

Application Type New
Facility Type Industrial
Major / Minor Minor

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

Application No. PA0255858
APS ID 1029223
Authorization ID 1337451

Applicant and Facility Information

Applicant Name	<u>W. G. Tomko, Inc.</u>	Facility Name	<u>W. G. Tomko, Inc.</u>
Applicant Address	<u>2559 Pa 88</u> <u>Finleyville, PA 15332-3504</u>	Facility Address	<u>2559 Pa 88</u> <u>Finleyville, PA 15332-3504</u>
Applicant Contact	<u>Steve Toprani</u>	Facility Contact	<u>Steve Toprani</u>
Applicant Phone	<u>(412) 997-7775</u>	Facility Phone	<u>(412) 997-7775</u>
Client ID	<u>187801</u>	Site ID	<u>783169</u>
SIC Code	<u>1711,3444</u>	Municipality	<u>Union Township</u>
SIC Description	<u>Construction - Plumbing, Heating, Air Conditioning, Manufacturing - Sheet Metal Work</u>	County	<u>Washington</u>
Date Application Received	<u>December 18, 2020</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u></u>	If No, Reason	<u></u>
Purpose of Application	<u>New NPDES Industrial Waste Permit.</u>		



Summary of Review

The Department received a new Industrial Waste NPDES permit application from W. G. Tomko, Inc. for the Finleyville facility on December 18, 2020. Assembly of HVAC components and oil and gas industry manufacturing are conducted at the facility. Facility industrial activities consist of earthwork regrading (excavation, material handling, crushing/screening and dust suppressant runoff) along with material storage stockpile runoff from the regrading activities. The facility's remaining discharges are from parking areas and roof drains. Vehicle maintenance occurs under roof. No manufacturing materials are exposed to the elements.

The site has four (4) outfalls that discharge stormwater associated with industrial activity to Tributary 39501 to Peters Creek, designated in 25 PA Code Chapter 93 as a Trout Stock Fishery (TSF).

Outfall 001 discharges to Tributary 39501 to Peters Creek with Chapter 93 classification of TSF. In the drainage area of Outfall 001, the activities that exist are parking area and facility roof drains. The location of Outfall 001 is 40° 14' 47.71", -80° 00' 8.24" and has a drainage area of 58,722 sf, that is 100% impervious.

Outfall 002 discharges to Tributary 39501 to Peters Creek with Chapter 93 classification of TSF. In the drainage area of Outfall 002, the activities that exist are earthwork activities and material stockpile storage. Stormwater and roof drains from

Approve	Deny	Signatures	Date
X		 Curtis Holes, P.E. / Environmental Engineering Specialist	April 05, 2021
X		 Michael E. Fifth, P.E. / Environmental Engineer Manager	April 7, 2021

Summary of Review

the fabrication building along with stormwater and process wastewater from the earthwork area are both directed to the sedimentation pond and ultimately discharge via Outfall 002. The location of Outfall 002 is 40° 14' 53.38", -80° 00' 11.35" and has a drainage area of 141,076 sf, that is approximately 19% impervious.

Outfall 003 discharges to Tributary 39501 To Peters Creek with Chapter 93 classification of TSF. In the drainage area of Outfall 003, the activities that exist are parking area and facility roof drains. The location of Outfall 003 is 40° 14' 46.1", -80° 00' 07.76" and has a drainage area of 43,911 sf, that is 100% impervious.

Outfall 004 discharges to Tributary 39501 To Peters Creek with Chapter 93 classification of TSF. In the drainage area of Outfall 004, the activities that exist are parking area and facility roof drains. The location of Outfall 004 is 40° 14' 44.94", -80° 00' 7.13" and has a drainage area of 600,597 sf, that is approximately 27% impervious.

Outfalls 001, 003 and 004 discharge stormwater only, while Outfall 002 discharges stormwater, groundwater seeps along with process wastewaters from the earthwork activities.

The permittee has no open violations with the Clean Water Program.

It is recommended that a Draft NPDES Permit be published for public comment in response to this application.

