pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Reissue**	Application No.	**PA0062634**
Facility Type	**Non-Municipal**	APS ID	**969068**
Major / Minor	**Minor**	Authorization ID	**1230637**

Applicant and Facility Information

Applicant Name	**Luckenbill Carol**	Facility Name	**Sammys Mobile Home Park (MHP) STP**
Applicant Address	PO Box 280	Facility Address	RR 1 Route 61 North
	Friedensburg, PA 17933-0280		Schuylkill Haven, PA 17972
Applicant Contact	Carol Luckenbill	Facility Contact	Carol Luckenbill
Applicant Phone	(570) 527-5432	Facility Phone	(570) 527-5432
Client ID	343284	Site ID	2751
Ch 94 Load Status	Not Overloaded	Municipality	North Manheim Township
Connection Status	-	County	Schuylkill
Date Application Received	April 26, 2018	EPA Waived?	Yes
Date Application Accepted	May 5, 2018	If No, Reason	-

Purpose of Application: NPDES Permit Renewal/Reissuance for Mobile Home Park STP.

Summary of Review

This is an 0.007 MGD NPDES Permit renewal for a Mobile Home Park STP discharge to UNT to Mahonney Creek (CWF; Stream Code No. 2319; Pathogen impaired – unknown sources; subject to Upper Schuylkill River TMDL AMD).

Background:

- AADF: 0.0019 MGD (2017), 0.0016 (2016), and 0.0019 MGD (2015) with 0.0023 MGD max month in 2017.
- Client Clarification: Current owner/operator is Carol Luckenbill. Her husband (previously named permittee, Mr. Larry L. Luckenbill) is deceased. Confirmation by submitted death certificate during Completeness Review. Not a permit transfer situation per Central Office. DEP File Name is under Luckenbill name, not Sammy MHP.

Sludge use and disposal description and location(s): 0.7 dry tons going to Orwigsburg NPDES Permit PA0021574.

Part C Special Conditions:

- Part C.I.A, B, C, and D: Standard conditions (Stormwater prohibition; Necessary property rights; Residuals management; and Planning condition).
- **Part C.I.E: New Chlorine Minimization condition**
- **Part C.I.F: New Dry Stream discharge condition due to limited dilution in UNT**
- **Part C.I.G: New SBR batch discharge condition due to low flow in UNT.**
- **Part C.II: Three-Year Schedule of Compliance (Ammonia-N)**
- **Part C.III: New standard solids management conditions**

Approve	Deny	Signatures	Date
X		James D. Berger (signed) James D. Berger, P.E. / Environmental Engineer	October 18, 2021
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Environmental Engineer Manager	10-18-21

Summary of Review
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 Information

Outfall No.	001	Design Flow (MGD)	.007
Latitude	40º 38' 55.89"	Longitude	-76º 7' 55.24"
Quad Name	Pottsville	Quad Code	1336 (6-19.4)
Wastewater Description:	Sewage Effluent		
Receiving Waters	UNT to Mahonney Creek (CWF); Mahonney Creek (CWF, MF)	Stream Code	None (UNT); 2319 (Mahonney Creek)
NHD Com ID	25991168	RMI	-
Drainage Area	0.22	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	0.022	Q_{7-10} Basis	Statewide LFY Default
Elevation (ft)	~600 feet	Slope (ft/ft)	-
Watershed No.	3-A	Chapter 93 Class.	CWF, MF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Mahonney Creek: Attaining Use(s); **Pathogen Impaired (source unknown)**		
Cause(s) of Impairment	-		
Source(s) of Impairment	-		
TMDL Status	Final	Name	4/7/2007 Upper Schuylkill River

Background/Ambient Data:		Data Source
pH (SU)	6.96	June 30, 2020 DEP Biologist (Tim Daley) Point of First Use (POFU) Survey Memo
Temperature (°F)	-	-
Hardness (mg/L)	100	See above
Alkalinity (mg/l):	52	-
Specific Conductivity (umhos)	245.7	See above
Other	-	-

Nearest Downstream Public Water Supply Intake	PA AMER WATER CO GLEN ALSACE DIST (Berks County)		
PWS Waters	Schuylkill River	Flow at Intake (cfs)	-
PWS RMI	-	Distance from Outfall (mi)	>10 miles

Changes Since Last Permit Issuance: **Pathogen impairment of downstream Mahonney Creek (source unknown).**

Other Comments:

- The MHP is located near the headwaters of the UNT.

- The June 30, 2020 DEP Biologist (Tim Daley) Point of First Use (POFU) Survey verified that the receiving UNT is a perennial stream upstream of the outfall (near headwater), with the first point of use by aquatic life at the Outfall location.
    - **DEP E-maps Information:** The UNT is not shown in DEP E-maps as a perennial stream. The UNT is not a listed historic PA stream.
    - **USGS PA Streamstats Information**: From the Outfall, the drainage channel runs eastward till Market Street, and then follows Market Street & beyond, before turning eastward until the UNT reaches Mahonny Creek below Route 61 Crossing. The USGS flow route is consistent with the DEP Biologist determination of the flow route.
    - **Previous DEP Biologist evaluations:**
        - The 1991 WPC Report referenced a 10/4/1990 DEP Biologist (Ed Kupsky) Field Report.
        - 2/13/2012 DEP Biologist (Sherril Leap) Macroinvertebrate study made a determination that the STP discharge did not impact the UNT, and that the UNT was not classifiable as a CWF, with suboptimal habitat and mediocre microbenthic community. However, minimum CWF protection is assumed for permitting purposes.
- Downstream Impairments: Downstream Mahonney Creek flows into Mahannon Creek (CWF; Stream Code No. 2318; Pathogen impaired unknown sources; impaired for aquatic life due to HIGHWAY/ROAD/BRIDGE RUNOFF (NON-CONSTRUCTION RELATED) - FLOW REGIME MODIFICATION ; ACID MINE DRAINAGE - SILTATION ; URBAN RUNOFF/STORM SEWERS - FLOW REGIME MODIFICATION ; CHANNELIZATION - HABITAT ALTERATIONS) which flows into the Schuylkill River (CWF; Stream Code 833; AMD and pathogen and PCBs impairments).
- Low Flow Yield (LFY): 0.1 CFS/square mile Default LFY assumed. Drainage areas too small for USGS PA Streamstats regression equations. Downstream locations are subject to unknown AMD contributions that might bias downstream gage flow data for determining the Q7-10 low flow.
- Watershed Impairments: A properly operated MHP STP is not expected to be a significant source for pathogens. MHP Domestic sewage is not expected to have significant loadings of AMD and PCBs.

Treatment Facility Summary

Treatment Facility Name: Sammys Mobile Home Park STP

WQM Permit No.	Issuance Date	Scope
5495404-T1	8/26/2008	Transfer of WQM Permit to Mr. Larry L. Luckenbill
5495404	1/19/1995	0.007 Cromoglass Package STP (Fiberglass 3-section SBR design) to replace a malfunctioning on-lot system for a 24-unit MHP with 1 office, issued to AWB Associates. 750-gallon Chlorine Contact Tank for disinfection.

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	SBRs	Hypochlorite	0.007

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.007	Not identified in original WQM Permit documents.	Not Overloaded	None	Disposal

Changes Since Last Permit Issuance: None known.

Other Comments:

- Previous NPDES Permit renewal Fact Sheet indicated SBRs (batch discharge with timer to calculate the flows) and hypochlorite disinfection with dechlorination tablets in use.
- 2019 DEP Inspection Report description: One Cromoglass Package Plant consisting of: (1) Screening tank, One (1) Aeration Chamber; One (1) Clarifier; One (1) Chlorine Contact Tank; One (1) Sludge Holding Tank with use of chlorine/dechlorination tablets and Aluminum Sulfate for settling. **NOTE**: The present Cromoglass website SBR product description: “The SBR has three compartments, each of which increases the purity of waste water. The first section filters out large particles. The second mixes the water with bacteria and oxygen to degrade organic matter. The third compartment allows the water to sit so that remaining waste can settle to the bottom. Some of the fluid is circulated back through the tank to increase overall purity”.

Compliance History

DMR Data for Outfall 001 (from September 1, 2020 to August 31, 2021)

Parameter	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20
Flow (MGD) Average Monthly	0.0013	0.0011	0.0012	0.0012	0.0012	0.0013	0.0014	0.0013	0.0017	0.0014	0.0014	0.0013
Flow (MGD) Daily Maximum	0.0024	0.0019	0.0027	0.0022	0.0027	0.0027	0.0022	0.0022	0.0035	0.0024	0.0030	0.0024
pH (S.U.) Minimum	7.2	7.2	7.1	7.2	7.1	7.2	7.1	7.2	7.2	7.2	7.2	7.2
pH (S.U.) Maximum	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
TRC (mg/L) Average Monthly	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.03**	**0.03**	**0.03**	**0.02**	**0.02**	**0.03**
TRC (mg/L) Instantaneous Maximum	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**
CBOD5 (mg/L) Average Monthly	6.4	7.3	8.4	14.6	9	16.9	17.9	11.3	11.4	4.7	6.5	3.5
TSS (mg/L) Average Monthly	27	11	23	18	22	20	28	17	24	20	24	8
Fecal Coliform (CFU/100 ml) Geometric Mean	10	10	10	< 10	10	10	10	< 10	1	1	140	1
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	10	10	10	< 10	10	10	10	< 10	1	1	140	1
Nitrate-Nitrite (lbs/day) Annual Average									0.0018			
Nitrate-Nitrite (mg/L) Annual Average									0.2			
Total Nitrogen (lbs/day) Annual Average									0.07			
Total Nitrogen (mg/L) Annual Average									7.71			
Ammonia (mg/L) Annual Average									**0.94**			
TKN (lbs/day) Annual Average									0.06			

TKN (mg/L) Annual Average									6.57			
Total Phosphorus (lbs/day) Annual Average									0.029			
Total Phosphorus (mg/L) Annual Average									3.22			
Total Aluminum (lbs/day) Annual Average									0.001			
Total Aluminum (mg/L) Annual Average									0.1			
Total Iron (lbs/day) Annual Average									0.001			
Total Iron (mg/L) Annual Average									0.07			
Total Manganese (lbs/day) Annual Average									0.00027			
Total Manganese (mg/L) Annual Average									0.03			

DMR Data for Outfall 001 (from February 1, 2019 to January 31, 2020)

Parameter	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19
Flow (MGD) Average Monthly	0.0016	0.0015	0.0014	0.0013	0.0012	0.0012	0.0012	0.0011	0.0016	0.0014	0.0014	0.0016
Flow (MGD) Daily Maximum	0.0030	0.003	0.0024	0.0027	0.0019	0.0019	0.0027	0.0022	0.0038	0.0032	0.0038	0.0027
pH (S.U.) Minimum	7.2	7.2	7.2	7.1	7.1	7.2	7.2	7.2	7.1	7.1	7.1	7.2
pH (S.U.) Maximum	7.3	7.3	7.6	7.4	7.3	7.3	7.3	7.4	7.3	7.3	7.3	7.2
TRC (mg/L) Average Monthly	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**
TRC (mg/L) Instantaneous Maximum	**0.03**	**0.03**	**0.03**	**0.02**	**0.02**	**0.03**	**0.03**	**0.03**	**0.03**	**0.03**	**0.07**	**0.02**
CBOD5 (mg/L) Average Monthly	11.5	9.9	12.8	4.9	6.1	4.6	2	3	6	4	7	7

TSS (mg/L) Average Monthly	27	6	22	13	15	23	13	17	20	21	9	9
Fecal Coliform (CFU/100 ml) Geometric Mean	1	1	1	10	1	132	180	190	1	20	50	1
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	1	1	1	10	1	290	180	190	1	20	50	1
Nitrate-Nitrite (lbs/day) Annual Average		0.0007										
Nitrate-Nitrite (mg/L) Annual Average		0.11										
Total Nitrogen (lbs/day) Annual Average		0.33										
Total Nitrogen (mg/L) Annual Average		49.51										
Ammonia (mg/L) Annual Average		**0.10**										
TKN (lbs/day) Annual Average		0.33										
TKN (mg/L) Annual Average		49.3										
Total Phosphorus (lbs/day) Annual Average		0.0134										
Total Phosphorus (mg/L) Annual Average		1.99										
Total Aluminum (lbs/day) Annual Average		0.001										
Total Aluminum (mg/L) Annual Average		0.57										
Total Iron (lbs/day) Annual Average		0.001										
Total Iron (mg/L) Annual Average		0.17										
Total Manganese (lbs/day) Annual Average		0.0003										

Total Manganese (mg/L) Annual Average		0.05										

Compliance History

Inspection History:

SITE NAME	INSP PROGRAM	INSP ID	INSPECTED DATE	INSP TYPE	AGENCY	INSPECTION RESULT DESC	# OF VIOLATIONS
SAMMYS MTN VIEW MHP	WPCNP	2930335	09/12/2019	Compliance Evaluation	PA Dept of Environmental Protection	Violation(s) Noted	2
SAMMYS MTN VIEW MHP	WPCNP	2952081	08/13/2019	Follow-up Inspection	PA Dept of Environmental Protection	No Violations Noted	0
SAMMYS MTN VIEW MHP	WPCNP	2579877	03/21/2017	Follow-up Inspection	PA Dept of Environmental Protection	No Violations Noted	0
SAMMYS MTN VIEW MHP	WPCNP	2579885	03/21/2017	Complaint Inspection	PA Dept of Environmental Protection	No Violations Noted	0
SAMMYS MTN VIEW MHP	WPCNP	2529166	12/14/2016	Compliance Evaluation	PA Dept of Environmental Protection	Violation(s) Noted	4
SAMMYS MTN VIEW MHP	WPCNP	2560559	10/18/2016	Follow-up Inspection	PA Dept of Environmental Protection	No Violations Noted	0

Compliance History: No open violations per 10/13/2021 WMS query (open violation by client number)

Permit: PA0062634
Client ID: 343284
Client: All

Open Violations: 0

No data was found using the criteria entered. Please revise your choices and try again.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .007
Latitude 40º 38' 45.00" **Longitude** -76º 8' 45.00"
Wastewater Description: Sewage Effluent

Permit limits and/or monitoring:

Parameter	Limit (mg/l unless otherwise specified)	SBC	Model/Basis
CBOD5	**Report lb/d** **Report lb/d** 25.0 **50.0** 50.0	**Monthly Average** **Daily Max** Monthly Average **Daily Max** IMAX	Existing Technology limit supported by updated modeling. **Daily max limit set to IMAX limit.** Application data: 24.7 mg/l max and 13 mg/l average (24 samples)
TSS	**Report lb/d** **Report lb/d** 30.0 60.0 60.0	**Monthly Average** **Daily Max** Monthly Average **Daily Max** IMAX	Existing Technology limit (Chapter 92a.47). **Daily max limit set to IMAX limit.** Application data: 29 mg/l max, 20 mg/l avg. (30 samples)
pH	6.0 – 9.0 SU	**IMIN** - IMAX	Existing Technology limit (Chapter 92a.47) Application data: 6.5 – 7.5 SU (207 samples)
Dissolved Oxygen (DO)	**3.0**	**IMIN**	**New WQBEL per water quality modeling. Effective immediately as normal treated sewage should meet this limit.**
Total Residual Chlorine (TRC)	**0.30** **1.00**	**Monthly Average** **IMAX**	**New WQBEL due to water quality modeling. Previous TBEL limits (1.2 mg/l monthly average and 2.8 mg/l IMAX) superseded by WQBEL and Chapter 92a.47, and use of dechlorination. New limits in effect upon Permit Effective date due application data showing facility is meeting the more stringent limits.** Application data: 0.05 max and 0.02 avg. (207 samples)
Fecal Coliform (5/1 – 9/30)	200/100 ml 1,000/100 ml	Geo Mean IMAX	Existing Technology limit (Chapter 92a.47). Application data: 170/100 ml max and 27/100 ml average (24 samples)
Fecal Coliform (10/1 – 4/30)	2,000/100 ml 10,000 ml/100 ml	Geo Mean IMAX	See above
E Coli	**Report/100 ml**	**IMAX**	**New annual monitoring requirement due to new E Coli WQS.**
Ammonia-Nitrogen **(Interim for 3-years, Year-round)**	**Report lb/d** **Report lb/d** Report Report	**Monthly Average** **Daily Max** **Monthly** Average Daily Max	Interim Monitoring during Part C.II Schedule of Compliance. Application data: **12.5 mg/l max, 7.0 mg/l avg. (2 samples)**
Ammonia-Nitrogen (Summer) – 4th Year of Permit	**Report lb/d** **Report lb/d** **6.52** **13.04** **13.04**	**Monthly Average** **Monthly Average** **Daily Max** **IMAX**	**New WQBELs effective in 3 years, with interim monitoring.**
Ammonia-Nitrogen	**Report lb/d** **Report lb/d**	**Monthly Average** **Daily Max**	**See above. Standard winter multiplier used.**

(Winter) – 4th Year of Permit	**19.56 Report**	**Monthly Average Daily Max**	
Total Phosphorus	Report lb/d **Report lb/d** Report **Report**	Annual Average **Daily Max** Annual Average **Daily Max**	**Annual Monitoring requirement** Application data: 1.1 mg/l max, 0.6 mg/l avg. (2 samples).
Total Nitrogen (Nitrate-Nitrite-N + TKN measured in same sample)	Report lb/d **Report lb/d** Report **Report**	Annual Average **Daily Max** Annual Average **Daily Max**	**Annual Monitoring requirement** Application data: Total Nitrogen: 25.3 mg/l max, 16 mg/l avg. (2 samples) TKN: 3.61 mg/l max and 21.77 avg. Nitrate-Nitrite-N: 24.83 mg/l max and 21.77 mg/l avg.
Total Aluminum	Report lb/d **Report lb/d** Report **Report**	Annual Average **Daily Max** Annual Average **Daily Max**	Annual monitoring only. Application data: None EDMR: 0.001 mg/l (1 sample)
Total Manganese	Report lb/d **Report lb/d** Report **Report**	Annual Average **Daily Max** Annual Average **Daily Max**	Annual monitoring only. Application data: None. EDMR: 0.05 mg/l (1 sample)
Total Iron	Report lb/d **Report lb/d** Report **Report**	Annual Average **Daily Max** Annual Average **Daily Max**	Annual monitoring only. Application data: None. EDMR: 0.17 mg/l (1 sample)

Comments:

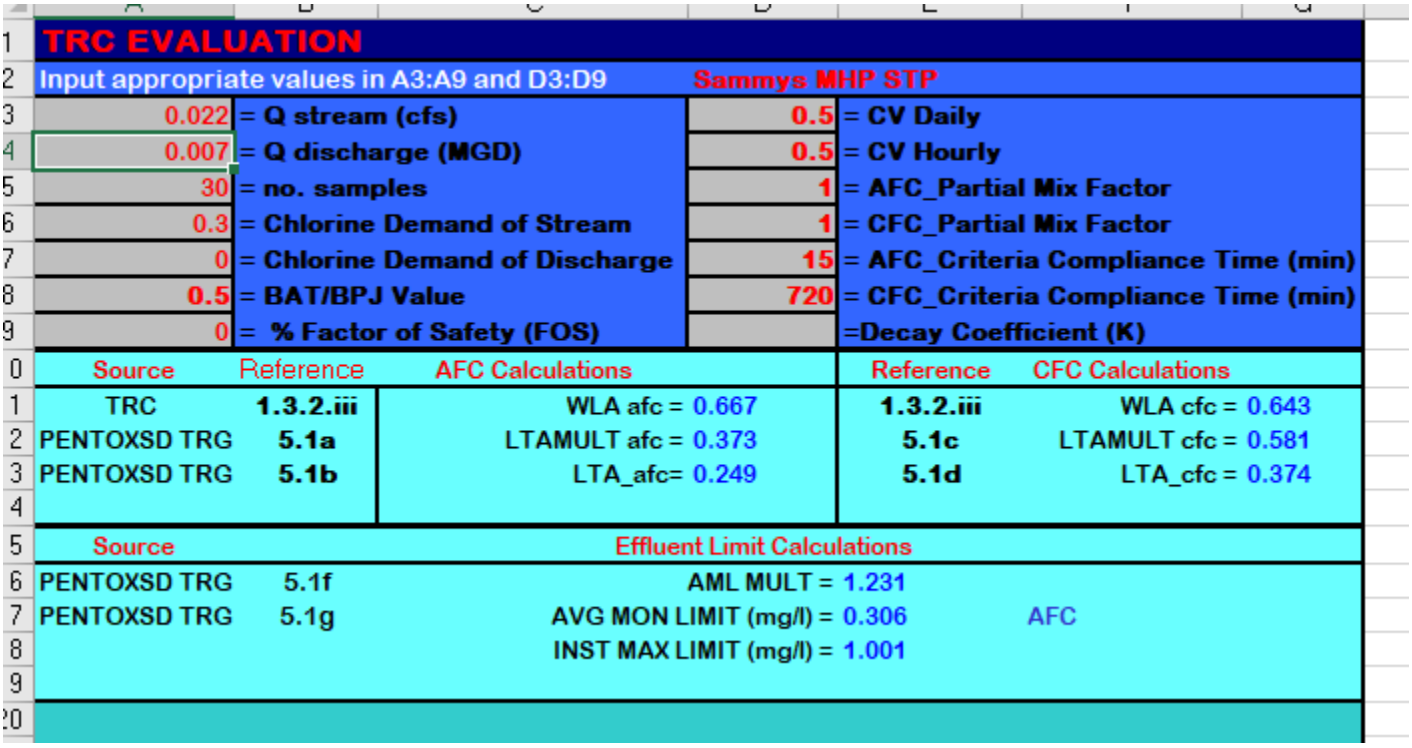
Monitoring Changes: Updated to address EDMR requirements, significant digits, 24-hour composite sampling, standard minimum monitoring frequencies plus daily max plus mass load reporting.

Water Quality Modeling Outputs:

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
03A	2319	MAHONNEY CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
0.750	Sammys MHP TP	PA0062634	0.007	CBOD5	25		
				NH3-N	6.52	13.04	
				Dissolved Oxygen			3



TRC EVALUATION					
Input appropriate values in A3:A9 and D3:D9			Sammys MHP STP		
0.022	= Q stream (cfs)		0.5	= CV Daily	
0.007	= Q discharge (MGD)		0.5	= CV Hourly	
30	= no. samples		1	= AFC_Partial Mix Factor	
0.3	= Chlorine Demand of Stream		1	= CFC_Partial Mix Factor	
0	= Chlorine Demand of Discharge		15	= AFC_Criteria Compliance Time (min)	
0.5	= BAT/BPJ Value		720	= CFC_Criteria Compliance Time (min)	
0	= % Factor of Safety (FOS)			=Decay Coefficient (K)	

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 0.667	1.3.2.iii	WLA cfc = 0.643
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.249	5.1d	LTA_cfc = 0.374

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.306	AFC
		INST MAX LIMIT (mg/l) = 1.001	