

Farm A: TSS levels for experimental basins					
Date	Time	Head 16	Bottom 16	Head 17	Bottom 17
2/10/98		3.3	9.1	1.4	2.4
2/26/98		1.8	5.3	3.2	1.9
3/30/98	8:00	3.2	2.6	6.5	3.8
3/30/98	8:40	8.6	15.8	1	4.2
4/1/98	10:00	1.5	6.3	12.2	12.2
4/1/98	11:00	6.2	7.8	3.3	2.9
4/1/98	3:00	2.8	8.8	5.6	5.2
4/1/98	3:30	5.4	10.6	4.4	3.4
4/1/98	4:00	2	5.6	2.6	1.2
4/2/98	9:30	1.8	10.6	8.4	1.5
4/2/98	10:00	7.2	3.0	7.8	5.2
4/2/98	10:30	9	15.8	3.6	4.4
4/2/98	11:30	2.6	2.6	6	1
4/2/98	12:00	3.8	1.8	8.4	2
4/2/98	1:00	12.8	9.4	8.2	1.6
4/2/98	2:00	4.2	16.0	2.4	0.6
4/2/98	3:00	2.4	5.4	5	0.2
4/2/98	5:00	7.6	9.4	7	0.6
4/3/98	8:50	3.8	6.8	2.6	6
4/3/98	10:00	1.4	5.0	3.8	4.8
4/3/98	12:00	1.2	1.6	1.8	0.8
4/3/98	1:00	0.6	1.0	3.2	1.8
4/3/98	2:15	0.4	2.0	5.2	0
4/3/98	3:00	0.6	1.3	4.2	4.4
4/22/98	3:15	0.6	1.0	1.2	0.6
4/22/98	4:00	1.8	6.4	0.8	1.4
5/7/98	12:00	1	4.0	11.4	3.6
5/18/98	12:30	0.2	9.6	3.6	1.2
5/21/98	8:00	3.8	7.4	2.8	3.8
5/27/98	2:00	0.2	0.2	0	0.2
5/29/98	12:00	1.2	0.6	1.2	1.2
6/10/98	1:00	0	1.0	1	0.2
6/10/98	1:30	0.2	9.8	0	0
6/22/98	12:30	0.6	1.8	2	1.2
7/29/98	12:00	0	0.2	3.4	0
7/29/98	12:15	0	1.2	0.8	0
7/29/98	12:30	0	2.4	1	0
7/29/98	12:45	2	1	0.6	0
7/29/98	1:00	0.8	1.2	2.6	0.2
7/29/98	1:15	1.4	0.6	2.8	0.4
7/29/98	1:20	0.8	1.2	1	0
7/29/98	1:25	0.2	1.8	0.6	0
7/29/98	1:30	0	1.2	0.8	0
8/28/98	11:00	0.4	0.4	1.4	0.1
8/28/98	11:15	0.6	0	1.2	1.2
8/28/98	11:30	0.2	1.4	0.2	0.2
8/28/98	11:45	1	1.4	1	1.2
8/28/98	12:00	1.2	0	0.8	1.2
8/28/98	12:15	1.8	0.2	0.6	0.6
8/28/98	12:30	0.6	0	0.2	0.4
8/28/98	12:45	1.2	0.6	0	1
8/28/98	1:00	0.6	0	0	0.4

Head 16	Head 17			z - Test Comparing Influent TSS levels	
3.3	1.4				
1.8	3.2			z-Test: Two Sample for Means	
3.2	6.5				
8.6	1			<i>Variable 1</i>	<i>Variable 2</i>
1.5	12.2			Mean	2.534884 3.567442
6.2	3.3			Known Variance	8.4 8.96
2.8	5.6			Observations	43 43
5.4	4.4			Hypothesized Mean Difference	0
2	2.6			z	-1.625077
1.8	8.4			P(Z<=z) one-tail	0.052073
7.2	7.8			z Critical one-tail	1.644853
9	3.6			P(Z<=z) two-tail	0.104146
2.6	6			z Critical two-tail	1.959961
3.8	8.4				
12.8	8.2				
4.2	2.4				
2.4	3				
7.6	7				
3.8	2.6				
1.4	3.8				
1.2	1.8				
0.6	3.2				
0.4	5.2				
0.6	4.2				
0.6	1.2				
1.8	0.8				
1	11.4				
0.2	3.6				
3.8	2.8				
0.2	0				
1.2	1.2				
0	1				
0.2	0				
0.6	2				
0	3.4				
0	0.8				
0	1				
2	0.6				
0.8	2.6				
1.4	2.8				
0.8	1				
0.2	0.6				
0	0.8				
0.4	1.4				
0.6	1.2				
0.2	0.2				
1	1				
1.2	0.8				
1.8	0.6				
0.6	0.2				
1.2	0				
0.6	0				

Bottom 16	Bottom 17			
9.1	2.4			
5.3	1.9	z-Test: Two Sample for Means		
2.6	3.8			
15.8	4.2		<i>Variable 1</i>	<i>Variable 2</i>
6.3	12.2	Mean	5.027907	2.002326
7.8	2.9	Known Variance	20.167	5.712
8.8	5.2	Observations	43	43
10.6	3.4	Hypothesized Mean Difference	0	
5.6	1.2	z	3.900042	
10.6	1.5	P(Z<=z) one-tail	4.81E-05	
3.0	5.2	z Critical one-tail	1.644853	
15.8	4.4	P(Z<=z) two-tail	9.62E-05	
2.6	1	z Critical two-tail	1.959961	
1.8	2			
9.4	1.6			
16.0	0.6			
5.4	0.2			
9.4	0.6			
6.8	6			
5.0	4.8			
1.6	0.8			
1.0	1.8			
2.0	0			
1.3	4.4			
1.0	0.6			
6.4	1.4			
4.0	3.6			
9.6	1.2			
7.4	3.8			
0.2	0.2			
0.6	1.2			
1.0	0.2			
9.8	0			
1.8	1.2			
0.2	0			
1.2	0			
2.4	0			
1	0			
1.2	0.2			
0.6	0.4			
1.2	0			
1.8	0			
1.2	0			
0.4	0.1			
0	1.2			
1.4	0.2			
1.4	1.2			
0	1.2			
0.2	0.6			
0	0.4			
0.6	1			
0	0.4			