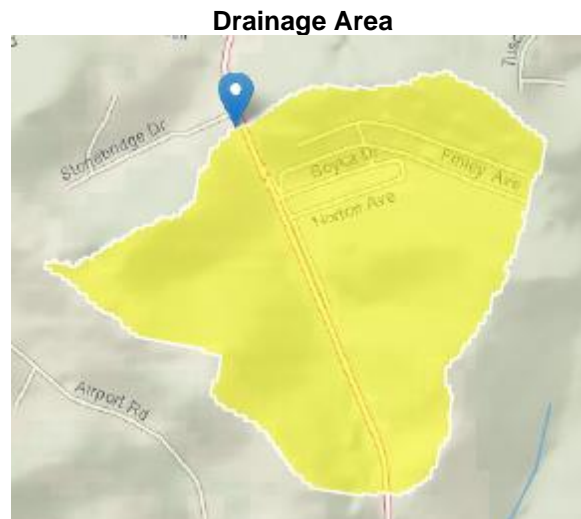
Public Participation

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

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	<u>001</u>	Design Flow (MGD)	<u>0.0</u>
Latitude	<u>40° 14' 46.8"</u>	Longitude	<u>-80° 00' 8.2"</u>
Quad Name	<u>Hackett</u>	Quad Code	<u>1705</u>
Wastewater Description: <u>Stormwater</u>			
Receiving Waters	<u>Unnamed Tributary to Peters Creek (TSF)</u>	Stream Code	<u>39501</u>
NHD Com ID	<u>99408950</u>	RMI	<u>0.3100</u>
Drainage Area	<u>0.33</u>	Yield (cfs/mi ²)	<u>0.00615</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.00203</u>	Q ₇₋₁₀ Basis	<u>USGS StreamStats</u>
Elevation (ft)	<u>960</u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>19-C</u>	Chapter 93 Class.	<u>TSF</u>
Existing Use	<u>Aquatic Life</u>	Existing Use Qualifier	<u></u>
Exceptions to Use	<u>None</u>	Exceptions to Criteria	<u></u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>CAUSE UNKNOWN, METALS</u>		
Source(s) of Impairment	<u>ACID MINE DRAINAGE, SOURCE UNKNOWN</u>		
TMDL Status	<u>Final</u>	Name	<u>Peters Creek Watershed</u>
Nearest Downstream Public Water Supply Intake	<u>PA American Water Company – Pittsburgh (69 MGD)</u>		
PWS Waters	<u>Monongahela</u>	Flow at Intake (cfs)	<u>1,230</u>
PWS RMI	<u>4.6</u>	Distance from Outfall (mi)	<u>26.5</u>

Changes Since Last Permit Issuance:

Other Comments:



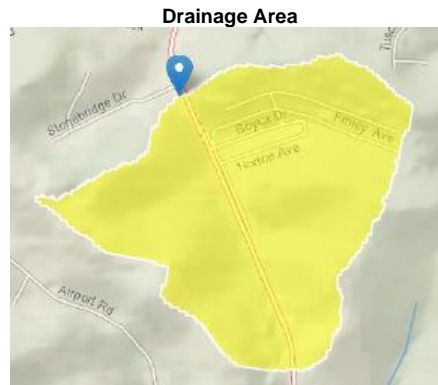
Discharge, Receiving Waters and Water Supply Information			
Outfall No.	002	Design Flow (MGD)	0.03
Latitude	40° 14' 53.4"	Longitude	-80° 00' 11.3"
Quad Name	Hackett	Quad Code	1705
Wastewater Description: Earthwork Process Wastewaters and Stormwater			
Receiving Waters	Unnamed Tributary to Peters Creek (TSF)	Stream Code	39501
NHD Com ID	99408950	RMI	0.17
Drainage Area	0.33	Yield (cfs/mi ²)	0.00615
Q ₇₋₁₀ Flow (cfs)	0.0044*	Q ₇₋₁₀ Basis	USGS StreamStats
Elevation (ft)	960	Slope (ft/ft)	
Watershed No.	19-C	Chapter 93 Class.	TSF
Existing Use	Aquatic Life	Existing Use Qualifier	
Exceptions to Use	None	Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	CAUSE UNKNOWN, METALS		
Source(s) of Impairment	ACID MINE DRAINAGE, SOURCE UNKNOWN		
TMDL Status	Final	Name	Peters Creek Watershed
Nearest Downstream Public Water Supply Intake	PA American Water Company – Pittsburgh (69 MGD)		
PWS Waters	Monongahela	Flow at Intake (cfs)	1,230
PWS RMI	4.6	Distance from Outfall (mi)	26.5

Changes Since Last Permit Issuance:

Other Comments: *The StreamStats calculated Q₇₋₁₀ flow (0.00203 cfs) was adjusted to account for the error warning produced when the drainage area is outside the suggested range to prediction from the low-flow regression equation. To compensate for this error warning, a new point is selected downstream of the W.G. Tomko facility, but in the same watershed to increase the drainage area. Once a point is selected that returns a drainage area that is large enough, the yield (cfs/mi²) is calculated for this location then ratioed to the Outfall location based on the drainage area as illustrated below.

$$(\text{Downstream location Yield}) * (\text{Outfall Drainage Area}) = \text{Adjusted Outfall Q}_{7-10}$$

