pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0000892**
Facility Type	**Industrial**	APS ID	**585255**
Major / Minor	**Minor**	Authorization ID	**635342**

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

Applicant and Facility Information

Applicant Name	**Westinghouse Electric Company, LLC**	Facility Name	**Specialty Metals Plant**
Applicant Address	559 Westinghouse Road	Facility Address	559 Westinghouse Road
	Blairsville, PA 15717		Blairsville, PA 15717
Applicant Contact	Michael Christoforetti	Facility Contact	Adam Caldwell
Applicant Phone	724-459-4164	Facility Phone	724-459-4159
Client ID	145015	Site ID	245371
SIC Code	3356	Municipality	Derry
SIC Description	Rolling, Drawing and Extruding of Nonferrous Metals, except Copper and Aluminum	County	Westmoreland
Date Application Received	June 1, 2006	EPA Waived?	No
Date Application Accepted	June 6, 2006	If No, Reason	TMDL
Purpose of Application	Renewal of NPDES Permit		

Summary of Review

Background

The Department received an NPDES permit renewal application for Westinghouse Electric Company LLC's Specialty Metals Plant in Blairsville of Derry Township of Westmoreland County on June 1, 2006. The current permit was issued on July 16, 2001 and expired July 16, 2006 but has been administratively extended.

Facility Description

The Specialty Metals Plant was founded in 1955. Numerous products including steam generator tubing have been developed and manufactured at the plant during its history. In 1985, the plant ceased manufacturing steam generator tubing but continues to manufacture Zircaloy tubing for use in the commercial nuclear power industry.

The approximately 485-acre plant property is approximately one quarter mile from the Conemaugh River. The manufacturing operations are in the western area of the property. The office area is in the northeastern area. The central-eastern area of the property houses the numerous treatment plants. A pond located in the southern area was previously used as source water for the plant but has since been abandoned following the plant's connection to public water. The pond has been left in place and is maintained for aesthetic purposes. A railroad runs across the northern end of the plant in an east-west direction.

Outfall Description

The facility has four outfalls that all discharge to the Conemaugh River which is designated as a Warm Water Fishery (WWF) in 25 PA Code Chapter 93. Outfall 001 is piped directly to the Conemaugh River. The end of pipe is submerged below the

Approve	Deny	Signatures	Date
X		Adam Olesnanik, P.E. / Environmental Engineer	May 13, 2024
X		Michael E. Fifth, P.E. / Environmental Engineer Manager	May 31, 2024

Summary of Review

normal water level. Three internal monitoring points (IMP), each with a distinct source of wastewater are the only connections into this pipe. The sources are process wastewater (101), sanitary wastewater (201) and remediated groundwater (301).

- Internal Monitoring Point (IMP) 101 conveys process wastewater from the Zircaloy tubing manufacturing process. A portion of the city water is pretreated prior to manufacturing in an Advanced Water Treatment plant consisting of softening, reverse osmosis, ion exchange and activated carbon. The Zirc Processing Finishing Area includes grinding/polishing and rinses, alkaline cleaning and rinses, and ultrasonic testing and rinses. The Zirc Processing Westro Area includes drawing/forming, grinding/polishing and rinses, alkaline cleaning and rinses, and surface etching (pickling) and rinses. In addition to these areas of manufacturing, there is Pilger Lube Dewatering System Wastewater and cooling tower blowdown. These wastewaters along with Zirc Processing wastewater are treated in the Industrial Wastewater Treatment Plant. A complete replacement plant was approved under Water Quality Management Part II Permit 6504202 on June 8, 2004 and the plant was installed shortly after. The original plant was decommissioned after the replacement plant was put into full time service. The Industrial Wastewater Treatment Plant consists of a 41,000 gallon equalization tank, two 2,000 gallon pH neutralization tanks in series (lime, sulfuric acid or alum addition depending on pH), 500 gallon flash mix tank (lime and polymer addition), lamella plate clarifier, a 150 gallon high dense sludge tank (receives clarified sludge for return to the second neutralization tank), 2500 gallon hold tank and filter press, two 20 sq. ft. sand filters, and finally a 2500 gallon pH adjustment tank. Solids from the filter press are collected in a dumpster and hauled offsite for disposal.

- IMP 201 is the discharge of sanitary/domestic wastewater. The sanitary treatment consists of flow equalization, screening, a sequential batch reactor and ultraviolet (UV) disinfection. Chlorination disinfection is available for use as a backup.

- IMP 301 is for the discharge of an existing groundwater remediation system. The system utilizes granular activated carbon for adsorption of primarily trichloroethylene (TCE). The system is designed for a flow of up to 20 gpm of TCE contaminated groundwater.

Outfall 002 discharges stormwater from roof drains and other catch basins through a buried pipe network that daylights on the property. This discharge then forms a drainage swale across the adjacent U. S. Army Corps of Engineers property that is a part of the Conemaugh River Flood Control Dam Project, and then into the Conemaugh River. In addition to stormwater, groundwater has infiltrated the piping network and also discharges through Outfall 002. The groundwater has historically show to contain TCE at detectable levels.

Two new outfalls, Outfall 003 and 004 also convey stormwater from roof drains. Outfall 003 is directed to the onsite lake to the south, and Outfall 004 is directed to the railroad drainage swale in the north which flows to the Conemaugh River.

Sewage Treatment Plant

The plant sewage is treated at the Sanitary Wastewater Treatment Plant consisting of a wet well, grinder pumps, bar screen, aeration tanks, clarifier, clarifier strainer, UV disinfection and an aerobic digester. The clarifier is operated to go through intervals of aeration during which time there is no discharge from the unit. Lime is continuously added in the wet well and added as needed to the aeration tank. Sludge is hauled offsite by a third-party to either the Johnstown Regional Sewage WWTP or the privately owned McCutcheon Enterprises Biosolids Treatment Plant approximately four to five times per year. The plant design and operation was approved by Water Quality Management Part II Permit 6594409 (issued December 27, 1994). Numerous camera inspections have been conducted throughout the years. A stormwater line was rerouted from the sewage treatment plant. Since that time, no other roof drains have been found to be tied to the sewage plant.

Drainage Area

The Outfall 002 drainage area covers most of the industrial buildings and is the largest of the three stormwater drainage areas, by far. The drainage area is approximately 23.3 acres. Improvements have been made to the system over the years, including the following since the current permit was issued: (1) abandonment of approximately 3,000 linear feet of storm pipe within and adjacent to the southern half of the Westro Building, (2) installation of approximately 800 feet of new storm pipe, (3) rerouting of certain roof drains above ground and/or to alternate discharge points where feasible and (4) repair/replacement of at least 10 catch basins and sealing of several manholes to mitigate infiltration into the system. Video inspections conducted within the past two years have identified additional locations of possible infiltration, which Westinghouse is systemically addressing, including the planned abandonment of a catch basin at the south end of the

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Westro Building and regrading of soils to eliminate ponding in the area. This location is within or immediately adjacent to the portion of the site with the highest detected TCE concentrations in groundwater, and Westinghouse believes this improvement will reduce the TCE loadings at Outfall 002. It is noted that during dry periods, the water table drops sufficiently such that no infiltration occurs in the vicinity of this catch basin. Additionally, Westinghouse plans to install a new manhole in another pipe segment and slip-line the associated 600-foot segment in order to address infiltrating tree roots. See Attachment A for a drawing supplied by Westinghouse showing the stormwater piping network to Outfall 002.

The Outfall 003 drainage area is the western portion of the Westro Building roof outside of the most northern corner as well as an access road running along the western side of the building. Stormwater in this area drains to a storm water diversion swale just west of the access road and runs from north to south conveying the stormwater to the onsite lake. A large wooded section of the property outside of the industrial activity also flows into the swale. Outfall 003 itself is located at the downstream end of a culvert that carries the swale drainage under an access road.

The Outfall 004 drainage area is the northwestern corner of the Westro Building roof, a part of the access road and the hazardous waste storage building area. These areas drain to a catch basin at the northern end of the building and enters into a swale that runs along the railroad tracks north of the site. The swale is owned by a third-party. Zirconium chip drums (a recyclable material) and zirconium waste drums (a residual waste) are stored in the outside waste and recyclable storage area. Lids cover the drums; however, lids are not sealed until they are ready for shipment. Small quantities

Correspondences through 2008 – Trichloroethylene (TCE) Contamination in Groundwater

Chlorinated solvents were historically used in the manufacturing operations. TCE was used to degrease steam generator tubing up until 1985 when the product line was discontinued. The historic use of TCE has impacted groundwater at the plant. These historic impacts have been characterized and documented in a series of reports submitted to the Department, including the “Remedial Investigation Report” (November 19, 2003) and the “Addendum, Remedial Investigation Report” (August 1, 2005). The TCE migrated through the groundwater and stormwater conveyance piping to reach the Conemaugh River, a surface water of the Commonwealth.

Westinghouse first identified concentrations of TCE of approximately 50 ug/L in surface water in the unnamed tributary in the May 1995 Data Summary Report, Phase I Site Investigation. Subsequent investigation later in 1995 further evaluated the nature and extent of VOC contamination in shallow and deep groundwater and select soils at the facility. In December of 1995, the Data Summary Report, Phase II Investigation, Volumes I-III identified elevated concentrations of TCE in monitoring well MW-13A located at the southwest corner of the Westro Building. Westinghouse notified the Department of the TCE detections in a comment letter to its 1996 NPDES permit. In 1996, Westinghouse identified three source areas of the TCE: south of Westro Building (AOI 1), south of Industrial Waste Treatment Plant (AOI 2), and northeast fill area (AOI 3). In 1997, Westinghouse first proposed remedial alternatives to address the three identified source areas at the facility in an Engineering Evaluation Report submitted to the Department. In 1998, Westinghouse submitted for the Department's review remedial design work plans to Address the AOI 1 and AOI 2 source areas which the Department approved in July 1998. This approval allowed for construction of a groundwater recovery and treatment system. At the time, it was thought that the French drain collecting groundwater upgradient of the industrial wastewater sludge filter/drying beds was the primary source of the TCE in the unnamed tributary. Construction commenced in March 1999 and became operational in July 1999. A Two-Year Quarterly Groundwater and Surface Water Monitoring Report submitted to the Department in 2000 noted the system was effective in reducing overall VOC source concentration in the AOI 2 source area, but sampling data indicated the system was not effective in appreciably reducing the TCE concentration in the UNT.

A renewed NPDES permit was issued in 2001 with TCE effluent limits imposed on IMP 301 with a sampling frequency of 2/month. Outfall 002 was not provided any effluent limitations and instead referred to Condition No. 9 in Part C which stated, “…all storm water discharges shall be composed entirely of uncontaminated storm water…”. Per the series of reports from 2001 through 2008, the discharge from Outfall 002 contained elevated TCE. The TCE-impacted groundwater has infiltrated portions of the underground stormwater conveyance system that discharges into the unnamed tributary of the Conemaugh River. At times, the instream concentration of TCE in the tributary exceeded the human health criterion of 2.7 ug/L as set forth in 25 Pa. Code Chapter 16 (as of 2008). The current human health criterion in Chapter 93 is 0.6 ug/L and is considered to have a cancer risk level (CRL).

In November 2003, Westinghouse submitted a "Remedial Investigation Report" which determined "chlorinated solvent storage [formerly located in the South Westro Building] and degreasing operations have been identified as the potential source areas for VOCs in groundwater in AOI 1…". Use of chlorinated solvents at the Specialty Metals Plant was discontinued around 1986. Primary constituents of concern were cis-1,2-dichloroethene; 1,1,1-Trichloroethylene; 1,1,2-Trichloroethylene; and 1,1-

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dichloroethene. In December 2005, the Department approved the "Remedial Investigation Report" but disapproved the "Focused Risk Assessment" which stated that methylene chloride exceeded human health the water quality criterion in 4 of 55 samples and TCE exceeded human health WQC in 30 of 55 samples. Westinghouse noted that the Focused Risk Investigation Assessment demonstrates human health criteria in the UNT are attained based on use of alternative site-specific exposure factors as allowed under 25 Pa Code 250.406(c)(2). On January 13, 2006 Westinghouse filed a Notice of Appeal in response to the Department's December 15, 2005 letter disapproving the Focused Risk Assessment portion of the Risk Investigation and disapproving that the Risk Assessment Report proposed alternative site-specific criterion be applied to the point source discharge from Outfall 002. On May 31, 2006 Westinghouse submitted to the Department a Petition for Use Re-designation and a Petition for Site-Specific Water Quality Criterion. On May 23, 2006 Westinghouse withdrew the petitions.

On July 18, 2007, Westinghouse submitted to the Department for review the “Evaluation of Remedial Alternative, Storm Water Rerouting/Treatment of Base Flow, Westinghouse Electric Company LLC, Specialty Metals Plant – Blairsville, Pennsylvania” (Cummings/Riter Consultants, Inc. – July 18, 2007)(the “Rerouting Plan”). In the Rerouting Plan, Westinghouse estimated implementation of the proposed actions should reduce long-term average TCE discharges from Outfall 002 by 90 to 95 percent from current conditions based on theoretical calculations. At least two-thirds of the total volume of groundwater infiltration into the storm sewer system would be eliminated. It was found that the laterals in the South Westro Building area feeding CRSW-16 and CRSW-10 are the most significant sources of Trichloroethylene contributing to the Outfall 002 discharge. The wet-weather sampling result at the South Westro Building catch basin CB-1 indicated the French drain discharge may be contributing a significant amount of TCE in wet-weather conditions. Westinghouse defined several tasks in the Rerouting Plan to mitigate the volatile organic compounds (VOCs) detected in the surface water discharge to the unnamed tributary. These proposed tasks were:

1. Reroute Westro Building center roof drains to a new storm sewer west of the building and discharge to a pond, allowing the existing north/south sewer line inside the building to be used exclusively for groundwater collection.
2. Reroute North Westro Building roof drains to existing Outfall 004 at the north end of the property.
3. Install a new storm sewer west of the Westro Building to replace an existing storm sewer. The new sewer would be approximately 1,170 feet long with several catch basins along the sewer. Discharge would be to the pond south of the Westro Building. The elevation of the pond discharge would need to be lowered by 2 to 3 feet to allow for gravity flow and may require approval from the Bureau of Dam Safety.
4. Install a new storm sewer east of the Westro building with several roof and yard drains being rerouted to this line which would tie into the main east/west storm sewer. This would allow the storm sewer immediately east of the South Westro Building to be used exclusively for groundwater collection.
5. Install a new storm sewer north of the existing sewer between manholes WMH-2 and WMH-11 to intercept various storm lines entering the main east/west line from the north.
6. Reroute storm drainage at the Westro Office Building to manhole WMH-11 and plug the sewer at Manhole WMH-1 and CRSW-25.
7. Install a new groundwater collection sump near manhole WMH-11 to collect groundwater in the storm sewers inside and immediately east of the Westro Building and pump to the existing groundwater treatment system. The sump would be pre-cast concrete, six-foot diameter, and 12 foot deep. A Ripley’s dam would be installed around the east-west collection trunkline that discharges at Outfall 002 with collected flows routed to the treatment system.
8. Collect water from the French drain south of the Westro Building into a new sump that would be pumped to the new sump as Part of Task 7.
9. Install a new double-walled conveyance line approximately 800-feet in length from the groundwater collection sump (Task 7) to the existing groundwater treatment system. It was estimated that the typical groundwater flow from this new sump would be 4 to 6 gpm. It was anticipated that the existing groundwater treatment system would need an expanded capacity to accommodate this additional loading.
10. Submit modifications to the existing NPDES permit and possibly the Water Quality Management Part II Permit for the groundwater treatment system.

See Appendix B for a figure detailing the 2007 sampling events locations and data, and the proposed new storm sewer, new groundwater conveyance pipe and existing stormwater segments to be used to collect infiltrating groundwater. These figures are from the Rerouting Plan submitted by Westinghouse.

As of 2007, there was significant infiltration of TCE-contaminated groundwater into the stormwater conveyance pipe. Outfall 002 was estimated to discharge approximately 15 to 20 pounds of TCE per year. Stormwater segregation and groundwater treatment was estimated to result in removal of approximately 95% of the TCE annual load.

Summary of Review

Correspondences 2008 – Installation of New Pilger Process

The Department received a letter from Westinghouse on July 30, 2008 regarding a request to discharge collected groundwater anticipated from the installation of a new pilger process. The process required excavation to install a foundation and basement within the confines of the Westro II Building, similar to those currently used in the existing pilger operations. The initial excavation required dewatering of any groundwater infiltration until the concrete pour was complete and the concrete set. The entire process was estimated to require 6 to 8 weeks, 4 of which would potentially need dewatering from the pit. It was estimated the worst-case scenario for dewatering efforts would result in an initial production of up to 100,000 gallons per day with flow decreasing to 15,000 to 20,000 gallons per day shortly thereafter based on modeling performed by consultants. The total discharge to the Outfall 002 stormwater sewer was estimated to be less than 1 million gallons over the four-week period. The project was expected to commence as early as October 2008.

