APPENDIX A: SOURCE DATA FOR CHAPTER III

11/12/2000 SRT=10 d Location	COD mg/L	SS mg/L	VSS mg/L	NO_2-N mg/L	NO_3-N mg/L	PO_4-P mg/L	PO_4-P mg/d	Flow Rates L/day	Ac mg/L	NH_4-N mg/L	PHA % TSS	PHA mg/L	PHA mg/d	Gly % SS	Gly % VSS	Gly mg/L	Gly mg/d
Synt. Feed	428			0	0	0		31.4	374	35.2							
PO4-P Feed				0	0	391		2.2		0							
Comb. Inf.	400			0	0	26		33.6	350								
Anaerobic 1	76	2820	2142	0	0	127.3	-6982		54	19.4	6.5	183	-8336	7.26	9.6	205	6050
Anaerobic 2	38	2936	2237	0	0	149.5	-1989		0	19.9	7.4	217	-3043	6.15	8.1	181	2165
Anoxic 1	32	4600	3266	0	0.1	60.2	2572		0	9.8	3.0	138	1431	9.50	13.4	437	-982
Anoxic 2	26	4689	3352	0	0	63.4	-579	56	0	10.1	3.1	144	-1245	9.29	13.0	436	251
Aerobic 1	26	4768	3369	0	4.9	8.8	6825		0	0	1.7	82	7801	10.16	14.4	484	-6083
Aerobic 2	24	4836	3348	0	5	1.4	925		0	0	1.3	64	2272	10.48	15.1	507	-2789
Aerobic 3	28	4773	3272	0	5.2	0.8	75	42.4	0	0	1.3	62	223	10.80	15.8	515	-1080
Effluent	28	23	16	0	5.1	1.2			0	0							
RAS	20	7774	5317	0	4	0.8		49	0	0	1.1	86		10.53	15.4	819	

SYS1 @20°C
11/29/2000
SRT=10 d

Location	COD	SS	VSS	NO_3-N	PO_4-P	PO_4-P	Ac	NH_4-N	K	Mg	PHA	PHA	PHA	Gly	Gly	Gly	Gly
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/d	mg/L	mg/L	mg/L	mg/L	% TSS	mg/L	mg/d	% SS	% VSS	mg/L	mg/d
Synt. Feed	446			0	0		398	44		45							
PO4-P Feed				0	446												
Comb. Inf.	425			0	21.2		379										
Anaerobic 1	89	2549	2018	0	93	-4842	67.2	23.7	58.5	79	7.94	202.4	-9309	6.9	5.46	176	5578
Anaerobic 2	43	2716	2118	0	118	-2228	0	23.4	53.9	76.4	9.1	247.2	-3989	5.4	4.23	147	2555
Anoxic 1	33	4340	3284	0	48.1	2000	0	13.3	35.4	60.6	3.75	162.8	880	9.2	6.95	398	-1357
Anoxic 2	30	4476	3418	0	50.3	-392	0	14.1	38.9	62.7	3.65	163.4	-111	8.9	6.79	398	88
Aerobic 1	33	4640	3407	4.9	5.8	5558	0	0	22.3	40.9	2	92.8	8815	9.9	7.24	458	-7442
Aerobic 2	27	4833	3398	5	1.4	550	0	0	18.6	35.7	1.44	69.6	2898	10.0	7.02	483	-3162
Aerobic 3	24	4797	3331	5.2	0.8	75	0	0	24.8	36.1	1.5	72.0	-295	10.2	7.07	488	-689
Effluent	27	60	40	5.1	1.0		0	0	24.2	36.5							
RAS	24	7356	5090	4	0.6		0	0	24.9	36.6	1.4	103.0		10.4	7.20	765	

20°C
12/4/2000

Location	COD mg/L	SS mg/L	VSS mg/L	NO_2-N mg/L	NO_3-N mg/L	PO_4-P mg/L	PO_4-P mg/d	Ac mg/L	NH_4-N mg/L	PHA % TSS	PHA mg/L	PHA mg/d	Gly % SS	Gly % VSS	Gly mg/L	Gly mg/d
Synt. Feed	420			0	0	0		391	36.9							
PO4-P Feed				0	0	418			0							
Comb. Inf.	398			0	0	20.3		372			0					
Anaerobic 1	80	3106	2456	0	0	98	-5181	47	20.5	6.36	156.2	-7464	7.52	9.51	233.6	4085
Anaerobic 2	36	3084	2434	0	0	118.2	-1836	0	20.4	8	194.7	-3501	6.66	8.44	205.4	2561
Anoxic 1	32	5004	3982	0	0.1	52	1414	0	10.3	2.99	119.1	2677	9.34	11.74	467.4	-2242
Anoxic 2	28	4966	3579	0	0	54.7	-485	0	10.6	3.44	123.1	-728	9.32	12.93	462.8	815
Aerobic 1	32	5033	3540	0	4.9	6.8	5978	0	0	1.69	59.8	7899	10.06	14.30	506.3	-5427
Aerobic 2	26	5219	3558	0	5.2	0.7	761	0	0	1.5	53.4	806	9.8	14.37	511.5	-642
Aerobic 3	30	5198	3618	0	5.2	0.05	81	0	0	1.44	52.1	159	10	14.37	519.8	-1041
Effluent	32	9	7	0	5.1	0.2		0	0							
RAS	28	8676	6022	0	3.9	0.03		0	0	1.48	89.1		10.16	14.64	881.5	

12/26/2001
Sys2 20C

Location	COD	SS	VSS	NO_2-N	NO_3-N	PO_4-P	PO_4-P	Ac	NH_4-N	PHA	PHA	PHA	PHA				
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/d	mg/L	mg/L	% TSS	% VSS	mg/L	mg/d	Gly	Gly	Gly	Gly
Synt. Feed	453			0	0	0		409	39.9					% SS	% VSS	mg/L	mg/d
PO4-P Feed				0	0	433			0								
Comb. Inf.	427			0	0	25.3		385									
Anaerobic 1	92	2820	2142	0	0	110	-4698	67	21.6	6.59	8.68	185.8	-8049	5.87	7.73	165.5	4256
Anaerobic 2	42	2936	2237	0	0	139.3	-2369	0	21.7	8.07	10.59	236.9	-4132	4.79	6.29	140.6	2013
Anoxic 1	34	4600	3266	0	0.05	70.4	748	0	11.9	3.32	4.68	152.7	1582	8.94	12.59	411.2	-2137
Anoxic 2	32	4689	3352	0	0	74.3	-587	0	12.4	3.39	4.74	159.0	-939	8.57	11.99	401.8	1414
Aerobic 1	28	4768	3369	0	6.6	21.9	5589	0	0.07	2.06	2.92	98.2	6478	9.34	13.22	445.3	-4638
Aerobic 2	26	4836	3348	0	6.8	7.7	1515	0	0	1.39	2.01	67.2	3307	9.62	13.90	465.2	-2122
Aerobic 3	30	4773	3272	0	6.8	1.2	693	0	0	1.10	1.60	52.5	1570	9.90	14.44	472.5	-779
Effluent	26	23	16	0	6.4	1.02		0	0			0.0					
RAS	26	7774	5317	0	4.2	1.2		0	0	1.28	1.87	99.5		11.40	16.67	886.2	

1/4/2001

Location	COD mg/L	SS mg/L	VSS mg/L	NO_3-N mg/L	PO4-P area	PO_4-P mg/L	PO_4-P mg/d	Ac mg/L	NH_4-N mg/L	PHA % TSS	PHA mg/L	PHA mg/d
Synt. Feed	436			0	0	0		389	39.9			
PO4-P Feed				0	429.0	421.4			0			
Comb. Inf.	410			0		24.6		350				
Anaerobic 1	92	2820	2142	0	91	89.6	-3718	67	21.6	6.38	180.0	-8193
Anaerobic 2	42	2936	2237	0	114	112.0	-1906	0	21.7	8.38	246.0	-5917
Anoxic 1	34	4600	3266	0.05	59.2	58.2	406	0	11.9	2.87	132.0	4069
Anoxic 2	32	4689	3352	0	65.0	63.9	-913	0	12.4	3.02	141.7	-1756
Aerobic 1	28	4768	3369	6.6	24	23.2	4643	0	0.07	1.45	69.2	9063
Aerobic 2	26	4836	3348	6.8	8.8	8.7	1655	0	0	1.23	59.3	1238
Aerobic 3	30	4773	3272	6.8	2.7	2.6	692	0	0	1.08	51.7	950
Effluent	26	23	16	6.4	3.1	3.0		0	0			
RAS	26	7774	5317	4.2	2.7	2.7		0	0	0.98	76.0	

01-17-01 at 18°C

Location	COD mg/L	SS mg/L	VSS mg/L	NO_2-N mg/L	NO_3-N mg/L	PO_4-P mg/L	PO_4-P mg/d	Ac mg/L	NH_4-N mg/L	PHA % TSS	PHA mg/L	PHA mg/d	PHA % VSS	Gly % SS	Gly % VSS	Gly mg/L	Gly mg/d
Synt. Feed	428			0	0	0		379	38.2								
PO4-P Feed				0	0	428.0			0								
Comb. Inf.	403			0	0	25.0		357	36								
Anaerobic 1	88	2602	2074	0	0	91.0	-3585	64	20.2	6.57	171.0	-7186	8.24	7.16	8.98	186.3	4226
Anaerobic 2	40	2688	2143	0	0	113.7	-1807	0	20.5	7.68	206.4	-3045	9.63	6.15	7.71	165.3	1671
Anoxic 1	36	4544	3458	0	0.02	55.7	167	0	10.3	3.06	139.0	587	4.02	9.32	12.25	423.5	-480
Anoxic 2	30	4503	3384	0	0	61.6	-965	0	10.9	3.22	145.0	-1012	4.28	9.28	12.35	417.9	920
Aerobic 1	26	4687	3469	0	6.4	24.4	4390	0	0.5	1.66	77.8	7956	2.24	9.85	13.31	461.7	-5167
Aerobic 2	28	4753	3500	0	6.6	9.5	1758	0	0	1.42	67.5	1221	1.93	10.04	13.63	477.2	-1833
Aerobic 3	28	4748	3491	0	6.5	3.0	767	0	0	1.4	66.5	121	1.90	10.18	13.85	483.3	-725
Effluent	26	38	28	0	6.6	2.6		0	0						0.00	0.0	
RAS	24	7643	5318	0	4.3	2.5		0	0	1.17	89.4		1.68	10.53	15.13	804.8	

SYS 2 @ 15 0C
1/19/01

Location	COD	SS	VSS	NO_2-N	NO_3-N	PO_4-P	PO_4-P	Ac	NH_4-N	PHA	PHA	PHA	Gly	Gly	Gly	Gly
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/d	mg/L	mg/L	% TSS	mg/L	mg/d	% SS	% VSS	mg/L	mg/d
Synt. Feed	434			0	0	0		379	38.8							
PO4-P Feed				0	0	360										
Comb. Inf.	408			0	0	21.6		357				0				
Anaerobic 1	110	2532	2001	0	0	75.2	-2844	73	23.2	5.98	151.4	-6467	6.98	8.83	176.7	3534
Anaerobic 2	76	2695	2124	0	0	103.2	-2234	0	21.8	6.7	180.6	-2597	5.89	7.47	158.7	1604
Anoxic 1	33	4492	3418	0	0.2	48.4	220	0	11.5	2.83	127.1	233	8.18	10.75	367.4	-233
Anoxic 2	30	4414	3350	0	0	52.9	-749	0	12	2.98	131.5	-787	8.18	10.78	361.1	1138
Aerobic 1	33	4618	3426	0	3.7	15.7	4486	0	0	1.64	75.7	6970	8.70	11.73	401.8	-5084
Aerobic 2	27	4702	3451	0	4.9	2.4	1604	0	0	1.5	70.5	650	8.82	12.02	414.7	-1618
Aerobic 3	24	4722	3368	0	4.6	0.5	229	0	0	1.41	66.6	493	8.93	12.52	421.7	-869
Effluent	27	44	31	0	5.2	1		0	0					0.00	0.0	
RAS	24	7468	5127	0	4.5	0.4		0	0	1.14	85.1		9.50	13.84	709.5	

SYS 2 @ 10 °C
1/21/01

Location	COD	SS	VSS	NO_2-N	NO_3-N	PO_4-P	PO_4-P	Ac	NH_4-N	PHB	PHB	PHV	PHV	PHA	PHA	PHB/ PHA	PHA	PHA	PHA	Gly	Gly	Gly	Gly
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/d	mg/L	mg/L	% TSS	mg/L	% TSS	mg/L	% TSS	mg/L		% TSS	% VSS	mg/d	% SS	% VSS	mg/L	mg/d
Synt. Feed	442			0	0	0		387	39.8														
PO4-P Feed				0	0	375		0															
Comb. Inf.	410			0	0	22		364															
Anaerobic 1	129	2616	2058	0	0	79.4	-2800	88	25.4	7.78	167.4	1.64	36.80	9.42	204.2	0.82	6.15	7.82	-6039	6.98	8.87	182.6	3311
Anaerobic 2	86	2796	2215	0	0	105.4	-2070	16	25.7	9.88	208.4	2.11	47.20	11.99	255.6	0.82	6.87	8.67	-2468	5.89	7.43	164.7	1426
Anoxic 1	41	4498	3520	0	0.2	53.1	37	0	13.5	5.48	173.0	1.08	36.80	6.56	209.8	0.82	3.22	4.11	155	8.81	11.26	396.3	157
Anoxic 2	32	4422	3500	0	0	60.8	-1284	0	13.9	5.82	191.5	1.14	41.30	6.96	232.8	0.82	3.36	4.25	-650	8.85	11.18	391.3	821
Aerobic 1	30	4823	3512	0	3.7	31.2	3585	0	0	3.17	128.7	0.55	29.50	3.71	158.2	0.81	2.45	3.36	3703	8.93	12.26	430.7	-4761
Aerobic 2	32	4812	3582	0	4.9	17.5	1659	0	0	2.82	94.6	0.55	20.30	3.38	114.9	0.82	2.22	2.99	1331	9.05	12.16	435.5	-580
Aerobic 3	28	4869	3546	0	4.6	6.9	1284	0	0	2.90	84.7	0.53	17.30	3.43	102	0.83	1.98	2.72	1258	9.06	12.44	441.1	-683
Effluent	28	52	33	0	5.2	8.8		0	0	2.52	211.0	0.41	46.00	2.93	257	0.82		0.00			0.00	0.0	
RAS	28	7983	5174	0	4.5	4.7		0	0								1.37	2.11		9.50	14.66	758.4	

SYS 2 @ 5 °C
1/23/01

Location	COD mg/L	SS mg/L	VSS mg/L	NO_2-N mg/L	NO_3-N mg/L	PO_4-P mg/L	PO_4-P mg/d	Ac mg/L	NH_4-N mg/L	PHB		PHV		PHA % TSS	PHA % VSS	PHA mg/L	PHA mg/d	Gly % SS	Gly % VSS	Gly mg/L	Gly mg/d
Synt. Feed	442			0	0	0		380	39												
PO4-P Feed				0	0	369		0													
Comb. Inf.	410			0	0	21.7		358	36.7	7.78	167.4	1.64	-160.09	5.71	7.31	158	-1299	7.20	9.21	199.2	1336
Anaerobic 1	162	2768	2162	0	0	62.2	-914	110	27.1	9.88	208.4	2.11	-200.91	5.97	7.49	179	-1705	6.09	7.64	182.6	1348
Anaerobic 2	128	3000	2390	0	0	74.4	-991	91.4	27.8	5.48	173.0	1.08	-166.47	5.03	6.53	231.2	-2159	8.27	10.75	380.5	1571
Anoxic 1	76	4600	3539	0	0	63.1	-1662	18.2	20.5	5.82	191.5	1.14	-184.75	5.13	6.75	244.3	-2214	7.79	10.25	371.0	1606
Anoxic 2	58	4764	3618	0	0	72	-1504	2.1	21.2	3.17	128.7	0.55	-123.11	4.36	5.59	217	3325	7.91	10.15	394.0	-2801
Aerobic 1	34	4980	3880	0	0.9	52.3	2399	0	18.4	2.82	94.6	0.55	-89.12	4.26	5.48	209.2	950	8.16	10.48	400.6	-804
Aerobic 2	30	4907	3821	0	1.7	45	889	0	16.2	2.90	84.7	0.53	-79.60	4.16	5.10	205	512	8.24	10.11	406.1	-670
Aerobic 3	34	4927	4017	0	2.4	37.4	926	0	14.8	2.52	211.0	0.41	-211.00		0.00					0.0	
Effluent	30	54	38	0	2.6	38.3		0	14.7					3.69	5.48	300		9.11	13.52	740.0	
RAS	30	8126	5474	0	2.5	30.4		0	14.8												

1/29/2001
SYS 2 @ 5^0 C.

Location	COD	SS	VSS	NO_2-N	NO_3-N	PO_4-P	PO_4-P	Ac	NH_4-N	PHA	PHA	PHA	Gly	Gly	Gly	Gly
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/d	mg/L	mg/L	% TSS	mg/L	mg/d	% SS	% VSS	mg/L	mg/d
Synt. Feed	440			0	0	0		395	39.5							
PO4-P Feed				0	0	334		0								
Comb. Inf.	414			0	0	19.7		371	37.3		0					
Anaerobic 1	172	3413	2695	0	0	48.3	-596	132	28.9	6.01	205.2	-2171	6.12	7.76	209.0	914
Anaerobic 2	162	3424	2706	0	0	56.2	-649	120	29.3	6.86	235.0	-2450	5.84	7.39	200.0	740
Anoxic 1	74	5691	4503	0	0	38.6	-1499	28	19.4	4.88	277.5	-3142	6.84	8.64	389.2	1138
Anoxic 2	50	5860	4702	0	0	56.1	-3001	0.7	20	5.20	304.9	-4699	6.41	7.98	375.4	2367
Aerobic 1	30	5877	4650	0	0.7	28.6	3391	0	18.6	4.28	251.5	6584	6.82	8.62	401.0	-3156
Aerobic 2	30	5973	4753	0	1.5	15.3	1640	0	17.7	3.73	222.9	3526	6.87	8.63	410.3	-1147
Aerobic 3	34	6086	4801	0	2.3	6.7	1060	0	17.3	3.35	204.0	2330	6.80	8.62	414.0	-456
Effluent	36	88	65	0	2	8.5		0	17.1				0.00			
RAS	34	10030	7840	0	2.1	4.6		0	16.9	3.53	354.0		7.26	9.29	728.0	

SYS 2 @ 5 ^{0}C
1/27/01

Location	COD	SS	VSS	NO_2-N	NO_3-N	PO_4-P	PO_4-P	Flow Rates	Ac	NH_4-N
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/d	L/day	mg/L	mg/L
Synt. Feed	428			0	0	0		31	366	39.7
PO4-P Feed				0	0	335		2	0	
Comb. Inf.	402			0	0	20.3		33	344	37.3
Anaerobic 1	154	3340	2532	0	0	49	-762		104	27.3
Anaerobic 2	124	3426	2640	0	0	59.8	-869		85.8	29.6
Anoxic 1	68	5337	4118	0	0	43.1	-1590		17	23.5
Anoxic 2	46	5469	4289	0	0	52.9	-1664	47.5	0	24.1
Aerobic 1	32	5670	4276	0	0.9	29.4	2874		0	20.6
Aerobic 2	38	5556	4268	0	1.8	18.6	1321		0	18.9
Aerobic 3	30	5680	4217	0	2.7	12.3	770	43.2	0	17.8
Effluent	28	58	42	0	2.8	13.1			0	17
RAS	32	9114	6128	0	2.7	8.3		46.1	0	17.2

1/30/2001
SYS 2 @ 5^0 C.

Location	COD mg/L	SS mg/L	VSS mg/L	NO_2-N mg/L	NO_3-N mg/L	PO_4-P mg/L	PO_4-P mg/d	Ac mg/L	NH_4-N mg/L	PHA % SS	PHA mg/L	PHA mg/d	Gly % SS	Gly % VSS	Gly mg/L	Gly mg/d
Synt. Feed	440			0	0	0		395	39.5							
PO4-P Feed				0	0	334		0								
Comb. Inf.	414			0	0	19.7		371	37.3							
Anaerobic 1	172	3413	2695	0	0	50.1	-981	100	28.9	6.39	218.1	-3014	6.12	7.76	209.0	914
Anaerobic 2	162	3424	2706	0	0	60.3	-838	88	29.3	7.36	252.0	-2788	5.84	7.39	200.0	740
Anoxic 1	74	5691	4503	0	0	40.1	-1626	22	19.4	5	284.6	-4019	6.84	8.64	389.2	1138
Anoxic 2	50	5860	4702	0	0	51.2	-1904	1.4	20	5.28	309.4	-4263	6.41	7.98	375.4	2367
Aerobic 1	30	5877	4650	0	0.7	24.9	3243	0	18.6	4.04	237.4	8875	6.82	8.62	401.0	-3156
Aerobic 2	30	5973	4753	0	1.4	13.8	1369	0	17.7	3.57	213.2	2983	6.87	8.63	410.3	-1147
Aerobic 3	34	6086	4801	0	2.2	3.4	1282	0	17.3	3.35	203.9	1153	6.80	8.62	414.0	-456
Effluent	36	88	65	0	2	5		0	17.1				0.00			
RAS	34	10030	7840	0	2.1	3.2		0	16.9	3.3	331.0		7.26	9.29	728.0	

2/1/2001
SYS 2 @ 5^0 C.

Location	COD mg/L	SS mg/L	VSS mg/L	NO_2-N mg/L	NO_3-N mg/L	PO_4-P mg/L	PO_4-P mg/d	Ac mg/L	NH_4-N mg/L	DO mg/L	pH	SVI mL/g	PHA % SS	PHA mg/L	PHA mg/d	Gly % SS	Gly % VSS	Gly mg/L	Gly mg/d
Synt. Feed				0	0	0		392	39.1		8.38								
PO4-P Feed				0	0	319		0											
Comb. Inf.				0	0	20		367	36.6										
Anaerobic 1		3524	2863	0	0	47.6	-797	111	28.4		7.65		6.86	241.7	-3114	5.96	7.33	210.0	872
Anaerobic 2		3696	2909	0	0	61.2	-1051	100	29		7.56		7.62	281.6	-3081	5.26	6.69	194.5	1197
Anoxic 1		5878	4761	0	0	36.2	-1171	28	19.2		7.99		5.22	306.8	-3389	6.53	8.07	384.0	1391
Anoxic 2		6004	4932	0	0	48.9	-2069	2.3	19.5		7.88		5.61	336.8	-4887	6.16	7.50	370.0	2281
Aerobic 1		6092	4906	0	0.8	21.1	3246	0	18.1	4.7	8.14		4.38	266.8	8172	6.51	8.09	396.7	-3117
Aerobic 2		6205	5048	0	1.6	7.8	1553	0	17.2		8.38		3.87	240.1	3117	6.77	8.32	420.0	-2720
Aerobic 3		6309	5114	0	2.2	0	911	0	17	5.6	8.34	47	3.6	227.1	1519	6.74	8.31	425.1	-595
Effluent		78	59	0	2.1	0		0	16.8					0.0					
RAS		10112	7992	0	2.1	0		0	16.4				3.46	349.9		7.02	8.88	710.0	

2/8/2001
SYS 2 @ 5^0 C.

Location	COD mg/L	SS mg/L	VSS mg/L	NO_2-N mg/L	NO_3-N mg/L	PO_4-P mg/L	PO_4-P mg/d	Ac mg/L	NH_4-N mg/L	PHA % SS	PHA mg/L	PHA mg/d	Gly % SS	Gly % VSS	Gly mg/L	Gly mg/d
Synt. Feed	492			0	0	0		451	38							
PO4-P Feed				0	0	447		0								
Comb. Inf.	462			0	0	27.5		423	35.7							
Anaerobic 1	179	3524	2863	0	0	64.8	-917	138.1	25.1	7.27	256.2	-4199	5.60	6.89	197.3	1358
Anaerobic 2	158	3696	2909	0	0	77.6	-986	127.9	25.9	8.3	306.8	-3894	5.01	6.36	185.0	947
Anoxic 1	73	5878	4761	0	0	55.5	-2872	28	17.8	5.36	315.1	-4305	6.38	7.88	375.0	3025
Anoxic 2	44	6004	4932	0	0	69.9	-2295	0	18.4	5.61	336.8	-3469	5.98	7.28	359.0	2550
Aerobic 1	32	6092	4906	0	0.7	28.7	4668	0	14.2	4.22	257.1	9035	6.48	8.05	394.7	-4045
Aerobic 2	34	6205	5048	0	1.4	11.4	1960	0	12.9	3.71	230.2	3045	6.66	8.19	413.2	-2096
Aerobic 3	32	6309	5114	0	2.1	0	1292	0	10.9	3.43	208.0	2516	6.70	8.27	422.7	-1076
Effluent	32	78	59	0	2.3	0		0	11.1					0.00		
RAS	28	10112	7992	0	1.6	0		0	10.5	3.18	321.6		7.17	9.07	725.0	

2/12/2001
SYS 2 @ 5^0 C.

Location	COD	SS	VSS	NO_2-N	NO_3-N	PO_4-P	PO_4-P	Ac	NH_4-N	TP	P % as TSS	PHB	PHV	PHA	PHA	PHA	Gly	Gly	Gly	Gly
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/d	mg/L	mg/L	mg/L		mg/L	mg/L	% TSS	mg/L	mg/day	% SS	% VSS	mg/L	mg/d
Synt. Feed	462			0	0	0		407	37											
PO4-P Feed				0	0	651		0												
Comb. Inf.				0	0	40		382	36.6											
Anaerobic 1	150	4230	3381	0	0	91.5	-1856	92.4	23.9	262	4.03	422.0	28.5	10.6	450.5	-4681	4.75	5.95	201.1	1377
Anaerobic 2	122	4448	3562	0	0	112.3	-1608	73.3	24.5	271	3.57	477.9	39.6	11.6	517.5	-3107	4.20	5.25	187.0	1090
Anoxic 1	40	6940	5531	0	0	72.1	-3165	0	16.4	627	8.00	530.9	46.1	8.3	577.0	-5764	5.39	6.77	374.4	3942
Anoxic 2	36	6908	5526	0	0	85.8	-2251	0	16.7	606	7.53	576.6	46.6	9.0	623.2	-5043	5.28	6.60	364.7	1594
Aerobic 1	32	6883	5554	0	0.7	32	6343	0	12.9	906	12.35	443.9	36.2	7.0	480.1	10710	5.88	7.29	404.8	-4728
Aerobic 2	34	6927	5492	0	1.4	8.2	2806	0	11.1	1052	14.21	397.6	30.7	6.2	428.3	3807	6.13	7.73	424.7	-2346
Aerobic 3	30	7079	5440	0	2.2	0	967	0	8.2	1081	14.41	373.8	29.8	5.7	403.7	1275	6.09	7.92	431.0	-743
Effluent	28	40	30	0	2	0		0	8											
RAS	30	11081	8433	0	1.7	0		0	7.2	1717	14.62	569.0	47.0	5.6	616.0		6.75	8.87	748.0	

2/17/2001
SYS 2 @ 5^0 C.

Location	COD mg/L	SS mg/L	VSS mg/L	NO_2-N mg/L	NO_3-N mg/L	PO_4-P mg/L	PO_4-P mg/d	Ac mg/L	NH_4-N mg/L	PHB mg/L	PHV mg/L	PHA % TSS	PHA mg/L	PHA mg/d	Glycogen % Dry solids	Glycogen mg/L	Glycogen mg/d
Synt. Feed	448			0	0	0		417	33.8								
PO4-P Feed	0	0	855		0												
Comb. Inf.	384			0	0	49.9		393	31.8								
Anaerobic 1	150	4258	3324	0	0	84.9	-2152	85	22.7	282.35	20.00	9.19	391.31	-9623	3.97	169	2898
Anaerobic 2	84	4562	3402	0	0	104	-1501	57.7	22.2	329.29	25.89	10.21	465.78	-5853	3.11	142	2122
Anoxic 1	36	7178	5607	0	0	55.5	-1061	0	15.2	330.08	22.38	5.91	424.22	-2984	5.00	359	1185
Anoxic 2	30	7394	5631	0	0	62.9	-1231	0	16.4	345.54	24.89	6.20	458.43	-5692	4.75	351	1331
Aerobic 1	30	7562	5692	0	0.7	24.7	4595	0	13.3	277.26	23.02	4.77	360.71	11756	5.21	394	-5173
Aerobic 2	36	7618	5638	0	1.4	5.1	2358	0	11.2	249.27	17.72	4.00	304.72	6735	5.42	413	-2286
Aerobic 3	30	7702	5680	0	2.5	0	614	0	8.1	246.00	14.84	3.70	284.97	2375	5.49	423	-1203
Effluent	32	43	33	0	2.4	0		0	8.2						0.00		
RAS	28	11970	8527	0	2.1	0		0	6.7	365.49	24.64	3.50	418.95		5.90	706	

2/19/01
SYS 2 @ 5^0 C.

Location	COD mg/L	SS mg/L	VSS mg/L	VSS/SS	NO_3-N mg/L	PO_4-P mg/L	PO_4-P mg/d	Ac mg/L	NH_4-N mg/L	TP mg/L	P %	PHB % TSS	PHB mg/L	PHV % TSS	PHV mg/L	PHA % TSS	PHA mg/L	mg/d	Glycogen % Dry solids	mg/L	mg/d
Synt. Feed	458				0	0		414	32.8												
PO4-P Feed					0	1320		0													
Comb. Inf.	429				0	83.8		378	36.6												
Anaerobic 1	158	4369	3400	0.78	0	127.9	-3033	91	22.7	291	3.73	6.56	286.7	0.48	20.93	7.04	307.60	-6831	3.20	140	2947
Anaerobic 2	120	4577	3427	0.75	0	149.7	-1685	59	22.2	284	2.93	7.28	333.2	0.51	23.2	7.79	356.40	-3772	2.60	119	1608
Anoxic 1	38	7062	5587	0.79	0	79.7	-1056	0	15.2	598	7.34	4.60	324.9	0.41	29.1	5.01	354.00	-1949	4.38	309	734
Anoxic 2	28	7289	5632	0.77	0	92	-2031	0	16.4	571	6.57	4.66	339.7	0.42	30.3	5.08	370.00	-2642	4.12	300	1487
Aerobic 1	26	7492	5712	0.76	0.7	47.9	5261	0	13.1	974	12.36	3.73	279.8	0.33	24.9	4.07	304.70	7790	4.38	328	-3322
Aerobic 2	28	7602	5690	0.75	1.4	23.2	2947	0	11	1182	15.24	3.17	241.2	0.32	24.1	3.49	265.30	4700	4.45	338	-1210
Aerobic 3	30	7685	5621	0.73	2.1	6.7	1968	0	7.7	1164	15.06	3.00	230.5	0.31	23.5	3.31	254.00	1348	4.51	347	-991
Effluent	28	39	28	0.72	2	6.6		0	7.6							0.00	0.00				
RAS	28	11689	8394	0.72	1.9	5.4		0	6.7	1589	13.55	3.16	369.6	0.29	33.4	3.45	403.00		5.30	620	

3/3/01
SYS 2 @ 5^0 C.

Location	COD mg/L	SS mg/L	VSS mg/L	VSS/SS	NO_3-N mg/L	PO_4-P mg/L	PO_4-P mg/d	Ac mg/L	NH_4-N mg/L	DO mg/L	pH	PHA % TSS	% VSS	mg/L	mg/d	Glycogen % Dry solids	mg/L	mg/d
Synt. Feed	502				0	0		432	33.8									
PO4-P Feed					0	1408		0										
Comb. Inf.	475				0	88.8		404	31.8			7.09	9.24	311.00	-6828	3.68	175.0	2895
Anaerobic 1	147	4754	3648	0.77	0	150.2	-3586	84.1	22.7		7.32	7.66	10.20	363.00	-4001	2.92	146.0	2232
Anaerobic 2	105	5002	3755	0.75	0	177.9	-2132	41.9	22.2			4.91	6.74	356.00	-1170	4.57	364.0	892
Anoxic 1	44	7963	5804	0.73	0	100.8	-1459	0	15.2			4.95	6.74	371.00	-2477	4.48	354.9	1503
Anoxic 2	34	7928	5820	0.73	0	113.5	-2097	0	16.4		7.55	4.07	5.54	308.20	7476	4.79	388.0	-3941
Aerobic 1	31	8094	5941	0.73	0.3	75.2	4560	0	13.3	5.8	7.96	3.50	4.85	279.00	3476	4.96	405.0	-2024
Aerobic 2	34	8167	5900	0.72	0.8	42.2	3929	0	11.2	6.6		3.39	4.75	259.00	2381	5.04	414.6	-1143
Aerobic 3	37	8223	5868	0.71	1.2	17.9	2893	0	8.1	7.9	8.4			0.00				
Effluent	34	87	59	0.68	1.1	16.9		0	8.2			3.41	4.97	413.20		5.62	712.0	
RAS	37	12666	8684	0.69	0.5	16.1		0	6.7									