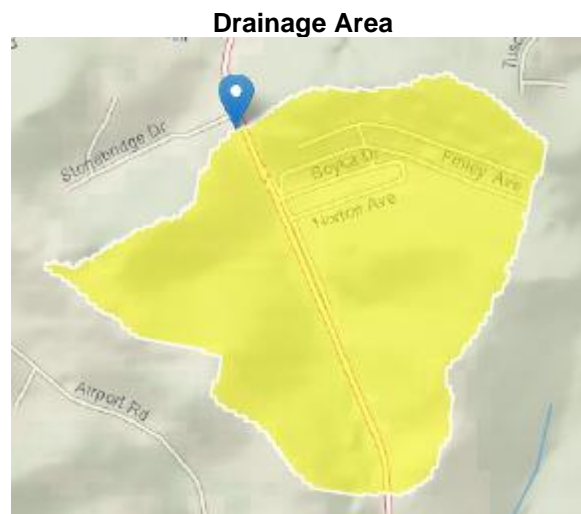
$$(0.127 \text{ cfs} / 9.46 \text{ mi}^2) * 0.33 \text{ mi}^2 = \mathbf{0.0044 \text{ cfs Adjusted Q}_{7-10}}$$



Discharge, Receiving Waters and Water Supply Information			
Outfall No.	<u>003</u>	Design Flow (MGD)	<u>0.0</u>
Latitude	<u>40° 14' 46.2"</u>	Longitude	<u>-80° 00' 07.8"</u>
Quad Name	<u>Hackett</u>	Quad Code	<u>1705</u>
Wastewater Description: <u>Stormwater</u>			
Receiving Waters	<u>Unnamed Tributary to Peters Creek (TSF)</u>	Stream Code	<u>39501</u>
NHD Com ID	<u>99408950</u>	RMI	<u>0.3200</u>
Drainage Area	<u>99408950</u>	RMI	<u>0.1700</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.33</u>	Yield (cfs/mi ²)	<u>0.00615</u>
Elevation (ft)	<u>0.00203</u>	Q ₇₋₁₀ Basis	<u>USGS StreamStats</u>
Watershed No.	<u>960</u>	Slope (ft/ft)	
Existing Use	<u>19-C</u>	Chapter 93 Class.	<u>TSF</u>
Exceptions to Use	<u>Aquatic Life</u>	Existing Use Qualifier	
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>CAUSE UNKNOWN, METALS</u>		
Source(s) of Impairment	<u>ACID MINE DRAINAGE, SOURCE UNKNOWN</u>		
TMDL Status	<u>Final</u>	Name	<u>Peters Creek Watershed</u>
Nearest Downstream Public Water Supply Intake	<u>PA American Water Company – Pittsburgh (69 MGD)</u>		
PWS Waters	<u>Monongahela</u>	Flow at Intake (cfs)	<u>1,230</u>
PWS RMI	<u>4.6</u>	Distance from Outfall (mi)	<u>26.5</u>

Changes Since Last Permit Issuance:

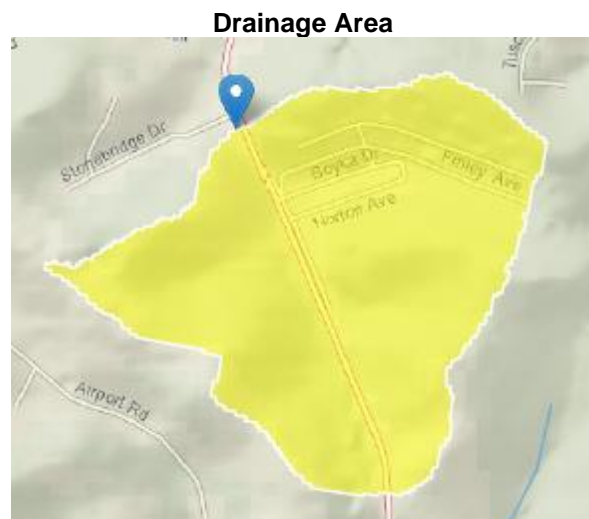
Other Comments:



Discharge, Receiving Waters and Water Supply Information			
Outfall No.	004	Design Flow (MGD)	0.0
Latitude	40° 14' 45.5"	Longitude	-80° 00' 7.3"
Quad Name	Hackett	Quad Code	1705
Wastewater Description: Stormwater			
Receiving Waters	Unnamed Tributary to Peters Creek (TSF)	Stream Code	39501
NHD Com ID	99408950	RMI	0.3400
Drainage Area	99408950	RMI	0.1700
Q ₇₋₁₀ Flow (cfs)	0.33	Yield (cfs/mi ²)	0.00615
Elevation (ft)	0.00203	Q ₇₋₁₀ Basis	USGS StreamStats
Watershed No.	960	Slope (ft/ft)	
Existing Use	19-C	Chapter 93 Class.	TSF
Exceptions to Use	Aquatic Life	Existing Use Qualifier	
Assessment Status	Impaired		
Cause(s) of Impairment	CAUSE UNKNOWN, METALS		
Source(s) of Impairment	ACID MINE DRAINAGE, SOURCE UNKNOWN		
TMDL Status	Final	Name	Peters Creek Watershed
Nearest Downstream Public Water Supply Intake	PA American Water Company – Pittsburgh (69 MGD)		
PWS Waters	Monongahela	Flow at Intake (cfs)	1,230
PWS RMI	4.6	Distance from Outfall (mi)	26.5

Changes Since Last Permit Issuance:

Other Comments:



Development of Effluent Limitations

Outfall No.	001, 003 and 004	Design Flow (MGD)	0.0
Latitude	Varies	Longitude	Varies
Wastewater Description: Stormwater			

Stormwater Technology Limits

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

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

Outfall 001 is identified as representative of Outfalls 003 and 004.