A treatment system was proposed for the groundwater withdrawn from the side of the excavation nearest the contamination plume. The system would consist of a 1000-gallon flow equalization tank, dual bag filters for solids removal, aqueous phase carbon adsorption via two 2,000-pound adsorbers operating in series, and ancillary equipment such as pumps, gauges, meters and piping. The hydraulic capacity would be approximately 50 gpm. Based on an assumption of 100 ug/L of TCE in the influent and 20 pounds of carbon per pound of TCE, approximately 120 million gallons of water could be treated prior to breakthrough of the first carbon vessel. The remainder of the groundwater withdrawn from the excavation would consist of only flow equalization and solids filtration with a capacity of 50 gpm. In total, operating 24 hours per day, seven days per week for the during of the four-week dewatering phase, the average discharge rate would be approximately 15 gpm with a maximum rate of 70 gpm.

A temporary discharge authorization was provided to Westinghouse in November 2008 for the treatment and discharge of the groundwater resulting from the excavation to an approximately 10' depth. Installation of the concrete pit started in December 2008 and was completed in January 2009. No water has been discharged from this equipment since that date.

Recent Correspondences in 2020 through Current – NPDES Application and Groundwater Updates

Westinghouse has replaced much of the stormwater infrastructure and is planning to install more. However, Westinghouse did not implement the construction of the rerouting of the groundwater in the impacted area by the Zircaloy Building to the existing treatment system. It was determined that this rerouting would overwhelm the design capacity of the treatment system. Attachment C contains a list of completed repairs and upgrades and planned repairs and upgraded for the storm sewer system.

As of August 2020, the Outfall 002 discharge had an average 13.1 ug/L and a maximum 23.9 ug/L TCE in three samples collected in 2020. In November 2021, The TCE concentration ranged from 6.01 ug/L to 25 ug/L in dry weather samples at a flow rate of approximately 2 gpm. So, even after the replacement stormwater infrastructure, the groundwater in the impacted area is still infiltrating and discharging via Outfall 002.

Conclusion

It is recommended that a draft permit be issued for public comment for renewal of NPDES permit PA0000892.

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.	001 (IMP 101, 201, and 301)	Design Flow (MGD)	0.1035 (0.090, 0.0037, and 0.0098)
Latitude	40º 26' 39.88"	Longitude	-79º 18' 0.21"
Quad Name	Blairsville	Quad Code	1511
Wastewater Description:	Process and miscellaneous wastewater (IMP 101), sanitary wastewater (IMP 201) and groundwater remediation (IMP 301)		

Receiving Waters	Conemaugh River (WWF)	Stream Code	43832
NHD Com ID	123714716	RMI	17.0
Drainage Area	890 sq. mi.	Yield (cfs/mi^2)	0.094
Q_{7-10} Flow (cfs)	83.4	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	910	Slope (ft/ft)	0.0001
Watershed No.	18-D	Chapter 93 Class.	WWF
Existing Use	WWF (non-attaining)	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, pH, Total Suspended Solids (TSS)		
Source(s) of Impairment	Acid Mine Drainage		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Background/Ambient Data		Data Source
pH (SU)	7.0	Default
Temperature (°F)	Ambient	Default
Hardness (mg/L)	100	Default
Other:	N/A	N/A

Nearest Downstream Public Water Supply Intake		Saltsburg Municipal Waterworks	
PWS Waters	Conemaugh River	Flow at Intake (cfs)	124
PWS RMI	0.55	Distance from Outfall (mi)	16.45

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	Intermittent and Variable* 2 gpm dry weather flow
Latitude	40º 26' 43.28"	Longitude	-79º 18' 17.46"
Quad Name	Blairsville	Quad Code	1511
Wastewater Description:	Stormwater and Groundwater		
Receiving Waters	Conemaugh River (WWF)	Stream Code	43832
NHD Com ID	123714716	RMI	16.8
Drainage Area	890 sq. mi.	Yield (cfs/mi^2)	0.094
Q_{7-10} Flow (cfs)	83.4	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	910	Slope (ft/ft)	0.0001
Watershed No.	18-D	Chapter 93 Class.	WWF
Existing Use	WWF (non-attaining)	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, pH, Total Suspended Solids (TSS)		
Source(s) of Impairment	Acid Mine Drainage		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Background/Ambient Data		Data Source
pH (SU)	7.0	Default
Temperature (°F)	Ambient	Default
Hardness (mg/L)	100	Default
Other:	N/A	N/A

Nearest Downstream Public Water Supply Intake	Saltsburg Municipal Waterworks		
PWS Waters	Conemaugh River	Flow at Intake (cfs)	124
PWS RMI	0.55	Distance from Outfall (mi)	16.25

* In 2006, Westinghouse estimated that under dry weather conditions the discharge from Outfall 002 is approximately 5 to 10 gpm. In November 2021, Westinghouse re-evaluated the dry weather flow over a 14-day period and estimated it to currently be approximately 2 gpm.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	003		
Latitude	40º 26' 39.72"	Longitude	-79º 18' 36.46"
Quad Name	Blairsville	Quad Code	1511
Wastewater Description:	Stormwater		
Receiving Waters	Conemaugh River (WWF)	Stream Code	43832
NHD Com ID	123714716	RMI	17.3
Watershed No.	18-D	Chapter 93 Class.	WWF
Existing Use	WWF (non-attaining)	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, Ph, Total Suspended Solids (TSS)		
Source(s) of Impairment	Acid Mine Drainage, Acid Mine Drainage, Acid Mine Drainage		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Discharge, Receiving Waters and Water Supply Information

Outfall No.	004		
Latitude	40º 26' 53.91"	Longitude	-79º 18' 33.51"
Quad Name	Blairsville	Quad Code	1511
Wastewater Description:	Stormwater		
Receiving Waters	Conemaugh River (WWF)	Stream Code	43832
NHD Com ID	123714716	RMI	16.7
Watershed No.	18-D	Chapter 93 Class.	WWF
Existing Use	WWF (non-attaining)	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, Ph, Total Suspended Solids (TSS)		
Source(s) of Impairment	Acid Mine Drainage, Acid Mine Drainage, Acid Mine Drainage		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Treatment Facility Summary				
Treatment Facility Name: Industrial Wastewater Treatment Plant (IMP 101)				
WQM Permit No.	**Issuance Date**			
6504202	June 8, 2004			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Design Flow (MGD)**
Industrial	N/A	Flow equalization, Neutralization, Chemical Precipitation, Flocculation Sedimentation, Sand Filtration, Neutralization	N/A	0.090 MGD

Changes Since Last Permit Issuance: At the time the current NPDES permit was issued the facility was utilizing the old treatment plant covered by WQM Permit No. 6587201. This new plant added a filter press to replace sludge drying beds, an extra chemical treatment tank and an extra sand filter. There was no increase in flow and no production expansion at the factory, the purpose of the new plant was to address some safety issues and provide better fluoride treatment.

Treatment Facility Summary				
Treatment Facility Name: Sanitary Treatment Plant (IMP 201)				
WQM Permit No.	**Issuance Date**			
6594409-T1	August 10, 1999			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sanitary	Secondary	Equalization, Sequential Batch Reactors, UV Disinfection	UV System (Backup Chlorination)	0.0037 MGD
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.0037 MGD	2.4lbs VSS/day/1000 cu.ft.	Not Overloaded	None	Third-party hauling and offsite disposal

Treatment Facility Summary				
Treatment Facility Name: Groundwater Treatment System (IMP 301)				
WQM Permit No.	**Issuance Date**			
6587201 A-2	August 18, 1999			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Design Flow (MGD)**
Chlorinated Groundwater	N/A	Flow Equalization, Cartridge Filtration, Activated Carbon, Flow Equalization	No Disinfection	0.0098 MGD

Development of Effluent Limitations

Outfall No.	001	**Design Flow (MGD)**	0.0547
Latitude	40º 26' 39.88"	**Longitude**	-79º 18' 0.21"

Wastewater Description: IW Process Effluent without ELG

Outfall 001 is submerged in the Conemaugh River and cannot be directly accessed for sampling. There are three internal monitoring points, each with a distinct and separate source of wastewater. Each source will be evaluated individually for applicable effluent limitations. No limitations will be imposed on Outfall 001. All wastewaters are regulated at Internal Monitoring Points 101, 201, and 301.

Development of Effluent Limitations

IMP No. 101 **Design Flow (MGD)** 0.090
Latitude 40º 26' 45.19" **Longitude** -79º 18' 21.47"
Wastewater Description: IW Process Effluent with ELG

Technology-Based Limitations

Regulatory Effluent Standards and Monitoring Requirements

Flow monitoring is required pursuant to 25 Pa. Code § 92a.61(d)(1).

As oil-bearing wastewaters, discharges from IMP 101 are subject to effluent standards for oil and grease from 25 Pa. Code § 95.2(2).

Pennsylvania regulations at 25 Pa. Code § 92a.48(b) require the imposition of technology-based TRC limits for facilities that use chlorination and that are not already subject to TRC limits based on applicable federal ELGs or a facility-specific BPJ evaluation.

Temperature limits will be imposed per the Department's "*Implementation Guidance for Temperature Criteria*." As a policy, DEP normally imposes a maximum temperature limit of 110°F on discharges that contain residual heat. The limit is intended as a safety measure to protect sampling personnel or anyone who may come into contact with the heated discharge where it enters the receiving water.

Effluent standards for pH are also imposed on industrial wastes by 25 Pa. Code § 95.2(1) as indicated in Table 1.

Table 1: Regulatory Effluent Standards and Monitoring Requirements for IMP 101

Parameter	Monthly Average	Daily Maximum	IMAX	Units
Flow	Monitor and Report		XXX	MGD
Oil & Grease	15.0	30.0	XXX	mg/L
Total Residual Chlorine	0.5	1.0	XXX	mg/L
Temperature	XXX	XXX	110	°F
pH	Not less than 6.0 nor greater than 9.0			S.U.

Federal Effluent Limitation Guidelines (ELGs)

IMP 101 is subject to Federal Effluent Limitation Guidelines (ELGs) under 40 CFR 471 Nonferrous Metals Forming and Metal Powders Point Source Category, Subpart I – Zirconium-Hafnium Forming Subcategory. The process operations that are conducted and subject to the ELG are:

- Zirconium-Hafnium Surface Treated
  - surface treatment spent baths - 471.91(h) & 471.92(h)
  - surface treatment rinse – 471.91(i) & 471.92(i)
- Zirconium-Hafnium Alkaline Cleaned
  - alkaline cleaning spent baths - 471.91(j) & 471.92(j)
  - alkaline cleaning rinse – 471.91 (k) & 471.92(k)
- Zirconium-Hafnium Sawed or Ground with Emulsions
  - sawing or grinding spent emulsions – 471.91(l) & 471.92(l)
- Zirconium-Hafnium Sawed or Ground with Contact Cooling Water
  - sawing or grinding contact cooling water – 471.91(q) & 471.92(q)
- Sawed or Ground Zirconium-Hafnium Rinsed
  - sawing or grinding rinse – 471.91(r) & 471.92(r)
- Zirconium-Hafnium Tested
  - inspection and testing wastewater – 471.91(t) & 471.92(t)

Each process operation is broken down in detail in Attachment D. The anticipated average annual production rate for the next five years was used to calculate the production-based limitations. The limitations from the ELGs are displayed below in Table 2.

Per 40 CFR 122.45 (f) (2), Pollutants limited in terms of mass additionally may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations. Therefore, along with the mass-based limitations calculated using the production data, concentrations from Table VII-21 from the Nonferrous Metals Forming and Metal Powders Point Source Category Development document will be imposed at IMP 101. The concentrations used to develop the ELGs for the Zirconium-Hafnium Forming Subcategory are based upon the BAT model treatment technology consisting of Lime, Settling and Filtration. These concentrations are being proposed because the production-based limitations are based on an anticipated average annual production and not actual production values. The anticipated annual production values that Westinghouse provided are greater than the actual average annual production values and greater than any of the annual production values from the past five years. By using an anticipated average annual production that is greater than actual production values, Westinghouse will receive additional, unsubstantiated loading that may not be accurate or consistent with the loading that the site should receive. By imposing concentration limitations, in addition to mass-based limiting, DEP is assured that the site will meet the treatment effectiveness requirements of the BAT model treatment technology, regardless of future production values.

Table 2: Technology Limits from ELGs

Parameter	Average Monthly (lbs/day)	Daily Maximum (lbs/day)	Average Monthly (mg/L)	Daily Maximum (mg/L)	Instant. Maximum (mg/L)
Total Chromium	0.0425	0.104	0.15	0.37	0.46
Total Cyanide	0.0283	0.0684	0.08	0.20	0.25
Total Nickel	0.300	0.454	0.37	0.55	0.69
Ammonia	13.8	31.5	58.6	133.3	166.6
Fluoride	6.23	14.0	26.4	59.5	74.4
Oil and Grease	19.6	32.7	10.0	10.0	12.5
Total Suspended Solids	31.9	67.1	12.0	15.0	18.75
pH (S.U.)	Between 7.5 and 10.0				

Per- and Polyfluoroalkyl Substances (PFAS)

In February 2024, DEP implemented a new monitoring initiative for PFAS consistent with an EPA memorandum that provides guidance to states for addressing PFAS discharges. PFAS are a family of thousands of synthetic organic chemicals that contain a chain of strong carbon-fluorine bonds. Many PFAS are highly stable, water- and oil-resistant, and exhibit other properties that make them useful in a variety of consumer products and industrial processes. PFAS are resistant to biodegradation, photooxidation, direct photolysis, and hydrolysis and do not readily degrade naturally; thus, many PFAS accumulate over time. According to the United States Department of Health and Human Services, Agency for Toxic Substances and Disease Registry (ATSDR), the environmental persistence and mobility of some PFAS, combined with decades of widespread use, have resulted in their presence in surface water, groundwater, drinking water, rainwater, soil, sediment, ice caps, outdoor and indoor air, plants, animal tissue, and human blood serum across the globe. ATSDR also reported that exposure to certain PFAS can lead to adverse human health impacts Due to their durability, toxicity, persistence, and pervasiveness, PFAS have emerged as potentially significant pollutants of concern.

In accordance with Section II.I of DEP's "Standard Operating Procedure (SOP) for Clean Water Program – Establishing Effluent Limitations for Individual Industrial Permits" [SOP No. BCW-PMT-032] and under the authority of 25 Pa. Code § 92a.61(b), DEP has determined that monitoring for a subset of common/well-studied PFAS including Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), Perfluorobutanesulfonic acid (PFBS), and Hexafluoropropylene oxide dimer acid (HFPO-DA) is necessary to help understand the extent of environmental contamination by PFAS in the Commonwealth and the extent to which point source dischargers are contributors. SOP BCW-PMT-032 directs permit writers to consider special monitoring requirements for PFOA, PFOS, PFBS, and HFPO-DA in the following instances:

a. If sampling that is completed as part of the permit renewal application reveals a detection of PFOA, PFOS, HFPO-DA or PFBS (any of these compounds), the application manager will establish a quarterly monitoring requirement for PFOA, PFOS, HFPO-DA and PFBS (all of these compounds) in the permit.

b. If sampling that is completed as part of the permit renewal application demonstrates non-detect values at or below the Target QLs for PFOA, PFOS, HFPO-DA and PFBS (all of these compounds in a minimum of 3 samples), the application manager will establish an annual monitoring requirement for PFOA, PFOS, HFPO-DA and PFBS in the permit.

c. In all cases the application manager will include a condition in the permit that the permittee may cease monitoring for PFOA, PFOS, HFPO-DA and PFBS when the permittee reports non-detect values at or below the Target QL for four consecutive monitoring periods for each PFAS parameter that is analyzed. Use the following language: The permittee may discontinue monitoring for PFOA, PFOS, HFPO-DA, and PFBS if the results in 4 consecutive monitoring periods indicate non-detects at or below Quantitation Limits of 4.0 ng/L for PFOA, 3.7 ng/L for PFOS, 3.5 ng/L for PFBS and 6.4 ng/L for HFPO-DA. When monitoring is discontinued, permittees should enter a No Discharge Indicator (NODI) Code of “GG” on DMRs.

Westinghouse’s application was submitted before the NPDES permit application forms were updated to require sampling for PFOA, PFOS, PFBS, and HFPO-DA. Also, according to EPA’s guidance, Westinghouse does not operate in one of the industries EPA expects to be a source for PFAS. Therefore, annual reporting of PFOA, PFOS, PFBS, and HFPO-DA will be required consistent with Section II.I.b of SOP BCW-PMT-032. Even though Westinghouse did not report results for PFOA, PFOS, PFBS, and HFPO-DA on the permit application, as a facility operating in a suspected non-source industry, Westinghouse is subject to the annual monitoring requirements described in Section II.I.b of the SOP.

As stated in Section II.I.c of the SOP, if non-detect values at or below DEP’s Target QLs are reported for four consecutive monitoring periods (i.e., four consecutive annual results in Westinghouse’s case), then the monitoring may be discontinued.

