TSSD Laboratory

TKN

HACH 10242

Rev 1.0

Date: 8/15 & 8/16 (Utah Lake Samples) Analyst: MWS

1.17 mg/L Std ID: 1/10 WP 162 Spectrophotometer ID: DR3900

3.56mg/L HACH Spk ID:_____ (second source) Reactor ID: DRB200

Vial Set ID:_____

Sample ID	Total N mg/L	NO_3-N + NO_2-N mg/L	TKN mg/L
Blank	0.142	0.089	0.053
Std SRM WP 162	1.54	0.109	1.43
# 1	1.08	0.169 u	0.908
2	1.30	0.659	0.645
3	1.72	0.200 u	1.52
4	3.32	0.397	2.92
5	3.86	0.438	3.42
6	1.70	0.235	1.46
7	3.52	0.295	3.22
8	1.56	0.229	1.33
9	3.82 >3.73	0.368	3.46 >3.37
9 dup	3.64	0.353	3.28
9 spk	2.88	0.172	2.34

Spk TV: 2.26

Preserved Samples:

Final Inf pH:_____

Final Eff pH:_____

NaOH ID:_____

Did all samples have an initial pH < 2 ?

YES_____

NO_____

Comments:_____

QC Data Review:

Acceptable Std Range: ±10%

Acceptable Dup Range: ±10%

Reviewed By:_____

Date:_____

TSSD Laboratory
Ammonia, NH3-N
HACH 10205
Rev 1.0

Analysis Date: AUG 28 2017 Tech: MWS

Sample ID# 17 D 8 28 Spectrophotometer ID: DR3600

1000mg/L HR Stock Std ID: 1462 HR Vial ID: C588-9

100 mg/L LR Std ID: _____ LR Vial ID: R600-3

10.0 mg/L Std ID: 1466

4mg/L HR Spk ID: _____

0.4mg/L LR Spk ID: _____

Sample ID	LR NH_3 mg/L (0.015-2.00 range)	HR NH_3 mg/L (2.00-47.0 range)
Blank		-0.079
HR Std 10		10.2
LR Std 1.0		
INF Grab		34.4
INF Grab Spk		24.0
INF Grab Spk/Dup		22.9
EFF Grab	0.084	
EFF Grab Spk		
EFF Grab Spk/Dup		
W#1 bioreactor		
W#2 bioreactor	0.052	
W#3 bioreactor	0.060	
W#4 bioreactor	0.046	
E#1 bioreactor		
E#2 bioreactor	0.100	
E#3 bioreactor		
E#4 bioreactor	0.097	
Total NH3-N Effluent Comp.		

HR Spk TV: 22.25

LR Spk TV: _____

Preserved Samples:

Raw Inf pH: _____

Final Eff pH: _____

NaOH ID: _____

Comments: _____

QC Data Review:

Acceptable Std Range: ± 15% Reviewed By: _____

Acceptable Dup Range: ± 10% Date: _____

TSSD Laboratory
Total-Phosphorus, ortho-Phosphorus
HACH 10210, 10209 using TNT 843, 844

Rev 1.0

Analysis Date: 8-17-17 Tech: CP

Sample ID# 170817 Spectrophotometer ID: DR3900

SRM
O- 1/10 WP mg/L Std ID: 268 0.168
T- 1/10 WP 268 0.685

HR Vial ID: ~~CS84-X~~ CP 8-17-17
LR Vial ID: CS80-45

Sample ID	Total LR PO4-P mg/L (0.005-1.50 range)	Total HR PO4-P mg/L (0.5-5.0 range)	Ortho LR PO4-P mg/L (0.005-1.50	Ortho HR PO4-P mg/L (0.5-5.0 range)
Blank	0.012		0.008	
HR Std 1.0				
LR Std 1.0	0.698	~~0.612~~ 8-17-17 CP	0.138	
1	0.127		0.033	
2	0.075		0.042	
3	0.075		0.015	
4	0.328		0.107	
5	0.439		0.122	
6	0.122		0.051	
7	0.401		0.206	
8	0.066		0.031	
9	0.165		0.148	
spike 9	0.430		0.154	

Comments: _____

_____

QC Data Review:
Acceptable Std Range: ± 15% Reviewed By: _____
Acceptable Dup Range: ± 10% Date: _____

TSSD Laboratory
TSS / VSS
Method 2540 D & E

	Effluent	Eff Dup	Influent
Dry Filter + Solids gm. #1	0.1086	0.1076	0.4088
Dry Filter + Solids gm. #2	0.1086	0.1076	0.4089
Dry Filter + Solids gm. #3			
Filter (Tare) gm.	0.1067	0.1057	0.3837
Wt. of Solids (Net) gm.			
Sample Vol. mL	250	250	100
TSS mg/L	7.6	7.6	252
Ignited Filter Wt. gm.			0.3890
Residue Wt. gm.			
VSS %			79.0

Oven 104 °C Time In 1003
Time Out 1128
* Time Out 1158
* Time Out
Furnace 550 °C Time In 1205
Time Out 1242

Date AUG 28 2017

Sample ID No. 170828

Tech MLOS

* Repeat the drying cycle until a constant weight is obtained (weight loss <0.0005 g)

INTERCEPTORS						
Filter + Solids (Gross) gm.						
Filter (Tare) gm.						
Wt. of Solids (Net) gm.						
Sample Vol. mL						
TSS mg/L						
Ignited Filter Wt. gm.						
Residue Wt. gm.						
VSS %						

BIOREACTORS		W2	W3	W4	E2	E4
Dry Filter + Solids gm. #1		0.4648	0.4667	0.4712	0.4866	0.4676
Dry Filter + Solids gm. #2		0.4650	0.4670	0.4712	0.4866	0.4677
Dry Filter + Solids gm. #3						
Filter (Tare) gm.		0.3866	0.3856	0.3901	0.3916	0.3869
Wt. of Solids (Net) gm.						
Sample Vol. mL		20.0	20.0	20.0	20.0	20.0
TSS mg/L		3920	4070	4055	4750	4040
Ignited Filter Wt. gm.		0.4025	0.4019	0.4066	0.4115	0.4036
Residue Wt. gm.						
VSS %		79.7	80.0	79.7	79.1	79.3

Reviewed By: _____