

Application Type Renewal
Facility Type Industrial
Major / Minor Minor

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

Application No. PA0103926
APS ID 1064745
Authorization ID 1398551

Applicant and Facility Information

Applicant Name	<u>Component Intertechnologies Inc.</u>	Facility Name	<u>Component Intertech</u>
Applicant Address	<u>2426 Perry Highway</u> <u>Hadley, PA 16130-2924</u>	Facility Address	<u>2426 Perry Highway</u> <u>Hadley, PA 16130-2924</u>
Applicant Contact	<u>Ted Fox</u>	Facility Contact	<u></u>
Applicant Phone	<u>(724) 253-3161</u>	Facility Phone	<u></u>
Client ID	<u>112856</u>	Site ID	<u>257372</u>
SIC Code	<u>3674</u>	Municipality	<u>Perry Township</u>
SIC Description	<u>Manufacturing - Semiconductors And Related Devices</u>	County	<u>Mercer</u>
Date Application Received	<u>June 2, 2022</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u></u>	If No, Reason	<u></u>
Purpose of Application	<u>Renewal of an NPDES Permit for an existing discharge of Industrial Waste-related wastewaters.</u>		

Summary of Review

This is an application to renew an NPDES Permit for a Minor Industrial Discharger that manufactures semiconductors and related devices. Current treatment at the facility consists of (WQM Permit No. 4374414 and 4397404) an extended aeration sewage treatment plant consisting of a communitor/bar screen, extended aeration tank, clarification tank, and aerated sludge holding tank. Permit No. 4397404 was issued to replace the existing chlorine disinfection system with an Ultraviolet (UV) Disinfection system. There is also a groundwater treatment system active at the site which is purposed to remove Volatile Organic Compounds (VOCs) from the groundwater to meet Act 2 standards. This system is being run by the permittee and overseen by the Department's Waste Management Program under Waste Permit No. PAD004510848.

Due to the quantity, quality, and location of the discharge, it was determined during the last permit renewal that there are no perceived impacts to state and federally listed threatened and endangered mussels.

With this renewal the permittee has requested the removal of AMR Requirements. In the 2021 inspection report the inspector noted that AMR Requirements were added to the sewage treatment facility based on the volume of treated sewage being evaluated as a Small Flow Treatment Facility. Based on 25 PA Code Chapter 92a.61(g) "... In addition to these results, the Department may require submission of other information regarding monitoring results it determines necessary." the Department believes it can accommodate the request and remove the submission of AMRs due to the fact that the facility is subject to monthly testing from the sewage treatment plant and should be able to identify and fix problems based on their effluent data.

Act 14 – Notifications were submitted and received.

There are no open violations in WMS for the subject Client ID (112856) as of 4/29/25.

Approve	Deny	Signatures	Date
X		Dustin Hargenrater Dustin Hargenrater / Project Manager	April 29, 2025
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	May 1, 2025

Summary of Review

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	Design Flow (MGD)	.07023
Latitude	41° 23' 13.06"	Longitude	-80° 13' 0.57"
Quad Name	Hadley	Quad Code	41080D2
Wastewater Description:	Groundwater / Spring Discharge, Noncontact Cooling Water (NCCW), Sewage Effluent, Stormwater		
Receiving Waters	Unnamed Tributary to Little Shenango River (TSF)	Stream Code	36275
NHD Com ID	130028338	RMI	1.43
Drainage Area	1.59	Yield (cfs/mi ²)	0.0527
Q ₇₋₁₀ Flow (cfs)	0.0137	Q ₇₋₁₀ Basis	USGS - StreamStats
Elevation (ft)	1274	Slope (ft/ft)	
Watershed No.	20-A	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Background/Ambient Data		Data Source	
pH (SU)			
Temperature (°F)			
Hardness (mg/L)			
Other:			
Nearest Downstream Public Water Supply Intake	Greenville Municipal Water Authority		
PWS Waters	Shenango River	Flow at Intake (cfs)	10.6
PWS RMI	56.9	Distance from Outfall (mi)	18.3

Changes Since Last Permit Issuance: None

Other Comments: Outfall 001 is considered the main discharge point for the facility. Outfall 001 receives wastewater from IMP No. 101 (Treated Groundwater), IMP No. 201 (Sewage Effluent), and IMP No. 501 (Non-contact cooling water for degreaser unit). The existing limits/monitoring in the last permit renewal will be retained to further characterize the waste stream flow generated at the facility.

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	101	Design Flow (MGD)	.025
Latitude	41° 23' 13.18"	Longitude	-80° 13' 0.74"
Quad Name	Hadley	Quad Code	41080D2
Wastewater Description: Groundwater / Spring Discharge			
Receiving Waters	Unnamed Tributary to Little Shenango River (TSF)	Stream Code	-
NHD Com ID	130028338	RMI	
Drainage Area	-	Yield (cfs/mi ²)	-
Q ₇₋₁₀ Flow (cfs)	-	Q ₇₋₁₀ Basis	-
Elevation (ft)		Slope (ft/ft)	
Watershed No.	20-A	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Background/Ambient Data		Data Source	
pH (SU)	-		-
Temperature (°F)	-		-
Hardness (mg/L)	-		-
Other:	--		-
Nearest Downstream Public Water Supply Intake	Greenville Municipal Water Authority		
PWS Waters	Shenango River	Flow at Intake (cfs)	10.6
PWS RMI	56.9	Distance from Outfall (mi)	18.3

Changes Since Last Permit Issuance: There have been no changes in treatment since the last permit issuance.

Other Comments: A Reasonable Potential Analysis (RPA) was conducted with the effluent data submitted on the application and the analysis concluded that limits for Trichloroethylene were based on CRL and are necessary to protect the water quality of the receiving stream. The RPA also concluded that monitoring for Dissolved Iron had reasonable potential to cause an excursion above water quality standards and therefore will receive monitoring only with this permit renewal.

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	201	Design Flow (MGD)	.09776
Latitude	41° 23' 13.18"	Longitude	-80° 13' 0.74"
Quad Name	Hadley	Quad Code	41080D2
Wastewater Description: Sewage Effluent			
Receiving Waters	Unnamed Tributary to Little Shenango River (TSF)	Stream Code	-
NHD Com ID	130028338	RMI	
Drainage Area	-	Yield (cfs/mi²)	-
Q ₇₋₁₀ Flow (cfs)	-	Q ₇₋₁₀ Basis	-
Elevation (ft)	-	Slope (ft/ft)	-
Watershed No.	20-A	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Background/Ambient Data		Data Source	
pH (SU)	-		-
Temperature (°F)	-		-
Hardness (mg/L)	-		-
Other:	-		-
Nearest Downstream Public Water Supply Intake	Greenville Municipal Water Authority		
PWS Waters	Shenango River	Flow at Intake (cfs)	10.6
PWS RMI	56.9	Distance from Outfall (mi)	18.3

Changes Since Last Permit Issuance: None.

Other Comments: Sewage treatment consists of a comminutor, activated sludge, sedimentation, and ultraviolet (UV) light disinfection.

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	501	Design Flow (MGD)	.002
Latitude	41° 23' 13.19"	Longitude	-80° 13' 0.72"
Quad Name	Hadley	Quad Code	41080D2
Wastewater Description: Noncontact Cooling Water (NCCW)			
Receiving Waters	Unnamed Tributary to Little Shenango River (TSF)	Stream Code	-
NHD Com ID	130028338	RMI	0.1000
Drainage Area	-	Yield (cfs/mi ²)	-
Q ₇₋₁₀ Flow (cfs)	-	Q ₇₋₁₀ Basis	-
Elevation (ft)	-	Slope (ft/ft)	-
Watershed No.	20-A	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Background/Ambient Data		Data Source	
pH (SU)	-		-
Temperature (°F)	-		-
Hardness (mg/L)	-		-
Other:	-		-
Nearest Downstream Public Water Supply Intake	Greenville Municipal Water Authority		
PWS Waters	Shenango River	Flow at Intake (cfs)	10.6
PWS RMI	56.9	Distance from Outfall (mi)	18.3

Changes Since Last Permit Issuance: Based on the cooling water process using 2,000 GPD during maximum production and the receiving stream being TSF it was determined through DEP's Thermal Limits Spreadsheet that temperature limits will be necessary in order to protect the receiving stream from temperature variations that could cause an excursion above water quality standards.

Compliance History

DMR Data for Outfall 001 (from March 1, 2024 to February 28, 2025)

Parameter	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24
Flow (MGD) Average Monthly	0.1290	0.00466	0.01537 5	0.00011 88	0.00072	0.00907	0.00036	0.00033 6	0.01120 8	0.01089 3	0.00757 7	0.00527 9
pH (S.U.) Minimum	6.9	6.9	6.8	6.8	6.8	6.9	6.9	6.9	6.9	6.9	6.9	6.9
pH (S.U.) Maximum	7.1	7.0	7.1	7.0	7.0	7.0	7.1	7.0	7.1	7.0	7.1	7.1

DMR Data for Outfall 201 (from March 1, 2024 to February 28, 2025)

Parameter	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24
Flow (MGD) Internal Monitoring Point Average Monthly	1.0552	0.00077	0.00017 82	0.00024	0.00127 7	0.00024 3	0.01086 5	0.00024 3	0.00324	0.00235 2	0.00113 4	0.00083 6
pH (S.U.) Internal Monitoring Point Minimum	6.9	6.9	6.8	6.7	6.8	6.9	6.9	6.9	6.9	6.8	6.8	6.9
pH (S.U.) Internal Monitoring Point Maximum	7.0	7.0	7.0	7.8	7.0	7.1	7.1	7.1	7.1	7.2	7.1	7.2
CBOD5 (mg/L) Internal Monitoring Point Average Monthly	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TSS (mg/L) Internal Monitoring Point Average Monthly	6.0	10.0	11.0	18.0	5.0	5.0	7.0	< 5.0	< 5.0	6.0	10.0	6.0
Fecal Coliform (No./100 ml) Internal Monitoring Point Geometric Mean	3.0	< 1.0	3.0	1.0	3.0	3.0	4.0	3.0	< 1.0	< 1.0	< 1.0	< 1.0
Fecal Coliform (No./100 ml) Internal Monitoring Point Instantaneous Maximum	3.0	< 1.0	3.0	1.0	3.0	3.0	4.0	3.0	< 1.0	< 1.0	< 1.0	< 1.0

Development of Effluent Limitations

Outfall No.	001	Design Flow (MGD)	.07023
Latitude	41° 23' 13.07"	Longitude	-80° 13' 0.56"
Wastewater Description:	Groundwater / Spring Discharge, Noncontact Cooling Water (NCCW), Sewage Effluent, Stormwater		

Technology-Based Limitations

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

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)

Outfall 001 is considered the main discharge point for the facility. Outfall 001 receives Groundwater / Spring Discharge, Noncontact Cooling Water (NCCW), Sewage Effluent, and Stormwater as a comingled waste-stream and is discharged to an unnamed tributary to the Shenango River. The facility will be subject to meeting limits at the Internal Monitoring Points for the respective waste-stream discharges and therefore Outfall 001 will receive Flow monitoring based on 25 PA Code Chapter 92a.61 and limits for pH of 6.0 S.U. to 9.0 S.U. based on 25 PA Code Chapter 95.2(1).

Other Considerations:

Stormwater from the facility is also discharge via Outfall 001. The permittee has certified this stormwater under a condition of "No Exposure." They were previously granted this certification by the Department and nothing has changed with the facility operation or setup since the last permit cycle, so the certification will be maintained in the next permit cycle.

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:

- 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.
- 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.
- 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.

Component InterTech'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, Component InterTech 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 Component InterTech did not report results for PFOA, PFOS, PFBS, and HFPO-DA on the permit application, the facility operates in a suspected non-source industry, which would subject Component InterTech 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 Component InterTech's case), then the monitoring may be discontinued.

Development of Effluent Limitations

Sub-Outfall No.	101	Design Flow (MGD)	.025
Latitude	41° 23' 13.87"	Longitude	-80° 13' 0.32"
Wastewater Description:	Remediated Groundwater		

Technology-Based Limitations

Comments: No Technology-Based Limitations apply at IMP 101.

Water Quality-Based Limitations

A "Reasonable Potential Analysis" (Attachment 1) determined the following parameters were candidates for limitations:

- Dissolved Iron
- Trichloroethylene

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

Parameter	Limit (mg/l)	SBC	Model
Dissolved Iron	Report	Average Monthly	Report
Dissolved Iron	Report	Daily Maximum	Report
Trichloroethylene	0.003 (lbs/day)	Average Monthly Load	0.003
Trichloroethylene	0.004 (lbs/day)	Maximum Daily Load	0.004
Trichloroethylene	12.1 (µg/l)	Average Monthly Limit	12.1
Trichloroethylene	18.9 (µg/l)	Maximum Daily Limit	18.9
Trichloroethylene	30.2 (µg/l)	Instantaneous Maximum	30.2

These WQBEL's were calculated using DEP's Toxics Management Spreadsheet which takes into consideration Design Flow, Hardness, pH, and the yield to conduct a Reasonable Potential Analysis and calculate limitations based on the effluent data that was submitted by the facility. The design flow used in the modeling is based on strictly the flow from the Groundwater Remediation project which was reported to be from 0-25,000 GPD so the maximum anticipated flow was used of 25,000 GPD for the modeling. Since no Site-Specific Criteria was available for the stream hardness a default of 100 mg/l was used. An average pH of 7.96 was calculated using the facilities effluent data and interpolating an average based on the minimum and maximum pH reported. Since the sample size was less than 10 the maximum reported concentration was used to determine Reasonable Potential according to the SOP for Establishing WQBELs for Toxic Pollutants.

Dissolved Iron:

Dissolved Iron monitoring was calculated based off of THH Criteria. The maximum concentration reported was 0.215 mg/l or 215 µg/l, this value is greater than 10% of the THH WQC Goal of 300 µg/l so this parameter will receive monitoring in the renewal permit. The Toxics Management Spreadsheet determined that there was no Reasonable Potential for the facility to discharge effluent concentrations that would create an excursion above water quality standards however monitoring was suggested because the discharge concentration was greater than 10% of the WQBEL.

Trichloroethylene:

Trichloroethylene limitations were calculated based off of CRL Criteria. The maximum concentration reported was 11.1 µg/l, this value was greater than or equal to 50% of the CRL WQC Criteria so this parameter has reasonable potential to create an excursion above water quality standards. Based on the SOP for Establishing Effluent Limitations in Individual Waste Permits all toxic pollutants that received concentration limits will be subject to receiving mass based effluent limitations as well so the loading limitations suggested by the TMS will also be implemented.

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
Benzene	0.012	mg/L	Discharge Conc ≤ 25% WQBEL
Ethylbenzene	0.19	mg/L	Discharge Conc ≤ 25% WQBEL
Tetrachloroethylene	0.2	mg/L	Discharge Conc ≤ 25% WQBEL
Toluene	0.16	mg/L	Discharge Conc ≤ 25% WQBEL
Vinyl Chloride	N/A	N/A	Discharge Conc < TQL
Naphthalene	0.12	mg/L	Discharge Conc ≤ 25% WQBEL

Development of Effluent Limitations

Outfall No.	<u>201</u>	Design Flow (MGD)	<u>.09776</u>
Latitude	<u>41° 23' 13.87"</u>	Longitude	<u>-80° 13' 0.32"</u>
Wastewater Description:	<u>Sewage Effluent</u>		

Technology-Based Limitations

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

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
CBOD ₅	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Comments: It was determined in the last permit renewal that the monitoring requirements for Outfall 201 would be derived from the SOP for New and Reissuance Small Flow Treatment Facility NPDES Applications based on a design flow of 0.0009 MGD which was the calculated/estimated water usage for the current number of employees. This discharge rate is verified through the past year of eDMR data where the facility is averaging 0.000916 MGD monthly so the effluent limitations should carry over. During the last renewal it was also determined that the secondary treatment limits for CBOD₅ and TSS would be retained as the tertiary limits found in the SOP could not be met consistently with the current treatment works, according to the SOP application managers do not need to impose the CBOD₅ and TSS limits set forth for existing SFTFs that were permitted prior to the publication of the Small Flow Treatment Facilities Manual when such facilities are not capable of meeting tertiary treatment limits and have no documented compliance issues. Based on the SOP for New and Reissuance Small Flow Treatment Facility NPDES Applications water quality modeling using the Toxics Management Spreadsheet and WQM models will not be conducted. Since UV disinfection is used for treatment at the facility the TRC Spreadsheet model will also not be used. Ammonia-Nitrogen concentrations are consistently below the detectable limit of the lab of 0.8 mg/l so it will not be considered a pollutant of concern in the sewage effluent.

Development of Effluent Limitations

Outfall No.	<u>501</u>	Design Flow (MGD)	<u>.002</u>
Latitude	<u>41° 23' 13.00"</u>	Longitude	<u>-80° 13' 0.40"</u>
Wastewater Description: <u>Noncontact Cooling Water (NCCW)</u>			

Technology-Based Limitations

No technology-based limitations are considered for Non-Contact Cooling Water.

Water Quality-Based Limitations

The Non-Contact Cooling Water was modeled using the DEPs Thermal Limits Spreadsheet. This spreadsheet takes into consideration the cooling water discharge rate, Q_{7-10} of the receiving stream, stream designated uses, and thermal water quality criteria in 25 PA Code Chapter 93 to create a mass balance equation and calculate allowable thermal limits for Non-Contact Cooling Water and other heated discharges. The discharge rate of the cooling water process was used instead of the entire discharge rate due to there being no concerns with the comingled discharge being thermally elevated, this was also taken into consideration when deciding which outfall should receive the limits which is why they are being imposed at IMP 501. The following limitations were calculated with the Thermal Limits Spreadsheet and will be imposed at IMP 501.

Semi-Monthly Increment	Daily WLA (°F)
Jan 1-31	110.0
Feb 1-29	110.0
Mar 1-31	110.0
April 1-15	110.0
April 16-30	110.0
May 1-15	110.0
May 16-31	110.0
Jun 1-15	110.0
Jun 16-30	110.0
Jul 1-31	81.5
Aug 1-15	110.0
Aug 16-31	110.0
Sep 1-15	110.0
Sep 16-30	110.0
Oct 1-15	110.0
Oct 16-31	110.0
Nov 1-15	110.0
Nov 16-30	110.0
Dec 1-31	105.8

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.

According to 25 PA Code Chapter 96.6(b), heated wastewater discharges may not cause a change of surface water temperature of more than 2 °F during any 1-hour period therefore the Part C condition, "Temperature 2 Degree Hourly Change" will be implemented to make sure this facility stays in compliance with the heated wastewater regulations. Additionally, the "No Net Addition of Pollutants to NCCW" Part C condition will be implemented as the Department has not taken into consideration additional pollutants when modeling the heated wastewater discharge and additional pollutants may cause an excursion above water quality standards.

Proposed Effluent Limitations and Monitoring Requirements

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

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	9.0	XXX	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

Compliance Sampling Location: Outfall 001.

Proposed Effluent Limitations and Monitoring Requirements

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

IMP 101, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Maximum	Instant. Maximum		
Flow (MGD) Internal Monitoring Point	Report	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.) Internal Monitoring Point	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	2/month	Grab
Dissolved Iron Internal Monitoring Point	XXX	XXX	XXX	Report Avg Mo	Report Daily Max	XXX	2/month	8-Hr Composite
Trichloroethylene (ug/L) Internal Monitoring Point	0.003	0.004	12.1	18.9	XXX	30.2	2/month	8-Hr Composite

Compliance Sampling Location: IMP 101, after treatment.

Proposed Effluent Limitations and Monitoring Requirements

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

IMP 201, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD) Internal Monitoring Point	Report	XXX	XXX	XXX	XXX	XXX	1/month	Measured
pH (S.U.) Internal Monitoring Point	XXX	XXX	6.0	XXX	9.0	XXX	1/month	Grab
CBOD5 Internal Monitoring Point	XXX	XXX	XXX	25.0	XXX	50	1/month	Grab
TSS Internal Monitoring Point	XXX	XXX	XXX	30.0	XXX	60	1/month	Grab
Fecal Coliform (No./100 ml) Internal Monitoring Point	XXX	XXX	XXX	200 Geo Mean	XXX	2000	1/month	Grab

Compliance Sampling Location: IMP 201, after disinfection.

Proposed Effluent Limitations and Monitoring Requirements

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

IMP 501, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD) Internal Monitoring Point	Report	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.) Internal Monitoring Point	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	2/month	Grab
Temperature (°F) Jan 1 - Jun 30, Aug 1 - Nov 30 Internal Monitoring Point	XXX	XXX	XXX	XXX	XXX	110	2/month	I-S
Temperature (°F) Jul 1 – 31 Internal Monitoring Point	XXX	XXX	XXX	XXX	XXX	81.5	2/month	I-S
Temperature (°F) Dec 1 – 31 Internal Monitoring Point	XXX	XXX	XXX	XXX	XXX	105.8	2/month	I-S

Compliance Sampling Location: IMP 501.

Attachment 1 – Toxics Management Spreadsheet

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions Discharge Stream

Facility: Component InterTechologies NPDES Permit No.: PA0103926 Outfall No.: 101Evaluation Type Major Sewage / Industrial Waste Wastewater Description: Treated 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
0.025	100	7.96						

				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												
	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	mg/L												
	Free Cyanide	µg/L												
	Total Cyanide	µg/L												
	Dissolved Iron	µg/L		215										
	Total Iron	µg/L												
	Total Lead	µg/L												
	Total Manganese	µg/L												
	Total Mercury	µg/L												
	Total Nickel	µg/L												
	Total Phenols (Phenolics) (PWS)	µg/L												
	Total Selenium	µg/L												
	Total Silver	µg/L												
	Total Thallium	µg/L												
	Total Zinc	mg/L												
	Total Molybdenum	µg/L												
	Acrolein	µg/L	<											
	Acrylamide	µg/L	<											
	Acrylonitrile	µg/L	<											
	Benzene	mg/L	<	0.001										
	Bromoform	µg/L	<											
	Carbon Tetrachloride	µg/L	<											
	Chlorobenzene	µg/L												
	Chlorodibromomethane	µg/L	<											
	Chloroethane	µg/L	<											
	2-Chloroethyl Vinyl Ether	µg/L	<											

Page 2



Stream / Surface Water Information

Component InterTechnologies, NPDES Permit No. PA0103926, Outfall 101

Instructions Discharge **Stream**

Receiving Surface Water Name: UNT to the Shenango 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	036167	1.52	1274	1.43			Yes
End of Reach 1	036167	0	1087	2.61			Yes

Q₇₋₁₀

Location	RMI	LFY (cfs/mi ²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	1.52	0.05										100	7		
End of Reach 1	0	0.08										100	7		

Q_h

Location	RMI	LFY (cfs/mi ²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	1.52														
End of Reach 1	0														



Model Results

Component InterTechnologies, NPDES Permit No. PA0103926, Outfall 101

Instructions

Results

RETURN TO INPUTS

SAVE AS PDF

PRINT

☒ All ☐ Inputs ☐ Results ☐ Limits☐ Hydrodynamics☒ Wasteload Allocations☒ AFC

CCT (min): 0.405

PMF: 1

Analysis Hardness (mg/l): 100

Analysis pH: 7.16

Pollutants	Stream Conc	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	
Benzene	0	0		0	640	640	1,823	
Ethylbenzene	0	0		0	2,900	2,900	8,261	
Tetrachloroethylene	0	0		0	700	700	1,994	
Toluene	0	0		0	1,700	1,700	4,843	
Trichloroethylene	0	0		0	2,300	2,300	6,552	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
Naphthalene	0	0		0	140	140	399	

☒ CFC

CCT (min): 0.405

PMF: 1

Analysis Hardness (mg/l): 100

Analysis pH: 7.16

Pollutants	Stream Conc	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	
Benzene	0	0		0	130	130	370	
Ethylbenzene	0	0		0	580	580	1,652	
Tetrachloroethylene	0	0		0	140	140	399	
Toluene	0	0		0	330	330	940	
Trichloroethylene	0	0		0	450	450	1,282	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
Naphthalene	0	0		0	43	43.0	122	

☒ THH

CCT (min): 0.405

PMF: 1

Analysis Hardness (mg/l): N/A

Analysis pH: N/A

Pollutants	Stream Conc	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	855	
Benzene	0	0		0	N/A	N/A	N/A	

Ethylbenzene	0	0		0	68	68.0	194	
Tetrachloroethylene	0	0		0	N/A	N/A	N/A	
Toluene	0	0		0	57	57.0	162	
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	

☒ **CRL** CCT (min): 0.239 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc	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	
Benzene	0	0		0	0.58	0.58	11.7	
Ethylbenzene	0	0		0	N/A	N/A	N/A	
Tetrachloroethylene	0	0		0	10	10.0	202	
Toluene	0	0		0	N/A	N/A	N/A	
Trichloroethylene	0	0		0	0.6	0.6	12.1	
Vinyl Chloride	0	0		0	0.02	0.02	0.4	
Naphthalene	0	0		0	N/A	N/A	N/A	

☒ **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			
Dissolved Iron	Report	Report	Report	Report	Report	µg/L	855	THH	Discharge Conc > 10% WQBEL (no RP)
Trichloroethylene	0.003	0.004	12.1	18.9	30.2	µg/L	12.1	CRL	Discharge Conc ≥ 50% WQBEL (RP)

☒ **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
Benzene	0.012	mg/L	Discharge Conc ≤ 25% WQBEL
Ethylbenzene	0.19	mg/L	Discharge Conc ≤ 25% WQBEL
Tetrachloroethylene	0.2	mg/L	Discharge Conc ≤ 25% WQBEL
Toluene	0.16	mg/L	Discharge Conc ≤ 25% WQBEL
Vinyl Chloride	N/A	N/A	Discharge Conc < TQL
Naphthalene	0.12	mg/L	Discharge Conc ≤ 25% WQBEL

Attachment 2 – Thermal Limits Spreadsheet



Instructions

Inputs

Facility: **Component Intertech**

Permit No.: **PA0103926**

Stream Name: **Unnamed Tributary to Little Shenango**

Analyst/Engineer: **Dustin Hargenrater**

Stream Q7-10 (cfs)*: **0.0**

Outfall No.: **001**

Analysis Type*: **TSF**

Facility Flows

Semi-Monthly Increment	Intake (Stream) (MGD)*	Intake (External) (MGD)*	Consumptive Loss (MGD)*	Discharge Flow (MGD)
Jan 1-31		0.002		0.002
Feb 1-29		0.002		0.002
Mar 1-31		0.002		0.002
Apr 1-15		0.002		0.002
Apr 16-30		0.002		0.002
May 1-15		0.002		0.002
May 16-31		0.002		0.002
Jun 1-15		0.002		0.002
Jun 16-30		0.002		0.002
Jul 1-31		0.002		0.002
Aug 1-15		0.002		0.002
Aug 16-31		0.002		0.002
Sep 1-15		0.002		0.002
Sep 16-30		0.002		0.002
Oct 1-15		0.002		0.002
Oct 16-31		0.002		0.002
Nov 1-15		0.002		0.002
Nov 16-30		0.002		0.002

Stream Flows

Q7-10 Multipliers (Default Shown)	PMF	Seasonal Stream Flow (cfs)	Downstream Stream Flow (cfs)
3.2	1.00	0.04	0.05
3.5	1.00	0.05	0.05
7	1.00	0.10	0.10
9.3	1.00	0.13	0.13
9.3	1.00	0.13	0.13
5.1	1.00	0.07	0.07
5.1	1.00	0.07	0.07
3	1.00	0.04	0.04
3	1.00	0.04	0.04
1.7	1.00	0.02	0.03
1.4	1.00	0.02	0.02
1.4	1.00	0.02	0.02
1.1	1.00	0.02	0.02
1.1	1.00	0.02	0.02
1.2	1.00	0.02	0.02
1.2	1.00	0.02	0.02
1.6	1.00	0.02	0.03
1.6	1.00	0.02	0.03

2.4	1.00	0.03	0.04
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Dec 1-31	0.002		0.002
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Thermal Limits Spreadsheet
Version 1.0, April 2024

Instructions

TSF Results

Recommended Limits for Case 1 or Case 2

Semi-Monthly Increment	TSF Target Maximum Stream Temp. (°F)	Case 1 Daily WLA (Million BTUs/day)	Case 2 Daily WLA (°F)
Jan 1-31	40	N/A -- Case 2	110.0
Feb 1-29	40	N/A -- Case 2	110.0
Mar 1-31	46	N/A -- Case 2	110.0
Apr 1-15	52	N/A -- Case 2	110.0
Apr 16-30	58	N/A -- Case 2	110.0
May 1-15	64	N/A -- Case 2	110.0
May 16-31	68	N/A -- Case 2	110.0
Jun 1-15	70	N/A -- Case 2	110.0
Jun 16-30	72	N/A -- Case 2	110.0
Jul 1-31	74	N/A -- Case 2	81.5
Aug 1-15	80	N/A -- Case 2	110.0
Aug 16-31	87	N/A -- Case 2	110.0
Sep 1-15	84	N/A -- Case 2	110.0
Sep 16-30	78	N/A -- Case 2	110.0
Oct 1-15	72	N/A -- Case 2	110.0
Oct 16-31	66	N/A -- Case 2	110.0
Nov 1-15	58	N/A -- Case 2	110.0
Nov 16-30	50	N/A -- Case 2	110.0
Dec 1-31	42	N/A -- Case 2	105.8