pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

-Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0239186**
Wastewater Type	**Sewage**	APS ID	**989301**
Facility Type	**SFTF**	Authorization ID	**1282916**

NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**Stallion Oilfield Services Ltd**	Facility Name	**Stallion Oilfield Services Evans City**
Applicant Address	950 Corbindale Road Suite 400	Facility Address	1498 Evans City Road
	Houston, TX 77024		Evans City, PA 16033-7646
Applicant Contact	Brian Baird	Facility Contact	
Applicant Phone	(713) 528-5544	Facility Phone	
Client ID	289665	Site ID	248843
Municipality	Forward Township	County	Butler
SIC Code	4225	SIC Code	6512
SIC Description	Fin, Ins & Real E-Non res Bldg Operators	SIC Description	Trans. & Ut-Gen Warehousing & Storage
SIC Code	4952	SIC Code	
SIC Description	Trans. & Utilities - Sewerage Systems	SIC Description	
Application Received	July 30, 2019	WQM Required	Transfer pending
Application Accepted	August 13, 2019	WQM App. No.	1003414 T-4

Project Description: Permit renewal and transfer

Summary of Review

Initially only the NPDES and WQM permit transfers was requested. Later as the NPDES permit expired on July 31, 2019 a NPDES permit renewal submission submitted. Both requests have been combined into one review with the WQM permit transfer withheld pending the NPDES review.

This is a small flow sewage treatment system originally design for a 0.000 750-MGD discharge and later downgraded to a 0.000 500-MGD facility.

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		William H. Mentzer, P.E. Environmental Engineering Specialist	February 5, 2020
X		Justin C. Dickey, P.E. Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.0005
Latitude NHD	40º 47' 20.79"	Longitude NHD	-80º 1' 54.66”
Latitude DP	40º 47' 11.00"	Longitude DP	-80º 2' 7.00”
Quad Name	Evans City	Quad Code	1205
Wastewater:	Treated domestic wastes		

Receiving Waters	Storm sewer to an unnamed tributary	Stream Code	unknown
NHD Com ID	126218483	RMI	0.25
Drainage Area	0.1	Yield (cfs/mi^2)	0
Q_{7-10} Flow (cfs)	0	Q_{7-10} Basis	Dry stream
Elevation (ft)	1015.00	Slope (ft/ft)	0.02363
Watershed No.	20C	Chapter 93 Class.	Warm Water Fish
Existing Use	**statewide**	Existing Use Qualifier	none
Exceptions to Use	none	Exceptions to Criteria	none

Comments The discharge is to a storm sewer flowing northeast to unnamed tributary 35094. The outfall is near a dry drainage swale flowing 1872.8-feet southeast to Connoquenessing Creek. -Storm sewer confluence with tributary 35094 is at NHD RMI 0.22 with a 954.40-foot elevation, 0.27-square-mile drainage,

Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	

Background/Ambient Data		Data Source
pH (SU)	7.9	1991 Beaver River Priority Water Body Survey
Temperature (°C)	25	WWF default
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake		Beaver Falls	
PWS Waters	Beaver River	Flow at Intake (cfs)	NA
PWS RMI	5.39	Distance from Outfall (mi)	38.59

Changes Since Last Permit Issuance:

PA American is consolidating and relocating its Connoquenessing basin intakes. They are proceeding to implement a new intake at the mouth of Connoquenessing Creek approximately 31.44 miles downstream

Other Comments: This discharge is not expected to impair any downstream water supplies.

Treatment Facility Summary				
Treatment Facility Name: Stallion Oilfield Service Evans City				
WQM Permit No.	**Issuance Date**			
1003414	August 1, 20014			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Tertiary	Extended Aeration With Solids Removal	Hypochlorite	0.0005
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.0008	5	Not Overloaded	Anaerobic Digestion	Other WWTP

Changes Since Last Permit Issuance: none

Other Comments: Propriety activated sludge treatment system with assessible sand filter and chlorination (NORWECO Model 960 aerobic treatment unit, 500-gallon dosing tank, 92.5-square foot accessible sand filter, and tablet chlorinator with a 300-gallon contact tank). Design can achieve the small flow 10-mg/L BOD5, 10-mg/L TSS and 3.0-mg/L ammonia requirements and achieve the 4.0-mg/L effluent minimum daily dissolved oxygen BPJ requirement. As for other small flow facilities ammonia and dissolved oxygen control is not necessary.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.0005
Latitude 40º 47' 11.00" **Longitude** -80º 2' 7.00"
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)
DO	4.0			BPJ

Recommended requirements are 10-mg/L BOD5, 10-mg/L TSS and 3.0-mg/L ammonia from the small flow guidance.

Water Quality-Based Limitations

The low flow reference stream is Buffalo Creek at Freeport. The stream flow at the storm sewer outlet is 0.0127 cfs estimated from aa 0.047-cfs/square mile basin yield calculated from a 6.37-cfs seven-day ten-year low flow and 137-square mile drainage area.

A sewerage program “Reasonable Potential Analysis” determined the following parameters were candidates for limitations: Phosphorus, CBOD5, TSS, ammonia, pH, DO, and fecal coliform. Previous review procedures included water-quality modeling of non-single residence small flow discharges.

No phosphorus requirements are proposed as this is a small flow sewage treatment facility and should not materially affect the basin phosphorus levels.

For BOD5, dissolved oxygen and ammonia, the initial modelling at 0.00075-MGD did not adjust the effluent for storm sewer attenuation. The attenuated effluent quality is 8.48-mg/L CBOD5, 13.59-mg/L ammonia, and 3.56-mg/L dissolved oxygen at 0.00075-MGD and 6.50-mg/L CBOD5, 11.62-mg/L ammonia, and 4.41-mg/L dissolved oxygen at 0.0005-MGD.

With a 0.00075-MGD discharge the water quality requirements at the sewer outlet are 8.48-mg/L CBOD5, 8.7-mg/L ammonia, and 5.56-mg/L dissolved oxygen which except for ammonia are the sewer outlet quality. The back calculated ammonia requirements are for a summer 15.45-mg/L limitation. At this concentration no winter requirements are necessary. With a 0.0005-MGD discharge no water quality requirements are necessary.

The previous TRC review used a regionally developed model with a 0.4-mg/l stream chlorine demand and a 0.3-mg/L discharge chlorine demand. Current TRC review uses a statewide model without the 0.4-mg/l stream chlorine demand. Also, the formerly evaluated 1.4-mg/L TRC requirement is no longer considered as BAT for small flow facilities and has been replaced with a 0.5-mg/L BAT requirement. The TRC model recommends 0.5-mg/L BAT requirements at the unnamed tributary.

For both tributary 35094 and dry drainage swale the total stream to waste flow at the Connoquenessing Creek is 20000:1.

Anti-Backsliding

Installed technology is sufficient to eliminate water quality-based ammonia requirements.

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	Minimum	Annual Average	Maximum	Instant. Maximum		
Flow (MGD)	Report Annl Avg	XXX	XXX	XXX	XXX	XXX	1/year	Estimate
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	Upon Request	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/month	Grab
BOD5	XXX	XXX	XXX	10.0	XXX	20.0	1/year	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20.0	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	XXX	XXX	1/year	Grab

Compliance Sampling Location at Outfall 001 after disinfection