Outfall 001 (40° 14' 47.71", -80° 00' 8.24"): Has a drainage area of approximately 58,722 square feet with 100% impervious. No industrial activities or materials are stored in this drainage area. Discharges include stormwater from paved parking area for the facility roof drains. Current BMPs to control pollutants in the stormwater are housekeeping procedures, employee education and awareness.

Review of the stormwater data contained in the permit application was below benchmark values, as summarized below.

Pollutant	Max Concentration (mg/L)	General Permit Benchmark Value (mg/L)	No Exposure Benchmark Value (mg/L)
Oil and Grease	<4.8	15	≤ 5.0
BOD ₅	<3.5	30	≤ 10
COD	<25.0	120	≤ 30
TSS	<4.0	100	≤ 30
Total Nitrogen	1.3	- -	≤ 2.0
Total Phosphorus	0.15	2.0	≤ 1.0
pH (S.U.)	7.47	6.0 – 9.0	6.0 – 9.0

Outfall 003 (40° 14' 46.1", -80° 00' 7.76"): Has a drainage area of approximately 43,911 square feet with 27% impervious. No industrial activities or materials are stored in this drainage area. Stormwater from paved parking area for the facility roof drains. Current BMPs to control pollutions in the stormwater are housekeeping procedures, employee education and awareness.

Outfall 004 (40° 14' 44.94", -80° 00' 7.13"): Has a drainage area of approximately 600,597 square feet with 100% impervious. No industrial activities or materials are stored in this drainage area. Stormwater from paved parking area for the facility roof drains. Current BMPs to control pollutants in the stormwater are housekeeping procedures, employee education and awareness.

The permit application stormwater data concentrations, summarized above, are below EPA's no exposure stormwater benchmark values. With the typical monitoring results below benchmark value no monitoring requirements will be applied to the stormwater outfalls, they will be listed in Part C of the permit as discharge points.

Development of Effluent Limitations

Outfall No.	<u>002</u>	Design Flow (MGD)	<u>0.03</u>
Latitude	<u>40° 14' 47.7"</u>	Longitude	<u>-80° 00' 8.3"</u>
Wastewater Description: <u>Earthwork Process Wastewaters, Groundwater Seeps and Stormwater</u>			

Outfall 002 consists of earthwork process wastewater and stormwater discharges. The process wastewaters consist of groundwater seeps and dust suppressant wastewaters generated by the facility's regrading earthwork activities. The facility is re-grading the property, cutting into the hillside. The earthworks activities have exposed groundwater seeps from the hillside, which are constantly flowing. The facility is processing the excavated material with a crusher/screener. The crusher/screener uses dust suppressant as a Best Management Practice (BMP) for dust control. The source water for the dust suppressant is public supplied water.

Technology-Based Limitations

Outfall 002 discharges consist of groundwater seeps, dust suppressant wastewater and stormwater discharges which are not subject to Federal Effluent Limitation Guidelines (ELGs) as the SIC code is not listed under 40 CFR parts 405 through 471.

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

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

Oil and Grease is imposed on industrial wastes by 25 Pa. Code § 95.2(2)(ii).

Total Residual Chlorine (TRC)

TRC technology-based limits do not apply to Outfalls 002. The facility uses public water supply for dust suppressant waters, but facility does not conduct chlorination activities. Even though the facility does not conduct chlorination activities, the use of chlorinated public supplied water as the source water for dust suppression causes a reasonable potential for TRC to be in the effluent. To evaluate this situation, TRC monitoring and reporting of monthly average and daily maximum at Outfall 002 are added to the permit monitoring requirements.

Total Dissolved Solids (TDS)

Integral to the implementation of 25 Pa. Code § 95.10 is the principle that existing, authorized mass loadings of TDS are exempt from any treatment requirements under these provisions. Existing mass loadings of TDS up to and including the maximum daily discharge loading for any existing discharge, provided that the loading was authorized prior to August 21, 2010 are exempt. Discharge loadings of TDS authorized by the Department are typically exempt from the treatment requirements of Chapter 95.10 until the net TDS loading is increased, an existing discharge proposes a hydraulic expansion or a change in the waste stream. If there are existing mass or production-based TDS effluent limits, then these are used as the basis for the existing mass loading. The facility is new, therefore, 25 Pa. Code § 95.10 requirements will be evaluated.

Where the TDS discharge concentration exceeds 1,000 mg/L and discharge flow exceeds 0.1 MGD, establish a monitoring requirement for TDS, sulfate, chloride, and bromide. For discharges of 0.1 <GD or less establish monitoring requirements for TDS, sulfate, chloride, and bromide if the concentration of TDS discharge exceeds 5,000 mg/L. The estimated discharge flowrate of Outfall 001 is 0.03 MGD with a TDS maximum concentration of 518 mg/L. TDS, sulfate, chloride, and bromide monitoring are not imposed at Outfall 002, since the TDS concentration and flow are below the threshold trigger limits.

Water Quality-Based Limitations

Toxics Management Analysis

The Department's Toxics Management Spreadsheet (TMS) was utilized to facilitate calculations necessary for completing a reasonable potential analysis and determine Water Quality-Based Effluent Limitations (WQBELs) for discharges containing toxic pollutant concentrations. TMS combines the functionality of two (2) of the Department's analysis tools, Toxics Screening Analysis Spreadsheet and PENTOXSD water quality model.

DEP's procedures for evaluating reasonable potential are as follows:

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

2. Perform a Toxics Screening Analysis to identify toxic pollutants of concern. All toxic pollutants, as reported in the permit application or on DMRs, are modeled by the TMS to determine the parameters 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].
 - Establish limits in the draft permit where the maximum reported concentration equals or exceeds 50% of the WQBEL. Use the average monthly and maximum daily limits for the permit as recommended by TMS. Establish an IMAX limit at 2.5 times the average monthly limit.
 - For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.
 - For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10% - 50% of the WQBEL.

Discharges from Outfall 002 are evaluated based on concentrations reported on the application and contained in the DMRs; data from those sources are used as inputs into the TMS. A summary of TMS Inputs is contained in Table 1 below.

Table 1: TMS Inputs

Parameter	Value
Discharge Inputs	
Facility	W. G. Tomko
Evaluation Type	Industrial
NPDES Permit No.	PA0255858
Wastewater Description	Industrial Wastewater and Stormwater
Outfall ID	002
Design Flow (MGD)	0.03
Hardness (mg/L)	335
pH (S.U.)	8.2
Partial Mix Factors	Unknown – Calculated by TMS
Complete Mix Times	
Q ₇₋₁₀ (min)	
Q _h (min)	
Stream Inputs	
Receiving Surface Water	UNT to Peters Creek
Number of Reaches to Model	1
Stream Code	39501
RMI	0.17
Elevation (ft)	960
Drainage Area (mi ²)	0.33/9.46
Slope (ft/ft)	
PWS Withdrawal (MGD)	69
Apply Fish Criteria	Yes
Low Flow Yield (cfs/mi ²)	0.013/0.013*
Flows	
Stream (cfs)	0.0044/0.127*
Tributary (cfs)	N/A
Width (ft)	15/15*
Stream Hardness (mg/L)	100
Stream pH (S.U.)	7

* Denotes discharge location/downstream location values.

Analysis Report from the TMS run is included in Attachment A. Based on the recommendations of the TMS, weekly monitoring requirements for twelve (12) parameters at Outfall 002 as summarized in Table 2 below.

Table 2: TMS Weekly Monitoring Recommendations for Outfall 002

Parameter	Department	Application	Recommended WQBEL ($\mu\text{g}/\text{L}$)	
	Target QL ($\mu\text{g}/\text{L}$)	Concentration ($\mu\text{g}/\text{L}$)	Average Monthly	Maximum Daily
Total Aluminum	10	1,730	750	821
Total Antimony*	2.0	<6	6.13	9.57
Total Arsenic*	3.0	<5	Report	Report
Total Cadmium*	0.2	<3	0.69	1.08
Total Copper*	4.0	<5	Report	Report
Dissolved Iron*	20	<70	Report	Report
Total Iron	20	1,780	1,642	2,562
Total Lead*	1.0	<5	Report	Report
Total Selenium	5.0	18.2	5.46	8.52
Total Silver*	0.4	<6	Report	Report
Total Thallium*	2.0	<10	0.26	0.41

* TMS recommended effluent monitoring of eight (8) parameters (Total Antimony, Total Arsenic, Total Cadmium, Total Copper, Dissolved Iron, Total Lead, Total Silver and Total Thallium) since the Department minimum quantitation limits (QLs) were not achieved for the permit application samples. The Department will allow W.G. Tomko the opportunity to resample these parameters during the 30-day Draft permit comment period. If W.G. Tomko can verify that these parameters are not present in its wastewater discharge at the Departments minimum QLs, effluent limitations for parameters illustrating this may be eliminated prior to Final permit issuance.

WQM 7.0 Model

In general, WQM 7.0 Model is run if the maximum BOD₅/CBOD₅ concentrations exceeds 30/25 mg/L in the permit application or the DMRs. The permit application reports BOD₅ concentration of <3.5mg/L, therefore, running WQM 7.0 Model is not required.

Effluent Limitations and Monitoring Requirements for Outfall 002

Effluent limits applicable at Outfall 002 are the more stringent of TBELs, regulatory effluent standards, WQBELs. Proposed monitoring requirements are summarized in Table 3.

Table 3: Final Effluent limits and monitoring requirements for Outfall 002

Parameter	Mass (pounds)		Concentration ($\mu\text{g}/\text{L}$)		Basis
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	
Flow (MGD)	Report	Report	—	—	25 Pa. Code § 92a.61(d)(1)
pH (S.U.)	—	—	—	9.0 IMAX	25 Pa. Code § 95.2
Total Aluminum	—	—	750	750	WQBEL
Total Antimony	—	—	6.13	9.57	WQBEL
Total Arsenic	—	—	Report	Report	WQBEL
Total Cadmium	—	—	0.69	1.08	WQBEL
TRC (mg/L)	—	—	Report	Report	WQBEL
Total Copper	—	—	Report	Report	WQBEL
Dissolved Iron	—	—	Report	Report	WQBEL
Total Iron	—	—	1,642	2,562	WQBEL
Total Lead	—	—	Report	Report	WQBEL
Total Selenium	—	—	5.46	8.52	WQBEL
Total Silver	—	—	Report	Report	WQBEL
Total Thallium	—	—	0.26	0.41	WQBEL

Monitoring requirements for the interim and final effluent limits are displayed in Table 4 below.

Table 4: Monitoring Requirements for Outfall 002

Parameter	Sample Type	Minimum Sample Frequency
Flow (MGD)	Measured	1/week
pH (S.U.)	Grab	1/week
Total Aluminum	Grab	1/week
Total Antimony	Grab	1/week
Total Arsenic	Grab	1/week
Total Cadmium	Grab	1/week
TRC	Grab	1/week
Total Copper	Grab	1/week
Dissolved Iron	Grab	1/week
Total Iron	Grab	1/week
Total Lead	Grab	1/week
Total Selenium	Grab	1/week
Total Silver	Grab	1/week
Total Thallium	Grab	1/week

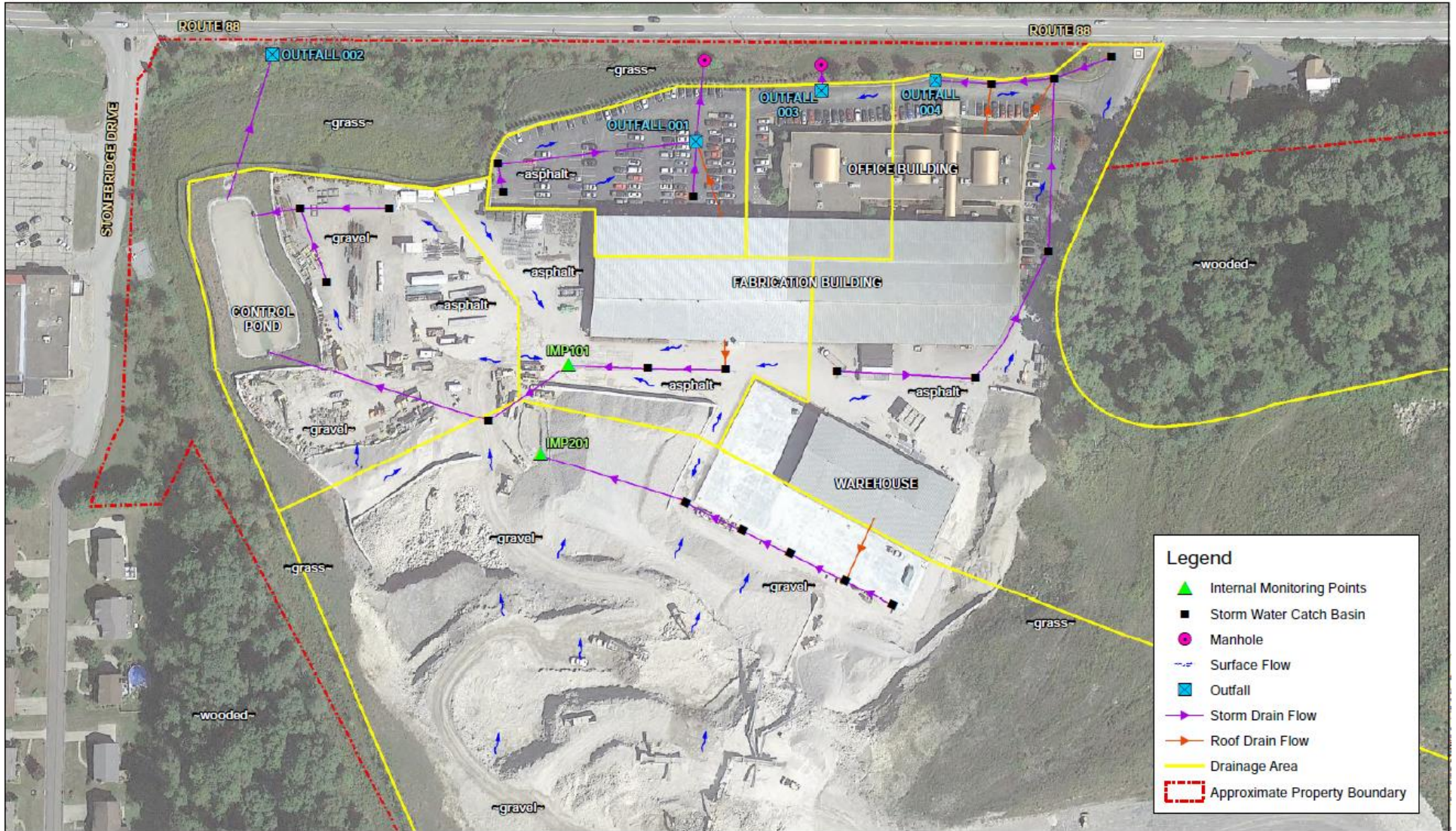
Tools and References Used to Develop Permit	
<input type="checkbox"/>	WQM for Windows Model (see Attachment)
<input checked="" type="checkbox"/>	TMS Spreadsheet Model (see Attachment B)
<input type="checkbox"/>	TRC Model Spreadsheet (see Attachment)
<input type="checkbox"/>	Temperature Model Spreadsheet (see Attachment)
<input type="checkbox"/>	Toxics Screening Analysis Spreadsheet (see Attachment)
<input type="checkbox"/>	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
<input type="checkbox"/>	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
<input type="checkbox"/>	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
<input type="checkbox"/>	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
<input type="checkbox"/>	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
<input type="checkbox"/>	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
<input type="checkbox"/>	Pennsylvania CSO Policy, 385-2000-011, 9/08.
<input type="checkbox"/>	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
<input type="checkbox"/>	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
<input type="checkbox"/>	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
<input type="checkbox"/>	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
<input type="checkbox"/>	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
<input type="checkbox"/>	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
<input type="checkbox"/>	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
<input type="checkbox"/>	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
<input type="checkbox"/>	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
<input type="checkbox"/>	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
<input type="checkbox"/>	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Design Stream Flows, 391-2000-023, 9/98.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
<input type="checkbox"/>	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
<input type="checkbox"/>	SOP:
<input type="checkbox"/>	Other:

Attachment A: Site Plan

Attachment B: TMS Model Report

Attachment A: Site Plan

Site Plan



Attachment B: TMS Model Summary



Discharge Information

Instructions **Discharge** Stream

Facility: **WG Tomko** NPDES Permit No.: **PA0255858** Outfall No.: **002**

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

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
0.03	335	8.21						

Discharge Pollutant	Units	Max Discharge Conc	0 if left blank		0.5 if left blank		0 if left blank			1 if left blank	
			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	518									
Chloride (PWS)	mg/L	6.5									
Bromide	mg/L	< 0.5									
Sulfate (PWS)	mg/L	298									
Fluoride (PWS)	mg/L	0.17									
Group 2											
Total Aluminum	µg/L	1730									
Total Antimony	µg/L	< 6									
Total Arsenic	µg/L	< 5									
Total Barium	µg/L	62.9									
Total Beryllium	µg/L										
Total Boron	µg/L	76.9									
Total Cadmium	µg/L	< 3									
Total Chromium (III)	µg/L	< 5									
Hexavalent Chromium	µg/L	< 0.01									
Total Cobalt	µg/L	1.1									
Total Copper	µg/L	< 5									
Free Cyanide	µg/L										
Total Cyanide	µg/L										
Dissolved Iron	µg/L	< 70									
Total Iron	µg/L	1780									
Total Lead	µg/L	< 5									
Total Manganese	µg/L	53.5									
Total Mercury	µg/L	< 0.2									
Total Nickel	µg/L	< 10									
Total Phenols (Phenolics) (PWS)	µg/L	< 50									
Total Selenium	µg/L	18.2									
Total Silver	µg/L	< 6									
Total Thallium	µg/L	< 10									
Total Zinc	µg/L	10.8									
Total Molybdenum	µg/L										
Acrolein	µg/L	<									
Acrylamide	µg/L	<									
Acrylonitrile	µg/L	<									
Benzene	µg/L	<									
Bromoform	µg/L	<									



Stream / Surface Water Information

WG Tomko, NPDES Permit No. PA025

Instructions Discharge **Stream**

Receiving Surface Water Name: UNT to Peters Creek

No. Reaches to Model: 1

- Statewide Criteria
- Great Lakes Criteria
- ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi ²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	039501	0.17	960	0.33			Yes
End of Reach 1	039501	0	955	9.46			Yes

Q₇₋₁₀

Location	RMI	LFY (cfs/mi ²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream	
			Stream	Tributary						Hardness	pH	Hardness*	pH*
Point of Discharge	0.17	0.013	0.0044									100	7
End of Reach 1	0	0.013	0.127										

Q_n

Location	RMI	LFY (cfs/mi ²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream	
			Stream	Tributary						Hardness	pH	Hardness*	pH*
Point of Discharge	0.17												
End of Reach 1	0												



Model Results

WG Tomko, NPDES Permit No. PA0255858, Outfall

Instructions

Results

RETURN TO INPUTS

SAVE AS PDF

PRINT

All

Inputs

Results

Limits

Hydrodynamics

Wasteload Allocations

AFC

CCT (min):

PMF:

Analysis Hardness (mg/l):

Analysis pH:

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	821	
Total Antimony	0	0		0	1,100	1,100	1,204	
Total Arsenic	0	0		0	340	340	372	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	22,991	
Total Boron	0	0		0	8,100	8,100	8,888	
Total Cadmium	0	0		0	6.130	6.84	7.49	Chem Translator of 0.896 applied
Total Chromium (III)	0	0		0	1456.851	4,610	5,047	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	17.8	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	104	
Total Copper	0	0		0	39.575	41.2	45.1	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	219.195	351	385	Chem Translator of 0.624 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	1.8	Chem Translator of 0.85 applied
Total Nickel	0	0		0	1234.885	1,237	1,355	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	23.104	27.2	29.8	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	71.2	
Total Zinc	0	0		0	309.503	316	346	Chem Translator of 0.978 applied

Model Results

4/5/2021

CFC CCT (min): PMF: Analysis Hardness (mg/l): Analysis pH:

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	241	
Total Arsenic	0	0		0	150	150	164	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	4,489	
Total Boron	0	0		0	1,600	1,600	1,752	
Total Cadmium	0	0		0	0.545	0.83	0.89	Chem Translator of 0.861 applied
Total Chromium (III)	0	0		0	189.506	220	241	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	11.4	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	20.8	
Total Copper	0	0		0	23.850	24.8	27.2	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	1,642	WQC = 30 day average; PMF =
Total Lead	0	0		0	8.542	13.7	15.0	Chem Translator of 0.624 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	0.99	Chem Translator of 0.85 applied
Total Nickel	0	0		0	137.158	138	151	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	5.46	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	14.2	
Total Zinc	0	0		0	312.034	316	346	Chem Translator of 0.986 applied

THH CCT (min): PMF: Analysis Hardness (mg/l): Analysis pH:

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	5.8	5.8	6.13	
Total Arsenic	0	0		0	10	10.0	10.9	
Total Barium	0	0		0	2,400	2,400	2,628	
Total Boron	0	0		0	3,100	3,100	3,394	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	

Model Results

4/5/2021

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	328
Total Iron	0	0		0	N/A	N/A	N/A
Total Lead	0	0		0	N/A	N/A	N/A
Total Manganese	0	0		0	1,000	1,000	1,095
Total Mercury	0	0		0	0.050	0.05	0.055
Total Nickel	0	0		0	610	610	668
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	0.26
Total Zinc	0	0		0	N/A	N/A	N/A

CRL

CCT (min):

PMF:

Analysis Hardness (mg/l):

Analysis pH:

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	

Model Results

4/5/2021

Recommended WQBELs & Monitoring Requirements

No. Samples/Month: **4**

Pollutants	Mass Limits		Concentration Limits				Governing WQBEL	WQBEL Basis	Comments
	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units			
Total Aluminum	0.19	0.21	750	821	821	µg/L	750	AFC	Discharge Conc ≥ 50%
Total Antimony	0.002	0.002	6.13	9.57	15.3	µg/L	6.13	THH	Discharge Conc ≥ 50%
Total Arsenic	Report	Report	Report	Report	Report	µg/L	10.9	THH	Discharge Conc > 10% V
Total Cadmium	0.0002	0.0003	0.89	1.08	1.73	µg/L	0.89	CFC	Discharge Conc ≥ 50%
Total Copper	Report	Report	Report	Report	Report	µg/L	27.2	CFC	Discharge Conc > 10% V
Dissolved Iron	Report	Report	Report	Report	Report	µg/L	328	THH	Discharge Conc > 10% V
Total Iron	0.41	0.64	1,642	2,562	4,106	µg/L	1,642	CFC	Discharge Conc ≥ 50%
Total Lead	Report	Report	Report	Report	Report	µg/L	15.0	CFC	Discharge Conc > 10% V
Total Selenium	0.001	0.002	5.46	8.52	13.7	µg/L	5.46	CFC	Discharge Conc ≥ 50%
Total Silver	Report	Report	Report	Report	Report	µg/L	27.2	AFC	Discharge Conc > 10% V
Total Thallium	0.00007	0.0001	0.26	0.41	0.66	µg/L	0.26	THH	Discharge Conc ≥ 50%

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, 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
Total Barium	2,628	µg/L	Discharge Conc ≤ 10% WQBEL
Total Boron	1,752	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	241	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	11.4	µg/L	Discharge Conc < TQL
Total Cobalt	20.8	µg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	1,095	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.055	µg/L	Discharge Conc < TQL
Total Nickel	151	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Zinc	316	µg/L	Discharge Conc ≤ 10% WQBEL