Outfall 509. Upon review of the analytical results, the outfall has relatively high COD and TSS values (i.e., 40.0 mg/L and 62.0 mg/L, respectively) but are still below the benchmark numbers presented in Table 3. Monitoring for COD and TSS will be applied at Outfall 509. The outfall also discharges 2.15 mg/L of total iron in their discharge. The receiving stream is impaired for metals, pH, siltation, total suspended solids, iron, aluminum, manganese, and low pH. Therefore, per the rationale discussed in Outfall 305 section, a maximum daily limit (MDL) of 3.0 mg/L of total iron will be applied at Outfall 509.

A schedule of compliance for total iron will not be necessary for Outfall 509. The limit is applied to ensure the quality of discharge and protection of the water of Commonwealth.

Table 12. Analytical Results for Stormwater through Outfall 509

Parameter	Concentration
pH	8.17
Oil and Grease (mg/L)	< 5.0
Biochemical Oxygen Demand (5-day) (mg/L)	5.0
Chemical Oxygen Demand (mg/L)	40.0
Total Suspended Solids (mg/L)	62.0
Total Nitrogen (mg/L)	<1.0
Total Phosphorus (mg/L)	0.081
Chromium (mg/L)	<0.01
Copper (mg/L)	<0.01
Iron, total (mg/L)	2.15
Lead, total (mg/L)	0.025
Manganese, total (mg/L)	0.408
Nickel (mg/L)	<0.01
Zinc, total (mg/L)	0.047

Summary of Effluent Limitations for Outfall 509

Effluent limits imposed at the outfalls are the most stringent of TBELs, WQBELs, regulatory effluent standards and monitoring requirements as discussed in the sections above. The applicable requirements for Outfall 509 are summarized in Table 13. The minimum sampling frequencies are chosen per PAG-03 guidelines and requirements and sampling types are applied based on Table 6-4 of *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document No. 362-0400-001, 10/97)*. The total iron limit will become effective immediately.

Table 13. Effluent Limitations and Monitoring Requirements for Outfall 509

Parameter	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Sample Frequency	Sample Type
Flow (MGD)	-	-	Report	-	1/ 6 months	Estimated
Total Suspended Solids	-	-	Report	-	1/ 6 months	Grab
Chemical Oxygen Demand	-	-	Report	-	1/ 6 months	Grab
Total Nitrogen	-	-	Report	-	1/ 6 months	Calculation
Total Phosphorus	-	-	Report	-	1/ 6 months	Grab
Total Aluminum	-	-	Report	-	1/ 6 months	Grab
Total Iron	-	-	3.0	-	1/ 6 months	Grab
Total Zinc	-	-	Report	-	1/ 6 months	Grab
Total Copper	-	-	Report	-	1/ 6 months	Grab
Total Lead	-	-	Report	-	1/ 6 months	Grab

Discharge, Receiving Waters and Water Supply Information

Outfall No.	805 (Representative Outfall for Outfalls 801 – 805 mentioned in Table 14)	Design Flow (MGD)	0 (varied)
Latitude	40º 21' 39"	Longitude	-78º 51' 41"
Quad Name	Johnstown	Quad Code	1614
Wastewater Description:	Stormwater and groundwater		
Receiving Waters	Little Conemaugh River	Stream Code	45815
NHD Com ID	134395975	RMI	5.06
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	18-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Not Assessed		
Cause(s) of Impairment	Metals, pH, Siltation, Total Suspended Solids, Turbidity, Iron, Manganese, Low pH, Aluminum		
Source(s) of Impairment	**Acid mine drainage – metals; Channelization –habitat alterations**		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL
Nearest Downstream Public Water Supply Intake	Saltsburg Municipality Waterworks		
PWS Waters	Conemaugh River	Flow at Intake (cfs)	
PWS RMI	0.54	Distance from Outfall (mi)	>50 miles approx..

Changes Since Last Permit Issuance: None.

Other Comments: None.

Development of Effluent Limitations (800 Series Outfalls)

Outfall No.	805 (Representative of 801 – 805)	**Design Flow (MGD)**	0 (varied)
Latitude	40º 21' 39"	**Longitude**	-78º 51' 41"

Wastewater Description: Stormwater and groundwater

Table 14. Locational Coordinates for 800 Series Outfalls

Outfall (Stormwater and groundwater; Design Flow = 0, varied)	**Locational Coordinates**	
	Latitude	**Longitude**
801	40º 20' 38"	-78º 51' 40"
802	40º 21' 38"	-78º 51' 40"
803	40º 21' 39"	-78º 51' 41"
804	40º 21' 39"	-78º 51' 41"
805	40º 21' 39"	-78º 51' 41"

Overview

Historically, Bethlehem Steel placed slags from open hearth, blast furnace and electric ore furnace operations at Park Hill site until 1992. Slag placement at the Park Hill ceased in 1992 with the closing of the Bethlehem Steelmaking facility. No defined solid waste management or disposal units are located at the site. Currently, no scrap recovery and slag processing operations are active at the Park Hill Area. These operations are conducted under the terms and conditions of a non-coal surface mining permit. If these industrial activities recommence the contractor will have to maintain and update a Spill Prevention, Control, and Countermeasures (SPCC) Plan specific and relative to their activities.

The 800 series outfalls discharge stormwater and groundwater from the Park Hill slag recovery area (Appendix A). The permittee chose Outfall 805 as the representative outfall to collect stormwater samples. The analytical results are presented in Table 15.

Table 15. Analytical Results for Stormwater through Outfall 805

Parameter	Concentration
pH	11.8
Oil and Grease (mg/L)	< 5.0
Biochemical Oxygen Demand (5-day) (mg/L)	<2.0
Chemical Oxygen Demand (mg/L)	17
Total Suspended Solids (mg/L)	3.0
Total Nitrogen (mg/L)	1.5
Total Phosphorus (mg/L)	0.0145
Chromium (mg/L)	<0.01
Copper (mg/L)	<0.01
Iron, total (mg/L)	0.184
Lead, total (mg/L)	<0.02
Manganese, total (mg/L)	0.095
Nickel (mg/L)	<0.01
Zinc, total (mg/L)	<0.01

Technology-Based Effluent Limitations (TBELs)

The discharge from the 800 series outfalls consist of stormwater runoff and groundwater discharge from the slag recovery area within the TRI facility. In the absence of federal ELGs, the rationale to develop the limits/monitoring requirements adopted by the Department explained in the TBELs section for Outfall 309 was applied at Outfall 805.

Per SIC code of TRI, the facility would be classified under Appendix B – Primary Metals because of the historic steel making operations.[2] The monitoring requirements of Appendix B of the PAG-03 are displayed in Table 3.

Additionally, the wastes generated from TRI historic operations were disposed in the slag recovery area. Therefore, per 40 CFR § 122.26(b)(14)(v), stormwater runoff from landfills, land application sites, and open dumps that receive or have received any industrial wastes are subject to PAG-03 Appendix C monitoring requirements as specified in Table 16.

Table 16. PAG-03 – Appendix C Minimum Monitoring Requirements

Discharge Parameter	Units	Sample Type	Benchmark Values
pH	S.U.	Grab	XXX
Total Nitrogen	mg/L	Calculation	XXX
Total Phosphorus	mg/L	Grab	XXX
Total Suspended Solids	mg/L	Grab	100
Chemical Oxygen Demand	mg/L	Grab	120
Ammonia-Nitrogen	mg/L	Grab	XXX
Total Iron	mg/L	Grab	XXX

pH

Table 15 shows that Outfall 805 discharges effluent with high pH value (i.e., 11.8). The high pH value may originate from the metal-laden slag that was produced (i.e., from iron pellets and limestone or dolomite) as a steel-making by-product and was disposed of at the Park Hill area. Per §95.2(1), the instantaneous maximum limit of 9.0 S.U. will be applied at all the 800 series outfall discharges. The minimum sampling frequency will be set once per six months because of the variable nature (i.e., in frequency and duration) of the precipitation-based discharge. The permittee will be required to adopt a pH neutralization system at the end of each 800 series outfall, if deemed necessary. It is the permittee's responsibility to assess the discharge quality of each 800 series outfall and determine and/or install pH neutralization system(s). The permittee will not have to report sample results of each 800 series outfall; a representative outfall will be allowed. The pH limit will be effective immediately upon the issuance of the final permit.

