pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

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

Application Type	**Renewal**	Application No.	**PA0114545**
Facility Type	**Industrial**	APS ID	**981985**
Major / Minor	**Minor**	Authorization ID	**1253697**

Applicant and Facility Information

Applicant Name	**Troy Schoenly**	Facility Name	**Troy's Suds Depot**
Applicant Address	PO Box 153	Facility Address	Rt 14 S
	Sylvania, PA 16945-0153		Troy, PA 16947
Applicant Contact	Troy Schoenly	Facility Contact	Troy Schoenly
Applicant Phone	570-297-4889	Facility Phone	570-297-4889
Client ID	44211	Site ID	1064
SIC Code	7542	Municipality	Troy Township
SIC Description	Services - Car Washes	County	Bradford
Date Application Received	November 27, 2018	EPA Waived?	Yes
Date Application Accepted	December 14, 2018	If No, Reason	

Purpose of Application: Application for the renewal of an individual NPDES permit for the discharge of industrial waste.

Summary of Review

Troy's Suds Depot has submitted an application for the renewal of the existing NPDES Permit PA114545 for the Department's review. DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
X		Jonathan P. Peterman / Project Manager	November 18, 2019
		Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.0075 (Max Daily)
Latitude	41º 46' 9.51"	Longitude	-76º 47' 15.38"
Quad Name	Troy	Quad Code	0431
Wastewater Description:	Laundromat, Washing/Cleaning Wastewater		
Receiving Waters	South Branch Sugar Creek (TSF)	Stream Code	30778
NHD Com ID	66402729	RMI	1.86
Drainage Area	5.66 mi^2	Yield (cfs/mi^2)	0.013
Q_{7-10} Flow (cfs)	0.0736	Q_{7-10} Basis	Gauge No. 01532000
Elevation (ft)	1150	Slope (ft/ft)	0.00927
Watershed No.	4-C	Chapter 93 Class.	TSF
Existing Use	TSF	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	N/A		
Source(s) of Impairment	N/A		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	Danville Municipal Authority		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	1120
PWS RMI	138.06	Distance from Outfall (mi)	160

Changes Since Last Permit Issuance: None.

Other Comments: In order to determine the Q7-10 low flow for South Branch Sugar Creek, a comparative stream analysis was previously conducted and the results of which are attached in Appendix A. The Q_{7-10} data was obtained from the updated stream gage information obtained from *Stuckey, M.H., and Roland, M.A., 2011, Selected Streamflow Statistics for Streamgage Locations In and Near Pennsylvania*. The analysis indicates that the Q_{7-10} for South Branch Sugar Creek was 0.0736 cfs. This estimation of Q_{7-10} is consistent with the previous review and seems appropriate given the size of the stream.

Treatment Facility Summary				

Treatment Facility Name: Troy's Suds Depot

WQM Permit No.	Issuance Date	Comments
0891201	8/8/91	

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Industrial	Physical (Industrial Waste)	Intermittent Sand Filters	Hypochlorite	

Treatment System Components:

Laundromat
- One (1) 10,000-gallon septic tank

Car Wash Wastewater
- One (1) grit chamber
- One (1) 1000-gallon oil/water separator

Combined flows are then further treated through the following:
- One (1) dosing tank
- Two (2) 40'x109' subsurface sand filters
- Two (2) erosion tablet chlorinators
- One (1) chlorine contact tank
- Outfall 001.

Changes Since Last Permit Issuance: None.
Other Comments: The owner has previously indicated that there are no sewage contributions to this system.

Chesapeake Bay Requirements

Troy's Suds Depot is considered a non-significant IW facility according to the Phase II Watershed Implementation Plan (WIP). For non-significant IW facilities, monitoring and reporting of TN and TP will be required throughout the permit term in renewed or amended permits anytime the facility has the potential to introduce a net TN or TP increase to the load contained within the intake water used in processing. One effluent sample was provided in the application. The results indicate that the discharge concentrations for nutrients are <2 mg/l Total Nitrogen (1.45 mg/l TKN and 0.469 mg/l Nitrate-Nitrite) and 1.30 mg/l Total Phosphorus. Given these results, the discharge doesn't appear to be introducing a net nutrient increase. Therefore, no further nutrient monitoring will be required for the facility at this time.

TMDL Impairment Discussion

The Department's Geographic Information System (GIS) shows that the South Branch Sugar Creek is not impaired and a no TMDL exists for the stream segment. No further review is required.

Existing Effluent Limitations and Monitoring Requirements

Existing Limits – Outfall 001

Discharge Parameter	Limitations							
	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Monthly Average	Daily Maximum	Minimum	Average Monthly	Daily Max.	Instantaneous Maximum	Minimum Frequency	Sample Type
Flow (MGD)	Report	Report					1/ Week	Measured
pH (Std. Units)			6.0			9.0	1/ Week	Grab
CBOD5				22	44	55	1/ Quarter	Grab
TSS				20	40	50	1/ Quarter	Grab
TRC				0.5		1.6	1/ Week	Grab
Oil and Grease				15	30	30	1/ Year	Grab
Ammonia-Nitrogen				8.0	16	20	1/ Year	Grab

*The existing effluent limits for Outfall 001 were based on a design flow of 0.0075 MGD.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.0075
Latitude 41º 46' 9.50" **Longitude** -76º 47' 14.60"
Wastewater Description: Laundromat, Washing/Cleaning Wastewater

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)

Water Quality-Based Limitations

To establish whether or not water-quality based effluent limitations (WQBELs) are required, the Department models in-stream conditions. In order to determine limitations for toxics, the Department utilizes the PENTOXSD v2.0d model. The use of a PENTOXSD v2.0d analysis is not required given that there were no pollutant candidates for modeling.

WQM 7.0 for Windows, Version 1.0b, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen
The model was previously run using the Q7-10 stream flow, background water quality, max daily flow, and other discharge characteristics. The existing water quality-based effluent limits for $CBOD_5$ (22 mg/l) and NH3-N (8 mg/l) were used as inputs for the modeling. The DO minimum daily average criterion from §93.7 (6.0 mg/L for TSF) was used for the in-stream objective for the model. The summary of the output is as follows:

Parameter	Effluent Limit		
	30 Day Average	Maximum	Minimum
CBOD5	22	N/A	N/A
Ammonia-N	8.0	16.0	N/A
Dissolved Oxygen	N/A	N/A	3

The model did not recommend more stringent water-quality based effluent limitations with regards to CBOD5, ammonia-nitrogen, and dissolved oxygen. The previously implemented effluent limits are still protective of water quality and will remain. Refer to Appendix B for the WQM 7.0 inputs and results.

Reasonable Potential Analysis

A formal "Reasonable Potential Analysis" was not conducted given the limited pollutant monitoring requirements required by the application. However, Emerging Pollutants (TDS, Chloride, Bromide, and Sulfate) have been sampled in the application. For discharges of 0.1 MGD or less, the Department's Policy is to establish a monitoring requirement for TDS, sulfate, chloride, and bromide if the concentration of TDS in the discharge exceeds 5,000 mg/L. The reported TDS effluent concentration (270 mg/L) is significantly below this value. Additionally, effluent concentrations for Chloride, Bromide, and Sulfate are significantly below the most stringent criterion and are not considered a pollutant of concern. This analysis has determined that there are no parameters that were candidates for monitoring or limitations. No further review is required.

Best Professional Judgement (BPJ) Limitations

Comments: None Required.

Anti-Backsliding

In accordance with 40 CFR 122.44(l)(1) and (2), this permit does not contain effluent limitations, standards, or conditions that are less stringent than the previous permit.

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 the abovementioned 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" (362-0400-001) and/or BPJ.

Proposed Limits - Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date

Discharge Parameter	Limitations							
	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Monthly Average	Daily Maximum	Minimum	Average Monthly	Daily Max.	Instantaneous Maximum	Minimum Frequency	Sample Type
Flow (MGD)	Report	Report					1/ Week	Measured
pH (Std. Units)			6.0			9.0	1/ Week	Grab
CBOD5				22	44	55	1/ Quarter	Grab
TSS				20	40	50	1/ Quarter	Grab
TRC				0.5		1.6	1/ Week	Grab
Oil and Grease				15	30	30	1/ Year	Grab
Ammonia-Nitrogen				8.0	16	20	1/ Year	Grab

*The proposed effluent limits for Outfall 001 were based on a design flow of 0.0075 MGD.

pH

CFR Title 40 §133.102(c) and 25 PA Code §95.2(1) provide the basis of effluent limitations for pH.

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)

The results of the WQM 7.0 model show that the previously applied water quality-based effluent limit for $CBOD_5$ is protective of water quality and will remain.

Total Suspended Solids (TSS)
The previously applied technology based secondary treatment standards (25 PA Code §92a.47 (a) (1&2)) for TSS will remain as well.

Oil and Grease
The Oil and Grease treatment requirements, as stipulated in 25 Pa. Code § 95.2(2)(ii), were previously applied given that an oil-water separator is used to treat stormwater. The previous permits establish an effluent limitation for Oil and Grease of 15 mg/L as an average monthly limit and 30 mg/L as an IMAX limit which are appropriate and will remain.

Ammonia-Nitrogen (NH3-N)
The results of the WQM 7.0 model show that the previously applied water quality-based effluent requirements for NH3-N are still protective of water quality. These limits will be assigned in accordance with the *Implementation Guidance of Section 93.7 Ammonia Criteria* (391-2000-013) which states that a multiplier of 2.0 times the average monthly concentration limit (8.0 mg/L) was used to establish the I-max concentration limit (16.0 mg/L).

Total Residual Chlorine (TRC)
In accordance with 25 Pa. Code 92a.48(b)(2), a best available technology (BAT) value of 0.5 mg/l was used as an input in the TRC model (see Attachment D). The attached TRC model indicates that the existing water quality-based effluent limit of 0.5 mg/L (Average Monthly) and 1.6 mg/L (Instantaneous Maximum) are still protective of water quality and will remain.

The existing monitoring frequencies and sample types for the abovementioned parameters are consistent with other water treatment plant wastewater discharges and the *Technical Guidance for the Development and Specification of Effluent Limitations* (362-0400-001) Table 6-3 and Table 6-4. The existing requirements will remain.

Compliance History

Summary of Inspections -The last inspection of the facility was conducted on 3/6/18 by the Department which reveals that there were no issues and the facility was operating normally.

WMS Query Summary - A WMS Query was run at *Reports - Violations & Enforcements – Open Violations for Client Report* to determine whether there are any unresolved violations associated with the client that will affect issuance of the permit (per CSL Section 609). This query revealed that there are no open violations associated with this client.

DMRs Summary -Upon review of the DMR's for the past year, the facility has been operating within the given concentration limits.

Attachments

Appendices

Compliance History

DMR Data for Outfall 001 (from October 1, 2018 to September 30, 2019)

Parameter	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18
Flow (GPD) Average Monthly	2340	1534	2280	2734	2744	2005	4280	4550	3477	4288	2840	2734
Flow (GPD) Daily Maximum	4500	3000	4000	4000	4000	4500	6000	6000	6000	6000	5000	5000
pH (S.U.) Minimum	7.3	7.2	7.3	7.4	7.4	7.4	7.5	7.5	7.4	7.5	7.5	7.4
pH (S.U.) Instantaneous Maximum	7.5	7.4	7.4	7.5	7.6	7.5	7.7	7.6	7.6	7.6	7.6	7.7
TRC (mg/L) Average Monthly	0.32	0.43	0.28	0.22	0.23	0.25	0.2	0.23	0.33	0.2	0.23	0.2
TRC (mg/L) Instantaneous Maximum	0.4	0.5	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.2
CBOD5 (mg/L) Average Monthly	3			2.6			2.8			3		
CBOD5 (mg/L) Daily Maximum	3			2.6			2.8			3		
TSS (mg/L) Average Monthly	4			4.0			7			5		
TSS (mg/L) Daily Maximum	4			4.0			7			5		
Oil and Grease (mg/L) Average Monthly										5		
Oil and Grease (mg/L) Daily Maximum										5		
Ammonia (mg/L) Average Monthly										0.560		
Ammonia (mg/L) Daily Maximum										0.560		

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment **B**)
☐	PENTOXSD for Windows Model (see Attachment)
☒	TRC Model Spreadsheet (see Attachment **D**)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Toxics Screening Analysis Spreadsheet (see Attachment)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☒	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☒	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☒	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☒	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☒	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☒	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: Establishing Effluent Limitations for Individual Industrial Permits, 1/10/2019
☐	Other: