pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0246760**
Facility Type	**Industrial**	APS ID	**370112**
Major / Minor	**Minor**	Authorization ID	**1373944**

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

Applicant and Facility Information

Applicant Name	**Franklin County General Authority**	Facility Name	**FCGA – Filter Backwash WTP**
Applicant Address	5000 Letterkenny Road Suite 230	Facility Address	554 Coffey Avenue
	Chambersburg, PA 17201-8384		Chambersburg, PA 17201
Applicant Contact	Ron Artley	Facility Contact	Ron Artley
Applicant Phone	(717) 267-9602	Facility Phone	(717) 267-6025
Client ID	119241	Site ID	532837
SIC Code	4941	Municipality	Greene Township
SIC Description	Trans. & Utilities - Water Supply	County	Franklin
Date Application Received	October 22, 2021	EPA Waived?	Yes
Date Application Accepted		If No, Reason	
Purpose of Application	NPDES Renewal.		

Summary of Review

Franklin County General Authority (FCGA) has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its NPDES permit. The permit was last reissued on November 21, 2016 and became effective on December 1, 2016. The permit expired on November 30, 2021.

Based on the review, it is recommended that the permit be drafted.

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.

Approve	Deny	Signatures	Date
X		*Jinsu Kim* Jinsu Kim / Environmental Engineering Specialist	February 11, 2022
x		*Maria D. Bebenek for* Daniel W. Martin, P.E. / Environmental Engineer Manager	March 1, 2022
x		*Maria D. Bebenek* Maria D. Bebenek, P.E. / Program Manager	March 1, 2022

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.14
Latitude	39º 59' 43"	Longitude	-77º 38' 40"
Quad Name	Chambersburg	Quad Code	1924
Wastewater Description:	Water Treatment Effluent		
Receiving Waters	Dry Swale to Unnamed Tributary of Conococheague Creek (CWF, MF)	Stream Code	
NHD Com ID	49484520	RMI	See comments below
Drainage Area	See comments below	Yield (cfs/mi^2)	See comments below
Q_{7-10} Flow (cfs)	See comments below	Q_{7-10} Basis	See comments below
Elevation (ft)		Slope (ft/ft)	
Watershed No.	13-C	Chapter 93 Class.	CWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	SILTATION,		
Source(s) of Impairment	AGRICULTURE, RURAL (RESIDENTIAL AREAS)		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Hagerstown MD		
PWS Waters	Potomac River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	59.44

Drainage Area
The discharge is to a dry swale and then to Unnamed Tributary of Conococheague Creek. Based on the site condition, a drainage area at the point of discharge is not available.

StreamStats
Low-flow statistics are not available at the point of discharge given that the discharge is to a dry swale and the nearest tributary is about 0.2 miles from the site.

Public Water Supply Intake
The fact sheet developed for the last permit renewal indicates that the nearest downstream water supply intake is located at Hagerstown MD on Potomac River, approximately 60 miles from the site. Given the distance, the discharge is not expected to impact the water supply.

Treatment Facility Summary

The Franklin County General Authority (FCGA) Water Treatment Plant is located in Franklin County. Influent waste is supplied by filter back wash water coming from the FCGA Drinking Water Filtration plant about 4 times per week. Backwashes are generally held in the clarifier 1 or 2 days before manually discharging into a dry swale. Prior to discharge, effluent is dechlorinated. The sludge solids are discharged into the collection system of the FCGA WWTP at South Patrol Road (PA0030597) for treatment and disposal.

The application reported the design flow rate of 0.14 MGD with maximum flow of 0.180 MGD. The average is about 0.0163 MGD.

Compliance History	
Summary of DMRs:	A summary of 12-month DMR data is presented on the next page.
Summary of Inspections:	07/22/20: Brandon Bettinger, DEP Water Quality Specialist, conducted a routine inspection via phone call and noted that all treatment units are operable. No violation was noted at the time of inspection. 10/24/17: Patrick Bowen, former DEP Water Quality Specialist, conducted a routine inspection and noted that no abnormal conditions noted at the outfall. No violation was noted at the time of inspection.
Other Comments:	Since the last permit reissuance, there were no permit violations. There is no open violation associated with this permittee or facility.

