

Southwest Regional Office CLEAN WATER PROGRAM

 Application Type
 Renewal

 Facility Type
 Industrial

 Major / Minor
 Minor

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

 Application No.
 PA0097624

 APS ID
 718438

 Authorization ID
 831675

Applicant and Facility Information

Applicant Name	Glassmere Fuel Service Inc.	Facility Name	Petro Bulk Plant
Applicant Address	PO Box 187	Facility Address	1967 Saxonburg Boulevard
	Curtisville, PA 15032-0187		Curtisville, PA 15032
Applicant Contact	Dell Cromie	Facility Contact	Dell Cromie
Applicant Phone	(724) 316-0367	Facility Phone	(800) 235-9054
Client ID	172024	Site ID	260905
SIC Code	5171	Municipality	West Deer Township
SIC Description	Wholesale Trade - Petroleum Bulk Stations And Terminals	County	Allegheny
Date Application Receiv	vedApril 9, 2010	EPA Waived?	Yes
Date Application Accep	otedApril 21, 2010	If No, Reason	
Purpose of Application	NPDES Permit Renewal for Sto separator	ormwater runoff from onsite	containment pond through oil/water

Summary of Review

Glassmere Fuel Service, Inc. (Glassmere) submitted a renewal application for their existing intermittent storm water discharge from their Petroleum Marketing Terminal (Standard Industrial Classification code 5171) in West Deer Township, Allegheny County. The facility is used for bulk storage of petroleum products for retail and wholesale distribution of various grades of fuel oil, lubricants, kerosene, propane, diesel fuel and gasoline, including an onsite vehicle service station. All products are brought in by truck.

Petroleum products are received in bulk, stored in various surface containers, above ground and underground tanks, then distributed to customers by a fleet of smaller tank trucks. Lubricating oils and greases are stored inside an enclosed warehouse in 24 above-ground tanks; as well as, 55-gallon drums, palletized 5-gallon containers and cases of packaged lubricants. Interconnecting pipelines are flushed between deliveries into a small waste tank (240-gallons) and disposed in a waste oil furnace.

Glassmere advertises that it has been in business since the early 1940's. However, this facility first received a National Pollutant Discharge Elimination System (NPDES) permit on May 15, 1987. The permit was later renewed on August 30, 1994, effective September 1, 1994. The permit was subsequently renewed for five-year terms on February 9, 2000 and again on September 2, 2005. Their latest renewal application submittal was received on April 9, 2010 and determined to be complete on April 21, 2010; however, the Department delayed action on this submittal and the 2005 permit has been administratively extended, pending this renewal review.

Approve	Deny	Signatures	Date
х		John L. Duryea, Jr., John L. Duryea, Jr., P.E. / Environmental Engineer	March 13, 2023
х		Midend F. Fifth Michael E. Fifth, P.E. / Environmental Engineer Manager	April 3, 2023

Summary of Review

This facility has documented only a single outfall (001) where stormwater is discharged from an American Petroleum Institute (API) approved oil/water separator (OWS) that treats the water collected in a large runoff/spill containment pond. Stormwater runoff is piped to this pond from the above ground storage tank containment dike, maintenance garage and exterior catch basins, lubrication oil unloading area, two onsite area concrete pads, gravel lot catch basins, and, via sheet flow, from the general operating area which slopes toward the pond. There are no process water, cooling water, or other waste waters discharged to this pond. Sanitary wastewater from the onsite lavatories is treated in three septic tanks which do not discharge to the pond.

The OWS is equipped with a sampling manhole. The discharge pipe (Outfall 001) previously had an underground connection to piping which discharges to a side branch of a nearby Unnamed Tributary (UNT) 42299 to Little Deer Creek. The receiving surface water is classified in 25 Pa. Code, Chapter 93, as a trout stock fishery (TSF).

A satellite image of the Glassmere site is shown in Figure 1 below:



Figure 1: Satellite Image of Glassmere's Site in West Deer Twp. from Saxonburg Boulevard toward the East.

Visible in Figure 1 is the containment pond toward the southeast of the largest above ground tank on their site. The OWS is located under cover toward the south of the pond. The documented location of Outfall 001 is at the yellow pin shown toward the right (south) in the figure. However, the actual location where Glassmere's intermittent discharge reaches the UNT 42299 of Little Deer Creek is just above the image toward the east (top).

A topographic drawing of the site, showing all its tanks and container locations, its containment pond, service garages, filling station, trailer park and warehouse was included in the renewal application submittal from 2010. An excerpt of this drawing is included and shown in Figure 2 below:

NPDES Permit Fact Sheet Glassmere Fuel Service Petro Bulk Plant



Figure 2: Excerpt of 1997 Topographic Drawing of Glassmere's Site (south at the top of this image)

As can be seen in Figure 2 above, there are several main areas in the site. Note that North is toward the bottom of this figure. Nearest to the pond is the above ground (AG) bulk storage area with three large tanks, interconnecting piping, pumps and a loading station. From there, toward Saxonburg boulevard, is an underground (UG) bulk storage area with a fill pump for both loading and unloading. Farther down (north) from there is a gasoline service station, then an office building and farther north a trailer with tank 21. Just left (east) of the office is the maintenance garage with 24 AG tanks with lubricants.

This same drawing, excerpted above, included a list of the contents of each of the tanks and containers at that time (1997). This represented a significant expansion of the number of tanks when compared to an earlier drawing from 1986. Although not still current today, this list is instructive to review the types of materials stored which are shown in Figure 3 below:

Summary of Review						
	TANK CONTENTS	VOLUME GAL	LOCATION			
	TANK CONTENTS	675 000	AG			
		15 000	AG			
		20,000	AG			
	S DIESEL- HS	30,000	LIG			
	4 DIESEL - LS	50,000	UG			
	6 DIESEL - LS	6,000	UG			
	7 KEROSENE	6,000	110			
	B ETHANOL	NE 4,000	UG			
	10 SUPER UNLEADED GASOL	INE 4,000	UG			
	II UNLEADED GASULINE	10,000	LIG			
	12 UNLEADED PLUS GASOLIF	NE 8,000	AG			
	14 PROPANE	1,000	AG			
	15 MINERAL SPIRITS	1,000	AG LIC			
	17 DIESEL - HS	4,000	UG			
	18 HEATING OIL NO. I (RNR)	1,000	UG			
	19 HEATING OIL NO. I (RNR)	275	AG			
	20 HEATING OIL NO. I (RNR)	275	AG			
	21 HEATING OIL NO. I (RNR)	275	AG			
	22 WASTE OIL (RNR)	240	. AG			
		VOLUME CAL	LOCATION			
	LUBE TANK CONTENTS	VULUME GAL	LOUATION			
	1 CITGO AW-52	2,300	AG			
	2 CIIGO AW-68	2,300	AG			
	3 MOBIL UTE 26	2,500	AG			
	4 CIIGO AW-46	2,300	AG			
	5 PACEMAKER 830	2,500	AG			
	6 PACEMAKER 1615	2,300	AG			
	7 GOODWRENCH 5W30	2,300	AG			
	8 GOODWRENCH ATF	1,000	AG			
	9 CITGO ATF	2,300	AG			
	IO MOBIL DELVAC 1330	2,300	AG			
	II CITGO 500 I5W40	2,300	AG			
	12 MOBIL DELVAC 1300S 15V	40 2,300	AG			
	13 CITGO IOW30	2,300	AG			
	14 GOODWRENCH IOW30	2,300	AG			
	15 MOBIL DELVAC 1230	2,300	AG			
	16 MOBIL ATF	1,000	AG			
	17 MOBIL DELVAC 1200S 15V	2,300	AG			
	18 GOODWRENCH 5W30	2,300	AG			
	19 GOODWRENCH IOW30	2,300	AG			
	20 CITGO TRACTOR HYD. FL	UID 2,300	AG			
	21 MOBIL 5W30	1.000	AG			
	22 MOBIL DELVAC 1210	2,300	AG			
	23 MOBIL IOW30	2,300	AG			
	24 GULF 30W	1,000	AG			
	HS: HIGH SULFUR					
	LS: LOW SULFUR					
	RNR: REGISTRATION NOT REQUI	RED				
	AG: ABOVE GROUND					
	LIC: LINDERGROUND					
	UG. UNDERGROUND					

Figure 3: Excerpt of 1997 Drawing of Glassmere's Site Showing the Contemporary Contents of All Tanks

After review of the three figures above, it can be seen that all of the lubrication AG tanks are located in the warehouse. The larger AG tanks are set back from the road and are in proximity to the containment pond. Note that both the permittee and their consultant confirmed that the use of the largest tank, shown as "Tank 1" in Figure 3, has been discontinued and the tank emptied and abandoned in place. Finally, most of the gasoline and other UG tanks are in proximity to the loading and filling stations toward Saxonburg Boulevard to the west.

More details on these tanks are included in the compliance section, later in this Fact Sheet. On February 21, 2023, the Department's Water Quality supervisor supplied a compliance check that confirmed that this client has no open violations and no pending enforcement action. On this same date the client's consultant supplied recent sampling results of their monitoring wells, established earlier this year with no exceedances or even any detection of volatile organic compounds in either the new monitoring wells or the receiving surface water.

Summary of Review

The permittee has complied with Act 14 notifications.

It is recommended to publish a draft NPDES renewal / amended permit for public comment of this renewal and amendment.

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 Inform	ation	
Outfall No. 001		Design Flow (MGD)	0
Latitude 40º 37	7' 44"	Longitude	-79º 51' 20"
Quad Name Wes	st Deer Township	Quad Code	02948
Wastewater Descrip	tion: Stormwater runoff from ons	ite containment pond through o	oil/water separator
Receiving Waters	UNT of Little Deer Creek (TSF)	Stream Code	42299
NHD Com ID	123971117	RMI	1.3
Drainage Area	0.81 Square Miles	Yield (cfs/mi ²)	0.012033
Q ₇₋₁₀ Flow (cfs)	0.009747	Q7-10 Basis	USGS StreamStats
Elevation (ft)	1080	Slope (ft/ft)	
Watershed No.	18-A	Chapter 93 Class.	TSF
Existing Use	Aquatic Life	Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Supporting		
Cause(s) of Impairm	nent		
Source(s) of Impairn	nent		
TMDL Status	Final	Name Little Deer C	creek Watershed i
Nearest Downstrean	n Public Water Supply Intake	Wilkinsburg-Penn Joint Water	Authority
PWS Waters A	llegheny River	Flow at Intake (cfs)	2,390
PWS RMI 8.	.8	Distance from Outfall (mi)	13.8

Changes Since Last Permit Issuance: The RMI of this discharge's entry into UNT 42299 was modified, informed by location of the OWS and associated piping. In addition, because of the presence of Twelve Mile island, splitting the Allegheny River at the mouth of Deer Creek, the downstream public water supply (PWS) intake has been changed from Oakmont to that which is the next downstream PWS on the Allegheny River.

Other Comments: The Q7-10 flow was calculated based on the yield of a downstream watershed that conformed to the USGS StreamStats statistical modeling parameters.

Figure 4: Drainage Area at Glassmere Outfall 001 Entry to UNT 42299 of Little Deer Creek

Compliance History

Table 1: DMR Data for Outfall 001 (from January 1, 2022 to December 31, 2022)

Parameter	DEC-22	NOV-22	OCT-22	SEP-22	AUG-22	JUL-22	JUN-22	MAY-22	APR-22	MAR-22	FEB-22	JAN-22
Flow (MGD)												
Average Monthly	0.00432			0.00432			0.00432			0.00432		
Flow (MGD)												
Daily Maximum	0.00432			0.00432			0.00432			0.00432		
Oil and Grease (mg/L)												
Average Monthly	< 5.0			< 5.05			< 5.5			< 5.75		
Oil and Grease (mg/L)												
Instantaneous												
Maximum	< 5.0			< 5.1			< 6.3			5.9		

Compliance History			
Summary of DMRs:	The Department has received and retained electronic DMR records since January 2009. Over that entire period there is no record of any exceedances of the oil and grease effluent limitations.		
Summary of Inspections:	Since the last permit renewal effective October 1, 2005, there have been four onsite inspections. Of these, a violation was noted only once, during the most recent inspection on November 16, 2021. The inspector noted a sheen on the receiving surface stream in proximity to the permittee's discharge. This was true despite the fact that the OWS was not discharging at that time.		
	Subsequently, the Department's storage tank group published a technical memo, dated December 21, 2021 which detailed the site's recent history, tank closures, spills, leakage and cleanup documentation. The memo also indicated that three of the UG storage tanks had been closed by removal in April 2014 and that two new UG storage tanks had been added in 2014.		
	This Department memo also outlined 8 onsite releases of fuel or oil spanning from 1993 through 2020 (one from an unregistered tank). Of these, five occurred since the last NPDES permit renewal. A review of versions of the site's Preparedness, Prevention and Contingency (PPC) plans and associated Spill Control and Countermeasure Plans (SPCC) indicates that earlier spills, prior to the 1990's had also occurred.		
	In response to the Notice of Violation (NOV) from the Department in December 2021, Glassmere requested a remediation plan from their consultant, Letterle & Associates (Letterle). Implementation of the Letterle plan was delayed since it required purchase of adjacent land. The land purchase was completed and the Letterle plan initiated near the end of 2022. The plan involves installation of monitoring and injection wells between the underground discharge piping and the receiving stream. The monitoring wells were installed on January 9, 2023.		
	The site's treatment consists of the use of the containment pond with its discharge processed through an OWS. No WQM Part II permit has been sought or issued. Over the last year, the facility has been in compliance with this permit as shown in Table 1 above.		
	In principle, this site could be eligible for coverage under the Department's General Permit for Discharges of Stormwater Associated with Industrial Activity, but given the history above, it appears that continuing with coverage under an individual IW permit is recommended.		
	The Department's SWRO Operations supervisor reviewed the compliance status of this permit. On February 21, 2023, this supervisor supplied a report which confirmed that all outstanding violations and enforcement actions were resolved. Given this, the renewal can now be finalized and issued.		

Development of Effluent Limitations					
Outfall No.	001	Design Flow (MGD)	0		
Latitude	40° 37' 44"	Longitude	-79º 51' 20"		
Wastewater Description:		Stormwater runoff from onsite containment pond through oil/wate	r separator.		

Storm Water Outfalls

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 (MSGP) "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.

To the extent that monitoring is necessary to ensure that storm water BMPs are adequately implemented, DEP's Permit Writers' Manual recommends that monitoring of stormwater runoff be established if there is evidence of that the stormwater may be contaminated with pollutants of interest to observe the impact of the facility's BMPs on storm water effluent quality.

In this case, Glassmere's lone outfall has an established history of monitoring, including effluent limitations. Additionally, stormwater data was contained in the NPDES renewal application submittal, results shown in Table 2 below.

Parameter	Sample Concentration (mg/L)	No Exposure Thresholds (mɑ/L)	2021 MSGP Benchmark Values (mɑ/L)
Oil and Grease	< 5	≤ 5.0	N/A
Biochemical Oxygen Demand (5-day)	5	≤ 10.0	≤ 30
Chemical Oxygen Demand	46	≤ 30.0	≤ 120
Total Suspended Solids	16	≤ 30.0	≤ 100
Nitrogen (Nitrate plus Nitrite)	0.19	≤ 2.0 (Tot. N)	≤ 0.68
Total Kjeldahl Nitrogen	0.79	≤ 2.0 (Tot. N)	N/A
Total Phosphorus	0.06	≤ 1.0	≤ 2.0
pH (s.u.)	7.4	6.0 - 9.0	6.0 - 9.0

Table 2: Applicant Stormwater Sample Results for Outfall 001 and Benchmarks

<u>Footnote</u>: Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO₂+NO₃-N), where TKN and NO₂+NO₃-N are measured in the same sample.

In addition to the stormwater samples shown in Table 2 above, results were undetectable for xylene, benzene, ethylbenzene, toluene and total BETX. The highest reported eDMR result in the last year for oil and grease was 6.3 mg/L. Although these reported results, coupled with those in Table 2, do not meet the Department's No Exposure benchmarks, these are consistent with EPA's most recent MSGP benchmarks.

No mathematical modeling was performed for toxic pollutants at Outfall 001 since storm water is only discharged intermittently and generally not at times when the receiving stream is flowing at the Q₇₋₁₀ design flow conditions required for modeling. Since no specific Water Quality Based Effluent Limitations will be developed, the stormwater discharged at this outfall are required to be uncontaminated. Typically, the facility's SIC code is used to indicate which parameters of concern will be monitored based on the guidance for the NPDES General Permit for Discharges of Stormwater Associated with Industrial Activity (PAG-03). Glassmere's SIC code is 5171 and is listed as corresponding with Appendix L of the General Permit. The associated monitoring requirements and benchmarks for this Appendix are shown below in Table 3:

	Monitoring Requ			
Pollutant	Minimum Measurement Frequency	Sample Type	Benchmark Values	
Total Nitrogen (mg/L) ⁽³⁾	1 / 6 months	Calculation	XXX	
Total Phosphorus (mg/L)	1 / 6 months	Grab	XXX	
Total Suspended Solids (TSS) (mg/L)	1 / 6 months	Grab	100	
Oil and Grease (mg/L)	1 / 6 months	Grab	30	

Table 3: Monitoring Requirements under General Permit (PAG-03) Appendix L

<u>Footnote</u>: Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO₂+NO₃-N), where TKN and NO₂ +NO₃-N are measured in the same sample.