Water Quality-Based Effluent Limitations (WQBELs)

TMDL Considerations

The TMDL background is explained in detail in the TMDL section for Outfall 309. Per Appendix E of this Fact Sheet document, the 800 series outfalls have criteria concentrations allocated for total aluminum, total iron, and total manganese. No percent reduction in discharge concentrations is required at the receiving stream segment. When the analytical results of Outfall 805 are studied, the discharge concentrations for total iron and total manganese are well below the criteria concentrations. Total aluminum concentration was not reported. It is important to note that the previous permit did not apply TMDL limits and/or requirements and the slag piles are still stored in this area. Since the discharge concentrations are well below the water quality criteria and/or the allocated concentrations for at least two of the three metal parameters listed, a BMP-based approach will be taken to comply with the TMDL requirements and only monitor and report requirements for total aluminum, total iron, and total manganese will be applied at all the 800 series outfalls.

[2] The determination of which of the PAG-03 General Permit's appendices applies to a facility is based on a facility's SIC Code.

Summary of Effluent Limitations for 800 Series Outfalls

Effluent limits imposed at the outfalls are the more stringent of TBELs, WQBELs, regulatory effluent standards and monitoring requirements as described in the sections above. The applicable requirements for Outfalls 801-805 are summarized in Table 17. The sampling frequencies and types are applied based on Table 6-4 of *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document No. 362-0400-001, 10/97)*.

Table 17. Effluent Limitations and Monitoring for Outfall 805

Parameter	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Sample Frequency	Sample Type
Flow (MGD)	-	-	Report	-	1/ 6 months	Estimated
pH (S.U.)	-	-	-	9.0	1/ 6 months	Grab
Total Suspended Solids	-	-	Report	-	1/ 6 months	Grab
Chemical Oxygen Demand	-	-	Report	-	1/ 6 months	Grab
Total Nitrogen	-	-	Report	-	1/ 6 months	Calculation
Total Phosphorus	-	-	Report	-	1/ 6 months	Grab
Ammonia-Nitrogen	-	-	Report	-	1/ 6 months	Grab
Total Aluminum	-	-	Report	-	1/ 6 months	Grab
Total Iron	-	-	Report	-	1/ 6 months	Grab
Total Manganese	-	-	Report	-	1/ 6 months	Grab
Total Zinc	-	-	Report	-	1/ 6 months	Grab
Total Copper	-	-	Report	-	1/ 6 months	Grab
Total Lead	-	-	Report	-	1/ 6 months	Grab

Discharge, Receiving Waters and Water Supply Information

Outfall No.	1001 (representative for Outfalls 1000 and 1001)	Design Flow (MGD)	0
Latitude	40º 21' 27"	Longitude	-78º 54' 14"
Quad Name	Johnstown	Quad Code	1614
Wastewater Description:	Stormwater and groundwater		
Receiving Waters	Hinckston Run (WWF)	Stream Code	45058
NHD Com ID	123720203	RMI	2.12
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	18-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Not Assessed		
Cause(s) of Impairment	Metals, pH, Siltation, Total Suspended Solids		
Source(s) of Impairment			
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL
Nearest Downstream Public Water Supply Intake	Saltsburg Municipality Waterworks		
PWS Waters	Conemaugh River	Flow at Intake (cfs)	
PWS RMI	0.54	Distance from Outfall (mi)	50 miles approx..

Changes Since Last Permit Issuance: None.

Other Comments: None.

Development of Effluent Limitations (Outfalls 1000 and 1001)			
Outfall No.	1000; 1001 (representative outfall)	**Design Flow (MGD)**	0 (varied)
Latitude	40º 21' 27"; 40º 21' 47"	**Longitude**	-78º 54' 14"; -78º 53' 38"
Wastewater Description:	Stormwater and groundwater		

Overview

The drainage area for the Outfall series 1000 consists of Riders Area as shown in Appendix A. Historically, Spent Pickle Liquor (SPL) was generated at Johnstown Plant and treated in pits at Riders Area from July 1967 through January, 1983. Sulfuric acid pickling and a minor amount of hydrochloric acid pickling were used to clean common carbon steel wire and billets. After continued use, the pickling acid or pickle liquor decreased in acidity and increased in iron content. It was then necessary to dispose of the pickling acid as SPL. In addition, steel that has been pickled required rinsing to remove the pickle liquor, and therefore, the rinse water needed to be disposed of after continued use. Based on available data and estimates of usage, the total volume of SPL taken to the TRI Riders Area site was 417,349,000 gallons. A similar volume of rinse water was also treated in these pits.

According to data from 1979-1980, the Johnstown SPL contained an average of 7.3 percent total iron and 5 percent free acid. The other metals present in SPL (e.g., hexavalent chromium, lead, nickel, etc.) usually precipitated with iron as insoluble compounds during the in-situ neutralization process. The hazardous waste landfill (Outfall 1000), containing approximately 100,000 tons of waste materials, was closed and capped in September 1993. The residual waste (ferromanganese) landfill (Outfall 1001), an approximately 7.5-acre site, was closed and capped in October 2005. The landfills in Riders Area are inspected by TRI in accordance with the Post-Closure Plans. The inspections are conducted to identify deterioration, tampering, and proper management. The log of these inspections and reports of corrective measures taken are retained according to TRI PPC Plan. Groundwater monitoring wells are inspected with monitoring data evaluated in accordance with the Groundwater and Surface Water Monitoring and Assessment Plan.

Jigging Technologies, LLC/dba Atoll currently operates a slag and ferromanganese recovery operation at the Rides Area. These operations are conducted under the terms and conditions of a non-coal surface mining permit. Atoll maintains and updates a PPC Plan specific and relative to their activities.

Per the history of operations in drainage areas of Outfalls 1000 and 1001 (Outfalls 100 and 101), the facility would be subject to the requirements of Appendix A – Hazardous Waste Treatment Storage and Disposal Facilities, Appendix B – Primary Metals, and Appendix C – Landfills and Land Application Sites of the PAG-03 General Permit. The monitoring and reporting requirements of Appendix A are presented in Table 18. The monitoring and reporting requirements for Appendices B and C of the PAG-03 General Permit have been presented in Tables 3 and 8, respectively earlier in the current Fact Sheet.

Table 18. PAG-03 – Appendix A Minimum Monitoring Requirements

Discharge Parameter	Units	Sample Type	Benchmark Values
pH	S.U.	Grab	9.0
Total Suspended Solids	mg/L	Grab	100
Chemical Oxygen Demand	mg/L	Grab	120
Ammonia-Nitrogen	mg/L	Grab	XXX
Total Arsenic	mg/L	Grab	XXX
Total Cadmium	mg/L	Grab	XXX
Total Cyanide	mg/L	Grab	XXX
Total Lead	mg/L	Grab	XXX
Total Mercury	mg/L	Grab	XXX
Total Selenium	mg/L	Grab	XXX
Total Silver	mg/L	Grab	XXX
Total Nitrogen	mg/L	Calculation	XXX
Total Phosphorus	mg/L	Grab	XXX

Table 19 presents the analytical data of the sample collected from Outfall 1001 and does not recommend additional monitoring.

Table 19. Analytical Results for Stormwater through Outfall 1001

Parameter	Concentration
pH	8.06
Oil and Grease (mg/L)	< 5.0
Biochemical Oxygen Demand (5-day) (mg/L)	4.0
Chemical Oxygen Demand (mg/L)	31.0
Total Suspended Solids (mg/L)	6.0
Total Nitrogen (mg/L)	<1.0
Total Phosphorus (mg/L)	0.0899
Chromium (mg/L)	<0.01
Copper (mg/L)	<0.01
Iron, total (mg/L)	0.244
Lead, total (mg/L)	<0.02
Manganese, total (mg/L)	0.603
Nickel (mg/L)	<0.01
Zinc, total (mg/L)	0.015

Summary of Effluent Limitations for 1000 Series Outfalls

Effluent limits imposed at the outfalls are the more stringent of TBELs, WQBELs, regulatory effluent standards and monitoring requirements as described in the sections above. The applicable requirements for 1000 Series Outfalls are summarized in Table 20. The sampling frequencies and types are applied based on Table 6-4 of *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document No. 362-0400-001, 10/97)*.

Table 20. Effluent Limitations and Monitoring Requirements for Outfall 1001

Parameter	Minimum	Average Monthly	Daily Maximum	Instantaneous Maximum	Sample Frequency	Sample Type
Flow (MGD)	-	-	Report	-	1/ 6 months	Estimated
pH (S.U.)	-	-	Report	-	1/ 6 months	Grab
Total Suspended Solids	-	-	Report	-	1/ 6 months	Grab
Chemical Oxygen Demand	-	-	Report	-	1/ 6 months	Grab
Ammonia-Nitrogen	-	-	Report	-	1/ 6 months	Grab
Total Aluminum	-	-	Report	-	1/ 6 months	Grab
Total Arsenic	-	-	Report	-	1/ 6 months	Grab
Total Cadmium	-	-	Report	-	1/ 6 months	Grab
Total Cyanide	-	-	Report	-	1/ 6 months	Grab
Total Mercury	-	-	Report	-	1/ 6 months	Grab
Total Selenium	-	-	Report	-	1/ 6 months	Grab
Total Silver	-	-	Report	-	1/ 6 months	Grab
Total Manganese	-	-	Report	-	1/ 6 months	Grab
Total Zinc	-	-	Report	-	1/ 6 months	Grab
Total Copper	-	-	Report	-	1/ 6 months	Grab
Total Lead	-	-	Report	-	1/ 6 months	Grab
Total Nitrogen	-	-	Report	-	1/ 6 months	Grab
Total Phosphorus	-	-	Report	-	1/ 6 months	Grab

	Tools and References Used to Develop Permit
☐	WQM for Windows Model (see Attachment)
☐	TMS Model for Windows Model (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Toxics Screening Analysis Spreadsheet (see Attachment)
☐	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:
☐	Other:

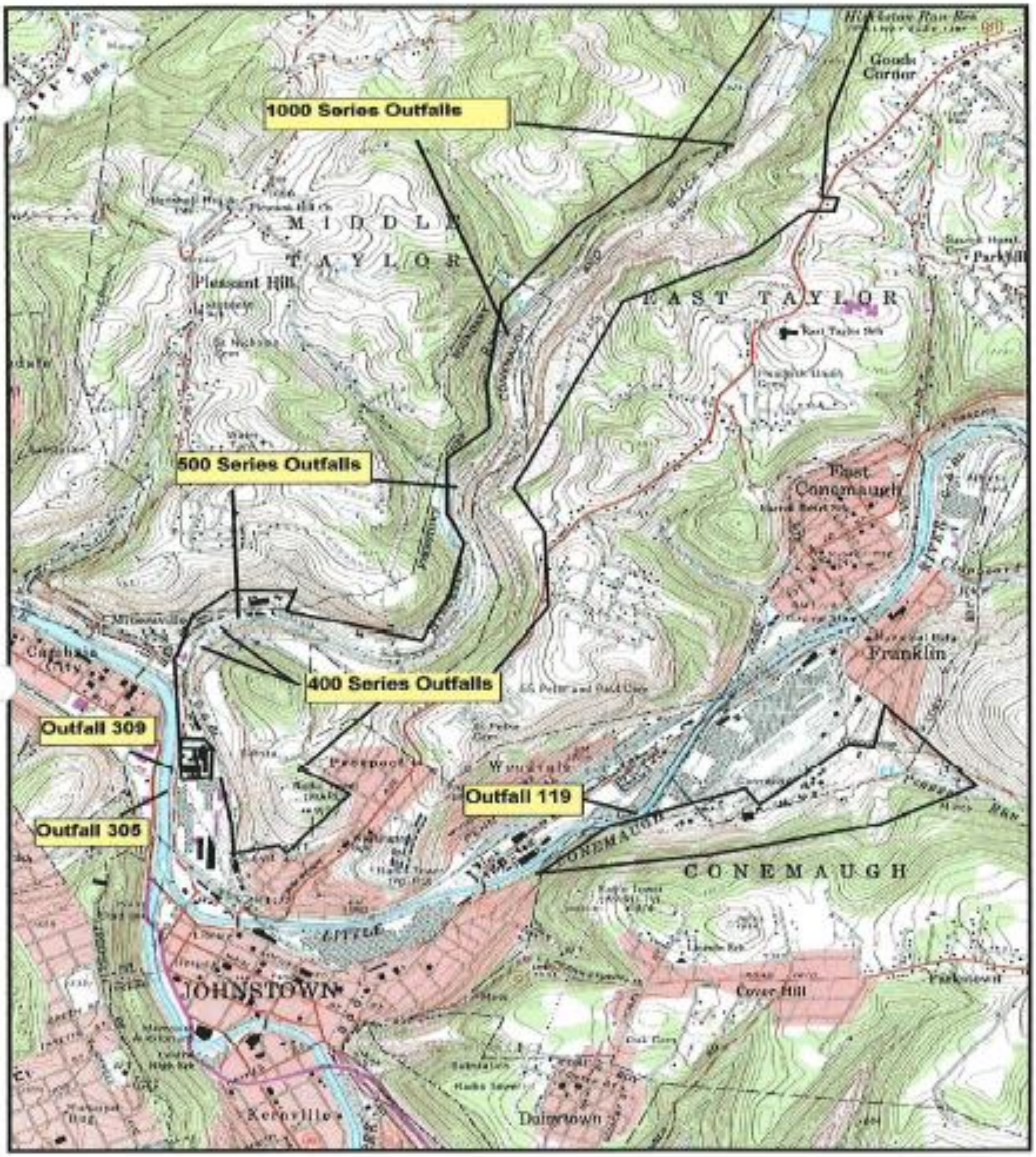
Appendix A - Outfall Location Map

Appendix B – Details of TRI Outfalls and History of IMP 399 of Standard Forged Products, Inc. (Johnstown Recovery Systems, Inc./Cambria Industrial Metals)

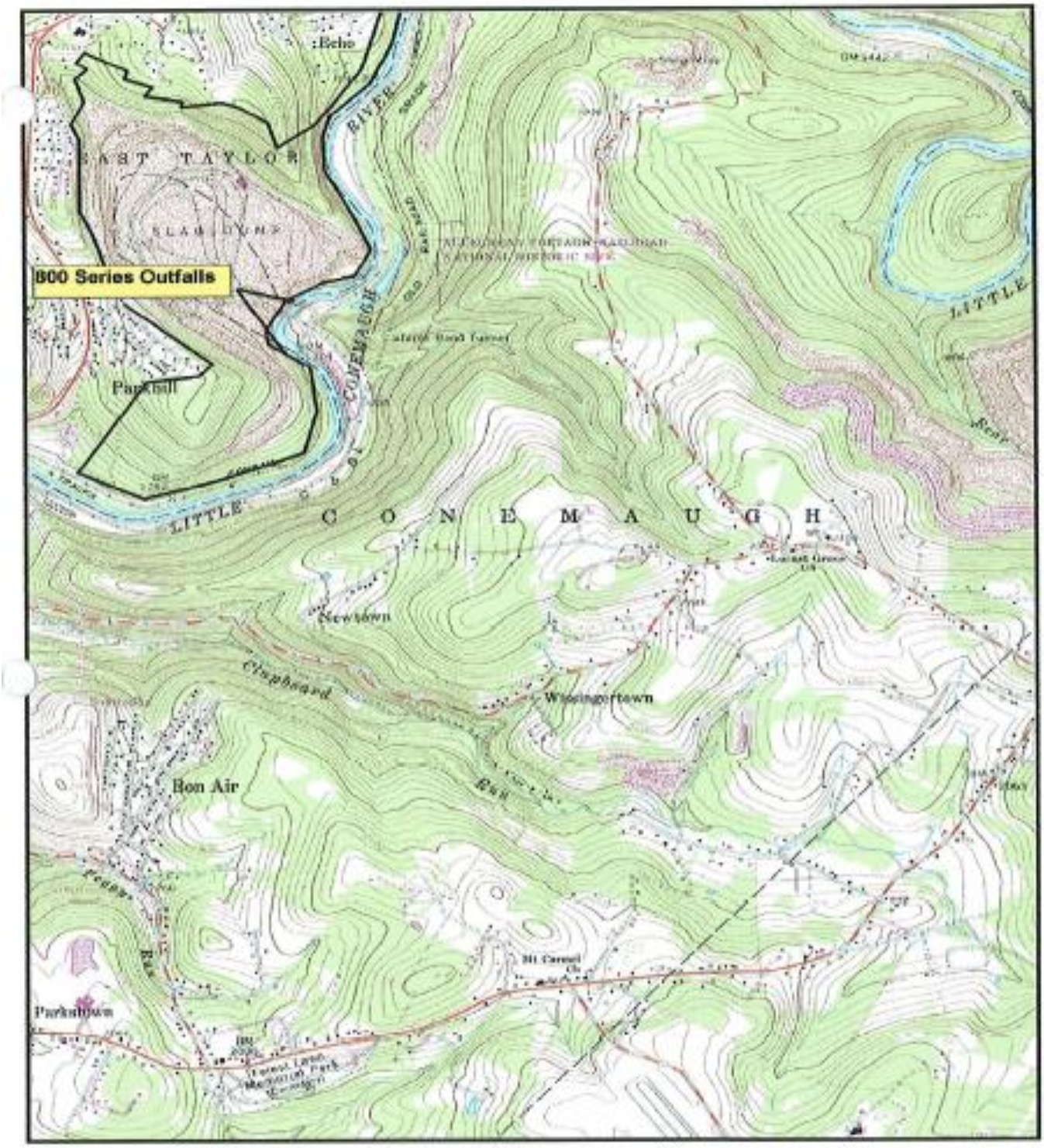
Appendix C – Stormwater Outfall Summary

Appendix D – Outfall 309 Sampling Results

Appendix A - Outfall Location Map

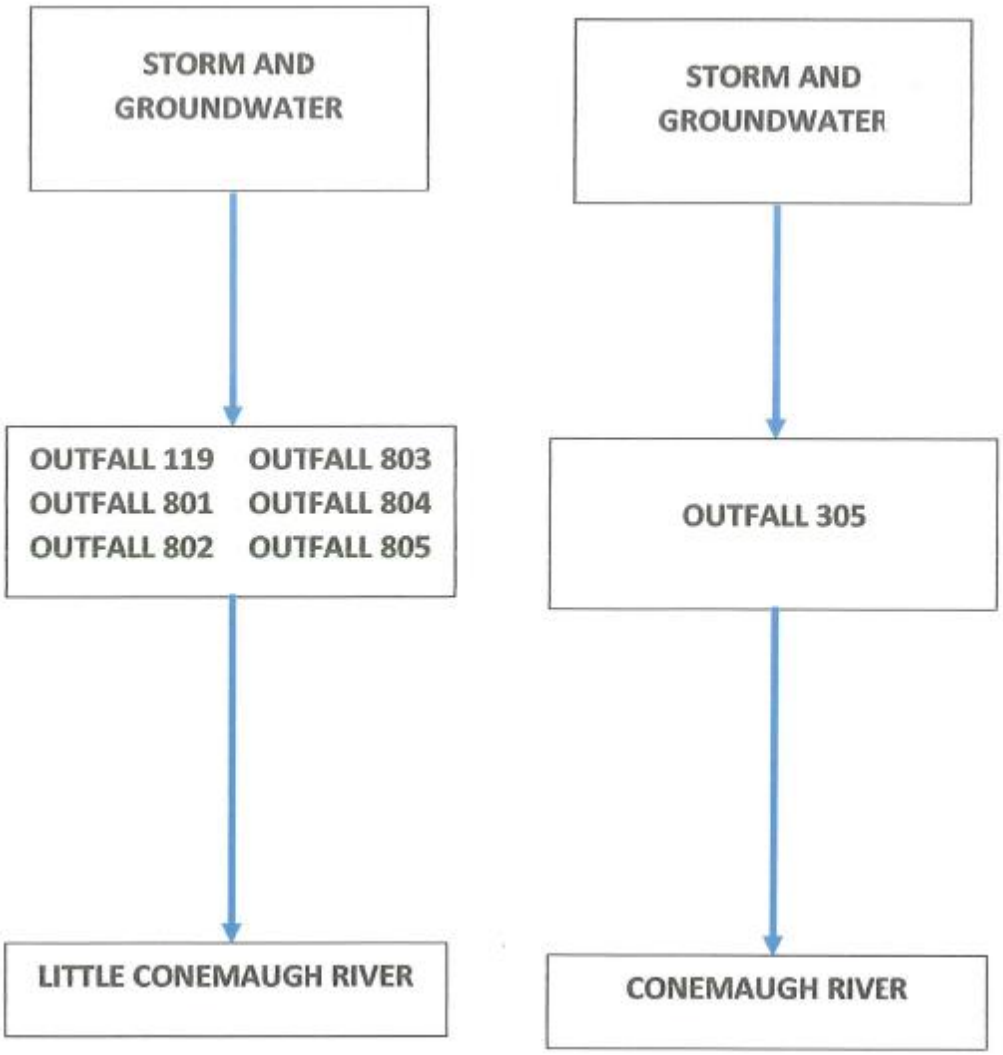


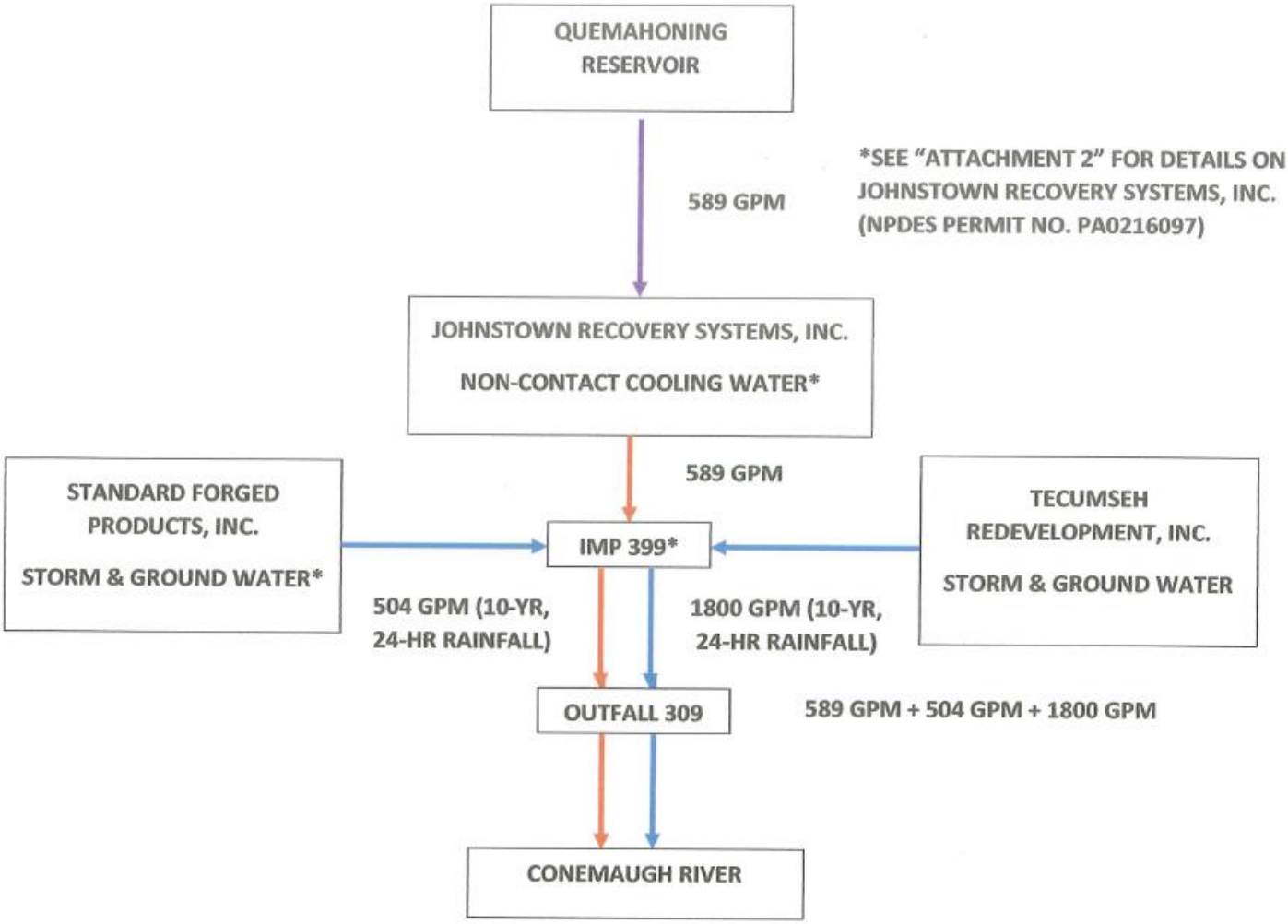
Scale: Approximate Scale (1000 0 1000 2000 FEET)	Tecumseh Redevelopment, Inc. Johnstown Area NPDES Permit No. PA0002992
Reference: Johnstown, PA U.S.G.S. Quadrangle Map 7.5 min. Series (Topographic) 1964, Photoinspected 1981	**Topographic Map 1**

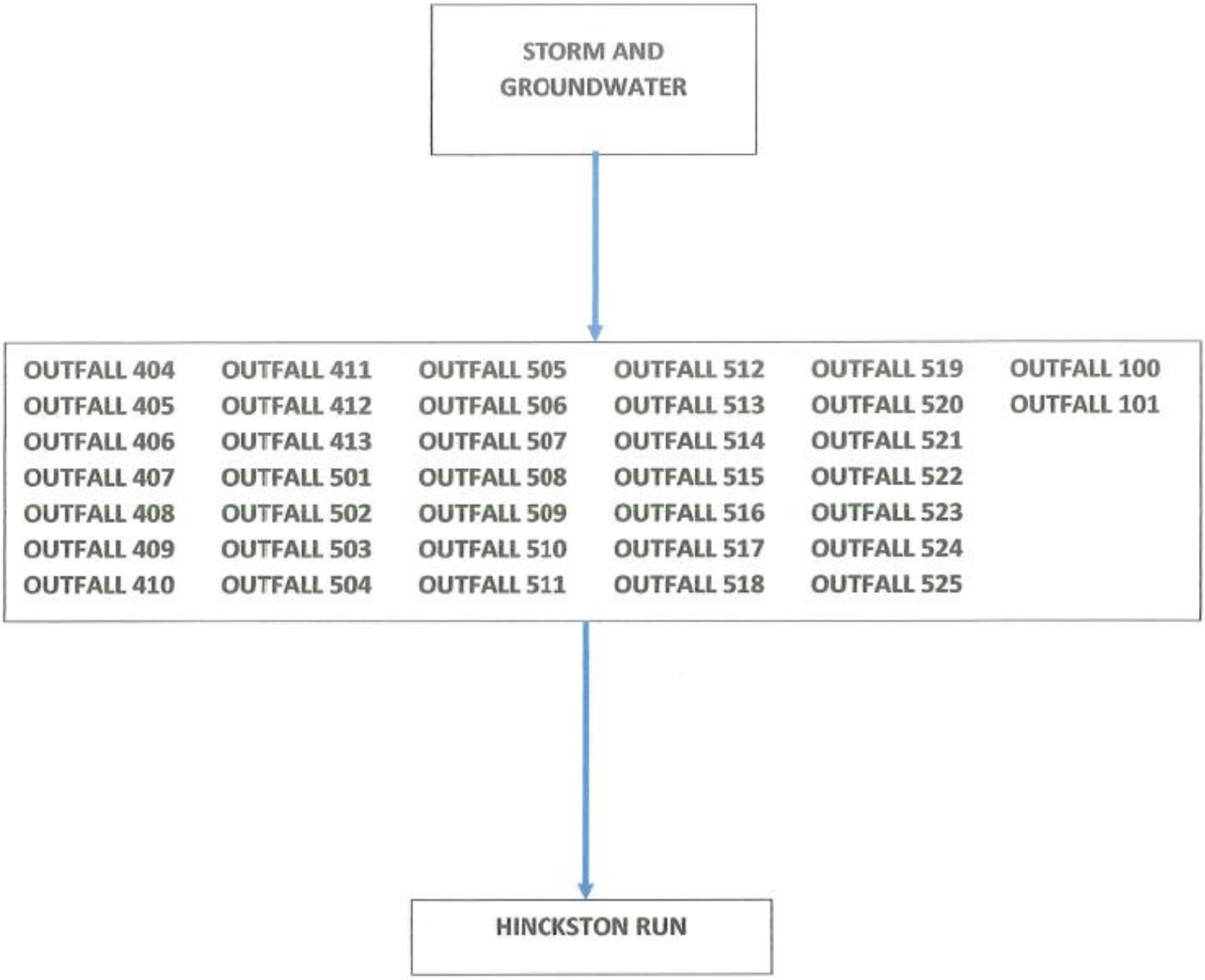


Scale: N W E S Approximate Scale 1000 0 1000 2000 FEET	Tecumseh Redevelopment, Inc. Johnstown Area NPDES Permit No. PA0002992
Reference: Geistown, PA U.S.G.S. Quadrangle Map 7.5 min. Series (Topographic) 1964, Photorevised 1981	**Topographic Map 2**

Appendix B – Details of TRI Outfalls and History of IMP 399 of Standard Forged Products, Inc. (Johnstown Recovery Systems, Inc./Cambria Industrial Metals)


STORM AND GROUNDWATER
STORM AND GROUNDWATER
OUTFALL 119
OUTFALL 801
OUTFALL 802
OUTFALL 803
OUTFALL 804
OUTFALL 805
OUTFALL 305
LITTLE CONEMAUGH RIVER
CONEMAUGH RIVER


QUEMAHONING RESERVOIR
589 GPM
*SEE "ATTACHMENT 2" FOR DETAILS ON JOHNSTOWN RECOVERY SYSTEMS, INC. (NPDES PERMIT NO. PA0216097)
JOHNSTOWN RECOVERY SYSTEMS, INC.
NON-CONTACT COOLING WATER*
589 GPM
STANDARD FORGED PRODUCTS, INC.
STORM & GROUND WATER*
IMP 399*
TECUMSEH REDEVELOPMENT, INC.
STORM & GROUND WATER
504 GPM (10-YR, 24-HR RAINFALL)
1800 GPM (10-YR, 24-HR RAINFALL)
OUTFALL 309
589 GPM + 504 GPM + 1800 GPM
CONEMAUGH RIVER


STORM AND GROUNDWATER
OUTFALL 404
OUTFALL 405
OUTFALL 406
OUTFALL 407
OUTFALL 408
OUTFALL 409
OUTFALL 410
OUTFALL 411
OUTFALL 412
OUTFALL 413
OUTFALL 501
OUTFALL 502
OUTFALL 503
OUTFALL 504
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OUTFALL 519
OUTFALL 520
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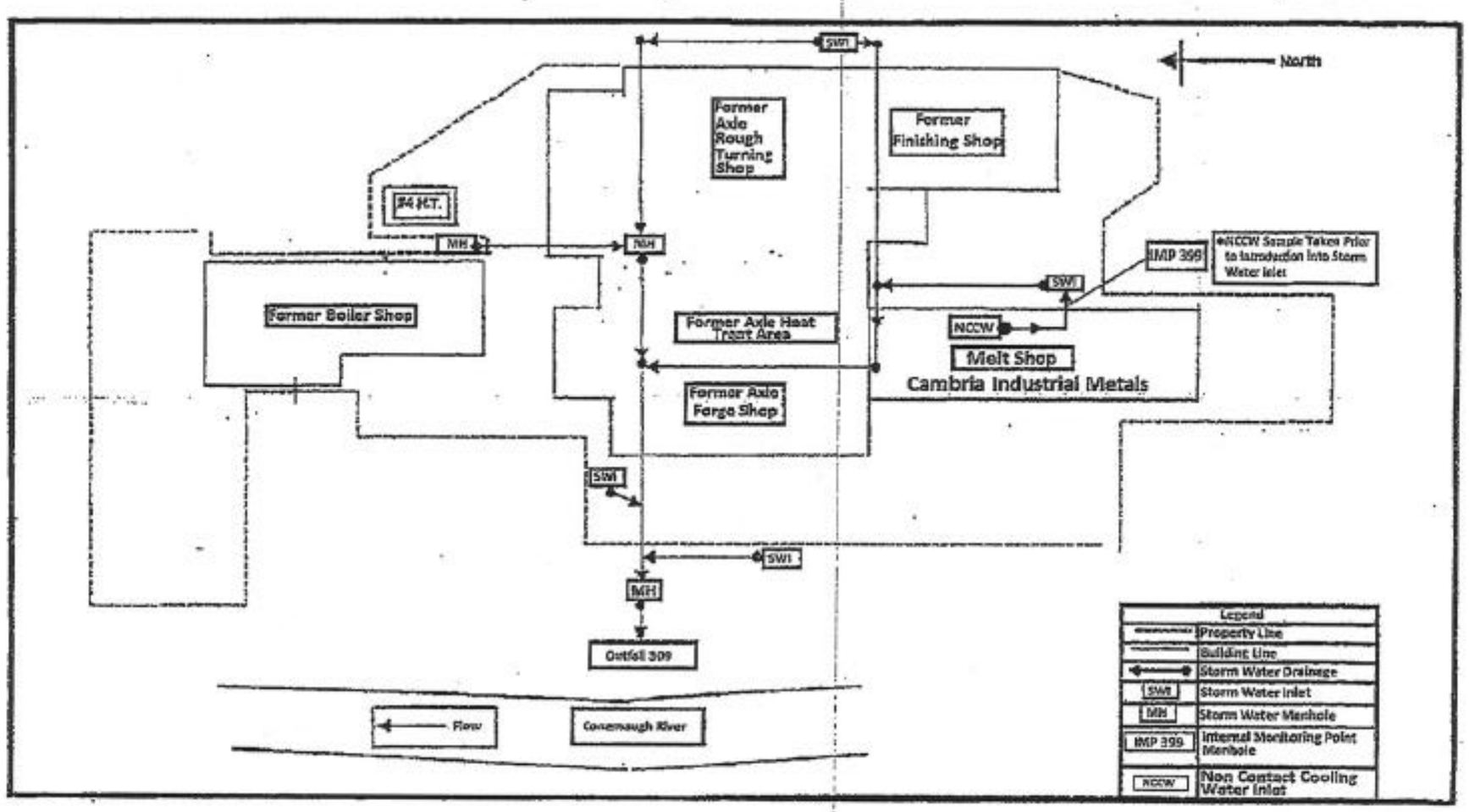
OUTFALL 522
OUTFALL 523
OUTFALL 524
OUTFALL 525
OUTFALL 100
OUTFALL 101
HINCKSTON RUN

Cambria Industrial Development Site Plan - Johnstown, Pa.



Appendix C – Stormwater Outfall Summary

Current Name(s) of Outfall(s)	Area Drained (ft^2)	Latitude	Longitude	Details of Drainage Area	Representative Outfall
119	5.924×10^6	40º 20' 02"	-78º 53' 50"	Stormwater from Former Franklin Coke Plant Area	119
305	1.35×10^6	40º 20' 02"	-78º 55' 28"	Stormwater from former Lower Works area	305
309	1.307×10^6	40º 20' 10"	-78º 55' 28"	Stormwater – shared discharge – from neighboring SFP property and TRI property	309
404	3,000	40º 20' 33"	-78º 55' 24"	Stormwater from former Rosedale Coke Plant area	406
405	3,000	40º 20' 33"	-78º 55' 24"		
406	5,400	40º 20' 33"	-78º 55' 24"		
407	18,500	40º 20' 33"	-78º 55' 24"		
408	3,000	40º 20' 33"	-78º 55' 24"		
409	3,750	40º 20' 33"	-78º 55' 24"		
410	10,500	40º 20' 34"	-78º 55' 24"		
411	14,800	40º 20' 34"	-78º 55' 24"		
412	92,000	40º 20' 34"	-78º 55' 24"		
413	3,000	40º 20' 35"	-78º 55' 24"		
501	31,925	40º 20' 36"	-78º 55' 20"	Stormwater from former Rosedale Coke Plant area	509
502	8,325	40º 20' 36"	-78º 55' 20"		
503	1.58×10^5	40º 20' 37"	-78º 55' 18"		
504	1.30×10^5	40º 20' 37"	-78º 55' 17"		
505	20,000	40º 20' 37"	-78º 55' 15"		
506	32,000	40º 20' 37"	-78º 55' 15"		
507	12,212	40º 20' 38"	-78º 55' 12"		
508	5,175	40º 20' 38"	-78º 55' 10"		
509	2.87×10^5	40º 20' 38"	-78º 55' 10"		
510	12,600	40º 20' 38"	-78º 55' 09"		
511	1.61×10^5	40º 20' 38"	-78º 55' 07"		
512	64,400	40º 20' 38"	-78º 55' 07"		
513	61,500	40º 20' 36"	-78º 55' 00"		
514	28,700	40º 20' 35"	-78º 54' 57"		
515	3.12×10^5	40º 20' 35"	-78º 54' 56"		
516	24,000	40º 20' 31"	-78º 54' 41"		
517	4,500	40º 20' 32"	-78º 54' 38"		
518	3.60×10^5	40º 20' 33"	-78º 54' 36"		
519	3.60×10^5	40º 20' 34"	-78º 54' 35"		
520	36,000	40º 20' 35"	-78º 54' 33"		
521	28,000	40º 20' 36"	-78º 54' 32"		
522	12,300	40º 20' 37"	-78º 54' 31"		
523	1,400	40º 20' 39"	-78º 54' 30"		
524	5,800	40º 20' 40"	-78º 54' 30"		
525	2.091×10^6	40º 20' 41"	-78º 54' 29"		
801	13,500	40º 20' 38"	-78º 51' 40"	Stormwater from Park Hill Slag Recovery area	805
802	7,400	40º 21' 38"	-78º 51' 40"		
803	8,900	40º 21' 39"	-78º 51' 41"		
804	1,500	40º 21' 39"	-78º 51' 41"		
805	1.74×10^5	40º 21' 39"	-78º 51' 41"		
1000	4.48×10^5	40º 21' 27"	-78º 54' 14"	Stormwater from closed hazardous and ferromanganese landfill area – Riders Area	1001
1001	4.92×10^5	40º 21' 47"	-78º 53' 38"		

Appendix D – Outfall 309 Sampling Results

ANALYSIS RESULTS TABLE
POLLUTANT GROUP 1

Please read instructions carefully before completing this form.

APPLICANT NAME	TECUMSEH REDEVELOPMENT, INC.

☒ Outfall / IMP Number 309 (Show location of sampling point on Line Drawing)
☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing)
☐ Intake Sampling Results (Specify Source: _____)
☐ Background (Upstream) Sampling Results (Specify Location: _____)
☐ New Discharge (Basis for Information: _____)

POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
BODs (mg/L)	3	8.2566	3	8.2566	3	8.2566	1	0	0.8	SM 5210 B
COD (mg/L)	20	55.044	20	55.044	20	55.044	1	0	5	HACH 8000
TOC (mg/L)	3.2	8.807	3.2	8.807	3.2	8.807	1	0	0.5	SM 5310 C-11
TSS (mg/L)	<2.0	<5.5044	<2.0	<5.5044	<2.0	<5.5044	1	1	2	SM 2540 D
Ammonia-Nitrogen (mg/L)	0.05	0.1376	0.05	0.1376	0.05	0.1376	1	0	0.01	EPA 350.1
Temperature (Winter) (°F)	46.05	XXX	46.05	XXX	46.05	XXX	38	XXX	XXX	EPA 170.1
Temperature (Summer) (°F)	61.61	XXX	61.61	XXX	61.61	XXX	38	XXX	XXX	EPA 170.1
pH – Minimum (S.U.)	7.15	XXX	XXX	XXX	7.15	XXX	38	XXX	XXX	SM 4500-H+
pH – Maximum (S.U.)	8.73	XXX	XXX	XXX	8.73	XXX	38	XXX	XXX	SM 4500-H+
Fecal Coliform (No./100 mL)	46.5	XXX	46.5	XXX	46.5	XXX	1	0	XXX	SM 9223 B
Oil and Grease (mg/L)	<1.4	<3.8531	<1.4	<3.8531	<1.4	<3.8531	1	1	1.4	EPA 1664 B
TRC (mg/L)	<0.100	XXX	<0.100	XXX	<0.100	XXX	1	1	0.1	SM 4500-CL G
Total Phosphorus (mg/L)	0.06	0.1651	0.06	0.1651	0.06	0.1651	1	0	0.005	EPA 200.7
TKN (mg/L)	<0.50	1.3761	<0.50	1.3761	<0.50	1.3761	1	1	0.50	HACH 10242
Nitrite + Nitrate-Nitrogen (mg/L)	0.64	1.7614	0.64	1.7614	0.64	1.7614	1	0	0.02	EPA 300.0
Total Dissolved Solids (mg/L)	499	1,373.35	499	1,373.35	499	1,373.35	1	0	1	SM 2540 C
Color (Pt-Co Units)	5.0	XXX	5.0	XXX	5.0	XXX	1	0	5.0	SM 2120 B
Bromide (mg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.1	EPA 300.0
Chloride (mg/L)	34.4	94.6757	34.4	94.6757	34.4	94.6757	1	0	0.2	EPA 300.0
Sulfate (mg/L)	174	478.88	174	478.88	174	478.88	1	0	0.5	EPA 300.0
Sulfide (mg/L)	<0.05	<0.1376	<0.05	<0.1376	<0.05	<0.1376	1	1	0.05	SM 4500-S2-D
Surfactants (mg/L)	0.03	0.0826	0.03	0.0826	0.03	0.0826	1	0	0.02	SM 5540 C
Fluoride (mg/L)	0.5	1.3761	0.5	1.3761	0.5	1.3761	1	0	0.05	EPA 300.0
Total Hardness (mg/L)	305	839.421	305	839.421	305	839.421	1	0	0.50	EPA 200.7

ANALYSIS RESULTS TABLE
POLLUTANT GROUP 2

Please read instructions carefully before completing this form.

APPLICANT NAME	TECUMSEH REDEVELOPMENT, INC.

☒ **Outfall / IMP Number 309** (Show location of sampling point on Line Drawing)
☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing)
☐ Intake Sampling Results (Specify Source: _____)
☐ Background (Upstream) Sampling Results (Specify Location: _____)
☐ New Discharge (Basis for Information: _____)

POLLUTANT GROUP 2 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Aluminum, Total (µg/L)	17.5	48.1635	17.5	48.1635	17.5	48.1635	1	0	5.00	EPA 200.8
Antimony, Total (µg/L)	1.1	3.0274	1.1	3.0274	1.1	3.0274	1	0	0.50	EPA 200.8
Arsenic, Total (µg/L)	3.6	9.9079	3.6	9.9079	3.6	9.9079	1	0	0.50	EPA 200.8
Barium, Total (µg/L)	49.5	136.2339	49.5	136.2339	49.5	136.2339	1	0	2.0	EPA 200.8
Beryllium, Total (µg/L)	<0.5	<1.3761	<0.5	<1.3761	<0.5	<1.3761	1	1	0.5	EPA 200.7
Boron, Total (µg/L)	283	778.8726	283	778.8726	283	778.8726	1	0	20.0	EPA 200.7
Cadmium, Total (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA 200.8
Chromium, Total (µg/L)	3.0	8.2566	3.0	8.2566	3.0	8.2566	1	0	0.50	EPA 200.8
Chromium, Hexavalent (µg/L)	<0.5	<1.3761	<0.5	<1.3761	<0.5	<1.3761	1	1	0.5	USGS I-1230-85
Cobalt, Total (µg/L)	1.0	2.7522	1.0	2.7522	1.0	2.7522	1	0	0.20	EPA 200.8
Copper, Total (µg/L)	6.1	16.7884	6.1	16.7884	6.1	16.7884	1	0	0.50	EPA 200.8
Cyanide, Total (µg/L)	540	1486.188	540	1486.188	540	1486.188	1	0	50	SM 4500-CN E
Iron, Total (µg/L)	354	974.2788	354	974.2788	354	974.2788	1	0	20.0	EPA 200.7
Iron, Dissolved (µg/L)	115	316.503	115	316.503	115	316.503	1	0	20.0	EPA 200.7
Lead, Total (µg/L)	3.9	10.7336	3.9	10.7336	3.9	10.7336	1	0	0.20	EPA 200.8
Manganese, Total (µg/L)	144	396.3168	144	396.3168	144	396.3168	1	0	1.0	EPA 200.8
Mercury, Total (µg/L)	<0.100	<0.2752	<0.100	<0.2752	<0.100	<0.2752	1	1	0.100	SM 3112 B
Molybdenum, Total (µg/L)	6.5	17.8893	6.5	17.8893	6.5	17.8893	1	0	0.50	EPA 200.8
Nickel, Total (µg/L)	7.1	19.5406	7.1	19.5406	7.1	19.5406	1	0	0.20	EPA 200.8
Phenols, Total (µg/L)	4.0	11.0088	4.0	11.0088	4.0	11.0088	1	0	2.50	EPA 420.1
Selenium, Total (µg/L)	2.5	6.8805	2.5	6.8805	2.5	6.8805	1	0	0.50	EPA 200.8
Silver, Total (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA 200.8
Thallium, Total (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA 200.8
Zinc, Total (µg/L)	11.1	30.5494	11.1	30.5494	11.1	30.5494	1	0	2.00	EPA 200.8

ANALYSIS RESULTS TABLE
POLLUTANT GROUP 3 (PAGE 1 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME | TECUMSEH REDEVELOPMENT, INC.

☒ **Outfall / IMP Number 309** (Show location of sampling point on Line Drawing)
☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing)
☐ Intake Sampling Results (Specify Source: _____)
☐ Background (Upstream) Sampling Results (Specify Location: _____)
☐ New Discharge (Basis for Information: _____)

POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acrolein (µg/L)	<1.00	<2.7522	<1.00	<2.7522	<1.00	<2.7522	1	1	1.00	EPA 624.1
Acrylonitrile (µg/L)	<0.500	<1.3761	<0.500	<1.3761	<0.500	<1.3761	1	1	0.500	EPA 624.1
Benzene (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA 624.1
Bromoform (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA 624.1
Carbon Tetrachloride (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA 624.1
Chlorobenzene (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA 624.1
Chlorodibromomethane (µg/L)	<0.40	<1.1009	<0.40	<1.1009	<0.40	<1.1009	1	1	0.40	EPA 624.1
Chloroethane (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA 624.1
2-Chloroethylvinyl Ether (µg/L)	<0.500	<1.3761	<0.500	<1.3761	<0.500	<1.3761	1	1	0.500	EPA 624.1
Chloroform (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA 624.1
Dichlorobromomethane (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA 624.1
1,1-Dichloroethane (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA 624.1
1,2-Dichloroethane (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA 624.1
1,1-Dichloroethylene (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA 624.1
1,2 Dichloropropane (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA 624.1
1,3-Dichloropropylene (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA 624.1
1,4-Dioxane (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Ethylbenzene (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA 624.1
Methyl Bromide (µg/L)	<0.50	<1.3761	<0.50	<1.3761	<0.50	<1.3761	1	1	0.50	EPA 624.1
Methyl Chloride (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA 624.1
Methylene Chloride (µg/L)	<0.40	<1.1009	<0.40	<1.1009	<0.40	<1.1009	1	1	0.40	EPA 624.1
1,1,2,2-Tetrachloroethane (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA 624.1
Tetrachloroethylene (µg/L)	<0.40	<1.1009	<0.40	<1.1009	<0.40	<1.1009	1	1	0.40	EPA 624.1

ANALYSIS RESULTS TABLE
POLLUTANT GROUP 3 (PAGE 2 OF 2)

Please read instructions carefully before completing this form.

APPLICANT NAME | TECUMSEH REDEVELOPMENT, INC.

☒ **Outfall / IMP Number 309** (Show location of sampling point on Line Drawing)
☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing)
☐ Intake Sampling Results (Specify Source: _____)
☐ Background (Upstream) Sampling Results (Specify Location: _____)
☐ New Discharge (Basis for Information: _____)

POLLUTANT GROUP 3 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Toluene (µg/L)	0.9	2.477	0.9	2.477	0.9	2.477	1	0	0.20	EPA624.1
1,2-Trans-Dichloroethylene (µg/L)	<0.50	<1.3761	<0.50	<1.3761	<0.50	<1.3761	1	1	0.50	EPA624.1
1,1,1-Trichloroethane (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA624.1
1,1,2-Trichloroethane (µg/L)	<0.50	<1.3761	<0.50	<1.3761	<0.50	<1.3761	1	1	0.50	EPA624.1
Trichloroethylene (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA624.1
Vinyl Chloride (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA624.1

ANALYSIS RESULTS TABLE
POLLUTANT GROUP 4

Please read instructions carefully before completing this form.

APPLICANT NAME TECUMSEH REDEVELOPMENT, INC.

☒ **Outfall / IMP Number 309** (Show location of sampling point on Line Drawing)
☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing)
☐ Intake Sampling Results (Specify Source: _____)
☐ Background (Upstream) Sampling Results (Specify Location: _____)
☐ New Discharge (Basis for Information: _____)

POLLUTANT GROUP 4 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
2-Chlorophenol (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA625
2,4-Dichlorophenol (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA625
2,4-Dimethylphenol (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA625
4,6-Dinitro-o-Cresol (µg/L)	<1.00	<2.7522	<1.00	<2.7522	<1.00	<2.7522	1	1	1.00	EPA625
2,4-Dinitrophenol (µg/L)	<1.00	<2.7522	<1.00	<2.7522	<1.00	<2.7522	1	1	1.00	EPA625
2-Nitrophenol (µg/L)	<0.50	<1.3761	<0.50	<1.3761	<0.50	<1.3761	1	1	0.50	EPA625
4-Nitrophenol (µg/L)	<0.50	<1.3761	<0.50	<1.3761	<0.50	<1.3761	1	1	0.50	EPA625
P-Chloro-m-Cresol (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA625
Pentachlorophenol (µg/L)	<0.50	<1.3761	<0.50	<1.3761	<0.50	<1.3761	1	1	0.50	EPA625
Phenol (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA625
2,4,6-Trichlorophenol (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA625

ANALYSIS RESULTS TABLE
POLLUTANT GROUP 5 (PAGE 1 OF 3)

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APPLICANT NAME TECUMSEH REDEVELOPMENT, INC.

☒ **Outfall / IMP Number 309** (Show location of sampling point on Line Drawing)
☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing)
☐ Intake Sampling Results (Specify Source: _____)
☐ Background (Upstream) Sampling Results (Specify Location: _____)
☐ New Discharge (Basis for Information: _____)

POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Acenaphthene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Acenaphthylene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Acrylamide (µg/L)	<5.0	<13.761	<5.0	<13.761	<5.0	<13.761	1	1	5.0	EPA8015C
Anthracene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Benzidine (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.10	EPA625
Benzo(a)Anthracene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Benzo(a)Pyrene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
3,4-Benzo-fluoranthene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Benzo(*ghi*)Perylene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Benzo(*k*)Fluoranthene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Bis(2-*Chloro-ethoxy*)Methane (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Bis(2-*Chloroethyl*)Ether (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Bis(2-*Chloro-isopropyl*)Ether (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Bis(2-*Ethylhexyl*)Phthalate (µg/L)	77.3	212.7451	77.3	212.7451	77.3	212.7451	1	0	20.0	EPA625
4-Bromophenyl Phenyl Ether (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Butyl Benzyl Phthalate (µg/L)	1.00	2.7522	1.00	2.7522	1.00	2.7522	1	0	1.00	EPA625
2-Chloronaphthalene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
4-Chlorophenyl Phenyl Ether (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Chrysene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625

ANALYSIS RESULTS TABLE
POLLUTANT GROUP 5 (PAGE 2 OF 3)

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☐ New Discharge (Basis for Information: _____)

POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Dibenzo(a,h)Anthracene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
1,2-Dichlorobenzene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
1,3- Dichlorobenzene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
1,4- Dichlorobenzene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
3,3'-Dichlorobenzidine (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA625
Diethyl Phthalate (µg/L)	<1.00	<2.7522	<1.00	<2.7522	<1.00	<2.7522	1	1	1.00	EPA625
Dimethyl Phthalate (µg/L)	<1.00	<2.7522	<1.00	<2.7522	<1.00	<2.7522	1	1	1.00	EPA625
Di-n-Butyl Phthalate (µg/L)	<1.00	<2.7522	<1.00	<2.7522	<1.00	<2.7522	1	1	1.00	EPA625
2,4-Dinitrotoluene (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA625
2,6-Dinitrotoluene (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA625
Di-n-Octyl Phthalate (µg/L)	<1.00	<2.7522	<1.00	<2.7522	<1.00	<2.7522	1	1	1.00	EPA625
1,2-Diphenylhydrazine (as *Azobenzene*) (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Fluoranthene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Fluorene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Hexachlorobenzene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Hexechlorobutadiene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Hexachlorocyclopentadiene (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA625
Hexachloroethane (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625

ANALYSIS RESULTS TABLE
POLLUTANT GROUP 5 (PAGE 3 OF 3)

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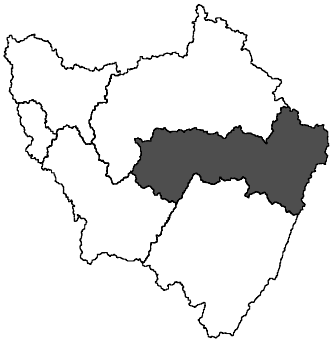
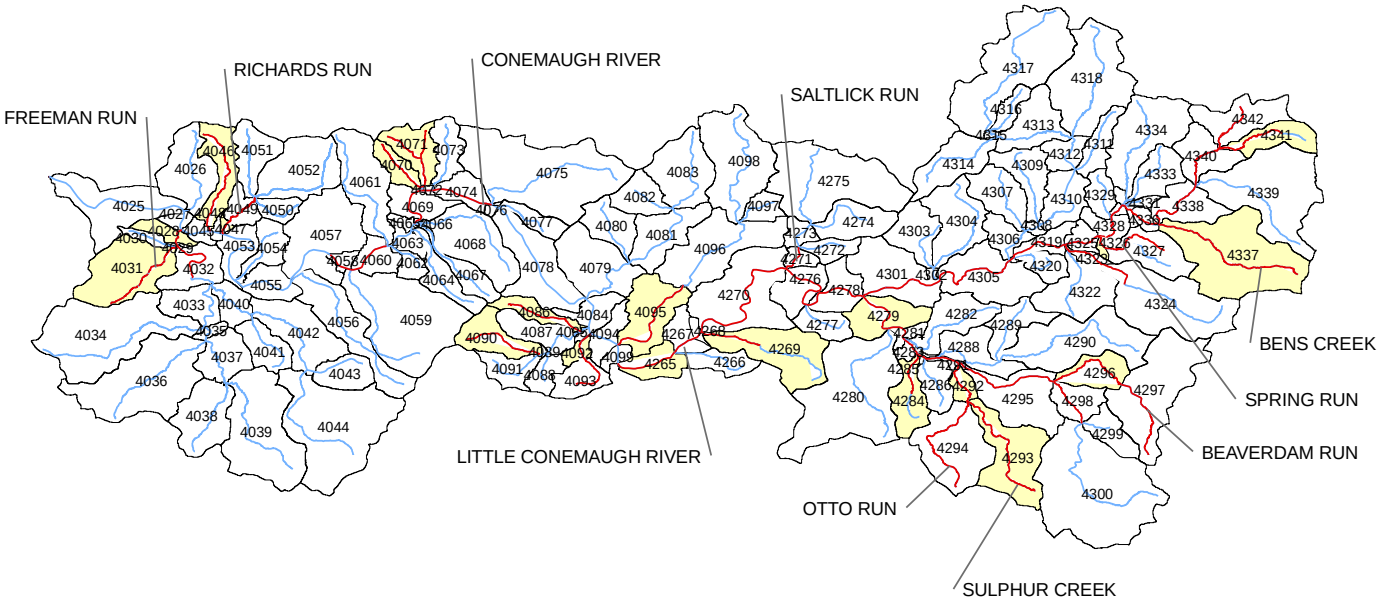
POLLUTANT GROUP 5 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Indeno(1,2,3-cd)Pyrene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Isophorone (µg/L)	<0.20	<0.5504	<0.20	<0.5504	<0.20	<0.5504	1	1	0.20	EPA625
Naphthalene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Nitrobenzene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
N-Nitroso-di-methylamine (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
N-Nitroso-di-n-propylamine (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
N-Nitroso-di-n-phenylamine (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Phenanthrene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
Pyrene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625
1,2,4-Trichlorobenzene (µg/L)	<0.10	<0.2752	<0.10	<0.2752	<0.10	<0.2752	1	1	0.10	EPA625

Appendix E: TMDL Considerations

Region 5: Conemaugh River





Data Sources: NHD, PADEP
Map Projection: Albers Equal Area NAD 83

0 2 4 8 12 16 Miles

Region	Sub-watershed	Pipe	Metal	Baseline Load (lbs/yr)	Baseline Conc. (mg/L)	Allocated Load (lbs/yr)	Allocated Conc. (mg/L)	% Reduction
5	4265	119	Aluminum	3	0.75	3	0.75	0
5	4265	119	Iron	6	1.50	6	1.50	0
5	4265	119	Manganese	4	1.00	4	1.00	0
5	4099	305	Aluminum	3	0.75	3	0.75	0
5	4099	305	Iron	6	1.50	6	1.50	0
5	4099	305	Manganese	4	1.00	4	1.00	0
5	4099	309	Aluminum	1,965	0.75	1,965	0.75	0
5	4099	309	Iron	3,930	1.50	3,930	1.50	0
5	4099	309	Manganese	2,620	1.00	2,620	1.00	0
5	4270	801	Aluminum	3	0.75	3	0.75	0
5	4270	801	Iron	6	1.50	6	1.50	0
5	4270	801	Manganese	4	1.00	4	1.00	0
5	4270	802	Aluminum	3	0.75	3	0.75	0
5	4270	802	Iron	6	1.50	6	1.50	0
5	4270	802	Manganese	4	1.00	4	1.00	0
5	4270	803	Aluminum	3	0.75	3	0.75	0
5	4270	803	Iron	6	1.50	6	1.50	0
5	4270	803	Manganese	4	1.00	4	1.00	0
5	4270	804	Aluminum	3	0.75	3	0.75	0
5	4270	804	Iron	6	1.50	6	1.50	0
5	4270	804	Manganese	4	1.00	4	1.00	0
5	4270	805	Aluminum	3	0.75	3	0.75	0
5	4270	805	Iron	6	1.50	6	1.50	0
5	4270	805	Manganese	4	1.00	4	1.00	0