Water Quality-Based Limitations

Toxics Management Spread Sheet

The Department of Environmental Protection (DEP) has developed the DEP Toxics Management Spreadsheet (“TMS”) to facilitate calculations necessary for completing a reasonable potential (RP) analysis and determining water quality-based effluent limitations for discharges of toxic pollutants. The Toxics Management Spreadsheet is a macro-enabled Excel binary file that combines the functions of the PENTOXSD model and the Toxics Screening Analysis spreadsheet to evaluate the reasonable potential for discharges to cause excursions above water quality standards and to determine WQBELs. The Toxics Management Spread Sheet is a single discharge, mass-balance water quality calculation spread sheet that includes consideration for mixing, first-order decay and other factors to determine recommended WQBELs for toxic substances and several non-toxic substances. Required input data including stream code, river mile index, elevation, drainage area, discharge name, NPDES permit number, discharge flow rate and the discharge concentrations for parameters in the permit application or in DMRs, which are entered into the spread sheet to establish site-specific discharge conditions. Other data such as low flow yield, reach dimensions and partial mix factors may also be entered to further characterize the conditions of the discharge and receiving water. Discharge concentrations for the parameters are chosen to represent the "worst case" quality of the discharge (i.e., maximum reported discharge concentrations). The spread sheet then evaluates each parameter by computing a Waste Load Allocation for each applicable criterion, determining a recommended maximum WQBEL and comparing that recommended WQBEL with the input discharge concentration to determine which is more stringent. Based on this evaluation, the Toxics Management Spread sheet recommends average monthly and maximum daily WQBELs.

Reasonable Potential Analysis and WQBEL Development for IMP 101

Discharges from IMP 101 are evaluated based on concentrations reported on the application and on DMRs; data from those sources are entered into the Toxics Management Spread Sheet. The maximum reported value of the parameters from the application form or from previous DMRs is used as the input concentration in the Toxics Management Spread Sheet. All toxic pollutants whose maximum concentrations, as reported in the permit application or on DMRs, are greater than the most stringent applicable water quality criterion are considered to be pollutants of concern. [This includes pollutants reported as "Not Detectable" or as "<MDL" where the method detection limit for the analytical method used by the applicant is greater than the most stringent water quality criterion]. The Toxics Management Spread Sheet is run with the discharge and receiving stream characteristics shown in Table 3. For IW discharges, the design flow used in modeling is the average flow during production or operation taken from the permit application. Pollutants for which water quality standards have not been promulgated (e.g., TSS, oil and grease) are excluded from the analysis. All the parameters are evaluated using the model to determine the water quality-based effluent limits applicable to the discharge and the receiving stream. The spreadsheet then compares the reported discharge concentrations to the calculated water quality-based effluent limitations to determine if a reasonable potential exists to exceed the calculated WQBELs. Effluent

limitations are established in the draft permit where a pollutant's maximum reported discharge concentration equals or exceeds 50% of the WQBEL. For non-conservative pollutants, monitoring requirements are established where the maximum reported concentration is between 25% - 50% of the WQBEL. For conservative pollutants, monitoring requirements are established where the maximum reported concentration is between 10% - 50% of the WQBEL. The information described above including the maximum reported discharge concentrations, the most stringent water quality criteria, the pollutant-of-concern (reasonable potential) determinations, the calculated WQBELs, and the WQBEL/monitoring recommendations are displayed in the Toxics Management Spread Sheet in Attachment E of this Fact Sheet. The Toxics Management Spread Sheet did not recommend any WQBELs for Toxics at IMP 101.

Table 3: TMS Inputs for IMP 101

Parameter	**Value**
River Mile Index	17.0
Discharge Flow (MGD)	0.090
Basin/Stream Characteristics	
Parameter	**Value**
Area in Square Miles	890
Q_{7-10} (cfs)	83.4
Low-flow yield (cfs/mi^2)	0.094
Elevation (ft)	910
Slope	0.0001

Total Residual Chlorine

To determine if WQBELs are required for discharges containing total residual chlorine (TRC), a discharge evaluation is performed using a DEP program called TRC_CALC created with Microsoft Excel for Windows. TRC_CALC calculates TRC Waste Load Allocations (WLAs) through the application of a mass balance model which considers TRC losses due to stream and discharge chlorine demands and first-order chlorine decay. Input values for the program include flow rates and chlorine demands for the receiving stream and the discharge, the number of samples taken per month, coefficients of TRC variability, partial mix factors, and an optional factor of safety. The mass balance model calculates WLAs for acute and chronic criteria that are then converted to long term averages using calculated multipliers. The multipliers are functions of the number of samples taken per month and the TRC variability coefficients (normally kept at default values unless site specific information is available). The most stringent limitation between the acute and chronic long-term averages is converted to an average monthly limit for comparison to the BAT average monthly limit of 0.5 mg/l from 25 Pa. Code § 92a.48(b)(2). The more stringent of these average monthly TRC limitations is imposed in the permit. The results of the modeling, included in Attachment F, indicate that no WQBELs are required for TRC.

Thermal WQBELs for Heated Discharges

Thermal WQBELs are evaluated using DEP's "Thermal Discharge Limit Calculation Spreadsheet" created with Microsoft Excel for Windows. The program calculates temperature WLAs through the application of a heat transfer equation, which takes two forms in the program depending on the source of the facility's cooling water. In Case 1, intake water to a facility is from the receiving stream. In Case 2, intake water is from a source other than the receiving stream (e.g., municipal water supply). The determination of which case applies to a given discharge is determined by the input data which include the receiving stream flow rate (Q_{7-10} or the minimum regulated flow for large rivers), the stream intake flow rate, external source intake flow rates, consumptive flow rates and site-specific ambient stream temperatures. Case 1 limits are generally expressed as heat rejection rates while Case 2 limits are usually expressed as temperatures.

Since the temperature criteria from 25 Pa. Code Chapter 93.7(a) are expressed on monthly and semi-monthly bases for three different aquatic life-uses—cold water fishes, warm water fishes and trout stocking—the program generates monthly

and semi-monthly limits for each use. DEP selects the output that corresponds to the aquatic life-use of the receiving stream and consequently which limits apply to the discharge. Temperature WLAs are bounded by an upper limit of 110°F for the safety of sampling personnel and anyone who may come into contact with the heated discharge where it enters the receiving water. If no WLAs below 110°F are calculated, an instantaneous maximum limit of 110°F is recommended by the program.

Discharges from IMP 101 are classified under Case 2 because water is obtained via municipal water supply. The results of the thermal analysis, included in Attachment G, indicate that no WQBELs for temperature are required at IMP 101. Therefore, the 110°F daily maximum temperature limit will be imposed at IMP 101.

Total Maximum Daily Loads for IMP 101

The Westinghouse Electric Company's Specialty Metals Plant 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). The Site's permit PA0000892 is listed in the Appendix G of the Kiskiminetas-Conemaugh River Watershed TMDL, requiring load allocations for IMP 101. Wasteload allocations were delegated for IMP 101. The original load allocations were calculated using the allocated concentrations and a flow of 0.112 MGD. The effluent limits from the TMDL are displayed below in Table 4. The Allocated Loads listed in Appendix G will not be imposed because the load unit is pounds per year, which can make it difficult to report and gage compliance in monthly DMRs. Therefore, for the ease of compliance, only the Allocated Concentration from Appendix G will be imposed. The Department believes that this satisfies the TMDL requirements because the loads that were calculated in the TMDL were based on the Discharge flow (at the time the TMDLs were developed) and the allocated discharge concentrations.

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

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

The specific water quality criterion for manganese is expressed as an acute or maximum daily of 1.0 mg/L in 25 Pa. Code § 93.7(a). The criterion is based on the protection of human health and is associated with chronic exposure associated with a potable water supply (PWS). Since no duration is given in Chapter 93 for the manganese criterion, a duration of 30 days is used based on the water quality criteria duration for Threshold Human Health (THH) criteria given in Section III.C.3.a., Table 1 on Page 10 of DEP's Water Quality Toxics Management Strategy. The 30-day duration for THH criteria coincides with the 30-day duration of an AML, which is why the manganese criterion is set equal to the AML for a "permitting at criteria" scenario. Because the manganese criterion is interpreted as having chronic exposure, the manganese MDL and IMAX may be made less stringent according to procedures established in Section III.C.2.h. of the Water Quality Toxics Management Strategy (AML multipliers of 2.0 and 2.5 for the MDL and IMAX respectively).

Table 4: TMDL Limitations for IMP 101

Parameter	Allocated Load (lbs./yr)	Allocated Concentration (mg/L)		Maximum Reported Discharge Concentration
		Average Monthly	Maximum Daily	
Aluminum, total	256	0.75	0.75	0.379
Iron, total	512	1.5	3.0	<0.02
Manganese, total	341	1.0	2.0	0.008

These TMDL limitation are new to the permit and there are limited discharge sampling results showing the concentrations of Aluminum, Iron, and Manganese in the discharge; therefore, it is uncertain if Westinghouse can meet these limitations upon permit issuance. The Department is proposing to include a Schedule of Compliance for these parameters per 25 Pa. Code § 92a.51(a). The Department is proposing a two-year compliance schedule because the limited discharge sample results show that Westinghouse may be able to achieve the limits. Also, the system utilized for the wastewater treatment that discharges via IMP 101 includes metal precipitation processes and should achieve the effluent limits for Aluminum, Iron, and Manganese.

Anti-backsliding:

Previous effluent limits and monitoring requirements can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l) and are displayed below in Table 5. The mass-based limitations for Total Suspended Solids, Oil and Grease, Chromium, Cyanide, Nickel, Fluoride, and Ammonia will be replaced with new mass-based limitations due to the updated production data.

Table 5: Existing Effluent Limitation for IMP 101

Parameters	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Frequency	Sample Type
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	2/Month	Measure
Temperature (°F)	XXX	XXX	XXX	XXX	XXX	110	2/Month	I-S
Total Residual Chlorine	XXX	XXX	XXX	0.5	1.0	1.25	2/Month	Grab
Total Suspended Solids	37	78	XXX	12	15	30*	2/Month	24-hour Composite
Oil and Grease	23	38	XXX	15.0	XXX	30.0	2/Month	grab
Chromium	0.05	0.12	XXX	0.15	0.37	0.46*	2/Month	24-hour Composite
Cyanide	0.03	0.08	XXX	0.08	0.2	0.25*	2/Month	24-hour Composite
Nickel	0.35	0.53	XXX	0.37	0.55	0.69*	2/Month	24-hour Composite
Fluoride	7.2	16.3	XXX	26.4	60	75*	2/Month	24-hour Composite
Ammonia	16	37	XXX	58.6	133	166*	2/Month	24-hour Composite
pH (S.U.)	XXX	XXX	7.5	XXX	9.0	XXX	2/Month	Grab

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

Proposed Effluent Limitations and Monitoring Requirements

The proposed effluent monitoring requirements for IMP 101 are displayed in Table 6 and Table 7 below, they are the most stringent values from the above effluent limitation development. As mentioned above, a Schedule of Compliance is included in the permit, providing Westinghouse two (2) years to meet the Final Effluent Limitations for Total Aluminum, Total Iron, and Total Manganese. From the Permit Effective Date until two years following the Permit Effective Date, Total Aluminum, Total Iron, and Total Manganese will be subject to monitor and report requirements.

Table 6: Proposed Interim Effluent Limitation for IMP 101

Parameters	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Frequency	Sample Type
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	2/Month	Measure
Temperature (°F)	XXX	XXX	XXX	XXX	XXX	110	2/Month	I-S
Total Residual Chlorine	XXX	XXX	XXX	0.5	1.0	1.25	2/Month	Grab
Total Suspended Solids	31.9	67.1	XXX	12.0	15.0	18.75*	2/Month	24-hour Composite
Oil and Grease	19.6	32.7	XXX	10.0	10.0	XXX	2/Month	Grab
Chromium	0.0425	0.104	XXX	0.15	0.37	0.46*	2/Month	24-hour Composite
Cyanide	0.0283	0.0684	XXX	0.08	0.2	0.25*	2/Month	24-hour Composite
Nickel	0.300	0.454	XXX	0.37	0.55	0.69*	2/Month	24-hour Composite
Fluoride	6.23	14.0	XXX	26.4	59.5	74.4*	2/Month	24-hour Composite
Ammonia	13.8	31.5	XXX	58.6	133.3	166.6*	2/Month	24-hour Composite
Iron, Total	XXX	XXX	XXX	Report	Report	XXX	2/Month	Grab
Aluminum, Total	XXX	XXX	XXX	Report	Report	XXX	2/Month	Grab
Manganese, Total	XXX	XXX	XXX	Report	Report	XXX	2/Month	Grab
pH (S.U.)	XXX	XXX	7.5	XXX	XXX	9.0	2/Month	Grab
PFOA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
PFBS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab

Table 7: Proposed Final Effluent Limitation for IMP 101

Parameters	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Frequency	Sample Type
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	2/Month	Measure
Temperature (°F)	XXX	XXX	XXX	XXX	XXX	110	2/Month	I-S
Total Residual Chlorine	XXX	XXX	XXX	0.5	1.0	1.25	2/Month	Grab
Total Suspended Solids	31.9	67.1	XXX	12.0	15.0	18.75*	2/Month	24-hour Composite
Oil and Grease	19.6	32.7	XXX	10.0	10.0	XXX	2/Month	Grab
Chromium	0.0425	0.104	XXX	0.15	0.37	0.46*	2/Month	24-hour Composite
Cyanide	0.0283	0.0684	XXX	0.08	0.2	0.25*	2/Month	24-hour Composite
Nickel	0.300	0.454	XXX	0.37	0.55	0.69*	2/Month	24-hour Composite
Fluoride	6.23	14.0	XXX	26.4	59.5	74.4*	2/Month	24-hour Composite
Ammonia	13.8	31.5	XXX	58.6	133.3	166.6*	2/Month	24-hour Composite
Iron, Total	XXX	XXX	XXX	1.5	3.0	XXX	2/Month	Grab
Aluminum, Total	XXX	XXX	XXX	0.75	0.75	XXX	2/Month	Grab
Manganese, Total	XXX	XXX	XXX	1.0	2.0	XXX	2/Month	Grab
pH (S.U.)	XXX	XXX	7.5	XXX	XXX	9.0	2/Month	Grab
PFOA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
PFBS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab

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

Development of Effluent Limitations

IMP No. 201 **Design Flow (MGD)** 0.0037
Latitude 40º 26' 45.19" **Longitude** -79º 18' 21.47"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

Sewage Minimum Technology and BPJ Standards

In addition to Federal Guidance, the State has established the following are minimum technology based and BPJ standards for sewage discharges.

Table 8. Standard Sewage Tech Limits

Parameter	Minimum	Average Monthly	Average Weekly	IMAX	Basis
Flow (MGD)	XXX	Report	Report Max Daily	XXX	92a.27, 92a.61
CBOD5 (mg/L)	XXX	25	40*	50	92a.47
TSS (mg/L)	XXX	30	45*	60	92a.47
TRC (mg/L)**	XXX	0.5	XXX	1.6	92a.47 & 48
NH3-N (mg/L)	XXX	25	XXX	50	BPJ
D.O. (mg/L)	4.0	XXX	XXX	XXX	BPJ
pH (SU)	6.0	XXX	XXX	9.0	92a.47, 95.2
Total N (mg/L)	XXX	Report	XXX	XXX	92a.61
Total P (mg/L)	XXX	Report	XXX	XXX	92a.61
Fecal Coliform May-Sept (no./100 ml)	XXX	200 Geo Mean	XXX	1,000	92a.47
Fecal Coliform Oct-April (no./100 ml)	XXX	2,000 Geo Mean	XXX	10,000	92a.47

*Weekly average limits for CBOD5 and TSS will not be imposed where the sampling frequency is less than 1/week.

**Where ultraviolet (UV) disinfection is used, TRC limits are not applicable, but the limits will generally contain, at a minimum, routine monitoring of UV transmittance (%), UV dosage (µWs/cm2 or mWs/cm2 or mjoules/cm2) or UV intensity (µW/cm2 or mW/cm2) at the same monitoring frequency that would be used for TRC. A UV system was installed in 1999 to replace the chlorination system. A new UV system (replacement in kind) was installed in July 2020. The system displays lamp output in units of W/m2 and relative percentage.

Water Quality-Based Limitations

Toxics Management Spread Sheet

The Department of Environmental Protection (DEP) has developed the DEP Toxics Management Spreadsheet (“TMS”) to facilitate calculations necessary for completing a reasonable potential (RP) analysis and determining water quality-based effluent limitations for discharges of toxic pollutants. The Toxics Management Spreadsheet is a macro-enabled Excel binary file that combines the functions of the PENTOXSD model and the Toxics Screening Analysis spreadsheet to evaluate the reasonable potential for discharges to cause excursions above water quality standards and to determine WQBELs. The Toxics Management Spread Sheet is a single discharge, mass-balance water quality calculation spread sheet that includes consideration for mixing, first-order decay and other factors to determine recommended WQBELs for toxic substances and several non-toxic substances. Required input data including stream code, river mile index, elevation, drainage area, discharge name, NPDES permit number, discharge flow rate and the discharge concentrations for parameters in the permit application or in DMRs, which are entered into the spread sheet to establish site-specific discharge conditions. Other data such as low flow yield, reach dimensions and partial mix factors may also be entered to further characterize the conditions of the discharge and receiving water. Discharge concentrations for the parameters are chosen to represent the "worst case" quality of the discharge (i.e., maximum reported discharge concentrations). The

spread sheet then evaluates each parameter by computing a Waste Load Allocation for each applicable criterion, determining a recommended maximum WQBEL and comparing that recommended WQBEL with the input discharge concentration to determine which is more stringent. Based on this evaluation, the Toxics Management Spread sheet recommends average monthly and maximum daily WQBELs.

Reasonable Potential Analysis and WQBEL Development for IMP 201

Discharges from IMP 201 are evaluated based on concentrations reported on the application and on DMRs; data from those sources are entered into the Toxics Management Spread Sheet. The maximum reported value of the parameters from the application form or from previous DMRs is used as the input concentration in the Toxics Management Spread Sheet. All toxic pollutants whose maximum concentrations, as reported in the permit application or on DMRs, are greater than the most stringent applicable water quality criterion are considered to be pollutants of concern. [This includes pollutants reported as "Not Detectable" or as "<MDL" where the method detection limit for the analytical method used by the applicant is greater than the most stringent water quality criterion]. The Toxics Management Spread Sheet is run with the discharge and receiving stream characteristics shown in Table 9. For IW discharges, the design flow used in modeling is the average flow during production or operation taken from the permit application. Pollutants for which water quality standards have not been promulgated (e.g., TSS, oil and grease) are excluded from the analysis. All the parameters are evaluated using the model to determine the water quality-based effluent limits applicable to the discharge and the receiving stream. The spreadsheet then compares the reported discharge concentrations to the calculated water quality-based effluent limitations to determine if a reasonable potential exists to exceed the calculated WQBELs. Effluent limitations are established in the draft permit where a pollutant's maximum reported discharge concentration equals or exceeds 50% of the WQBEL. For non-conservative pollutants, monitoring requirements are established where the maximum reported concentration is between 25% - 50% of the WQBEL. For conservative pollutants, monitoring requirements are established where the maximum reported concentration is between 10% - 50% of the WQBEL. The information described above including the maximum reported discharge concentrations, the most stringent water quality criteria, the pollutant-of-concern (reasonable potential) determinations, the calculated WQBELs, and the WQBEL/monitoring recommendations are displayed in the Toxics Management Spread Sheet in Attachment H of this Fact Sheet. The Toxics Management Spread Sheet did not recommend any WQBELs for Toxics at IMP 201.

Table 9: TMS Inputs for IMP 201

Parameter	**Value**
River Mile Index	17.0
Discharge Flow (MGD)	0.0037
Basin/Stream Characteristics	
Parameter	**Value**
Area in Square Miles	890
Q_{7-10} (cfs)	83.4
Low-flow yield (cfs/mi^2)	0.094
Elevation (ft)	910
Slope	0.0001

WQM 7.0 Water Quality Modeling Program

WQM 7.0 is a water quality modeling program for Windows that determines waste load allocations and effluent limitations for carbonaceous biochemical oxygen demand (CBOD5), ammonia nitrogen (NH3-N), and dissolved oxygen (DO) for single and multiple point-source discharge scenarios. To accomplish this, the model simulates two basic processes. In the NH3-N module, the model simulates the mixing and degradation of NH3-N in the stream and compares calculated instream NH3-N concentrations to NH3-N water quality criteria. In the DO module the model simulates the mixing and consumption of DO in the stream due to the degradation of CBOD5 and NH3-N and compares calculated instream DO concentrations to DO

water quality criteria. WQM 7.0 then determines the highest pollutant loadings that the stream can assimilate while still meeting water quality criteria under design conditions. WQM 7.0 was run for IMP 201 because the outfall discharge treated sewage wastewater. The WQM-7 model was run using the discharge and receiving stream characteristics shown in Table 8 above. The modeling results, which are include in Attachment I, indicate that no WQBELs are required for NH3-N; Dissolved Oxygen, or $CBOD_5$.

Total Maximum Daily Loads

Wastewater discharges from the Specialty Metals Plant are located within the Kiskiminetas-Conemaugh Watershed for which the Department has developed a TMDL. The TMDL was finalized on January 29, 2010 and establishes waste load allocations for the discharge of aluminum, iron and manganese within the Kiskiminetas-Conemaugh Watershed. The site's NPDES permit (PA0000892) is listed in the Appendix G of the Kiskiminetas-Conemaugh Watershed TMDL, requiring load allocations. Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's Water Quality Planning and Management Regulations (codified at Title 40 of the *Code of Federal Regulations* Part 130) require states to develop a TMDL for impaired water bodies. A TMDL establishes the amount of a pollutant that a water body can assimilate without exceeding the water quality criteria for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and non-point sources in order to restore and maintain the quality of the state's water resources (USEPA 1991a). Stream reaches within the Kiskiminetas-Conemaugh Watershed are included in the state's 2008 Section 303(d) list because of various impairments, including metals, pH and sediment. The TMDL includes consideration for each river and tributary within the target watershed and its impairment sources. Stream data is then used to calculate minimum pollutant reductions that are necessary to attain water quality criteria levels. Target concentrations published in the TMDL were based on established water quality criteria of 0.750 $^{mg}/_{L}$ total recoverable aluminum, 1.5 $^{mg}/_{L}$ total recoverable iron based on a 30-day average 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. TMDLs prescribe allocations that minimally achieve water quality criteria (i.e., 100 percent use of a stream's assimilative capacity). However, the Kiskiminetas-Conemaugh River TMDL did not assign a WLA to IMP 201 and it is believed that these discharges do not contribute to the impairment of the Watershed; therefore, only monitoring of total iron, aluminum and manganese will be imposed.

Anti-backsliding:

Previous effluent limits and monitoring requirements can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l) and are displayed below in Table 10.

Table 10: Existing Effluent Limitation for IMP 201

Parameters	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Frequency	Sample Type
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	2/Month	grab
$CBOD_5$	XXX	XXX	XXX	25	XXX	50	2/Month	grab
Total Suspended Solids	XXX	XXX	XXX	30	XXX	60	2/Month	grab
Fecal Coliform	See Part C Condition *		XXX	XXX	XXX	XXX	2/Month	grab
Total Residual Chlorine**	XXX	XXX	XXX	1.4	XXX	3.3	2/Month	grab
pH (S.U.)	XXX	XXX	6.0	XXX	9.0	XXX	2/Month	grab

*****The Fecal Coliform Organisms Part C condition states that effective disinfection to control disease producing organism shall be the production of an effluent which contains a concentration of fecal coliform organisms not greater than: 200/100 mL as a monthly geometric mean, nor than 1000/100 mL in more than ten percent of the samples examined during any month from May through September inclusive; and 2000/100 mL as a monthly geometric mean based on five consecutives samples collected on different days during any month from October through April inclusive.

******TRC limits only apply when chlorination is used. Permittee must indicate on the discharge monitoring report if chlorination was used during that month.

Proposed Effluent Limitations and Monitoring Requirements

The proposed effluent monitoring requirements for IMP 201 are displayed in Tables 11 and 12 below, they are the most stringent values from the above effluent limitation development. The TRC Limitation has been removed because the permittee no longer uses and does not plan to use chlorination as part of the treatment system for IMP 201. The limitation for DO is new to the permit and no data has been collected by the permittee to determine if they can achieve the limitation upon permit issuance. Therefore, the Department is providing Westinghouse time to collect data and determine if additional treatment is needed to achieve the new limit. For the first two year after the permit effective date, a monitor and report requirement for DO will be imposed. The Final Limits for DO will become effective two years after the permit effective date.

Table 11: Proposed Interim Effluent Limitation for IMP 201

Parameters	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Frequency	Sample Type
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	2/Month	Measured
$CBOD_5$	XXX	XXX	XXX	25	XXX	50	2/Month	grab
Total Suspended Solids	XXX	XXX	XXX	30	XXX	60	2/Month	grab
UV Transmittance (%)	XXX	XXX	XXX	Report	XXX	Report	2/Month	grab
NH3-N (mg/L)	XXX	XXX	XXX	25	XXX	50	2/Month	grab
D.O. (mg/L)	XXX	XXX	Report	XXX	XXX	XXX	2/Month	grab
Total N (mg/L)	XXX	XXX	XXX	Report	XXX	XXX	2/Month	grab
Total P (mg/L)	XXX	XXX	XXX	Report	XXX	XXX	2/Month	grab
Fecal Coliform May-Sept (no./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/Month	grab
Fecal Coliform Oct-April (no./100 ml)	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/Month	grab
Iron, Total	XXX	XXX	XXX	Report	Report	XXX	2/Month	grab
Aluminum, Total	XXX	XXX	XXX	Report	Report	XXX	2/Month	grab
Manganese, Total	XXX	XXX	XXX	Report	Report	XXX	2/Month	grab
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	2/Month	grab

Table 12: Proposed Final Effluent Limitation for IMP 201

Parameters	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Frequency	Sample Type
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	2/Month	Measured
$CBOD_5$	XXX	XXX	XXX	25	XXX	50	2/Month	grab
Total Suspended Solids	XXX	XXX	XXX	30	XXX	60	2/Month	grab
UV Transmittance (%)	XXX	XXX	XXX	Report	XXX	Report	2/Month	grab
NH3-N (mg/L)	XXX	XXX	XXX	25	XXX	50	2/Month	grab
D.O. (mg/L)	XXX	XXX	4.0	XXX	XXX	XXX	2/Month	grab
Total N (mg/L)	XXX	XXX	XXX	Report	XXX	XXX	2/Month	grab
Total P (mg/L)	XXX	XXX	XXX	Report	XXX	XXX	2/Month	grab
Fecal Coliform May-Sept (no./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/Month	grab
Fecal Coliform Oct-April (no./100 ml)	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/Month	grab
Iron, Total	XXX	XXX	XXX	Report	Report	XXX	2/Month	grab
Aluminum, Total	XXX	XXX	XXX	Report	Report	XXX	2/Month	grab
Manganese, Total	XXX	XXX	XXX	Report	Report	XXX	2/Month	grab
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	2/Month	grab

Development of Effluent Limitations

IMP No.	301	**Design Flow (MGD)**	0.0098
Latitude	40º 26' 45.19"	**Longitude**	-79º 18' 21.47"

Wastewater Description: Groundwater Cleanup Discharge

Technology-Based Limitations

Regulatory Effluent Standards and Monitoring Requirements

Flow monitoring is required pursuant to 25 Pa. Code § 92a.61(d)(1).

As oil-bearing wastewaters, discharges from IMP 301 are subject to effluent standards for oil and grease from 25 Pa. Code § 95.2(2).

Industrial Waste may not contain more than 7 milligrams per liter of dissolved iron per 25 Pa. Code § 95.2(4).

Effluent standards for pH are also imposed on industrial wastes by 25 Pa. Code § 95.2(1) as indicated in Table 13.

Table 13: Regulatory Effluent Standards and Monitoring Requirements for IMP 301

Parameter	Monthly Average	Daily Maximum	IMAX	Units
Flow	Monitor and Report		XXX	MGD
Oil & Grease	15	30	XXX	mg/L
Iron, Dissolved	XXX	7.0	XXX	mg/L
pH	Not less than 6.0 nor greater than 9.0			S.U.

Best Professional Judgement

Trichloroethylene (TCE) is the primary pollutant of concern that lead to the installation of a groundwater remediation system which was approved by Water Quality Management Part II Permit 6587201-A2 issued in 1999. The Groundwater Remediation System consists of an influent tank, granular activated carbon filtration, effluent tank and a UV treatment system designed for up to 20 gpm of flow. The UV treatment is to prevent iron-consuming bacterial growth which could clog the filtration unit and accumulate along pipe walls. As no federal or state regulatory effluent limitations for this type of discharge have been promulgated; therefore, Best Professional Judgement (BPJ) can be utilized per Sections 304(b)(2)(B), 304(b)(4)(B), and 402(a)(1) of the Clean Water Act. However, a BPJ analysis was conducted during the last permit renewal for TCE; therefore, these limitations can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l) and a discussed in more detail below in the Anti-backsliding section of this Fact Sheet. Due to this, no new BPJ limitations will not be evaluated during this permit cycle.

Water Quality-Based Limitations

Toxics Management Spread Sheet

The Department of Environmental Protection (DEP) has developed the DEP Toxics Management Spreadsheet ("TMS") to facilitate calculations necessary for completing a reasonable potential (RP) analysis and determining water quality-based effluent limitations for discharges of toxic pollutants. The Toxics Management Spreadsheet is a macro-enabled Excel binary file that combines the functions of the PENTOXSD model and the Toxics Screening Analysis spreadsheet to evaluate the reasonable potential for discharges to cause excursions above water quality standards and to determine WQBELs. The Toxics Management Spread Sheet is a single discharge, mass-balance water quality calculation spread sheet that includes consideration for mixing, first-order decay and other factors to determine recommended WQBELs for toxic substances and several non-toxic substances. Required input data including stream code, river mile index, elevation, drainage area, discharge name, NPDES permit number, discharge flow rate and the discharge concentrations for parameters in the permit application or in DMRs, which are entered into the spread sheet to establish site-specific discharge conditions. Other data such as low flow yield, reach dimensions and partial mix factors may also be entered to further characterize the conditions of the discharge and receiving water. Discharge concentrations for the parameters are chosen to represent the "worst case" quality of the discharge (i.e., maximum reported discharge concentrations). The spread sheet then evaluates each parameter by computing a Waste Load Allocation for each applicable criterion, determining a recommended maximum WQBEL and comparing that recommended WQBEL with the input discharge

concentration to determine which is more stringent. Based on this evaluation, the Toxics Management Spread sheet recommends average monthly and maximum daily WQBELs.

Reasonable Potential Analysis and WQBEL Development for IMP 301

Discharges from IMP 301 are evaluated based on concentrations reported on the application and on DMRs; data from those sources are entered into the Toxics Management Spread Sheet. The maximum reported value of the parameters from the application form or from previous DMRs is used as the input concentration in the Toxics Management Spread Sheet. All toxic pollutants whose maximum concentrations, as reported in the permit application or on DMRs, are greater than the most stringent applicable water quality criterion are considered to be pollutants of concern. [This includes pollutants reported as "Not Detectable" or as "<MDL" where the method detection limit for the analytical method used by the applicant is greater than the most stringent water quality criterion]. The Toxics Management Spread Sheet is run with the discharge and receiving stream characteristics shown in Table 14. For IW discharges, the design flow used in modeling is the average flow during production or operation taken from the permit application. Pollutants for which water quality standards have not been promulgated (e.g., TSS, oil and grease) are excluded from the analysis. All the parameters are evaluated using the model to determine the water quality-based effluent limits applicable to the discharge and the receiving stream. The spreadsheet then compares the reported discharge concentrations to the calculated water quality-based effluent limitations to determine if a reasonable potential exists to exceed the calculated WQBELs. Effluent limitations are established in the draft permit where a pollutant's maximum reported discharge concentration equals or exceeds 50% of the WQBEL. For non-conservative pollutants, monitoring requirements are established where the maximum reported concentration is between 25% - 50% of the WQBEL. For conservative pollutants, monitoring requirements are established where the maximum reported concentration is between 10% - 50% of the WQBEL. The information described above including the maximum reported discharge concentrations, the most stringent water quality criteria, the pollutant-of-concern (reasonable potential) determinations, the calculated WQBELs, and the WQBEL/monitoring recommendations are displayed in the Toxics Management Spread Sheet in Attachment J of this Fact Sheet. The Toxics Management Spread Sheet did not recommend any WQBELs for Toxics at IMP 301.

Table 14: TMS Inputs for IMP 301

Parameter	**Value**
River Mile Index	17.0
Discharge Flow (MGD)	0.0098
Basin/Stream Characteristics	
Parameter	**Value**
Area in Square Miles	890
Q_{7-10} (cfs)	83.4
Low-flow yield (cfs/mi^2)	0.094
Elevation (ft)	910
Slope	0.0001

Total Maximum Daily Loads

Wastewater discharges from the Specialty Metals Plant are located within the Kiskiminetas-Conemaugh Watershed for which the Department has developed a TMDL. The TMDL was finalized on January 29, 2010 and establishes waste load allocations for the discharge of aluminum, iron and manganese within the Kiskiminetas-Conemaugh Watershed. The site's NPDES permit (PA0000892) is listed in the Appendix G of the Kiskiminetas-Conemaugh Watershed TMDL, requiring load allocations. Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's Water Quality Planning and Management Regulations (codified at Title 40 of the *Code of Federal Regulations* Part 130) require states to develop a TMDL for impaired water bodies. A TMDL establishes the amount of a pollutant that a water body can assimilate without exceeding the water quality criteria for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and non-point sources in order to restore and

maintain the quality of the state's water resources (USEPA 1991a). Stream reaches within the Kiskiminetas-Conemaugh Watershed are included in the state's 2008 Section 303(d) list because of various impairments, including metals, pH and sediment. The TMDL includes consideration for each river and tributary within the target watershed and its impairment sources. Stream data is then used to calculate minimum pollutant reductions that are necessary to attain water quality criteria levels. Target concentrations published in the TMDL were based on established water quality criteria of 0.750 $^{mg}/_{L}$ total recoverable aluminum, 1.5 $^{mg}/_{L}$ total recoverable iron based on a 30-day average 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. TMDLs prescribe allocations that minimally achieve water quality criteria (i.e., 100 percent use of a stream's assimilative capacity). However, the Kiskiminetas-Conemaugh River TMDL did not assign a WLA to IMP 301 and it is believed that these discharges do not contribute to the impairment of the Watershed; therefore, only monitoring of total iron, aluminum and manganese will be imposed.

Anti-backsliding:

Previous effluent limits and monitoring requirements can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l) and are displayed below in Table 15. As discussed above limitations for trichloroethylene was developed in the previous permit using Best Professional Judgement (BPJ) per Sections 304(b)(2)(B), 304(b)(4)(B), and 402(a)(1) of the Clean Water Act. The Department determined the effluent limitations in the previous permit based on the percent removal as determined from the EPA's RREL treatability database based on parameters of concern in the renewal application. A percent removal of 99% was used to determine the trichloroethylene limitations. There have been no changes to the treatment plant, and so 99% removal will continue to be applied. The raw (influent) concentration of trichloroethylene in the 2001 permit application was 7.24 mg/L and was limited to 0.0724 mg/L (1%). Monitoring for TRC will be removed from the Draft Permit because chlorination has not been used at the Facility for greater than 10 years and an UV system was installed in its place. The technology-based limits for suspended solids were also imposed as BPJ based existing treatment and treatability.

Table 15: Existing Effluent Limitation for IMP 301

Parameters	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Frequency	Sample Type
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
Total Suspended Solids	XXX	XXX	XXX	30	XXX	60	2/Month	grab
Oil and Grease	XXX	XXX	XXX	15	XXX	30	2/Month	grab
Dissolved Iron	XXX	XXX	XXX	XXX	XXX	7.0	2/Month	grab
Total Residual Chlorine	XXX	XXX	XXX	0.5	XXX	1.0	2/Month	grab
Trichloroethylene	XXX	XXX	XXX	0.072	XXX	0.144	2/Month	grab
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	2/Month	grab

Proposed Effluent Limitations and Monitoring Requirements

The proposed effluent monitoring requirements for IMP 301 are displayed in Table 16 below, they are the most stringent values from the above effluent limitation development. The TRC Limitation has been removed because the permittee does not use chlorination as part of the treatment system for IMP 301.

Table 16: Proposed Effluent Limitation for IMP 301

Parameters	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Frequency	Sample Type
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
Total Suspended Solids	XXX	XXX	XXX	30	XXX	60	2/Month	grab
Oil and Grease	XXX	XXX	XXX	15	XXX	30	2/Month	grab
Dissolved Iron	XXX	XXX	XXX	XXX	XXX	7.0	2/Month	grab
Trichloroethylene	XXX	XXX	XXX	0.072	XXX	0.144	2/Month	grab
Iron, Total	XXX	XXX	XXX	Report	Report	XXX	2/Month	grab
Aluminum, Total	XXX	XXX	XXX	Report	Report	XXX	2/Month	grab
Manganese, Total	XXX	XXX	XXX	Report	Report	XXX	2/Month	grab
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	2/Month	grab

Development of Effluent Limitations

Outfall No. 002 **Design Flow (MGD)** 0
Latitude 40º 26' 43.28" **Longitude** -79º 18' 17.46"
Wastewater Description: Stormwater and Groundwater

Stormwater Technology Limits

Outfall 002 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfall receives stormwater. The SIC code for the site is 3356 and the corresponding appendix of the PAG-03 that would apply to the facility is Appendix B. The reporting requirements applicable to stormwater discharges are shown in Table 17 below.

Table 17: PAG-03 Appendix (B) Monitoring Requirements

Parameter	Max Daily Concentration	Benchmark Values (mg/L)	Measurement Frequency	Sample Type
Total Nitrogen*	Monitor and Report		1/6 Months	Calculation
Total Phosphorus	Monitor and Report		1/6 Months	Grab
Total Suspended Solids (TSS)	Monitor and Report	100	1/6 Months	Grab
Oil & Grease	Monitor and Report	30	1/6 Months	Grab
Total Aluminum	Monitor and Report		1/6 Months	Grab
Total Zinc	Monitor and Report		1/6 Months	Grab
Total Copper	Monitor and Report		1/6 Months	Grab
Total Iron	Monitor and Report		1/6 Months	Grab
Total Lead	Monitor and Report		1/6 Months	Grab

*Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO_2+NO_3-N), where TKN and NO_2+NO_3-N are measured in the same sample.

Water Quality-Based Limitations

Stormwater WQBELs

Water quality analyses are typically performed under low-flow (Q7-10) conditions. Stormwater discharges occur at variable rates and frequencies but not however during Q7-10 conditions. Since the discharges from Outfall 002 are composed entirely of stormwater, a formal water quality analysis cannot be accurately conducted. Accordingly, water quality-based effluent limitations based on water quality analyses are not proposed.

Trichloroethylene

Discharge samples have indicated elevated concentrations of Trichloroethylene (TCE) in the discharge from Outfall 002. The facility collected three stormwater samples as part of the recent update to the pending renewal data and reported a TCE concentration of 13.1 ug/L average and 23.9 ug/L maximum. The estimated stormwater flow ranged from 30 to 60 gpm. In November 2021 the facility collected an additional three samples from IMP 201 during dry weather conditions. The flow was of groundwater. The flow rate was typically 2.1 gpm on dry days and the TCE concentration ranged from 6.01 ug/L to 25 ug/L. Per Section 307 of the Clean Water Act, TCE is listed as a toxic pollutant and it is also listed as a toxic substance in 25 Pa. Code Chapter 93.8c. Additionally, TCE is not a naturally occurring pollutant. The Criteria Continuous Concentration (CCC) is 450 ug/L, the Criteria Maximum Concentration (CMC) is 2300 ug/L and the Human Health Criteria is 0.6 ug/L with a Cancer Risk Level (CRL) at 1×10^{-6} (one excess case of cancer in a population of 1 million over a 70-year lifetime). The discharge concentrations are significantly greater than the 0.6 ug/L Human Health Criteria. Outfall 002 discharges to a drainage swale that discharges to the Conemaugh River. Because TCE is not a naturally occurring pollutant, the groundwater is likely contaminated from past activities at the site and is not being collected and treated in the onsite groundwater treatment system that discharges via IMP 301. At this time the Department is not imposing a limitation for Trichloroethylene at Outfall 002 but will in include a benchmark goal equal to the Department's Quantitation Limit, 0.5 ug/L. The benchmark for Trichloroethylene is proposed to be at the Department QL because TCE is not naturally occurring and any detection indicates the stormwater and groundwater are being contaminated. Similar to the other stormwater benchmarks, a Corrective Action Plan must be developed and submitted when there are two consecutive exceedances of the benchmark values. If Westinghouse continues to discharge Trichloroethylene above detection levels via Outfall 002, a limitation may be developed in the future. As part of the Corrective Action Plans, Westinghouse can evaluate why TCE is in

the discharge and how to prevent it from discharge via Outfall 002. Westinghouse may want to evaluate the stormwater infiltration and if needed reroute the contaminated groundwater to IMP 301.

Total Maximum Daily Load (TMDL)

To ensure the facility does not contribute to the impairment, monitoring of total aluminum, iron and manganese will be imposed.

Anti-Backsliding

Outfall 002 did not have any limitations or monitoring requirements in the previous permit, therefore anti-backsliding is not applicable.

Proposed Effluent Limitations and Monitoring Requirements

The proposed effluent monitoring requirements for Outfall 002 are displayed in Table 18 below, they are the most stringent values from the above effluent limitation development. The Draft Permit requires a Corrective Action Plan when there are two consecutive exceedances of the benchmark values, which are also included in the Part C condition. The benchmark values are displayed below in Table 18. The Benchmark for Trichloroethylene is only applicable to Outfall 002. These values are not effluent limitations, an exceedance of the benchmark value is not a violation. If there are two consecutive exceedances of the benchmark value, a corrective action plan must be conducted to evaluate site stormwater controls and BMPs. Benchmark monitoring is a feedback tool, along with routine inspections and visual assessments, for assessing the effectiveness of stormwater controls and BMPs. An exceedance of the benchmark provides permittees with an indication that the facility's controls may not be sufficiently controlling pollutants in stormwater.

Table 18: Proposed Effluent Monitoring Requirements – Outfall 002

Parameter	Max Daily Concentration	Benchmark Values	Measurement Frequency	Sample Type
Total Nitrogen* (mg/L)	Report	XXX	1/6 Months	Calculation
Total Phosphorus (mg/L)	Report	XXX	1/6 Months	Grab
Total Suspended Solids (TSS) (mg/L)	Report	100	1/6 Months	Grab
Oil & Grease (mg/L)	Report	30	1/6 Months	Grab
Total Aluminum (mg/L)	Report	XXX	1/6 Months	Grab
Total Zinc (mg/L)	Report	XXX	1/6 Months	Grab
Total Copper (mg/L)	Report	XXX	1/6 Months	Grab
Total Iron (mg/L)	Report	XXX	1/6 Months	Grab
Total Lead (mg/L)	Report	XXX	1/6 Months	Grab
Total Manganese (mg/L)	Report	XXX	1/6 Months	Grab
Trichloroethylene (µg/L)	Report	0.5	1/6 Months	Grab

*Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO_2+NO_3-N), where TKN and NO_2+NO_3-N are measured in the same sample.

Development of Effluent Limitations

Outfall No. 003 **Design Flow (MGD)** 0
Latitude 40º 26' 39.72" **Longitude** -79º 18' 36.46"
Wastewater Description: Stormwater

Stormwater Technology Limits

Outfall 003 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfall receives stormwater. The SIC code for the site is 3356 and the corresponding appendix of the PAG-03 that would apply to the facility is Appendix B. The reporting requirements applicable to stormwater discharges are shown in Table 19 below.

Table 19: PAG-03 Appendix (B) Monitoring Requirements

Parameter	Max Daily Concentration	Benchmark Values (mg/L)	Measurement Frequency	Sample Type
Total Nitrogen*	Monitor and Report		1/6 Months	Calculation
Total Phosphorus	Monitor and Report		1/6 Months	Grab
Total Suspended Solids (TSS)	Monitor and Report	100	1/6 Months	Grab
Oil & Grease	Monitor and Report	30	1/6 Months	Grab
Total Aluminum	Monitor and Report		1/6 Months	Grab
Total Zinc	Monitor and Report		1/6 Months	Grab
Total Copper	Monitor and Report		1/6 Months	Grab
Total Iron	Monitor and Report		1/6 Months	Grab
Total Lead	Monitor and Report		1/6 Months	Grab

*Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO_2+NO_3-N), where TKN and NO_2+NO_3-N are measured in the same sample.

Water Quality-Based Limitations

Stormwater WQBELs

Water quality analyses are typically performed under low-flow (Q7-10) conditions. Stormwater discharges occur at variable rates and frequencies but not however during Q7-10 conditions. Since the discharges from Outfall 003 are composed entirely of stormwater, a formal water quality analysis cannot be accurately conducted. Accordingly, water quality-based effluent limitations based on water quality analyses are not proposed.

Trichloroethylene - Monitoring

None of the sampled pollutants were elevated in concentration, including TCE. Since Outfall 003 is new and discharge is from a significant area along the Westro Building, monitoring will be imposed for further confirmation of the pollutant's absence under varying storm conditions.

Total Maximum Daily Load (TMDL)

To ensure the facility does not contribute to the impairment, monitoring of total aluminum, iron and manganese will be imposed.

Anti-Backsliding

Outfall 003 is a new outfall and therefore anti-backsliding is not applicable.

Proposed Effluent Limitations and Monitoring Requirements

The proposed effluent monitoring requirements for Outfall 003 are displayed in Table 20 below, they are the most stringent values from the above effluent limitation development. The Draft Permit requires a Corrective Action Plan when there are two consecutive exceedances of the benchmark values, which are also included in the Part C condition. The benchmark values are displayed below in Table 20. These values are not effluent limitations, an exceedance of the

benchmark value is not a violation. As described above, if there are two consecutive exceedances of the benchmark value, a corrective action plan must be conducted to evaluate site stormwater controls and BMPs. Benchmark monitoring is a feedback tool, along with routine inspections and visual assessments, for assessing the effectiveness of stormwater controls and BMPs. An exceedance of the benchmark provides permittees with an indication that the facility's controls may not be sufficiently controlling pollutants in stormwater.

Table 20: Proposed Effluent Monitoring Requirements – Outfall 003

Parameter	Max Daily Concentration	Benchmark Values	Measurement Frequency	Sample Type
Total Nitrogen* (mg/L)	Report	XXX	1/6 Months	Calculation
Total Phosphorus (mg/L)	Report	XXX	1/6 Months	Grab
Total Suspended Solids (TSS) (mg/L)	Report	100	1/6 Months	Grab
Oil & Grease (mg/L)	Report	30	1/6 Months	Grab
Total Aluminum (mg/L)	Report	XXX	1/6 Months	Grab
Total Zinc (mg/L)	Report	XXX	1/6 Months	Grab
Total Copper (mg/L)	Report	XXX	1/6 Months	Grab
Total Iron (mg/L)	Report	XXX	1/6 Months	Grab
Total Lead (mg/L)	Report	XXX	1/6 Months	Grab
Total Manganese (mg/L)	Report	XXX	1/6 Months	Grab
Trichloroethylene (µg/L)	Report	XXX	1/6 Months	Grab

*Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO_2+NO_3-N), where TKN and NO_2+NO_3-N are measured in the same sample.

Development of Effluent Limitations

Outfall No. 004 **Design Flow (MGD)** 0
Latitude 40º 26' 53.91" **Longitude** -79º 18' 33.51"
Wastewater Description: Stormwater

Stormwater Technology Limits

Outfall 004 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfall receives stormwater. The SIC code for the site is 3356 and the corresponding appendix of the PAG-03 that would apply to the facility is Appendix B. The reporting requirements applicable to stormwater discharges are shown in Table 21 below.

Table 21: PAG-03 Appendix (B) Monitoring Requirements

Parameter	Max Daily Concentration	Benchmark Values (mg/L)	Measurement Frequency	Sample Type
Total Nitrogen*	Monitor and Report		1/6 Months	Calculation
Total Phosphorus	Monitor and Report		1/6 Months	Grab
Total Suspended Solids (TSS)	Monitor and Report	100	1/6 Months	Grab
Oil & Grease	Monitor and Report	30	1/6 Months	Grab
Total Aluminum	Monitor and Report		1/6 Months	Grab
Total Zinc	Monitor and Report		1/6 Months	Grab
Total Copper	Monitor and Report		1/6 Months	Grab
Total Iron	Monitor and Report		1/6 Months	Grab
Total Lead	Monitor and Report		1/6 Months	Grab

*Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO_2+NO_3-N), where TKN and NO_2+NO_3-N are measured in the same sample.

Water Quality-Based Limitations

Stormwater WQBELs

Water quality analyses are typically performed under low-flow (Q7-10) conditions. Stormwater discharges occur at variable rates and frequencies but not however during Q7-10 conditions. Since the discharges from Outfall 004 are composed entirely of stormwater, a formal water quality analysis cannot be accurately conducted. Accordingly, water quality-based effluent limitations based on water quality analyses are not proposed.

Trichloroethylene - Monitoring

None of the sampled pollutants were elevated in concentration, including TCE. Since Outfall 004 is new and the discharge is from along the Westro Building, monitoring will be imposed for further confirmation of the pollutant's absence under varying storm conditions.

Total Maximum Daily Load (TMDL)

To ensure the facility does not contribute to the impairment, monitoring of total aluminum, iron and manganese will be imposed.

Anti-Backsliding

Outfall 004 is a new outfall and therefore anti-backsliding is not applicable.

Proposed Effluent Limitations and Monitoring Requirements

The proposed effluent monitoring requirements for Outfall 004 are displayed in Table 22 below, they are the most stringent values from the above effluent limitation development. The Draft Permit requires a Corrective Action Plan when there are two consecutive exceedances of the benchmark values, which are also included in the Part C condition. The benchmark values are displayed below in Table 22. These values are not effluent limitations, an exceedance of the

benchmark value is not a violation. As described above, if there are two consecutive exceedances of the benchmark value, a corrective action plan must be conducted to evaluate site stormwater controls and BMPs. Benchmark monitoring is a feedback tool, along with routine inspections and visual assessments, for assessing the effectiveness of stormwater controls and BMPs. An exceedance of the benchmark provides permittees with an indication that the facility's controls may not be sufficiently controlling pollutants in stormwater.

Table 22: Proposed Effluent Monitoring Requirements – Outfall 004

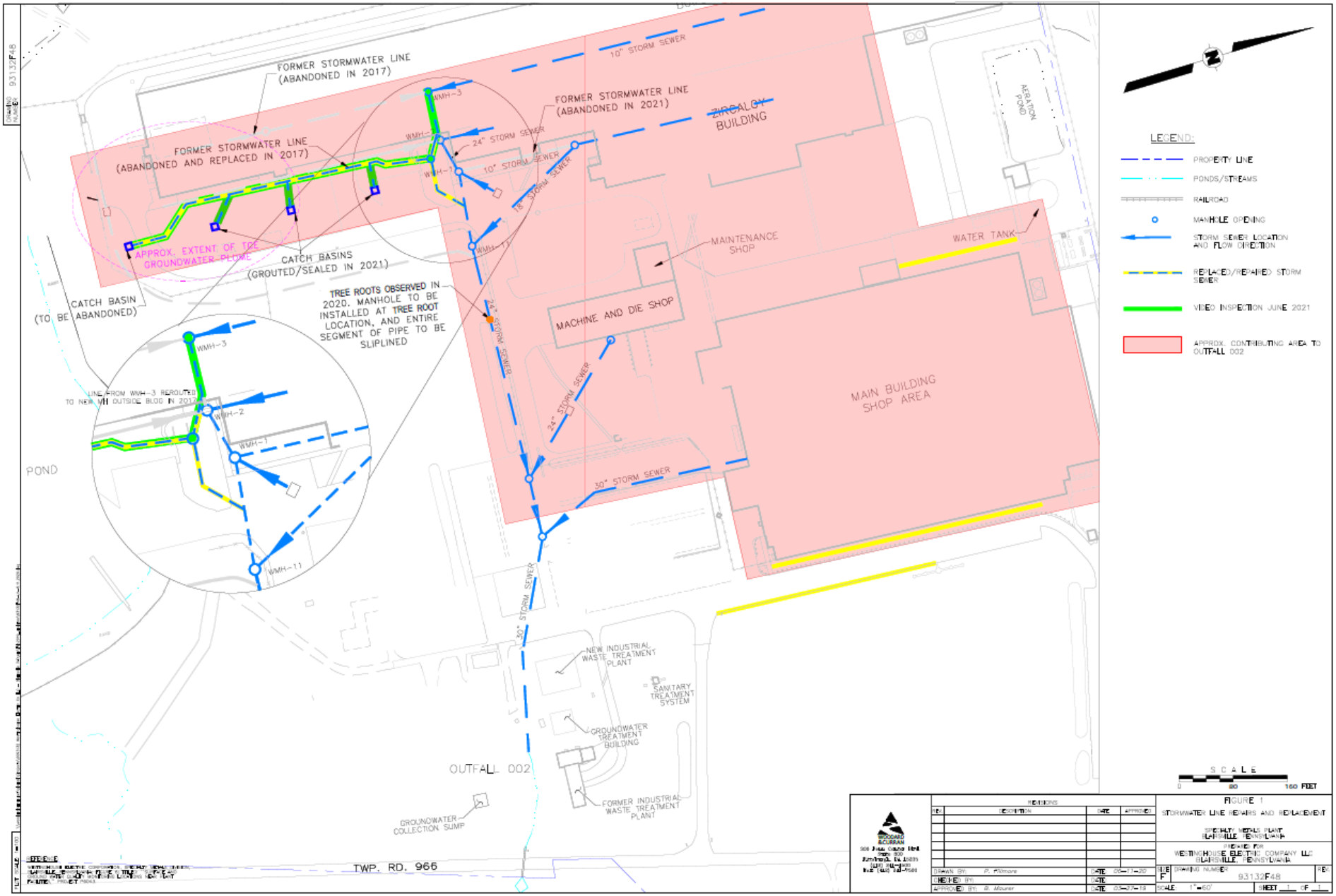
Parameter	Max Daily Concentration	Benchmark Values	Measurement Frequency	Sample Type
Total Nitrogen* (mg/L)	Report	XXX	1/6 Months	Calculation
Total Phosphorus (mg/L)	Report	XXX	1/6 Months	Grab
Total Suspended Solids (TSS) (mg/L)	Report	100	1/6 Months	Grab
Oil & Grease (mg/L)	Report	30	1/6 Months	Grab
Total Aluminum (mg/L)	Report	XXX	1/6 Months	Grab
Total Zinc (mg/L)	Report	XXX	1/6 Months	Grab
Total Copper (mg/L)	Report	XXX	1/6 Months	Grab
Total Iron (mg/L)	Report	XXX	1/6 Months	Grab
Total Lead (mg/L)	Report	XXX	1/6 Months	Grab
Total Manganese (mg/L)	Report	XXX	1/6 Months	Grab
Trichloroethylene (µg/L)	Report	XXX	1/6 Months	Grab

*Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO_2+NO_3-N), where TKN and NO_2+NO_3-N are measured in the same sample.

	Tools and References Used to Develop Permit
☒	WQM for Windows Model (see Attachment **I**)
☒	Toxics Management Spreadsheet (see Attachment **E, H, and J**)
☒	TRC Model Spreadsheet (see Attachment **F**)
☒	Temperature Model Spreadsheet (see Attachment **G**)
☐	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:

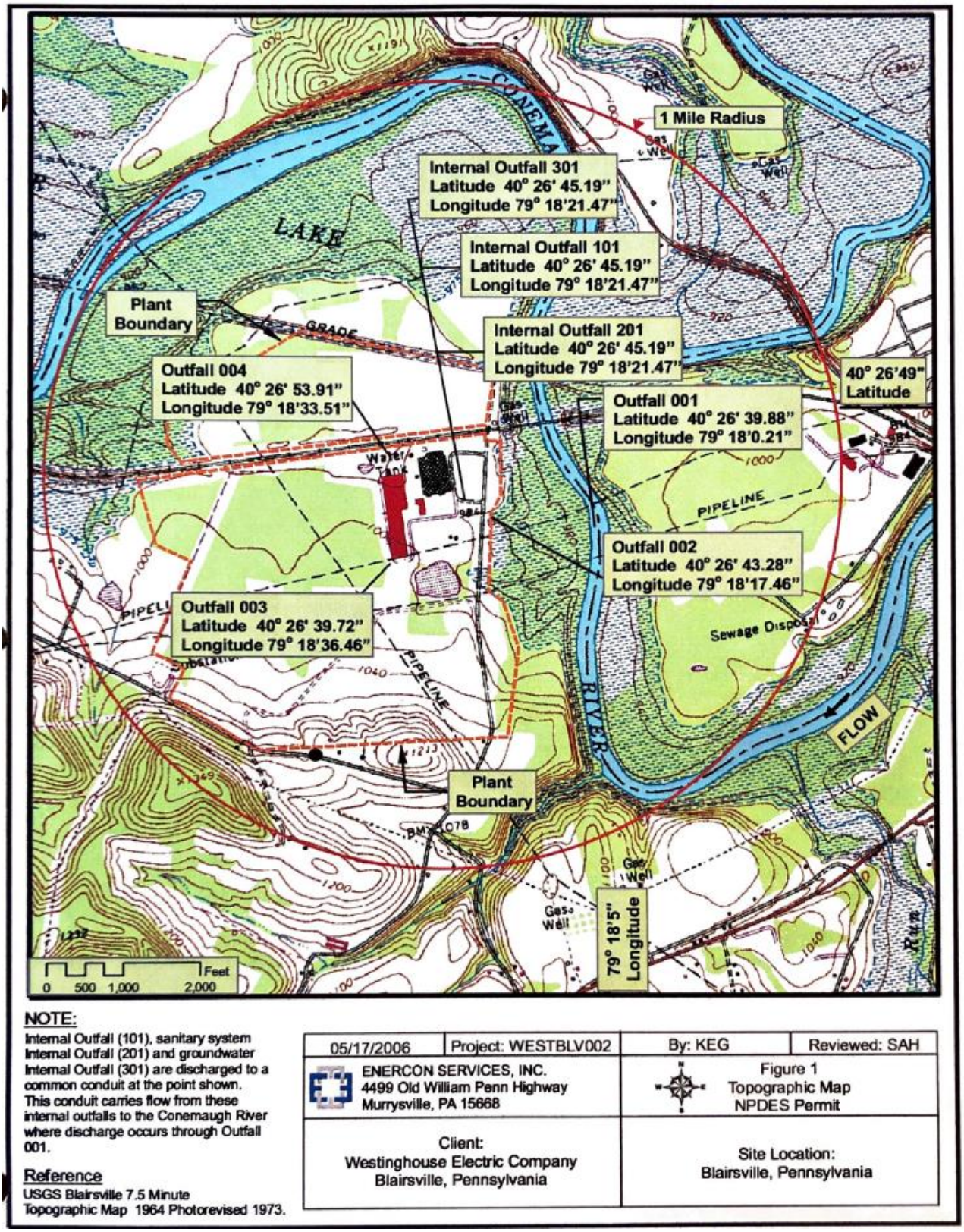
Attachment A

Drawing of Stormwater Piping Network to Outfall 002



Attachment B

Facility Maps



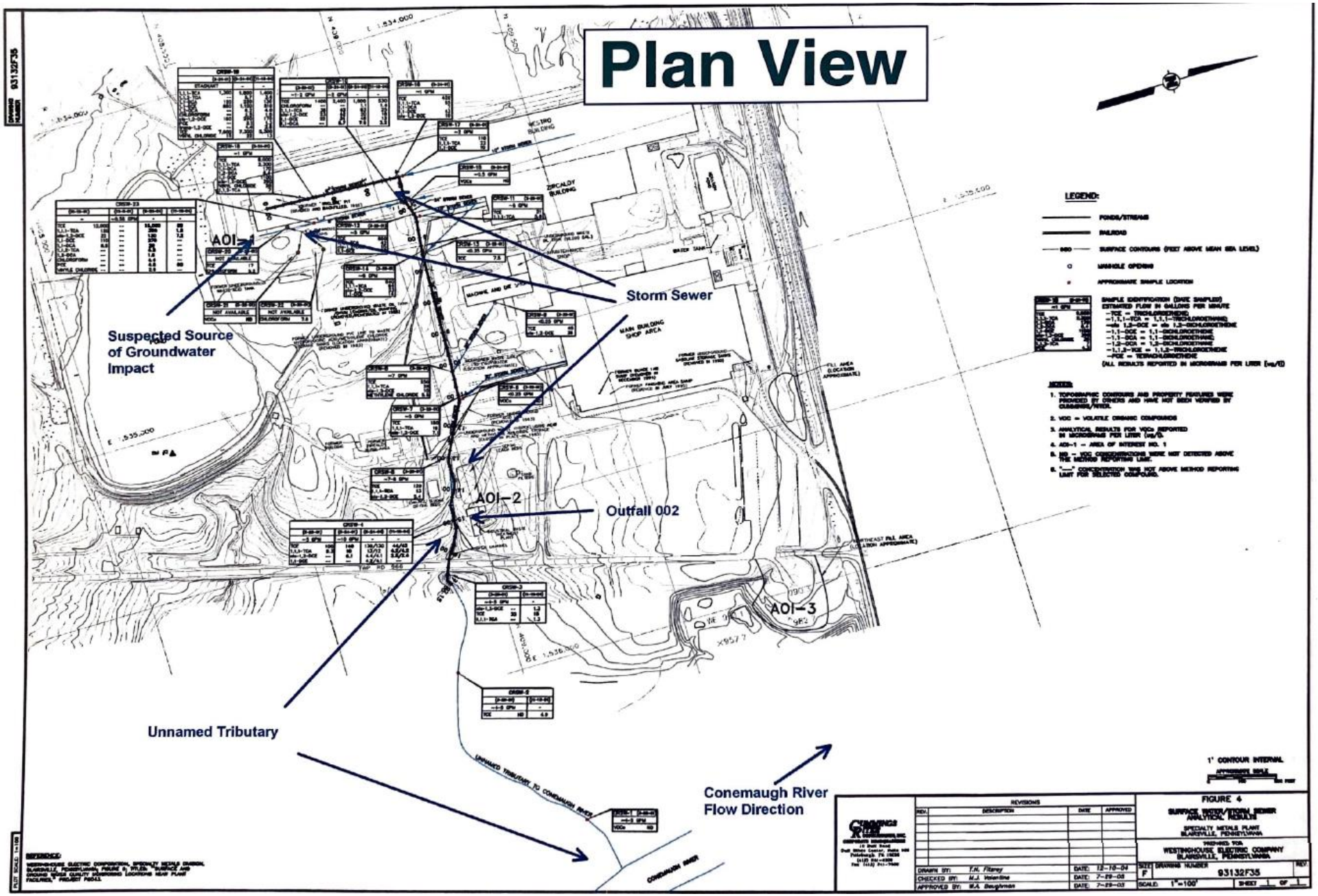
NOTE:

Internal Outfall (101), sanitary system Internal Outfall (201) and groundwater Internal Outfall (301) are discharged to a common conduit at the point shown. This conduit carries flow from these internal outfalls to the Conemaugh River where discharge occurs through Outfall 001.

Reference

USGS Blairsville 7.5 Minute Topographic Map 1964 Photorevised 1973.

05/17/2006	Project: WESTBLV002	By: KEG	Reviewed: SAH
ENERCON SERVICES, INC. 4499 Old William Penn Highway Murrysville, PA 15668		Figure 1 Topographic Map NPDES Permit	
Client: Westinghouse Electric Company Blairsville, Pennsylvania		Site Location: Blairsville, Pennsylvania	


Plan View
AOI-1
Suspected Source of Groundwater Impact
Storm Sewer
AOI-2
Outfall 002
AOI-3
Unnamed Tributary
Conemaugh River Flow Direction
LEGEND:
1' CONTOUR INTERVAL
FIGURE 4

Attachment C

Stormwater Infrastructure Changes

Completed Items
Repairs and Upgrades
Stormwater Maintenance Activities
Westinghouse - Blairsville

Area of Plant			
Yard Drains	**Task**	**Finish**	**Status**
1	Replace Maintenance Center West Catch Basin	2013	Complete
2	Replace Maintenance South West Catch Basin	2013	Complete
3	Replace Maintenance South Catch Basin	2016	Complete
4	Repair Die Shop East Basins	2011	Complete
5	Repair Die Shop South Door Basin	2011	Complete
6	Repair Die Shop North Basins	2012	Complete
7	Repair Zirc Pickle House Catch Basin	2013	Complete
8	Repair Guard Bldg Catch Basin	2016	Complete
9	Repair Westro Office Catch Basin	2014	Complete
10	Replace Plant Service Area South West Drain	2013	Complete
11	Install New PVC for IW, Sanitary, and Storm Drain Lines East of Main Entrance	2019	Complete
South Parking Lot Area (Hourly)	**Task**	**Finish**	**Status**
12	Clean Catch Basin	Yearly	SAP PM
13	Video SW Lines South of Tech Services to Hourly Lot	2020	Complete
Westro	**Task**	**Finish**	**Status**
14	Re-route Piping for Center Roof Drains	2014	Complete
15	Repave and Plant Disturbed Areas - from Westro IW Line Replacement - 2013 (300')	2013	Complete
16	Re-route Westro2 Center / North Roof Drains to Outfall 003	2016	Complete
17	Camera Inspection of Westro center Drain Line	2014	Complete
18	Excavate and Replace 2 Sections of Broken Center Drain Line Found via Camera Inspection Also Ground Penetrating Radar Performed	2014	Complete
19	Form and Install New Manhole 2A	2017	Complete
20	Plug Existing Manhole 2 (East of Westro)	2017	Complete
21	Reroute through Building and Install New Roof Drain PVC Piping to Manholes - Westro 1 South East Area to Tech Services	2017	Complete
22	Install New 24" PVC from Manhole 2A to Manhole 11	2017	Complete
Road Drains	**Task**	**Finish**	**Status**
23	Shipping Parking Lot - New PVC Drain Sections	2012	Complete
24	West Main Building - Replacement of Exterior Drains and PVC Pipe from Fuel Storage to Center Main Building	2018	Complete
25	Repair Catch Basin Picklehouse Door	2016	Complete
Main Building	**Task**	**Finish**	**Status**
26	Replace Bay 4 South Roof Drain	2016	Complete

Planned Items
Repairs and Upgrades
Stormwater Maintenance Activities
Westinghouse - Blairsville

Task	Anticipated Completion Timeframe
Fill and Close Southwest SW Line in Westro (currently abandoned and plugged), including Unnamed MH in South Westro	12 months
Repair MH-3	12 months
Repair MH-3 to MH-2	12 months
Repair MH-1 to MH-11	12 months

Attachment D

IMP 101 ELG Calculations

Westinghouse Electric Company, LLC - Specialty Metals Plant
Federal ELG Calculations
PA0000892
Authorization 635342

NPDES Permit Application Reported Production Rates	
Operation	**Anticipated Average Annual Production (Off-lbs)**
Zirconium-Hafnium Surface Treatment Spent Baths	3,000,000
Zirconium-Hafnium Surface Treatment Rinse	2,800,000
Zirconium-Hafnium Alkaline Cleaning Spent Baths	11,600,000
Zirconium-Hafnium Alkaline Cleaning Rinse	11,600,000
Zirconium-Hafnium Sawed or Grinding with Spent Emulsions	1,200,000
Zirconium-Hafnium Sawed or Grinding with Contact Cooling Water	1,200,000
Sawed or Grinding Zirconium-Hafnium Rinse	1,200,000
Zirconium-Hafnium inspection and testing Wastewater	1,300,000

IMP 101

ELG 40 CFR 471.91/92 (h) Zirconium-Hafnium Forming Surface Treatment Spent Baths

Pollutant	BPT/BAT Effluent Limitations (lbs/1,000,000 off-lb zirconium-hafnium surface treated)		Mass-Based Effluent Limits (lbs./day)	
	Max for any 1 day	Average Daily Value for 30 consecutive days	Average Monthly	Max Daily
Chromium	0.150	0.062	0.00074	0.00179
Cyanide	0.099	0.041	0.00049	0.00118
Nickel	0.653	0.432	0.00514	0.00777
Ammonia	45.300	20.000	0.23810	0.53929
Fluoride	20.300	8.980	0.10690	0.24167
Oil and Grease	9.800	4.080	0.04857	0.11667
TSS	14.000	6.630	0.07893	0.16667
pH	Within Range of 7.5 to 10.0		Within Range of 7.5 to 10.0	

Sample Calculations

Mass-Based Effluent Limit (lbs/day) = [ELG Max for any 1 day (lbs/1,000,000 lbs production)] * [Average Daily Production (1,000,000 lbs production)]
Chromium Max Daily (lbs/day) = (0.15 lbs/1,000,000 lbs production) * [((3,000,000 lbs/yr) * (1 yr/ 12 months) * (1 Month / 21 Days)) / (1,000,000 lbs production)]
Chromium Max Daily (lbs/day) = 0.0018 lbs/day

ELG 40 CFR 471.91/92 (i) Zirconium-Hafnium Forming Surface Treatment Rinse

Pollutant	BPT/BAT Effluent Limitations (lbs/1,000,000 off-lb zirconium-hafnium surface treated)		Mass-Based Effluent Limits (lbs./day)	
	Max for any 1 day	Average Daily Value for 30 consecutive days	Average Monthly	Max Daily
Chromium	0.3910	0.160	0.00178	0.00434
Cyanide	0.2580	0.107	0.00119	0.00287
Nickel	1.7100	1.130	0.01256	0.01900
Ammonia	119.0000	52.100	0.57889	1.32222
Fluoride	52.9000	23.500	0.26111	0.58778
Oil and Grease	178.0000	107.000	1.18889	1.97778
TSS	364.0000	173.000	1.92222	4.04444
pH	Within Range of 7.5 to 10.0		Within Range of 7.5 to 10.0	

ELG 40 CFR 471.91/92 (j) Zirconium-Hafnium Forming Alkaline Cleaning Spent Baths

Pollutant	BPT/BAT Effluent Limitations (lbs/1,000,000 off-lb zirconium-hafnium Alkaline Cleaned)		Mass-Based Effluent Limits (lbs./day)	
	Max for any 1 day	Average Daily Value for 30 consecutive days	Average Monthly	Max Daily
Chromium	0.7040	0.2880	0.01326	0.03241
Cyanide	0.4640	0.1920	0.00884	0.02136
Nickel	3.0700	2.0300	0.09344	0.14132
Ammonia	214.0000	93.8000	4.31778	9.85079
Fluoride	95.2000	42.3000	1.94714	4.38222
Oil and Grease	32.0000	19.2000	0.88381	1.47302
TSS	65.6000	31.2000	1.43619	3.01968
pH	Within Range of 7.5 to 10.0		Within Range of 7.5 to 10.0	

ELG 40 CFR 471.91/92 (k) Zirconium-Hafnium Forming Alkaline Cleaning Rinse

Pollutant	BPT/BAT Effluent Limitations (lbs/1,000,000 off-lb zirconium-hafnium Alkaline Cleaned)		Mass-Based Effluent Limits (lbs./day)	
	Max for any 1 day	Average Daily Value for 30 consecutive days	Average Monthly	Max Daily
Chromium	1.3800	0.5650	0.02601	0.06352
Cyanide	0.9110	0.3770	0.01735	0.04193
Nickel	6.0300	3.9900	0.18367	0.27757
Ammonia	419.0000	184.0000	8.46984	19.28730
Fluoride	187.0000	82.9000	3.81603	8.60794
Oil and Grease	628.0000	377.0000	17.35397	28.90794
TSS	1290.0000	613.0000	28.21746	59.38095
pH	Within Range of 7.5 to 10.0		Within Range of 7.5 to 10.0	

ELG 40 CFR 471.91/92 (l) Zirconium-Hafnium Forming Sawing or Grinding Spent Emulsions

Pollutant	BPT/BAT Effluent Limitations (lbs/1,000,000 off-lb zirconium-hafnium Sawed or Ground with Emulsions)		Mass-Based Effluent Limits (lbs./day)	
	Max for any 1 day	Average Daily Value for 30 consecutive days	Average Monthly	Max Daily
Chromium	0.1240	0.0510	0.00024	0.00059
Cyanide	0.0820	0.0340	0.00016	0.00039
Nickel	0.5400	0.3570	0.00170	0.00257
Ammonia	37.5000	16.5000	0.07857	0.17857
Fluoride	16.7000	7.4200	0.03533	0.07952
Oil and Grease	5.6200	3.3700	0.01605	0.02676
TSS	11.5000	5.4800	0.02610	0.05476
pH	Within Range of 7.5 to 10.0		Within Range of 7.5 to 10.0	

ELG 40 CFR 471.91/92 (q) Zirconium-Hafnium Forming Sawing or Grinding Contact Cooling Water

Pollutant	BPT/BAT Effluent Limitations (lbs/1,000,000 off-lb zirconium-hafnium Sawed or Ground with Cooling Water)		Mass-Based Effluent Limits (lbs./day)	
	Max for any 1 day	Average Daily Value for 30 consecutive days	Average Monthly	Max Daily
Chromium	0.1420	0.0580	0.00028	0.00068
Cyanide	0.0930	0.0390	0.00019	0.00044
Nickel	0.6170	0.4080	0.00194	0.00294
Ammonia	42.8000	18.8000	0.08952	0.20381
Fluoride	19.1000	8.4800	0.04038	0.09095
Oil and Grease	6.4200	3.8500	0.01833	0.03057
TSS	13.2000	6.2600	0.02981	0.06286
pH	Within Range of 7.5 to 10.0		Within Range of 7.5 to 10.0	

ELG 40 CFR 471.91/92 (r) Zirconium-Hafnium Forming Sawing or Grinding Rinse

Pollutant	BPT/BAT Effluent Limitations (lbs/1,000,000 off-lb of Sawed or Ground zirconium-hafnium Rinsed)		Mass-Based Effluent Limits (lbs./day)	
	Max for any 1 day	Average Daily Value for 30 consecutive days	Average Monthly	Max Daily
Chromium	0.0790	0.0330	0.00016	0.00038
Cyanide	0.0520	0.0220	0.00010	0.00025
Nickel	0.3460	0.2290	0.00109	0.00165
Ammonia	24.0000	10.6000	0.05048	0.11429
Fluoride	10.7000	4.7500	0.02262	0.05095
Oil and Grease	36.0000	21.6000	0.10286	0.17143
TSS	73.8000	35.1000	0.16714	0.35143
pH	Within Range of 7.5 to 10.0		Within Range of 7.5 to 10.0	

ELG 40 CFR 471.91/92 (t) Zirconium-Hafnium Forming Inspection and Testing Wastewater

Pollutant	BPT/BAT Effluent Limitations (lbs/1,000,000 off-lb of zirconium-hafnium Tested)		Mass-Based Effluent Limits (lbs./day)	
	Max for any 1 day	Average Daily Value for 30 consecutive days	Average Monthly	Max Daily
Chromium	0.0070	0.0030	0.00002	0.00004
Cyanide	0.0050	0.0020	0.00001	0.00003
Nickel	0.3000	0.0200	0.00010	0.00155
Ammonia	2.0600	0.9030	0.00466	0.01063
Fluoride	0.9170	0.4070	0.00210	0.00473
Oil and Grease	0.3080	0.1850	0.00095	0.00159
TSS	0.6320	0.3010	0.00155	0.00326
pH	Within Range of 7.5 to 10.0		Within Range of 7.5 to 10.0	

Pollutant	Mass-Based Effluent Limits (lbs./day)	
	Average Monthly	Max Daily
Chromium	0.0425	0.104
Cyanide	0.0283	0.0684
Nickel	0.300	0.454
Ammonia	13.8	31.5
Fluoride	6.23	14.0
Oil and Grease	19.6	32.7
TSS	31.9	67.1
pH	Within Range of 7.5 to 10.0	

Attachment E

IMP 101 Toxics Management Spreadsheet

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions | Discharge | Stream

Facility: **Westinghouse Specialty Metals Plant, Blairsvill** NPDES Permit No.: **PA0000892** Outfall No.: **101**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Industrial process and miscellaneous WW**

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
0.09	663	8						

					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		2880									
	Chloride (PWS)	mg/L		470									
	Bromide	mg/L		1.07									
	Sulfate (PWS)	mg/L		27.2									
	Fluoride (PWS)	mg/L		15.6									
Group 2	Total Aluminum	µg/L		379									
	Total Antimony	µg/L	<	1									
	Total Arsenic	µg/L	<	3									
	Total Barium	µg/L		16									
	Total Beryllium	µg/L	<	5									
	Total Boron	µg/L		183									
	Total Cadmium	µg/L		5									
	Total Chromium (III)	µg/L	<	5									
	Hexavalent Chromium	µg/L	<	0.01									
	Total Cobalt	µg/L		0.7									
	Total Copper	µg/L		3									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L		100									
	Dissolved Iron	µg/L		11									
	Total Iron	µg/L	<	20									
	Total Lead	µg/L	<	2									
	Total Manganese	µg/L		8									
	Total Mercury	µg/L	<	0.04									
	Total Nickel	µg/L		3									
	Total Phenols (Phenolics) (PWS)	µg/L		5									
	Total Selenium	µg/L	<	5									
	Total Silver	µg/L	<	2									
	Total Thallium	µg/L	<	1									
	Total Zinc	µg/L		2									
	Total Molybdenum	µg/L		7									
	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	<	1										
	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											
	Total Beta	pCi/L	<										
	Radium 226/228	pCi/L	<										
	Total Strontium	µg/L	<										
	Total Uranium	µg/L	<										
	Osmotic Pressure	mOs/kg											

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Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

Westinghouse Specialty Metals Plant, Blairsville, NPDES Permit No. PA0000892, Outfall 101

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Conemaugh River**

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	043832	17	910	890	0.0001		Yes
End of Reach 1	043832	16.5	909	891	0.0001	0	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	17	0.0937079										100	7		
End of Reach 1	16.5	0.0937079										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	17														
End of Reach 1	16.5														

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Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Westinghouse Specialty Metals Plant, Blairsville, NPDES Permit No. PA0000892, Outfall 101

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.068 Analysis Hardness (mg/l): 113.48 Analysis pH: 7.01

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	31,332	
Total Antimony	0	0		0	1,100	1,100	45,954	
Total Arsenic	0	0		0	340	340	14,204	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	877,298	
Total Boron	0	0		0	8,100	8,100	338,386	
Total Cadmium	0	0		0	2.277	2.43	101	Chem Translator of 0.939 applied
Total Chromium (III)	0	0		0	631.921	2,000	83,542	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	681	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	3,969	
Total Copper	0	0		0	15.139	15.8	659	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	74.092	95.9	4,006	Chem Translator of 0.773 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	68.8	Chem Translator of 0.85 applied
Total Nickel	0	0		0	521.093	522	21,813	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	3.998	4.7	197	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	2,715	
Total Zinc	0	0		0	130.430	133	5,571	Chem Translator of 0.978 applied
Trichloroethylene	0	0		0	2,300	2,300	96,085	

☑ *CFC* CCT (min): 720 PMF: 0.472 Analysis Hardness (mg/l): 101.99 Analysis pH: 7.00

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	62,371	
Total Arsenic	0	0		0	150	150	42,526	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	1,162,371	
Total Boron	0	0		0	1,600	1,600	453,608	
Total Cadmium	0	0		0	0.249	0.27	77.8	Chem Translator of 0.908 applied
Total Chromium (III)	0	0		0	75.318	87.6	24,829	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	2,947	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	5,387	
Total Copper	0	0		0	9.108	9.49	2,690	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	900,013	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.571	3.26	925	Chem Translator of 0.788 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	257	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.879	53.0	15,037	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	1,414	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	3,686	
Total Zinc	0	0		0	120.124	122	34,539	Chem Translator of 0.986 applied
Trichloroethylene	0	0		0	450	450	127,577	

☑ *THH* CCT (min): ###### THH PMF: 0.472 Analysis Hardness (mg/l): N/A Analysis pH: N/A PWS PMF: 0.1807

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	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	

Fluoride (PWS)	0	0		0	2,000	2,000	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	1,588	THH WQC applied at PWS at RMI 16.5
Total Arsenic	0	0		0	10	10.0	2,835	THH WQC applied at PWS at RMI 16.5
Total Barium	0	0		0	2,400	2,400	680,412	THH WQC applied at PWS at RMI 16.5
Total Boron	0	0		0	3,100	3,100	878,866	THH WQC applied at PWS at RMI 16.5
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	85,052	THH WQC applied at PWS at RMI 16.5
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	283,505	THH WQC applied at PWS at RMI 16.5
Total Mercury	0	0		0	0.050	0.05	14.2	THH WQC applied at PWS at RMI 16.5
Total Nickel	0	0		0	610	610	172,938	THH WQC applied at PWS at RMI 16.5
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	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	0.24	0.24	68.0	THH WQC applied at PWS at RMI 16.5
Total Zinc	0	0		0	N/A	N/A	N/A	
Trichloroethylene	0	0		0	N/A	N/A	N/A	

☑ *CRL* CCT (min): 720 PMF: 0.759 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	
Trichloroethylene	0	0		0	0.6	0.6	1,162	

☑ ***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)		mg/L	Discharge Conc ≤ 10% WQBEL
Chloride (PWS)		mg/L	Discharge Conc ≤ 10% WQBEL
Bromide	N/A	N/A	No WQS
Sulfate (PWS)		mg/L	Discharge Conc ≤ 10% WQBEL
Fluoride (PWS)		mg/L	Discharge Conc ≤ 10% WQBEL
Total Aluminum	20,083	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Arsenic	N/A	N/A	Discharge Conc < TQL
Total Barium	562,313	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	216,892	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	65.0	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	24,829	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	436	µg/L	Discharge Conc < TQL
Total Cobalt	2,544	µg/L	Discharge Conc ≤ 10% WQBEL
Total Copper	422	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	85,052	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	900,013	µg/L	Discharge Conc < TQL
Total Lead	925	µg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	283,505	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	14.2	µg/L	Discharge Conc < TQL
Total Nickel	13,981	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	Discharge Conc ≤ 10% WQBEL
Total Selenium	1,414	µg/L	Discharge Conc < TQL
Total Silver	126	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	68.0	µg/L	Discharge Conc < TQL
Total Zinc	3,571	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS
Trichloroethylene	1,162	µg/L	Discharge Conc ≤ 25% WQBEL

Attachment F

IMP 101 TRC Model

TRC EVALUATION

83.4	= Q stream (cfs)	0.5	= CV Daily
0.09	= Q discharge (MGD)	0.5	= CV Hourly
4	= no. samples	0.5	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	0.5	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
	= %Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 2.422	1.3.2.iii	WLA cfc = 2.354
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.902	5.1d	LTA_cfc = 1.368

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.720	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.170	

WLA afc	**(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...**
	...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	**(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...**
	...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	**1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)**

Attachment G

IMP 101 Thermal Discharge Evaluation

Facility:	**Westinghouse Specialty Metals**						
Permit Number:	PA0000892						
Stream Name:	Conemaugh River						
Analyst/Engineer:	Olesnanik						
Stream Q7-10 (cfs):	83.4						
	Facility Flows[1]					**Stream Flows**	
	Stream (Intake) (MGD)	External (Intake) (MGD)	Consumptive (Loss) (MGD)	Discharge (MGD)		Adj. Q7-10 Stream Flow (cfs)	Downstream[2] Stream Flow (cfs)
Jan 1-31	0	0.09		0.09		266.9	267.0
Feb 1-29	0	0.09		0.09		291.9	292.0
Mar 1-31	0	0.09		0.09		583.8	583.9
Apr 1-15	0	0.09		0.09		775.6	775.8
Apr 16-30	0	0.09		0.09		775.6	775.8
May 1-15	0	0.09		0.09		425.3	425.5
May 16-31	0	0.09		0.09		425.3	425.5
Jun 1-15	0	0.09		0.09		250.2	250.3
Jun 16-30	0	0.09		0.09		250.2	250.3
Jul 1-31	0	0.09		0.09		141.8	141.9
Aug 1-15	0	0.09		0.09		116.8	116.9
Aug 16-31	0	0.09		0.09		116.8	116.9
Sep 1-15	0	0.09		0.09		91.7	91.9
Sep 16-30	0	0.09		0.09		91.7	91.9
Oct 1-15	0	0.09		0.09		100.1	100.2
Oct 16-31	0	0.09		0.09		100.1	100.2
Nov 1-15	0	0.09		0.09		133.4	133.6
Nov 16-30	0	0.09		0.09		133.4	133.6
Dec 1-31	0	0.09		0.09		200.2	200.3

Facility:	**Westinghouse Specialty Metals**						
Permit Number:	PA0000892						
Stream:	Conemaugh River						
	WWF Criteria	**CWF Criteria**	**TSF Criteria**	**316 Criteria**		**Q7-10 Multipliers**	**Q7-10 Multipliers**
	(ºF)	(ºF)	(ºF)	(ºF)		(Used in Analysis)	(Default - Info Only)
Jan 1-31	40	38	40	0		3.2	3.2
Feb 1-29	40	38	40	0		3.5	3.5
Mar 1-31	46	42	46	0		7	7
Apr 1-15	52	48	52	0		9.3	9.3
Apr 16-30	58	52	58	0		9.3	9.3
May 1-15	64	54	64	0		5.1	5.1
May 16-30	72	58	68	0		5.1	5.1
Jun 1-15	80	60	70	0		3	3
Jun 16-30	84	64	72	0		3	3
Jul 1-31	87	66	74	0		1.7	1.7
Aug 1-15	87	66	80	0		1.4	1.4
Aug 16-31	87	66	87	0		1.4	1.4
Sep 1-15	84	64	84	0		1.1	1.1
Sep 16-30	78	60	78	0		1.1	1.1
Oct 1-15	72	54	72	0		1.2	1.2
Oct 16-31	66	50	66	0		1.2	1.2
Nov 1-15	58	46	58	0		1.6	1.6
Nov 16-30	50	42	50	0		1.6	1.6
Dec 1-31	42	40	42	0		2.4	2.4

Facility:	**Westinghouse Specialty Metals**						
Permit Number:	PA0000892						
Stream:	Conemaugh River						
	WWF			**WWF**		**WWF**	
	Ambient Stream	Ambient Stream	Target Maximum	Daily		Daily	
	Temperature (ºF)	Temperature (ºF)	Stream Temp.[1]	WLA[2]		WLA[3]	at Discharge
	(Default)	(Site-specific data)	(ºF)	(Million BTUs/day)		(ºF)	Flow (MGD)
Jan 1-31	35	0	40	N/A -- Case 2		110.0	0.09
Feb 1-29	35	0	40	N/A -- Case 2		110.0	0.09
Mar 1-31	40	0	46	N/A -- Case 2		110.0	0.09
Apr 1-15	47	0	52	N/A -- Case 2		110.0	0.09
Apr 16-30	53	0	58	N/A -- Case 2		110.0	0.09
May 1-15	58	0	64	N/A -- Case 2		110.0	0.09
May 16-30	62	0	72	N/A -- Case 2		110.0	0.09
Jun 1-15	67	0	80	N/A -- Case 2		110.0	0.09
Jun 16-30	71	0	84	N/A -- Case 2		110.0	0.09
Jul 1-31	75	0	87	N/A -- Case 2		110.0	0.09
Aug 1-15	74	0	87	N/A -- Case 2		110.0	0.09
Aug 16-31	74	0	87	N/A -- Case 2		110.0	0.09
Sep 1-15	71	0	84	N/A -- Case 2		110.0	0.09
Sep 16-30	65	0	78	N/A -- Case 2		110.0	0.09
Oct 1-15	60	0	72	N/A -- Case 2		110.0	0.09
Oct 16-31	54	0	66	N/A -- Case 2		110.0	0.09
Nov 1-15	48	0	58	N/A -- Case 2		110.0	0.09
Nov 16-30	42	0	50	N/A -- Case 2		110.0	0.09
Dec 1-31	37	0	42	N/A -- Case 2		110.0	0.09

[1] This is the maximum of the WWF WQ criterion or the ambient temperature. The ambient temperature may be either the design (median) temperature for WWF, or the ambient stream temperature based on site-specific data entered by the user. A minimum of 1ºF above ambient stream temperature is allocated.

[2] The WLA expressed in Million BTUs/day is valid for Case 1 scenarios, and disabled for Case 2 scenarios.

[3] The WLA expressed in ºF is valid only if the limit is tied to a daily discharge flow limit (may be used for Case 1 or Case 2). WLAs greater than 110ºF are displayed as 110ºF.

Attachment H

IMP 201 Toxics Management Spreadsheet

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Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions | Discharge | Stream

Facility: **Westinghouse Specialty Metals Plant, Blairsvill** NPDES Permit No.: **PA0000892** Outfall No.: **201**

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

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
0.0037	140	6.3						

					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	Strea m CV	Fate Coeff	FOS	Criteri a Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		712									
	Chloride (PWS)	mg/L		167									
	Bromide	mg/L		0.218									
	Sulfate (PWS)	mg/L		70.3									
	Fluoride (PWS)	mg/L		1.93									

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

Westinghouse Specialty Metals Plant, Blairsville, NPDES Permit No. PA0000892, Outfall 201

Instructions | Discharge | *Stream*

Receiving Surface Water Name: Conemaugh River

No. Reaches to Model: 1

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	043832	17	910	890	0.0001		Yes
End of Reach 1	043832	16.5	909	891	0.0001		Yes

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

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	17	0.0937079										100	7		
End of Reach 1	16.5	0.0937079										100	7		

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	17														
End of Reach 1	16.5														

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Westinghouse Specialty Metals Plant, Blairsville, NPDES Permit No. PA0000892, Outfall 201

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

☐ *Hydrodynamics*

☑ *Wasteload Allocations*

☑ *AFC* CCT (min): 15 PMF: 0.068 Analysis Hardness (mg/l): 100.04 Analysis pH: 7.00

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	

☑ *CFC* CCT (min): 720 PMF: 0.471 Analysis Hardness (mg/l): 100.01 Analysis pH: 7.00

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	

☑ *THH* CCT (min): 720 PMF: 0.471 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	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Fluoride (PWS)	0	0		0	2,000	2,000	N/A	

☑ *CRL* CCT (min): 720 PMF: 0.760 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	

☑ ***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)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Fluoride (PWS)	N/A	N/A	PWS Not Applicable

Attachment I

IMP 201 WQM7.0 Model Run

Input Data WQM 7.0

	SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
	18C	43832	CONEMAUGH RIVER	**17.000**	910.00	890.00	0.00010	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	83.40	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
IMP 201	PA0000892	0.0037	0.0000	0.0000	0.000	20.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	8.38	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
18C	43832	CONEMAUGH RIVER	**16.500**	909.00	891.00	0.00010	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	83.40	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
18C	43832	CONEMAUGH RIVER

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
17.000	83.40	0.00	83.40	.0057	0.00010	1.163	172.32	148.13	0.42	0.073	25.00	7.00
Q1-10 Flow												
17.000	53.38	0.00	53.38	.0057	0.00010	NA	NA	NA	0.32	0.094	25.00	7.00
Q30-10 Flow												
17.000	113.42	0.00	113.42	.0057	0.00010	NA	NA	NA	0.49	0.062	25.00	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	6		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
18C	43832	CONEMAUGH RIVER

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
17.000	IMP 201	11.07	50	11.07	50	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
17.000	IMP 201	1.37	25	1.37	25	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
17.00	IMP 201	25	25	25	25	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
18C	43832	CONEMAUGH RIVER

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
17.000	0.004	25.000	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
172.321	1.163	148.133	0.416
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.00	0.001	0.00	1.029
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.380	0.219	Tsivoglou	6
Reach Travel Time (days)			
0.073			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.007	2.00	0.00	7.54
0.015	2.00	0.00	7.54
0.022	2.00	0.00	7.54
0.029	2.00	0.00	7.54
0.037	2.00	0.00	7.54
0.044	2.00	0.00	7.54
0.051	2.00	0.00	7.54
0.059	2.00	0.00	7.54
0.066	2.00	0.00	7.54
0.073	2.00	0.00	7.54

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
18C	43832	CONEMAUGH RIVER

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
17.000	IMP 201	PA0000892	0.004	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			5

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
18C	43832	CONEMAUGH RIVER	**17.000**	910.00	890.00	0.00010	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	83.40	0.000	0.000	0.0	0.00	0.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
IMP 201	PA0000892	0.0037	0.0000	0.0000	0.000	20.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	12.80	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
18C	43832	CONEMAUGH RIVER	**16.500**	909.00	891.00	0.00010	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	83.40	0.000	0.000	0.0	0.00	0.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
18C	43832	CONEMAUGH RIVER

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
17.000	83.40	0.00	83.40	.0057	0.00010	1.163	172.32	148.13	0.42	0.073	5.00	7.00
Q1-10 Flow												
17.000	53.38	0.00	53.38	.0057	0.00010	NA	NA	NA	0.32	0.094	5.00	7.00
Q30-10 Flow												
17.000	113.42	0.00	113.42	.0057	0.00010	NA	NA	NA	0.49	0.062	5.00	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	6		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
18C	43832	CONEMAUGH RIVER

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
17.000	IMP 201	24.1	50	24.1	50	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
17.000	IMP 201	4.36	25	4.36	25	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
17.00	IMP 201	25	25	25	25	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
18C	43832	CONEMAUGH RIVER

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
17.000	0.004	5.001	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
172.321	1.163	148.133	0.416
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.00	0.001	0.00	0.221
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
12.799	0.136	Tsivoglou	6
Reach Travel Time (days)			
0.073			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.007	2.00	0.00	11.45
0.015	2.00	0.00	11.45
0.022	2.00	0.00	11.45
0.029	2.00	0.00	11.45
0.037	2.00	0.00	11.45
0.044	2.00	0.00	11.45
0.051	2.00	0.00	11.45
0.059	2.00	0.00	11.45
0.066	2.00	0.00	11.45
0.073	2.00	0.00	11.45

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
18C	43832	CONEMAUGH RIVER

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
17.000	IMP 201	PA0000892	0.004	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			5

Attachment J

IMP 301 Toxics Management Spreadsheet

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Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions | Discharge | Stream

Facility: **Westinghouse Specialty Metals Plant, Blairsvill** NPDES Permit No.: **PA0000892** Outfall No.: **301**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Remediated Groundwater**

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
0.0098	100	6.5						

					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	Strea m CV	Fate Coeff	FOS	Criteri a Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L											
	Chloride (PWS)	mg/L											
	Bromide	mg/L											
	Sulfate (PWS)	mg/L											
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L											
	Total Antimony	µg/L											
	Total Arsenic	µg/L											
	Total Barium	µg/L											
	Total Beryllium	µg/L											
	Total Boron	µg/L											
	Total Cadmium	µg/L											
	Total Chromium (III)	µg/L											
	Hexavalent Chromium	µg/L											
	Total Cobalt	µg/L											
	Total Copper	µg/L											
	Free Cyanide	µg/L											
	Total Cyanide	µg/L											
	Dissolved Iron	µg/L	<	0.049									
	Total Iron	µg/L											
	Total Lead	µg/L	<	2									
	Total Manganese	µg/L											
	Total Mercury	µg/L	<	0.02									
	Total Nickel	µg/L											
	Total Phenols (Phenolics) (PWS)	µg/L											
	Total Selenium	µg/L											
	Total Silver	µg/L											
	Total Thallium	µg/L											
	Total Zinc	µg/L											
	Total Molybdenum	µg/L											
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<	0.001									
	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	<	0.001											
	Methyl Bromide	µg/L	<												
	Methyl Chloride	µg/L	<												
	Methylene Chloride	µg/L	<												
	1,1,2,2-Tetrachloroethane	µg/L	<												
	Tetrachloroethylene	µg/L	<	0.001											
	Toluene	µg/L	<	0.001											
	1,2-trans-Dichloroethylene	µg/L	<												
	1,1,1-Trichloroethane	µg/L	<												
	1,1,2-Trichloroethane	µg/L	<												
	Trichloroethylene	µg/L	<	0.0017											
	Vinyl Chloride	µg/L	<	0.00154											
	Naphthalene	µg/L	<	0.001											
	Total Xylenes	mg/L	<	0.001											
	MTBE	mg/L	<	0.002											
	Acetone	mg/L	<	0.01											
	1,2-cis-Dichloroethylene	mg/L	<	0.00157											

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Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

Westinghouse Specialty Metals Plant, Blairsville, NPDES Permit No. PA0000892, Outfall 301

Instructions | Discharge | *Stream*

Receiving Surface Water Name: Conemaugh River

No. Reaches to Model: 1

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	043832	17	910	890	0.0001		Yes
End of Reach 1	043832	16.5	909	891	0.0001		Yes

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

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	17	0.0937079										100	7		
End of Reach 1	16.5	0.0937079										100	7		

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	17														
End of Reach 1	16.5														

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Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Westinghouse Specialty Metals Plant, Blairsville, NPDES Permit No. PA0000892, Outfall 301

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.068 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	64.581	81.6	30,627	Chem Translator of 0.791 applied
Total Mercury	0	0		0	1.400	1.65	618	Chem Translator of 0.85 applied
Benzene	0	0		0	640	640	240,081	
Ethylbenzene	0	0		0	2,900	2,900	1,087,866	
Tetrachloroethylene	0	0		0	700	700	262,588	
Toluene	0	0		0	1,700	1,700	637,715	
Trichloroethylene	0	0		0	2,300	2,300	862,790	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
Naphthalene	0	0		0	140	140	52,518	
Total Xylenes	0	0		0	1,100	1,100	412,639	
Acetone	0	0		0	450,000	450,000	#########	
1,2-cis-Dichloroethylene	0	0		0	N/A	N/A	N/A	

☑ ***CFC*** CCT (min): 720 PMF: 0.471 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	2.517	3.18	8,250	Chem Translator of 0.791 applied
Total Mercury	0	0		0	0.770	0.91	2,349	Chem Translator of 0.85 applied
Benzene	0	0		0	130	130	337,093	
Ethylbenzene	0	0		0	580	580	1,503,953	
Tetrachloroethylene	0	0		0	140	140	363,023	
Toluene	0	0		0	330	330	855,697	
Trichloroethylene	0	0		0	450	450	1,166,860	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
Naphthalene	0	0		0	43	43.0	111,500	
Total Xylenes	0	0		0	210	210	544,535	
Acetone	0	0		0	86,000	86,000	#########	
1,2-cis-Dichloroethylene	0	0		0	N/A	N/A	N/A	

☑ ***THH*** CCT (min): 720 PMF: 0.471 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
Dissolved Iron	0	0		0	300	300	777,907	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.050	0.05	130	
Benzene	0	0		0	N/A	N/A	N/A	
Ethylbenzene	0	0		0	68	68.0	176,326	
Tetrachloroethylene	0	0		0	N/A	N/A	N/A	
Toluene	0	0		0	57	57.0	147,802	
Trichloroethylene	0	0		0	N/A	N/A	N/A	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
Naphthalene	0	0		0	N/A	N/A	N/A	
Total Xylenes	0	0		0	70,000	70,000	#########	
Acetone	0	0		0	3,500	3,500	9,075,579	
1,2-cis-Dichloroethylene	0	0		0	12	12.0	31,116	

☑ *CRL* CCT (min): 720 PMF: 0.760 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
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Benzene	0	0		0	0.58	0.58	10,315	
Ethylbenzene	0	0		0	N/A	N/A	N/A	
Tetrachloroethylene	0	0		0	10	10.0	177,848	
Toluene	0	0		0	N/A	N/A	N/A	
Trichloroethylene	0	0		0	0.6	0.6	10,671	
Vinyl Chloride	0	0		0	0.02	0.02	356	
Naphthalene	0	0		0	N/A	N/A	N/A	
Total Xylenes	0	0		0	N/A	N/A	N/A	
Acetone	0	0		0	N/A	N/A	N/A	
1,2-cis-Dichloroethylene	0	0		0	N/A	N/A	N/A	

☑ ***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
Dissolved Iron	N/A	N/A	Discharge Conc < TQL
Total Lead	8,250	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	N/A	N/A	Discharge Conc < TQL
Benzene	N/A	N/A	Discharge Conc < TQL
Ethylbenzene	N/A	N/A	Discharge Conc < TQL
Tetrachloroethylene	N/A	N/A	Discharge Conc < TQL
Toluene	N/A	N/A	Discharge Conc < TQL
Trichloroethylene	N/A	N/A	Discharge Conc < TQL
Vinyl Chloride	356	µg/L	Discharge Conc < TQL
Naphthalene	33,662	µg/L	Discharge Conc < TQL
Total Xylenes	264	mg/L	Discharge Conc < TQL
MTBE	N/A	N/A	No WQS
Acetone	9,076	mg/L	Discharge Conc ≤ 25% WQBEL
1,2-cis-Dichloroethylene	31.1	mg/L	Discharge Conc ≤ 25% WQBEL

Attachment K

StreamStats Reports

StreamStats Report Outfall 001

Region ID: PA
Workspace ID: PA20201016175204972000
Clicked Point (Latitude, Longitude): 40.44411, -79.29990
Time: 2020-10-16 13:52:22 -0400

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	890	square miles
ELEV	Mean Basin Elevation	1982	feet
PRECIP	Mean Annual Precipitation	45	inches
BSLOPD	Mean basin slope measured in degrees	7.1488	degrees

Low-Flow Statistics Parameters[100 Percent (890 square miles) Low Flow Region 3]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	890	square miles	2.33	1720
ELEV	Mean Basin Elevation	1982	feet	898	2700
PRECIP	Mean Annual Precipitation	45	inches	38.7	47.9

Low-Flow Statistics Flow Report[100 Percent (890 square miles) Low Flow Region 3]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	SEp
7 Day 2 Year Low Flow	137	ft^3/s	43	43
30 Day 2 Year Low Flow	180	ft^3/s	38	38
7 Day 10 Year Low Flow	83.4	ft^3/s	54	54