Total Maximum Daily Load (TMDL)

Wastewater discharges from the facility are located within the Little Deer Creek Watershed for which the Department has developed a TMDL. Originally listed on the 1996 Pennsylvania Section 303(d) as impaired waters, Little Deer Creek was included in a Department TMDL, finalized on August 23, 2006. This TMDL establishes load allocations for the discharge of aluminum iron, manganese, pH and Total Dissolved Solids (TDS). The focus on these pollutants is because the source of the stream's impairment is abandoned mine drainage (AMD) primarily from coal mines which were located well downstream of the Glassmere site. Because the source of this stream's impairment is from closed and abandoned mines, the allocations were assigned in the TMDL to impaired stream segments rather than to individual point sources as are typically assigned to NPDES permits. The stream segment immediately downstream of the Glassmere site is listed in the TMDL as "Attaining" or is considered unimpaired. No reductions were therefore required in the vicinity of the Glassmere site and this facility's permit, **PA0097624**, has no waste load allocation or required reductions.

Anti-Backsliding

Section 402(o) of the Clean Water Act (CWA), enacted in the Water Quality Act of 1987, establishes anti-backsliding rules governing two situations. The first situation occurs when a permittee seeks to revise a Technology-Based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent. The second situation addressed by Section 402(o) arises when a permittee seeks relaxation of an effluent limitation which is based upon a State treatment standard or water quality standard.

Previous limits can be used pursuant to EPA's anti-backsliding regulation 40 CFR 122.44 (I) Reissued permits. (1) Except as provided in paragraph (I)(2) of this section when a permit is renewed or reissued. Interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62). (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit. These prior effluent limits are shown in Table 4 below:

	Mass / Loading (^{lb} / _{day})		Con				
Parameter	Monthly Average	Daily Maximum	Instant Minimum	Monthly Average	Daily Maximum	Instant Max	Units
Flow	Report	Report					MGD
Oil and Grease				15.0	Report	30.0	^{mg} /L

Table 4: Current Outfall 001 Effluent Limitations

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Monitoring Requirements for Outfall 001

Since sampling had previously been established at this outfall to monitor the effectiveness of the site's OWS and other BMPs implemented, this same level of monitoring will be continued and at the same twice per quarter frequency. Note that the General Permit has recently added nitrogen and phosphorus to the monitored pollutants, so these will be added here as well. Since there are no requirements of the Little Deer Creek TMDL for this stream segment or this permit, and the associated pollutants are not considered to have a reasonable potential of being discharge from this facility, no monitoring of this TMDL pollutants has been included.

The prior permit imposed an instantaneous maximum limit for oil and grease, but this will be imposed going forward as a daily maximum, consistent with current permitting practice. The resulting monitoring requirements are shown in Table 5 below:

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Table 5: Permit Monitoring Requirements for Outfall 001						
	Mass (p	ounds)	Con	centration (r		
Parameter	Average Monthly	Daily Maximum	Average Quarterly	Daily Maximum	Instant Maximum	Monitoring Requirements
Total Suspended Solids	—		Report	Report		Grab sample; 2/quarter
Oil and Grease	—		15.0	30.0	—	Grab sample; 2/quarter
Total Nitrogen	—		Report	Report	—	Calculation; 2/quarter
Total Phosphorus			Report	Report		Grab sample; 2/quarter
Flow	Report	Report	—	—	—	Estimate; 2/quarter

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Footnote: Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO₂+NO₃-N), where TKN and NO₂ +NO₃-N are measured in the same sample.

In Table 5 above, since twice per quarter monitoring has been imposed, averaging over a month will only typically occur when extra samples are taken. Therefore, the reported values for average will be quarterly averages along with that of the daily maximum values.

Tools and References Used to Develop Permit
WQM for Windows Model
Toxics Management Spreadsheet (see Attachment A)
TRC Model Spreadsheet
Temperature Model Spreadsheet
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: SOP for Clean Water Program, New and Reissuance IW and Industrial Stormwater, Individual NPDES Permit Applications, BPBPSM-PMT-001
Other: