pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0033642**
Facility Type	**Non-Municipal**	APS ID	**1032651**
Major / Minor	**Minor**	Authorization ID	**1343803**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Burns Drilling & Excav Co.**	Facility Name	**Graysville Elementary School STP**
Applicant Address	PO Box 41	Facility Address	1029 W Roy Furman Highway
	Wind Ridge, PA 15380-0041		Graysville, PA 15337-3062
Applicant Contact	Alfred Burns	Facility Contact	Same as Applicant
Applicant Phone	(724) 428-4361	Facility Phone	Same as Applicant
Client ID	38247	Site ID	248824
Ch 94 Load Status	Not Overloaded	Municipality	Gray Township
Connection Status		County	Greene
Date Application Received	February 4, 2021	EPA Waived?	Yes
Date Application Accepted	February 24, 2021	If No, Reason	

Purpose of Application: Application for Renewal of NPDES Permit

Summary of Review

The permittee has applied for a renewal of NPDES Permit No. PA0033642. NPDES Permit No. PA0033642 was previously issued by the PA Department of Environmental Protection (DEP) on August 25, 2016 and transferred on February 20, 2018. That permit expires on August 31, 2021.

Sewage at this facility is treated by clarification, extended aeration, and chlorine disinfection prior to discharge to Grays Fork

The applicant is currently enrolled in and will continue to use eDMR.

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*

Approve	Deny	Signatures	Date
X		Stephanie Conrad / Environmental Engineering Specialist	April 26, 2021
X		Donald J. Leone, P.E. / Environmental Engineer Manager	
X		Christopher Kriley, P.E. / Program Manager	

Summary of Review
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)	.008
Latitude	39º 55' 54"	Longitude	-80º 23' 44"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Grays Fork (HQ-WWF)	Stream Code	40689
NHD Com ID	99415960	RMI	0.09
Drainage Area	1.47	Yield (cfs/mi^2)	0.009
Q_{7-10} Flow (cfs)	0.0138	Q_{7-10} Basis	USGS Stream Stats
Elevation (ft)		Slope (ft/ft)	
Watershed No.	19-B	Chapter 93 Class.	HQ-WWF
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	Southwestern PA Water Waynesburg		
PWS Waters	Ten Mile Creek	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	16.9

Changes Since Last Permit Issuance:

Other Comments:

Compliance History

DMR Data for Outfall 001 (from March 1, 2020 to February 28, 2021)

Parameter	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20
Flow (MGD) Average Monthly	0.0028	0.00025	0.0055	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
pH (S.U.) Daily Minimum	7.3	7.5	7.8	6.9	7.1	7.2	7.5	7.5	7.4	7.2	7.3	7.3
pH (S.U.) Daily Maximum	7.7	7.1	7.8	7.2	7.3	7.4	7.9	7.7	7.5	7.5	7.4	7.6
DO (mg/L) Daily Minimum	6.8	5.65	5.4	7.1	5.9	6.7	7.1	7.3	6.7	7.2	8.5	7.0
TRC (mg/L) Average Monthly	< 0.01	0.045	0.004	0.05	0.10	0.09	0.10	0.08	0.10	0.10	0.10	0.11
TRC (mg/L) Instantaneous Maximum	0.40	0.07	0.004	0.08	0.16	0.15	0.17	0.14	0.18	0.17	0.013	0.18
CBOD5 (mg/L) Average Monthly	7.6	12.7	8.4	2.0	2.3	2.0	4.3	2.1	2.0	2.0	2.1	2.0
CBOD5 (mg/L) Instantaneous Maximum	14.1	17.0	8.4	2.0	2.5	2.0	6.6	2.0	2.0	2.0	2.2	2.0
TSS (mg/L) Average Monthly	6.0	22.5	14.0	7.0	5.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0
TSS (mg/L) Instantaneous Maximum	12.0	28.0	14.0	14.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Fecal Coliform (No./100 ml) Geometric Mean	20	1860	12.0	186.0	41.0	90.0	39.0	2.0	288.0	41.0	6.0	20.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	196	1022	156.0	410.0	94.0	98.0	44.0	2.0	1880.0	143.0	17.0	99.0
Total Nitrogen (mg/L) Daily Maximum			25.6									
Ammonia (mg/L) Average Monthly	12.9	53.55	115.6	< 0.55	0.4	0.4	0.2	0.35	0.7	0.3	0.1	0.4
Ammonia (mg/L) Instantaneous Maximum	15.5	38.1	115.6	1.0	0.4	0.4	0.2	0.4	1.0	0.3	0.1	0.7

Total Phosphorus (mg/L) Daily Maximum			2.9									

Compliance History	
Summary of DMRs:	**Between March 18, 2016 through March 18, 2021, the facility has complied with submittal of Discharge Maintenance Reports. During the review period, a total of 13 effluent limit exceedances were reported. All of these exceedances occurred after March 2020 and are summarized in the table below. The exceedances were either for Ammonia-Nitrogen, however, at least on exceedance was also reported for fecal coliform, TSS, CBOD5, and TRC. Operations is planning to follow up on the violations with an inspection.**
Summary of Inspections:	**Two Administrative/File reviews were conducted during this permit cycle. The first occurred on April 11, 2017 (Inspection ID 2610696) and resulted in a NOV for failing to comply with the format or process required by DEP for self-monitoring reporting (enforcement ID 354827). The second occurred on July 21, 2020 (Inspection ID 3057673) and did not result in any violations. There are no open enforcements against this facility.**

Other Comments:

Compliance History

Effluent Violations for Outfall 001, from: April 1, 2020 To: February 28, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TRC	02/28/21	IMAX	0.40	mg/L	0.33	mg/L
CBOD5	01/31/21	Avg Mo	12.7	mg/L	10.0	mg/L
TSS	01/31/21	Avg Mo	22.5	mg/L	10.0	mg/L
TSS	12/31/20	Avg Mo	14.0	mg/L	10.0	mg/L
TSS	01/31/21	IMAX	28.0	mg/L	20.0	mg/L

Fecal Coliform	06/30/20	Geo Mean	288.0	No./100 ml	200	No./100 ml
Fecal Coliform	06/30/20	IMAX	1880.0	No./100 ml	1000	No./100 ml
Ammonia	12/31/20	Avg Mo	115.6	mg/L	4.5	mg/L
Ammonia	01/31/21	Avg Mo	53.55	mg/L	4.5	mg/L
Ammonia	02/28/21	Avg Mo	12.9	mg/L	4.5	mg/L
Ammonia	01/31/21	IMAX	38.1	mg/L	9.0	mg/L
Ammonia	02/28/21	IMAX	15.5	mg/L	9.0	mg/L
Ammonia	12/31/20	IMAX	115.6	mg/L	9.0	mg/L

Summary of Inspections:

Other Comments:

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .008
Latitude 39º 55' 54.00" **Longitude** -80º 23' 44.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

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

Pollutant	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)
Total N	Report	Average Monthly	-	92a.61
Total P	Report	Average Monthly	-	92a.61

Comments:

Reimposition of Existing Limitations

The Treatment plant was constructed prior to the receiving stream being designated a HQ-WWF. Therefore, the original effluent limitations were based on regional policy in place at that time of permit issuance for discharges to dry streams/swales. Modeling was not performed and the facility is in general compliance with the existing permit effluent limitations. The following effluent limits are carried over to this permit:

CBOD5	10 / 20
TSS	10 / 20
DO	5 max
Ammonia-Nitrogen (Nov 1 – Apr 30)	4.5 / 9.0
Ammonia-Nitrogen (May 1 – Oct 31)	1.5 / 3.0

Since there has been no changes to the discharge or the receiving stream, the existing limitations found on page 8 of this Fact Sheet for TRC (0.13/0.33) will again be imposed

DEP published the Water Quality Anti-Degradation Implementation Guidance in November of 2003. The Tech limits discussed in the Anti-Degradation Guidance will not be imposed due to Antibacksliding as the limits found in the guidance are less restrictive.

Since there has been no changes to the discharge or the receiving stream, the existing limitations found on page 8 of this Fact Sheet will again be re-imposed.

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 of water quality standard.

Previous limits can be used pursuant to EPA's anti-backsliding regulation 40 CFR 122.44 **(l) Reissued permits. (1) Except as provided in paragraph (l)(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.**

The facility is not seeking to revise the previously permitted effluent limits.

Additional Considerations

The stream is not impaired for nutrients, therefore, annual sampling for phosphorus and nitrogen will again be imposed per 25 PA Code §92a.6.

Sewage discharges will include monitoring, at a minimum, for E. Coli, in new and reissued permits, with a monitoring frequency of 1/year for design flows of 0.002 – 0.05 MGD per Chapter 92.a.61.

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	Average Weekly	Average Monthly	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.008	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	9.0	XXX	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	0.13	XXX	XXX	0.33	1/day	Grab
CBOD5	XXX	XXX	10.0	XXX	XXX	20.0	2/month	Grab
TSS	XXX	XXX	10.0	XXX	XXX	20.0	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	Report	XXX	XXX	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	4.5	XXX	XXX	9.0	2/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	1.5	XXX	XXX	3.0	2/month	Grab

Outfall 001, Continued (from 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	Average Monthly	Average Monthly	Maximum	Instant. Maximum		
Total Phosphorus	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab

Compliance Sampling Location: Outfall #001

Other Comments:

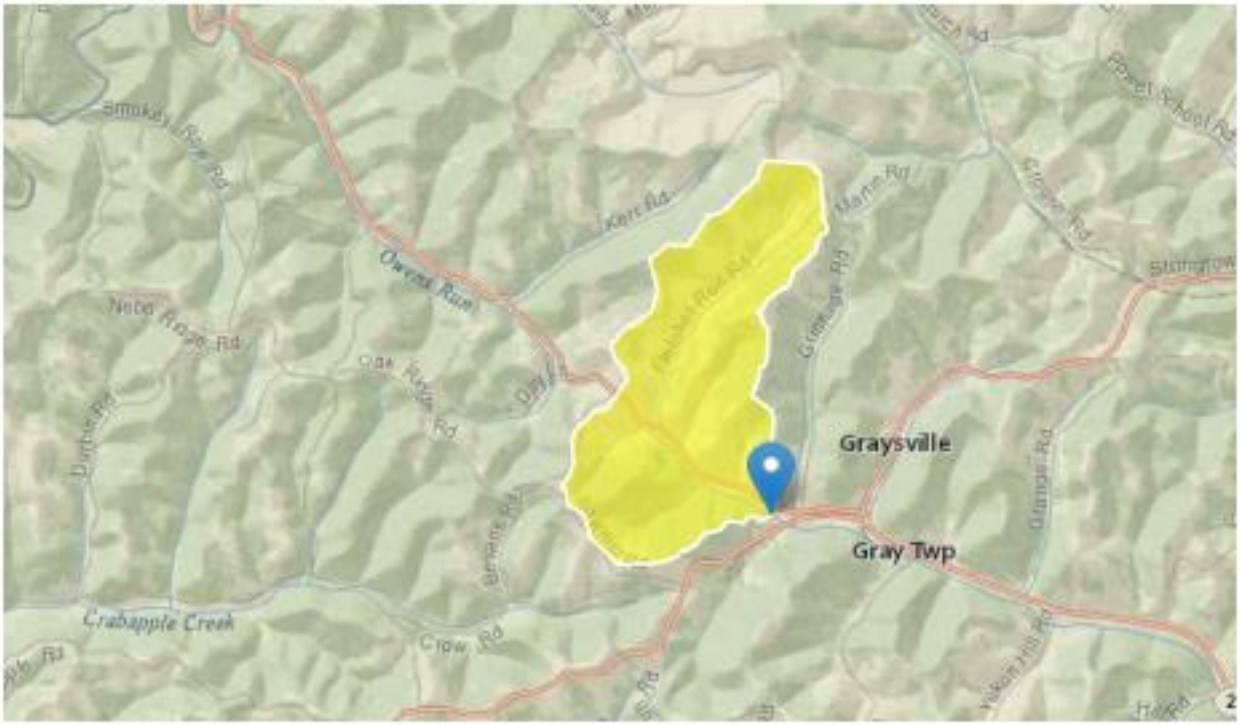
TRC_CALC

	B	C	D	E	F	G
2	**TRC EVALUATION**				Cl	
3	Input appropriate values in B4:B8 and E4:E7				Graysville Elem School STP	
4	0.0078	= Q stream (cfs)		0.5	= CV Daily	Re-evaluate using different CVs per
5	0.008	= Q discharge (MGD)		0.5	= CV Hourly	
6	30	= no. samples		1	= AFC_Partial Mix Factor	
7	0.3	= Chlorine Demand of Stream		1	= CFC_Partial Mix Factor	
8	0	= Chlorine Demand of Discharge		15	= AFC_Criteria Compliance Time (min)	
9	0.5	= BAT/BPJ Value		720	= CFC_Criteria Compliance Time (min)	
	0	= % Factor of Safety (FOS)		0	=Decay Coefficient (K)	
10	Source	Reference	AFC Calculations		Reference	CFC Calculations
11	TRC	1.3.2.III	WLA afc = 0.220		1.3.2.iii	WLA cfc = 0.207
12	PENTOXSD TRG	5.1a	LTAMULT afc = 0.373		5.1c	LTAMULT cfc = 0.581
13	PENTOXSD TRG	5.1b	LTA_afc= 0.082		5.1d	LTA_cfc = 0.120
14						
15	Source		Effluent Limit Calculations			
16	PENTOXSD TRG	5.1f	AML MULT = 1.231			
17	PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.101		AFC	
18			INST MAX LIMIT (mg/l) = 0.330			

WLA afc	(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))... ...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))... ...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)

StreamStats Report

Region ID: PA
Workspace ID: PA20210415162515681000
Clicked Point (Latitude, Longitude): 39.93199, -80.39515
Time: 2021-04-15 12:25:32 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1.47	square miles
ELEV	Mean Basin Elevation	1304	feet

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.47	square miles	2.26	1400

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
ELEV	Mean Basin Elevation	1304	feet	1050	2580

Low-Flow Statistics Disclaimers [Low Flow Region 4]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report [Low Flow Region 4]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0467	ft^3/s
30 Day 2 Year Low Flow	0.0889	ft^3/s
7 Day 10 Year Low Flow	0.0138	ft^3/s
30 Day 10 Year Low Flow	0.029	ft^3/s
90 Day 10 Year Low Flow	0.0594	ft^3/s

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)