Effluent Data

DMR Data for Outfall 001 (from January 1, 2021 to December 31, 2021)

Parameter	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21
Flow (MGD) Average Monthly	0.019805	0.014227	0.007455	0.017836	0.011020	0.026214	0.011412	0.009711	0.013457	0.023332	0.028344	0.024605
Flow (MGD) Daily Maximum	0.080673	0.075238	0.049546	0.125576	0.051119	0.180807	0.035940	0.045024	0.040580	0.091469	0.090006	0.116952
pH (S.U.) Minimum	6.7	6.8	6.3	6.2	6.7	6.5	6.6	6.4	6.5	6.3	6.4	6.3
pH (S.U.) Maximum	7.3	7.4	6.5	6.6	7.1	7.0	7.1	6.6	6.9	7.0	6.8	6.5
TRC (mg/L) Average Monthly	0.01	0.0087	0.0067	0.0072	0.01	0.01	0.0065	0.01	0.0075	0.01	0.0117	0.0086
TRC (mg/L) Instantaneous Maximum	0.01	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.03	0.02	0.02
TSS (lbs/day) Average Monthly	0.792	0.402	0.788	0.923	0.827	0.297	0.255	0.434	0.785	0.338	2.795	1.349
TSS (lbs/day) Daily Maximum	0.941	0.571	1.020	1.532	1.066	0.407	0.365	0.751	1.221	0.407	5.258	2.371
TSS (mg/L) Average Monthly	2.50	2.5	4.225	2.9	2.50	2.00	2	2.00	8.5	2.20	4.5	5
TSS (mg/L) Daily Maximum	2.50	2.5	4.6	3.3	2.50	2.00	2	2.00	12.6	2.4	7	5
Total Aluminum (lbs/day) Average Monthly	0.086	0.033	0.102	0.060	0.154	0.03	0.026	0.061	0.117	0.078	0.745	0.16
Total Aluminum (lbs/day) Daily Maximum	0.120	0.046	0.129	0.093	0.085	0.041	0.037	0.110	0.156	0.092	1.457	0.147
Total Aluminum (mg/L) Average Monthly	0.26	0.2	0.5485	0.205	0.25	0.20	0.2	0.25	1.2905	0.51	1.07	0.255
Total Aluminum (mg/L) Daily Maximum	0.32	0.20	0.58	0.21	0.30	0.20	0.20	0.29	1.61	0.54	1.94	0.31
Total Iron (lbs/day) Average Monthly	0.049	0.033	0.037	0.059	0.066	0.03	0.026	0.044	0.018	0.031	0.111	0.054
Total Iron (lbs/day) Daily Maximum	0.051	0.046	0.044	0.093	0.085	0.041	0.037	0.075	0.019	0.034	0.188	0.095
Total Iron (mg/L) Average Monthly	0.16	0.2	0.2	0.2	0.20	0.20	0.2	0.20	0.2	0.20	0.225	0.2

Parameter	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21
Total Iron (mg/L) Daily Maximum	0.20	0.2	0.2	0.2	0.20	0.20	0.2	0.20	0.2	0.20	0.25	0.2
Total Manganese (lbs/day) Average Monthly	0.005	0.005	0.018	0.015	0.039	0.023	0.004	0.004	0.003	0.006	0.03	0.005
Total Manganese (lbs/day) Daily Maximum	0.008	0.006	0.024	0.018	0.052	0.029	0.005	0.006	0.004	0.009	0.059	0.009
Total Manganese (mg/L) Average Monthly	0.014	0.031	0.094	0.063	0.114	0.158	0.035	0.014	0.036	0.034	0.043	0.016
Total Manganese (mg/L) Daily Maximum	0.0213	0.036	0.107	0.086	0.121	0.172	0.044	0.016	0.046	0.052	0.078	0.018

Existing Effluent Limits and Monitoring Requirements

A table below summarizes effluent limits and monitoring requirements specified in the existing permit.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/discharge	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	9.0	XXX	1/discharge	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.5	XXX	1.0	1/discharge	Grab
Total Suspended Solids	35	70	XXX	30	60	75	2/month	Grab
Aluminum, Total	4.8	9.6	XXX	4	8	10	2/month	Grab
Iron, Total	2.4	4.8	XXX	2	4	5	2/month	Grab
Manganese, Total	1.2	2.4	XXX	1	2	2.5	2/month	Grab

