pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0253081**
Facility Type	**Non-Municipal**	APS ID	**1037857**
Major / Minor	**Minor**	Authorization ID	**1353072**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Universal Electric Bus LLC**	Facility Name	**Universal Electric Bus**
Applicant Address	168 Georgetown Road	Facility Address	168 Georgetown Road
	Canonsburg, PA 15317-5611		Canonsburg, PA 15317-5611
Applicant Contact	Richard Graf	Facility Contact	Richard Graf
Applicant Phone	(724) 355-5338	Facility Phone	(724) 355-5338
Client ID	243678	Site ID	653292
Ch 94 Load Status	Not Overloaded	Municipality	Cecil Township
Connection Status	No Limitations	County	Washington
Date Application Received	May 4, 2021	EPA Waived?	Yes
Date Application Accepted	May 5, 2021	If No, Reason	

Purpose of Application: NPDES Renewal of a non-Municipal Sewage Treatment Plant.

Summary of Review

The permittee is currently using the eDMR system for reporting.

No changes to the discharge quality or quantity were proposed as part of this renewal.

There is one open violation currently in EFACTS for this permittee as of 03/30/2022, for Operator Certification – failure to submit annual system fee. Violation dated 12/20/2021.

Sludge use and disposal description and location(s): Sludge hauled offsite to the Clairton STP, owned by the Clairton Municipal Authority.

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		Jordan A. Frey, E.I.T. Jordan A. Frey, E.I.T. / Civil Engineer Trainee	March 30, 2022
X		Justin C. Dickey Justin C. Dickey, P.E. / Environmental Engineer Manager	March 31, 2022

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.006
Latitude	40º 18' 9.35"	Longitude	-80º 8' 9.23"
Quad Name	Canonsburg	Quad Code	40080C2
Wastewater Description:	Sewage Effluent		

Receiving Waters	Chartiers Creek (WWF)	Stream Code	36777
NHD Com ID	99691624	RMI	24.5
Drainage Area	143	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	14.3	Q_{7-10} Basis	Default
Elevation (ft)	942	Slope (ft/ft)	---
Watershed No.	20-F	Chapter 93 Class.	WWF
Existing Use	---	Existing Use Qualifier	---
Exceptions to Use	---	Exceptions to Criteria	---

Assessment Status	Impaired
Cause(s) of Impairment	METALS, METALS, ORGANIC ENRICHMENT, ORGANIC ENRICHMENT, POLYCHLORINATED BIPHENYLS (PCBS), POLYCHLORINATED BIPHENYLS (PCBS), TOTAL DISSOLVED SOLIDS (TDS), TOTAL DISSOLVED SOLIDS (TDS), TURBIDITY, TURBIDITY
Source(s) of Impairment	ACID MINE DRAINAGE, ACID MINE DRAINAGE, ACID MINE DRAINAGE, ACID MINE DRAINAGE, ACID MINE DRAINAGE, ACID MINE DRAINAGE, ACID MINE DRAINAGE, ACID MINE DRAINAGE, SOURCE UNKNOWN, SOURCE UNKNOWN
TMDL Status	Final, Final
Name	Chartiers Creek,Chartiers Creek Watershed

Background/Ambient Data		Data Source
pH (SU)	7.0	Default
Temperature (°F)	20	Default
Hardness (mg/L)	100	Default
Other:	0.1	Default

Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance: None.

Other Comments: None.

Treatment Facility Summary

Treatment Facility Name: Universal Electric Bus

WQM Permit No.	Issuance Date
3606401 T-1	June 30, 2020
3606401	July 27, 2006

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia Reduction	Extended Aeration	Ultraviolet	0.006

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
		Not Overloaded		

Changes Since Last Permit Issuance: None.

Other Comments: None.

Compliance History

DMR Data for Outfall 001 (from October 1, 2020 to September 30, 2021)

Parameter	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20
Flow (MGD) Average Monthly	0.00280	0.00183	0.00253	0.00271	0.00106	0.00107	0.00129	0.00094	0.00220	0.00243	0.00405	0.00273
pH (S.U.) Instantaneous Minimum	7.0	7.1	7.0	7.0	7.1	6.3	7.0	7.1	7.0	6.8	7.0	7.0
pH (S.U.) Instantaneous Maximum	7.3	7.3	7.3	7.4	7.4	7.3	7.3	7.3	7.4	7.3	7.3	7.3
DO (mg/L) Instantaneous Minimum	6.5	5.0	6.0	6.2	6.1	4.3	6.0	6.7	6.4	6.4	6.2	6.0
CBOD5 (mg/L) Average Monthly	2.0	2.0	2.0	2.0	2.0	3.5	2.0	2.0	2.0	2.0	8.7	2.0
CBOD5 (mg/L) Instantaneous Maximum	2.0	2.0	2.0	2.0	2.0	5.0	2.0	2.0	2.0	2.0	15.4	2.0
TSS (mg/L) Average Monthly	5.0	5.0	5.0	5.0	5.0	5.0	6.0	5.0	5.0	5.0	15.0	5.0
TSS (mg/L) Instantaneous Maximum	5.0	5.0	5.0	5.0	5.0	5.0	7.0	5.0	5.0	5.0	25.0	5.0
Fecal Coliform (No./100 ml) Geometric Mean	1	1	1	1	1	1	1	3	1	1	177	1
UV Transmittance (%) Average Monthly	80	79	80	80	80	71	79	80	80	80	78	78
Total Nitrogen (mg/L) Daily Maximum										1.75		
Ammonia (mg/L) Average Monthly	0.4	0.5	0.9	0.9	0.3	0.8	1.3	0.9	0.8	0.7	7.2	0.5
Ammonia (mg/L) Instantaneous Maximum	0.6	0.5	0.9	1.0	0.3	1.1	2.1	1.4	1.3	1.1	9.7	0.7
Total Phosphorus (mg/L) Daily Maximum										0.7		

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .006
Latitude 40º 18' 9.00" **Longitude** -80º 8' 17.00"
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)

Comments: None.

Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
Ammonia Nitrogen May 1 - Oct 31	20	Average Monthly	WQM 7.1b
Ammonia-Nitrogen Nov 1 - Apr 30	Report	Average Monthly	WQM 7.1b

Comments: Comments: Existing Ammonia limits are believed to be water quality-based originating from an old Dry Streams Manual. WQM 7.1.1 modeling does not indicate the need for such stringent limits but the existing limits will remain due to anti-backsliding provisions and the ability of the permittee to meet the existing limits.

Best Professional Judgment (BPJ) Limitations

Comments: A Dissolved Oxygen minimum limitation of 4.0 mg/L was implemented in the last permit cycle based on the standard in 25 PA Code Chapter 93 and best professional judgment. This limitation will be retained.

For pH, UV, and Dissolved Oxygen (DO) the previously imposed monitoring frequency of “3/week” will be increased to “5/week” in accordance with the Department SOP for New and Reissuance Sewage Individual NPDES Permit Applications (Revised February 3, 2022).

Anti-Backsliding

N/A

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	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	5/week	Grab
DO	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	5/week	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	Grab
TSS	XXX	XXX	XXX	30	XXX	60	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	XXX	XXX	Report	1/year	Grab
UV Transmittance (%)	XXX	XXX	XXX	Report	XXX	XXX	5/week	Measured
Total Nitrogen	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	9.0	XXX	18.0	2/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	3.0	XXX	6.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001, after disinfection.

Other Comments: Dry streams policy applied for limits on Ammonia-Nitrogen

Dry Streams Criteria
Pages 1-5

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
12A	12354	Trib 12354 to Juniata River	**0.120**	920.00	0.23	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.001	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.50	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Univ Elec Bus	PA0253081	0.0060	0.0060	0.0060	0.000	20.00	7.50

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	0.00	0.00	1.50
Dissolved Oxygen	4.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
12A	12354	Trib 12354 to Juniata River	**0.001**	875.00	0.26	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.001	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.50	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
12A	12354	Trib 12354 to Juniata River

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
0.120	0.00	0.00	0.00	NA	0.07162	.254	1.4	5.5	0.03	0.272	20.00	7.50
Q1-10 Flow												
0.120	0.00	0.00	0.00	NA	0.07162	NA	NA	NA	0.00	0.000	0.00	0.00
Q30-10 Flow												
0.120	0.00	0.00	0.00	NA	0.07162	NA	NA	NA	0.00	0.000	0.00	0.00

WQM 7.0 Modeling Specifications

Parameters	D.O.	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	Simulation	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	2		

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
12A	12354	Trib 12354 to Juniata River

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.120	0.006	20.000	7.500
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
1.400	0.254	5.503	0.027
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
24.40	1.500	24.40	0.700
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
4.103	24.104	Owens	2
Reach Travel Time (days)			
0.272			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.027	23.42	23.93	3.92
0.054	22.48	23.48	3.90
0.082	21.58	23.04	3.96
0.109	20.72	22.60	4.06
0.136	19.89	22.18	4.17
0.163	19.09	21.76	4.30
0.191	18.33	21.35	4.42
0.218	17.60	20.95	4.55
0.245	16.89	20.55	4.67
0.272	16.22	20.16	4.79

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
12A	12354	Trib 12354 to Juniata River

RMI	Name	Permit Number	Disc Flow (mgd)
0.120	Univ Elec Bus	PA0253081	0.006

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
20F	36777	CHARTIERS CREEK	**25.630**	875.00	139.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Univ Elec Bus	PA0253081	0.0060	0.0060	0.0060	0.000	20.00	7.50

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	16.22	2.00	0.00	1.50
Dissolved Oxygen	4.79	7.54	0.00	0.00
NH3-N	20.16	0.10	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
20F	36777	CHARTIERS CREEK	**23.000**	855.00	154.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
20F	36777	CHARTIERS CREEK

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
25.630	13.90	0.00	13.90	.0093	0.00144	.826	60.26	72.95	0.28	0.575	25.00	7.00
Q1-10 Flow												
25.630	8.90	0.00	8.90	.0093	0.00144	NA	NA	NA	0.22	0.738	24.99	7.00
Q30-10 Flow												
25.630	18.90	0.00	18.90	.0093	0.00144	NA	NA	NA	0.33	0.484	25.00	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
20F	36777	CHARTIERS CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
25.630	Univ Elec Bus	11.08	40.32	11.08	40.32	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
25.630	Univ Elec Bus	1.37	20.16	1.37	20.16	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
25.63	Univ Elec Bus	16.22	16.22	20.16	20.16	4.79	4.79	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
20F	36777	CHARTIERS CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
25.630	0.006	24.997	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
60.256	0.826	72.950	0.279
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.01	0.005	0.11	1.028
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.538	3.092	Tsivoglou	5
Reach Travel Time (days)			
0.575			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.058	2.01	0.11	7.54
0.115	2.01	0.10	7.54
0.173	2.01	0.10	7.54
0.230	2.01	0.10	7.54
0.288	2.01	0.10	7.54
0.345	2.01	0.10	7.54
0.403	2.00	0.10	7.54
0.460	2.00	0.10	7.54
0.518	2.00	0.10	7.54
0.575	2.00	0.10	7.54

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
20F	36777	CHARTIERS 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)
25.630	Univ Elec Bus	PA0253081	0.006	CBOD5	16.22		
				NH3-N	20.16	40.32	
				Dissolved Oxygen			4.79