Farm A: Effluent TSS - Influent TSS							
Date	Time	Head 16	Bottom 16	Head 17	Bottom 17	Standard Grower	High Energy Basin
2/10/98		3.3	9.1	1.4	2.4	5.8	1
2/26/98		1.8	5.3	3.2	1.9	3.5	-1.3
3/30/98	8:00	3.2	2.6	6.5	3.8	(0.6)	-2.7
3/30/98	8:40	8.6	15.8	1	4.2	7.2	3.2
4/1/98	10:00	1.5	6.3	12.2	12.2	4.8	0
4/1/98	11:00	6.2	7.8	3.3	2.9	1.6	-0.4
4/1/98	3:00	2.8	8.8	5.6	5.2	6.0	-0.4
4/1/98	3:30	5.4	10.6	4.4	3.4	5.2	-1
4/1/98	4:00	2	5.6	2.6	1.2	3.6	-1.4
4/2/98	9:30	1.8	10.6	8.4	1.5	8.8	-6.9
4/2/98	10:00	7.2	3.0	7.8	5.2	(4.2)	-2.6
4/2/98	10:30	9	15.8	3.6	4.4	6.8	0.8
4/2/98	11:30	2.6	2.6	6	1	-	-5
4/2/98	12:00	3.8	1.8	8.4	2	(2.0)	-6.4
4/2/98	1:00	12.8	9.4	8.2	1.6	(3.4)	-6.6
4/2/98	2:00	4.2	16.0	2.4	0.6	11.8	-1.8
4/2/98	3:00	2.4	5.4	5	0.2	3.0	-4.8
4/2/98	5:00	7.6	9.4	7	0.6	1.8	-6.4
4/3/98	8:50	3.8	6.8	2.6	6	3.0	3.4
4/3/98	10:00	1.4	5.0	3.8	4.8	3.6	1
4/3/98	12:00	1.2	1.6	1.8	0.8	0.4	-1
4/3/98	1:00	0.6	1.0	3.2	1.8	0.4	-1.4
4/3/98	2:15	0.4	2.0	5.2	0	1.6	-5.2
4/3/98	3:00	0.6	1.3	4.2	4.4	0.7	0.2
4/22/98	3:15	0.6	1.0	1.2	0.6	0.4	-0.6
4/22/98	4:00	1.8	6.4	0.8	1.4	4.6	0.6
5/7/98	12:00	1	4.0	11.4	3.6	3.0	-7.8
5/18/98	12:30	0.2	9.6	3.6	1.2	9.4	-2.4
5/21/98	8:00	3.8	7.4	2.8	3.8	3.6	1
5/27/98	2:00	0.2	0.2	0	0.2	-	0.2
5/29/98	12:00	1.2	0.6	1.2	1.2	(0.6)	0
6/10/98	1:00	0	1.0	1	0.2	1.0	-0.8
6/10/98	1:30	0.2	9.8	0	0	9.6	0
6/22/98	12:30	0.6	1.8	2	1.2	1.2	-0.8
7/29/98	12:00	0	0.2	3.4	0	0.2	-3.4
7/29/98	12:15	0	1.2	0.8	0	1.2	-0.8
7/29/98	12:30	0	2.4	1	0	2.4	-1
7/29/98	12:45	2	1	0.6	0	(1.0)	-0.6
7/29/98	1:00	0.8	1.2	2.6	0.2	0.4	-2.4
7/29/98	1:15	1.4	0.6	2.8	0.4	(0.8)	-2.4
7/29/98	1:20	0.8	1.2	1	0	0.4	-1
7/29/98	1:25	0.2	1.8	0.6	0	1.6	-0.6
7/29/98	1:30	0	1.2	0.8	0	1.2	-0.8
8/28/98	11:00	0.4	0.4	1.4	0.1	-	-1.3
8/28/98	11:15	0.6	0	1.2	1.2	(0.6)	0
8/28/98	11:30	0.2	1.4	0.2	0.2	1.2	0
8/28/98	11:45	1	1.4	1	1.2	0.4	0.2
8/28/98	12:00	1.2	0	0.8	1.2	(1.2)	0.4
8/28/98	12:15	1.8	0.2	0.6	0.6	(1.6)	0
8/28/98	12:30	0.6	0	0.2	0.4	(0.6)	0.2
8/28/98	12:45	1.2	0.6	0	1	(0.6)	1
8/28/98	1:00	0.6	0	0	0.4	(0.6)	0.4

Farm A: Normalized TSS Values									
Date	Time	Bottom 16	lbs fed/day	kgs fed/day	SG TSS (mg/L)/kg	Bottom 17	lbs fed/day	kgs fed/day	HE TSS (mg/L)/kg
2/10/98		9.1	6	2.7210884	3.3	2.4	5	2.2675737	1.1
2/26/98		5.3	6	2.7210884	1.9	1.9	5	2.2675737	0.8
3/30/98	8:00	2.6	10	4.5351474	0.6	3.8	8	3.6281179	1.0
3/30/98	8:40	15.8	10	4.5351474	3.5	4.2	8	3.6281179	1.2
4/1/98	10:00	6.3	10	4.5351474	1.4	12.2	8	3.6281179	3.4
4/1/98	11:00	7.8	10	4.5351474	1.7	2.9	8	3.6281179	0.8
4/1/98	3:00	8.8	10	4.5351474	1.9	5.2	8	3.6281179	1.4
4/1/98	3:30	10.6	10	4.5351474	2.3	3.4	8	3.6281179	0.9
4/1/98	4:00	5.6	10	4.5351474	1.2	1.2	8	3.6281179	0.3
4/2/98	9:30	10.6	10	4.5351474	2.3	1.5	8	3.6281179	0.4
4/2/98	10:00	3.0	10	4.5351474	0.7	5.2	8	3.6281179	1.4
4/2/98	10:30	15.8	10	4.5351474	3.5	4.4	8	3.6281179	1.2
4/2/98	11:30	2.6	10	4.5351474	0.6	1	8	3.6281179	0.3
4/2/98	12:00	1.8	10	4.5351474	0.4	2	8	3.6281179	0.6
4/2/98	1:00	9.4	10	4.5351474	2.1	1.6	8	3.6281179	0.4
4/2/98	2:00	16.0	10	4.5351474	3.5	0.6	8	3.6281179	0.2
4/2/98	3:00	5.4	10	4.5351474	1.2	0.2	8	3.6281179	0.1
4/2/98	5:00	9.4	10	4.5351474	2.1	0.6	8	3.6281179	0.2
4/3/98	8:50	6.8	10	4.5351474	1.5	6	8	3.6281179	1.7
4/3/98	10:00	5.0	10	4.5351474	1.1	4.8	8	3.6281179	1.3
4/3/98	12:00	1.6	10	4.5351474	0.4	0.8	8	3.6281179	0.2
4/3/98	1:00	1.0	10	4.5351474	0.2	1.8	8	3.6281179	0.5
4/3/98	2:15	2.0	10	4.5351474	0.4	0	8	3.6281179	0.0
4/3/98	3:00	1.3	10	4.5351474	0.3	4.4	8	3.6281179	1.2
4/22/98	3:15	1.0	10	4.5351474	0.2	0.6	8	3.6281179	0.2
4/22/98	4:00	6.4	10	4.5351474	1.4	1.4	8	3.6281179	0.4
5/7/98	12:00	4.0	10	4.5351474	0.9	3.6	8	3.6281179	1.0
5/18/98	12:30	9.6	10	4.5351474	2.1	1.2	8	3.6281179	0.3
5/21/98	8:00	7.4	10	4.5351474	1.6	3.8	8	3.6281179	1.0
5/27/98	2:00	0.2	10	4.5351474	0.0	0.2	8	3.6281179	0.1
5/29/98	12:00	0.6	10	4.5351474	0.1	1.2	8	3.6281179	0.3
6/10/98	1:00	1.0	13	5.8956916	0.2	0.2	10	4.5351474	0.0
6/10/98	1:30	9.8	13	5.8956916	1.7	0	10	4.5351474	0.0
6/22/98	12:30	1.8	13	5.8956916	0.3	1.2	10	4.5351474	0.3
7/29/98	12:00	0.2	15.5	7.0294785	0.0	0	12.5	5.6689342	0
7/29/98	12:15	1.2	15.5	7.0294785	0.2	0	12.5	5.6689342	0
7/29/98	12:30	2.4	15.5	7.0294785	0.3	0	12.5	5.6689342	0
7/29/98	12:45	1	15.5	7.0294785	0.1	0	12.5	5.6689342	0
7/29/98	1:00	1.2	15.5	7.0294785	0.2	0.2	12.5	5.6689342	0.0
7/29/98	1:15	0.6	15.5	7.0294785	0.1	0.4	12.5	5.6689342	0.1
7/29/98	1:20	1.2	15.5	7.0294785	0.2	0	12.5	5.6689342	0
7/29/98	1:25	1.8	15.5	7.0294785	0.3	0	12.5	5.6689342	0
7/29/98	1:30	1.2	15.5	7.0294785	0.2	0	12.5	5.6689342	0

<b>Farm A - Monthly Average of Normalized TSS values</b>			
Date		SG Basin TSS (mg/L)/kgs fed day-1	HE TSS (mg/L)/kgs fed day-1
2/10/98		3.3	1.1
2/26/98		1.9	0.8
<b>February</b>	<b>Average</b>	<b>2.6</b>	<b>0.9</b>
	<b>Std. Dev.</b>	<b>1.0</b>	<b>0.2</b>
3/30/98		0.6	1.0
3/30/98		3.5	1.2
<b>March</b>	<b>Average</b>	<b>2.0</b>	<b>1.1</b>
	<b>Std. Dev.</b>	<b>2.1</b>	<b>0.1</b>
4/1/98		1.4	3.4
4/1/98		1.9	1.4
4/1/98		2.3	0.9
4/1/98		1.2	0.3
4/2/98		2.3	0.4
4/2/98		0.7	1.4
4/2/98		3.5	1.2
4/2/98		0.6	0.3
4/2/98		0.4	0.6
4/2/98		2.1	0.4
4/2/98		3.5	0.2
4/2/98		1.2	0.1
4/2/98		2.1	0.2
4/3/98		1.5	1.7
4/3/98		1.1	1.3
4/3/98		0.4	0.2
4/3/98		0.2	0.5
4/3/98		0.4	0.0
4/3/98		0.3	1.2
4/22/98		0.2	0.2
4/22/98		1.4	0.4
<b>April</b>	<b>Average</b>	<b>1.4</b>	<b>0.8</b>
	<b>Std. Dev.</b>	<b>1.0</b>	<b>0.8</b>
5/7/98		0.9	1.0
5/18/98		2.1	0.3
5/21/98		1.6	1.0
5/27/98		0.0	0.1
5/29/98		0.1	0.3
<b>May</b>	<b>Average</b>	<b>1.0</b>	<b>0.6</b>
	<b>Std. Dev.</b>	<b>0.9</b>	<b>0.4</b>
6/10/98		0.2	0.0
6/10/98		1.7	0.0
6/22/98		0.3	0.3
<b>June</b>	<b>Average</b>	<b>0.7</b>	<b>0.1</b>
	<b>Std. Dev.</b>	<b>0.8</b>	<b>0.1</b>
7/29/98		0.0	0
7/29/98		0.2	0
7/29/98		0.3	0
7/29/98		0.1	0
7/29/98		0.2	0.0
7/29/98		0.1	0.1
7/29/98		0.2	0
7/29/98		0.3	0
7/29/98		0.2	0
<b>July</b>	<b>Average</b>	<b>0.2</b>	<b>0</b>
	<b>Std. Dev.</b>	<b>0.1</b>	<b>0</b>

<b>Farm A: Effluent TKN Values (mg/L)</b>		
	Standard Grower Basin Effluent	High Energy Basin Effluent
	2.3	3.6
	2.3	3.3
	2.6	9.9
	5.3	10.6
	6.6	5.3
	5.3	5
	0	0
	1	0.3
	3.3	2
	5	4
	4.3	2.3
	1.3	5.9
	2	3
	2.6	1
	2	4
	4.6	1.7
	3.6	2
	Standard Grower Basin Effluent	High Energy Basin Effluent
Average	3.2	3.8
Standard Deviation	1.8	3.0

<b>Farm A: TSS Discharges - 24 Hour Composite Sampling</b>			
	Basin 16 Effluent	Basin 17 Effluent	
4/22/98	4.6		
5/7/98		2.6	
5/18/98	5.1		
5/21/98		1.8	
5/27/98	4.7		
5/29/98		2	
6/10/98	5		
6/22/98		1.3	
Avg.	4.9	1.9	

Farm A: TSS versus TKN and TAN		
TSS	TKN	TAN
0.6	2	0.69
1.8	2.6	0.69
1	2.3	0.43
0.2	6.3	0
0.2	5	0.4
1.2	1	0
0	0	0.72
0.6	0.3	1.19
0	2.6	0.4
0	2.3	0.6
0	2	0.7
2	5	0.6
0.8	5.3	0.8
1.4	3	0.3
0.8	3.3	1.4
0.2	2.6	0.8
0	4.6	0.4
1	2.3	0.49
6.4	2.3	0.96
4	2.6	0.96
9.6	5.3	0
0.2	6.6	0.79
0.6	5.3	0.4
1	0	0.72
1.8	1	0.66
0.2	3.3	0.7
1.2	5	0.9
2.4	4.3	1.1
1	1.3	0.7
1.2	2	1.2
0.6	2.6	0.8
1.2	2	0.6
1.8	4.6	0.9
1.2	3.6	1
0	3.3	0.13
1.2	5	0.13
1	0	0.99
2	0	1.39
3.4	4.3	1
0.8	2.3	0.8
1	6.9	0.5
0.6	1.7	0.7
2.6	4.3	0.6
2.8	3.3	0.8
1	5.6	1.9
0.6	4.6	2.3
0.8	2.6	1.3
0.6	3.6	0.49
1.4	3.3	0.69
3.6	9.9	0.69
1.2	10.6	0
0.2	5.3	0.2
1.2	5	0.2
0.2	0	0.53
1.2	0.3	0.46
0	2	0.4
0	4	0.6
0	2.3	1.2
0	5.9	0.8
0.2	3	0.4
0.4	1	1
0	4	1
0	1.7	0.6
0	2	0.3