Development of Effluent Limitations and Monitoring Requirements

Outfall No. 001 **Design Flow (MGD)** .14
Latitude 39º 59' 43.00" **Longitude** -77º 38' 40.00"
Wastewater Description: Water Treatment Effluent

The discharge from this facility is to a dry swale. Since this is an existing facility, the *Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers* (DEP Document ID: 391-2000-014, effective April 12, 2008) doesn't apply. However, since the facility was built in around 2004, the August 1997 *Implementation Guidance for Evaluating Wastewater Discharges to Drainage Ditches and Swales* applies to this discharge which stated conditions where the minimum treatment is required for industrial discharges. This minimum treatment requirement is shown below.

Parameter	Limit (mg/l)	SBC
Suspended Solids	30	Average Monthly
	60	Daily Maximum
Iron, Total	2.0	Average Monthly
	4.0	Daily Maximum
Aluminum, Total	4.0	Average Monthly
	8.0	Daily Maximum
Manganese, Total	1.0	Average Monthly
	2.0	Daily Maximum
Flow	Monitor	Average Monthly
pH	6.0	Minimum
	9.0	Maximum

The guidance document *Technology Based Control Requirements for Water Treatment Plant Wastes* (DEP Document ID: 362-2183-003) states "Due to the cost of finished water quality concern, BAT options may not be feasible. Therefore, it may not be appropriate to require further effluent reduction to controls beyond the BPT options. Except where the recycle of wastewater is feasible, BAT and BCT should be equivalent to BPT." Recycle of wastewater is not feasible at this plant due to the technology currently employed to treat the raw water. Therefore, BPT requirements will determine the limits. TRC effluent limits of 0.5 mg/L (average monthly) and 1.6 mg/L (instantaneous maximum) will continue to be included in the permit as the finished water is used to backwash the filter.

DMR datasets were reviewed and have been summarized as follows:

	DMR Data from February 2017 to January 2022 (60 Datasets)						
AVG.MON	AVG, mg/L	MAX, mg/L	MIN, mg/L	MEDIAN, mg/L	90th PERCENTILE, mg/L	No. Exceedance (Permit Limits)	No. Exceedance (WQC)
TSS	4.29	16.5	0	4.3625	9.5	0	N/A
Iron	0.141	0.28	0	0.2	0.234	0	0
Aluminum	0.69	2.8	0.092	0.3	1.945	0	21
Manganese	0.087	0.485	0.007	0.0325	0.2825	0	0

	DMR Data from February 2017 to January 2022 (60 Datasets)						
Daily MAX	AVG, mg/L	MAX, mg/L	MIN, mg/L	MEDIAN, mg/L	90th PERCENTILE, mg/L	No. Exceedance (Permit Limits)	No. Exceedance (WQC)
TSS	5.70	20	0	5	14	0	N/A
Iron	0.161	0.36	0	0.2	0.298	0	0
Aluminum	0.879	3.1	0.1	0.38	2.29	0	23
Manganese	0.107	0.5	0.0074	0.04	0.327	0	0

Data shows none of pollutants, except for Aluminum is discharged at levels of concern. While Aluminum effluent concentrations have exceeded the water quality criteria, given that the discharge is not directly to the stream and such exceedance only occurred less than 50%. Based on the review, existing limits are still appropriate.

The facility is not subject to the requirements of the Chesapeake Bay Tributary Strategy.

Unless stated otherwise in this fact sheet, permit requirements proposed in this fact sheet are at least as stringent as existing permit requirements. A Class A Wild Trout Fishery is not impacted by this discharge.

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" (362-0400-001), 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	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/discharge	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/discharge	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.0	1/discharge	Grab
TSS	35	70	XXX	30	60	75	2/month	Grab
Total Aluminum	4.8	9.6	XXX	4.0	8.0	10	2/month	Grab
Total Iron	2.4	4.8	XXX	2	4	5	2/month	Grab
Total Manganese	1.2	2.4	XXX	1	2	2.5	2/month	Grab

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model 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:
☐	Other: