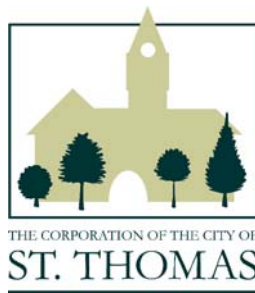


The Corporation of the City of St. Thomas

Water Pollution Control Plant



2008 Annual Performance Report

Under Ontario Ministry of the Environment

Certificate of Approval 5276-5M9JW7

February 2009

John Mansell, *Environmental Technologist*

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Monitoring Data Overview:

For the purposes of this report the St. Thomas Water Pollution Control Plant shall be referred to as 'the plant' and Ontario Ministry of the Environment Certificate of Approval 5276-5M9JW7 shall be referred to as the 'C of A'. Formal notification of start up of operation of the works for this C of A was given on February 14, 2003.

Throughout 2008 the St. Thomas Water Pollution Control Plant has been operated not only within the limits set out in the C of A but in the case of CBOD5, TSS, TP, pH and E. Coli, within the C of A objectives.

Despite the use of best effort, averages for Ammonia + Ammonium as Nitrogen, 'objectives' were exceeded as detailed in the data below:

<u>Months Average</u>	<u>Effluent Result/Loading</u>	<u>Effluent Objective</u>
Amm October 2008	3.72 mg/L	1 mg/L (Limit 5 mg/L)
	57.4 kg/day	27.3 kg/day (Limit 136.5 kg/day)

Ammonia + Ammonium as Nitrogen, limits were maintained at all times throughout 2008.

Ammonia + Ammonium as Nitrogen exceeded the C of A objective in October of 2008 despite the use of best effort. This may have been a result of a Digester Start-up in September of 2008. During start-up of the digesters, large volumes of supernatant, which may have been high in solids content, went to the head works of the plant. This would cause a greater oxygen demand in the aeration system and may have lead to higher Ammonia + Ammonium as Nitrogen. Digester start-up takes 6-8 weeks.

The peak and average daily sewage flow limits, 54600 m³/day and 27300 m³/day/year respectively, as set out in the C of A, were maintained at all times throughout 2008.

Sewage flows were maintained within the sewage works and were continuously disinfected with a Trojan UV system at all times throughout 2008 with the exception of a power failure that occurred on April 29, 2008. During this City wide power failure, the plant was without continuous disinfection for 1 hour and 20 minutes. There were no known adverse affects as a result of this incident.

Several public complaints were received and may have been a result of a digester cleanout that was conducted in the summer of 2008. The complaints were documented and responded to. The complaints are listed below:

July 16, 2008	140 Stanley Street	Odour complaint
September 04, 2008	140 Stanley Street	Odour complaint
September 20-24, 2008	140 Stanley Street	Odour complaint
October 08, 2008	140 Stanley Street	Odour complaint
October 09, 2008	1 Willow Street	Odour complaint
October 20, 2008	140 Stanley Street	Odour complaint

The monitoring data and its supporting information collected throughout 2008 and presented in this report, indicate that St. Thomas sewage treatment program was both successful and adequate during 2008.

The following tables, Table 1 through Table 3, represent a summary of all monitoring data collected at the plant throughout 2008:

Corporation of the City of St. Thomas - Water Pollution Control Plan

Table 1 - 2008 Daily WPCP Flow Summary (Limit: Ave. Daily Flow 27300 m3/day >1 Year and Max. Flow 54600 m3/Day)

	January	February	March	April	May	June	July	August	September	October	November	December
	Flow (M3)	Flow (M3)	Flow (M3)	Flow (M3)	Flow (M3)	Flow (M3)	Flow (M3)	Flow (M3)	Flow (M3)	Flow (M3)	Flow (M3)	Flow (M3)
Min:	15102	15330	15150	15698	13137	12366	11015	10845	10968	11143	14711	17805
Max:	45042	40839	44849	42584	22988	25651	22608	20122	31739	25576	37152	51425
Avg:	21241	21544	25153	23116	16625	14303	13405	13167	14568	15435	23024	28964
Total:	658463	624773	779755	693477	515367	429099	415553	408171	437046	478491	690731	897879
1	18446	17161	15336	142584	15136	14093	12241	13413	11756	13422	16505	33277
2	17429	16272	15150	34451	216728	214029	212198	213807	211601	213837	215769	30481
3	16722	16853	27630	28865	322988	314829	316936	312263	312264	312828	318177	25744
4	16251	417838	431972	434785	418854	415648	412388	413860	411601	412201	416609	25197
5	17972	536197	521168	530896	516804	513822	511809	513592	510968	512337	515600	21840
6	20395	640839	620326	626843	615596	613353	611309	613270	611978	612190	614711	20128
7	22738	733584	718557	724814	719404	712855	711588	712732	718262	712242	719708	18694
8	22680	827256	817428	822571	818388	813724	811545	815121	813084	820189	831559	818290
9	45042	925613	916497	923645	916085	916090	911394	915733	918136	914398	919911	929987
10	37695	1023523	1017122	1022250	1014957	1025651	1011015	1020122	1013051	1012959	1018012	1034131
11	31923	1120653	1117203	1130496	1119945	1115550	1111502	1114218	1112265	1112541	1116438	1136716
12	25276	1219553	1218331	1231874	1219005	1214342	1211737	1212526	1212503	1212195	1215854	1227251
13	23433	1318515	1319046	1328419	1316733	1313874	1311132	1314439	1322366	1312534	1327667	1323424
14	24631	1417814	1424742	1426024	1418660	1413188	1411362	1414262	1431739	1412278	1423030	1424590
15	22804	1517072	1530290	1522534	1517529	1513156	1511032	1512399	1525236	1511143	1537152	1538189
16	20952	1616390	1628956	1621355	1615711	1613392	1611244	1611302	1616305	1619308	1636801	1632534
17	20826	1726144	1725341	1720364	1716184	1713387	1711844	1711217	1715257	1713497	1736385	1725622
18	22495	1829520	1821829	1818983	1820092	1813344	1811412	1813169	1814104	1812987	1829586	1822707
19	19709	1927943	1944849	1918983	1917262	1913102	1919971	1912675	1913658	1912988	1924622	1921585
20	18355	2021352	2039313	2018314	2016064	2013004	2020136	2012552	2013107	2015901	2021989	2019486
21	17539	2119501	2131547	2117654	2116537	2114371	2115599	2113752	2113035	2119387	2120342	2119034
22	17131	2218816	2227782	2217049	2216645	2213272	2215058	2213765	2213064	2225576	2219186	2217982
23	16626	2317873	2325996	2316733	2315248	2313449	2316022	2311339	2312572	2312541	2318975	2317805
24	15813	2417618	2424849	2416376	2414300	2412366	2414384	2411789	2412463	2412725	2422602	2428414
25	15452	2516784	2525350	2516314	2513944	2513359	2512346	2512529	2512291	2516908	2530722	2547166
26	15102	2617130	2625441	2615787	2614318	2612856	2612487	2611670	2612217	2619064	2630647	2631716
27	15650	2716186	2727421	2716094	2714098	2712534	2712176	2711935	2712138	2719957	2725670	2751425
28	15960	2815443	2831085	2816941	2813673	2819909	2813423	2813540	2812306	2816216	2823242	2843298
29	21972	2915330	2928698	2915781	2914419	2913488	2913046	2912765	2912409	2922479	2921607	2941735
30	23116	3023116	3026313	3015698	3013137	3013062	3022608	3011570	3015310	3022270	3021653	3036834
31	18328	3134187	31316923	3116923	3116923	3114629	3114629	3110845	3110845	3119393	3121653	3132597

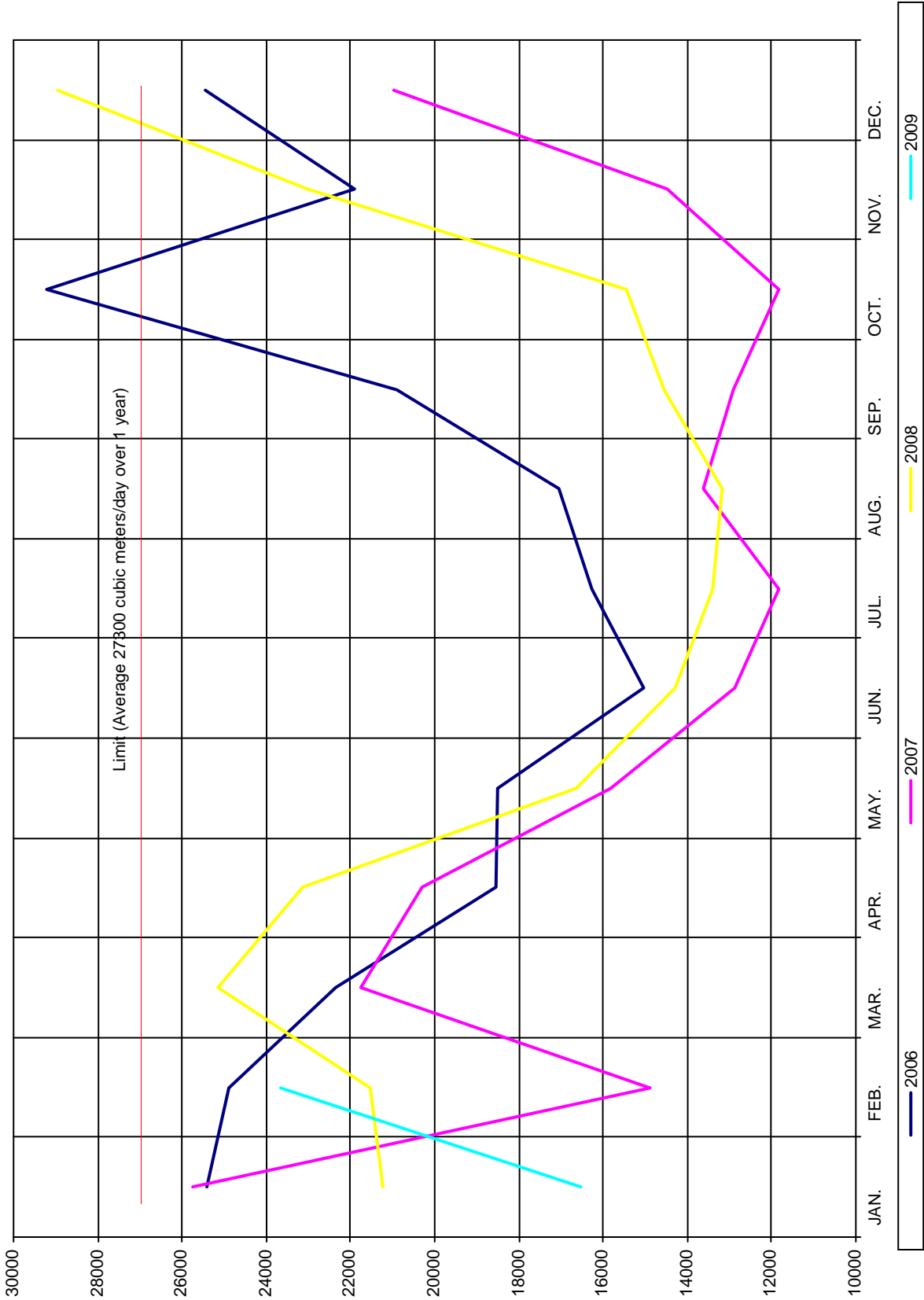
Corporation of the City of St. Thomas - Water Pollution Control Plant

Table 2 - Monthly Flow Summary

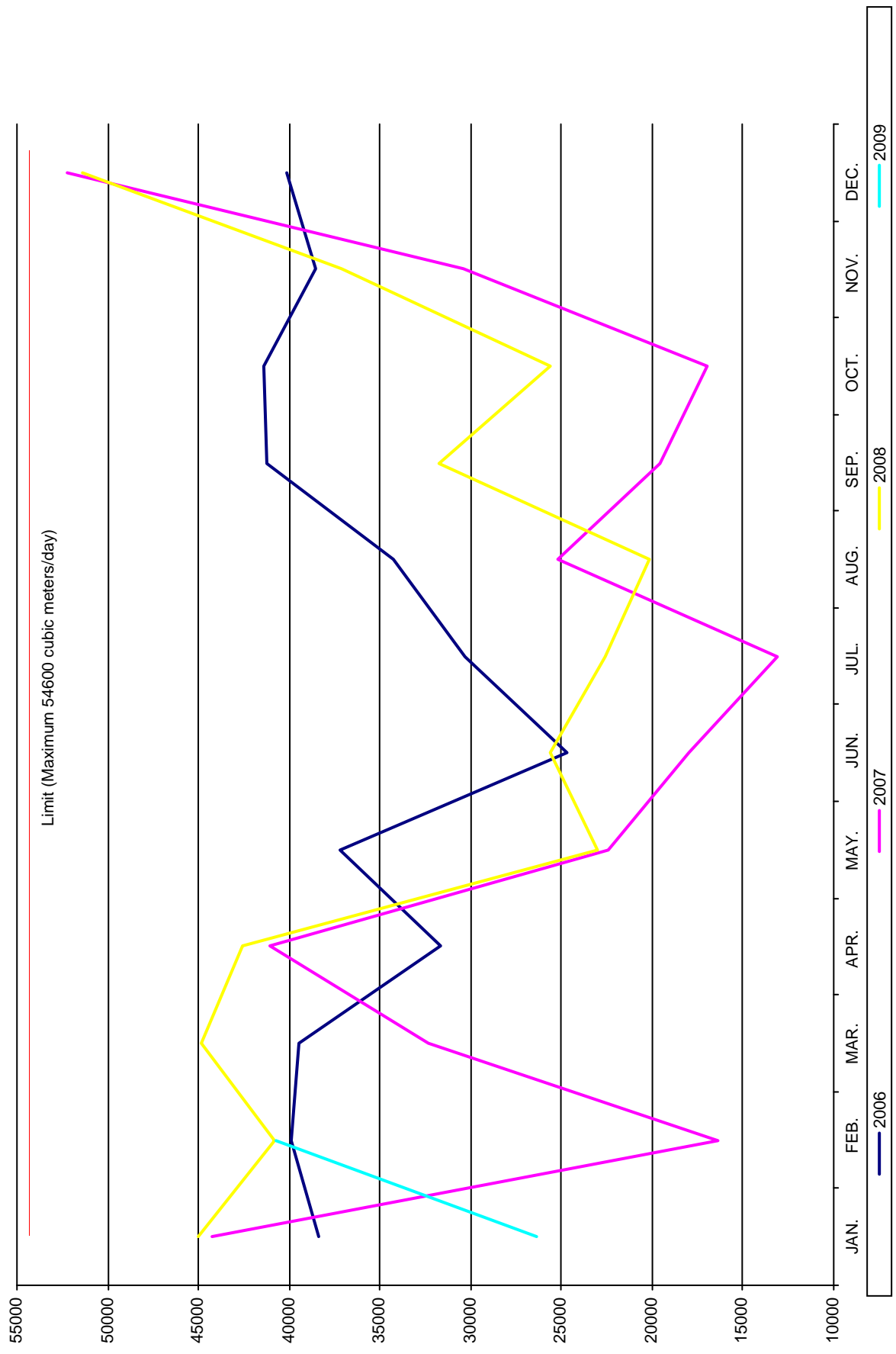
Month of: 2009	Total Flow (m3)	Average Flow (m3)	Min. Flow (m3)	Max. Flow (m3)
January 2009	512614	16536	12939	26330
February 2009	496975	23665	12650	40727
Totals:	1009589	20101	12650	40727
Month of: 2008	Total Flow (m3)	Average Flow (m3)	Min. Flow (m3)	Max. Flow (m3)
January 2008	658463	21241	15102	45042
February 2008	624773	21544	15330	40839
March 2008	779755	25153	15150	44849
April 2008	693477	23116	15698	42584
May 2008	515367	16625	13137	22988
June 2008	429099	14303	12366	25651
July 2008	415553	13405	11015	22608
August 2008	408171	13167	10845	20122
September 2008	437046	14568	10968	31739
October 2008	478491	15435	11143	25576
November 2008	690731	23024	14711	37152
December 2008	897879	28964	17805	51425
Totals:	7028805	19212	10845	51425
Month of: 2007	Total Flow (m3)	Average Flow (m3)	Min. Flow (m3)	Max. Flow (m3)
January 2007	798152	25747	16447	44273
February 2007	416530	14876	13768	16366
March 2007	673833	21737	15199	32309
April 2007	609155	20305	15677	41105
May 2007	490773	15831	13234	22458
June 2007	386690	12890	11073	17976
July 2007	366346	11818	10954	13127
August 2007	421916	13610	11046	25229
September 2007	387442	12915	10633	19531
October 2007	366493	11822	10484	16973
November 2007	434292	14476	11085	30369
December 2007	650634	20988	13224	52240
Totals:	6002256	16418	10484	52240

Friday, March 13, 2009

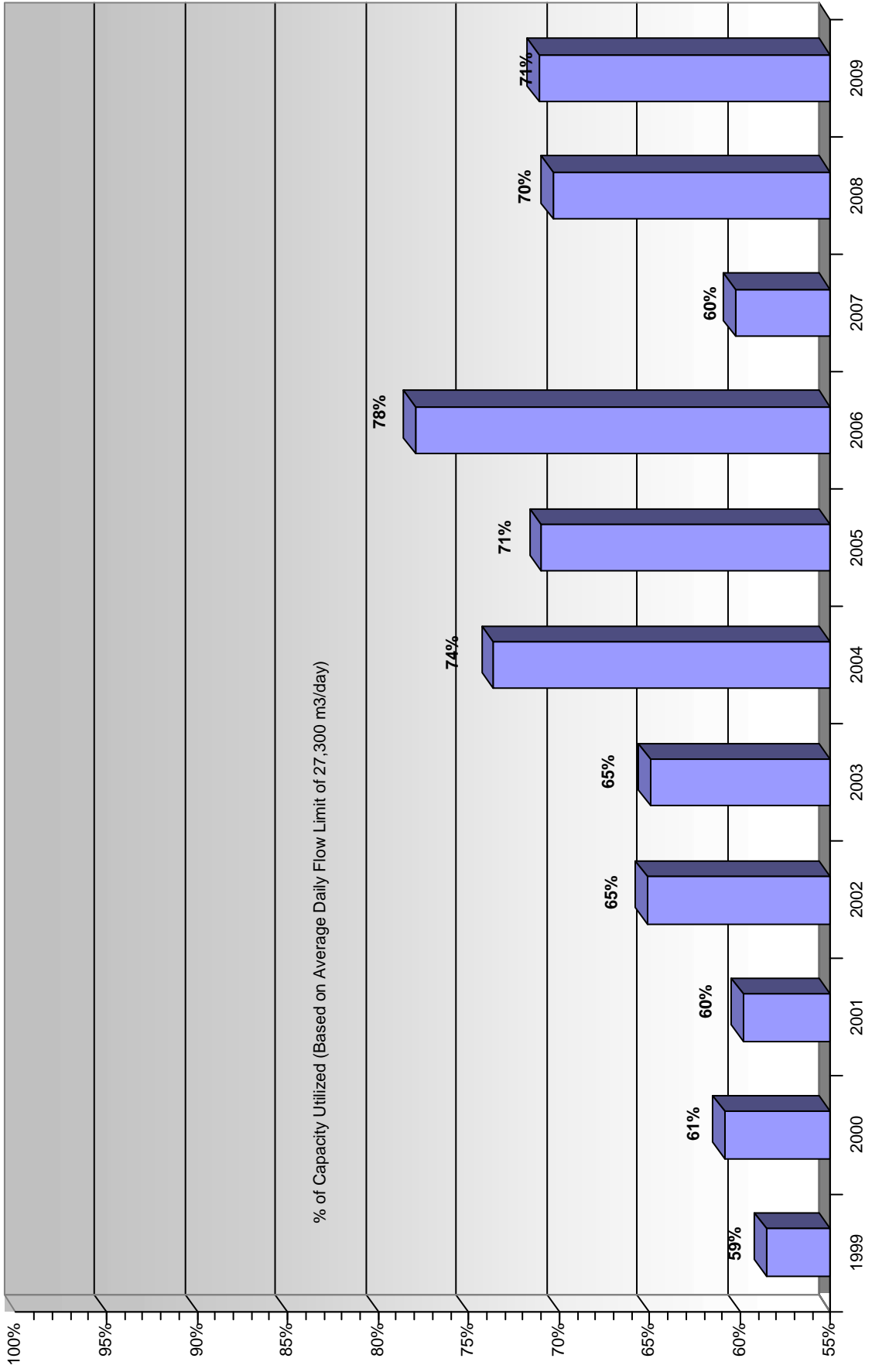
City of St. Thomas Water Pollution Control Plant
 Chart 1 - Average Daily Flow (Cubic Meters)



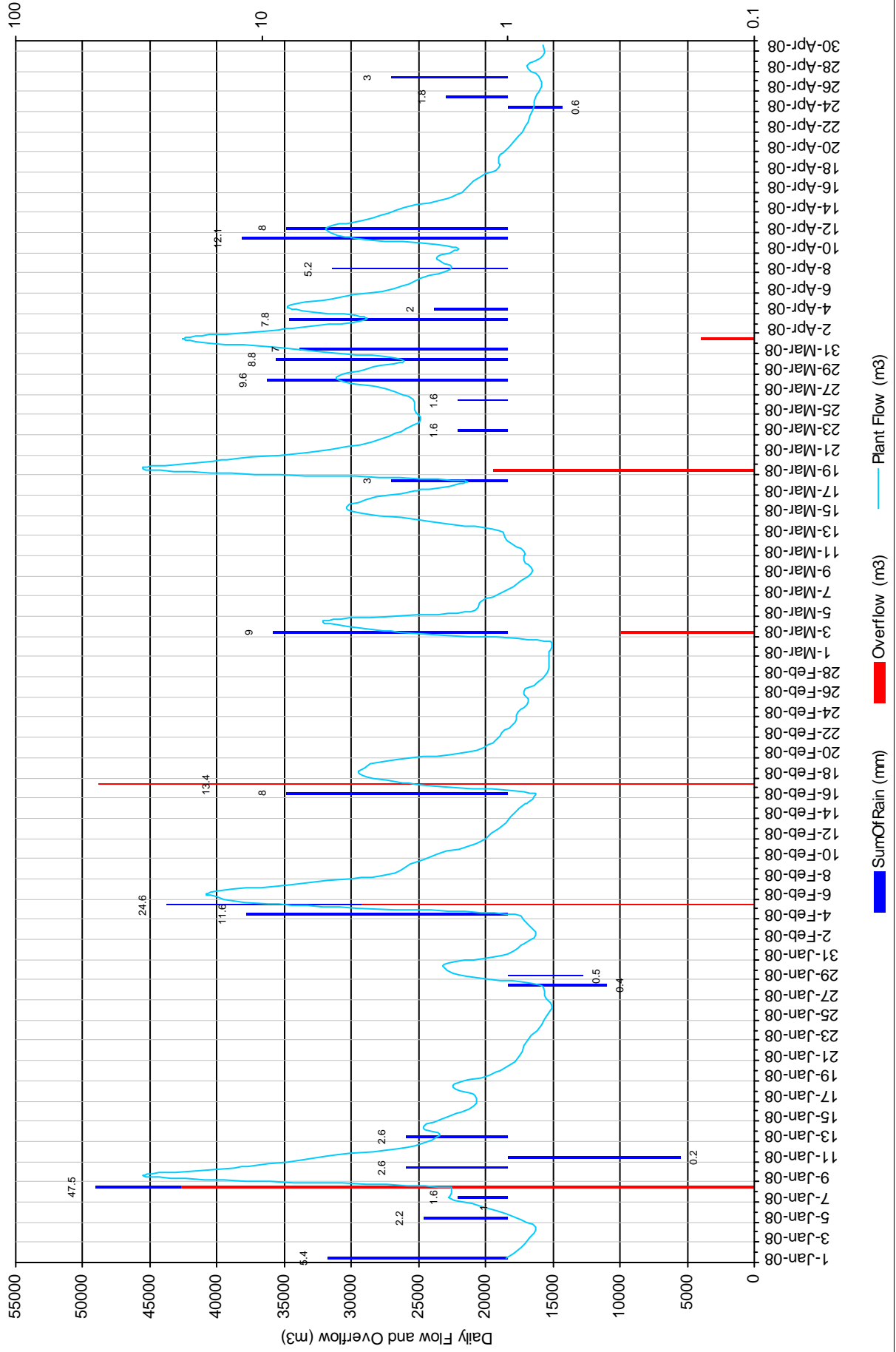
City of St. Thomas Water Pollution Control Plant
 Chart 2 - Maximum Daily Flow (Cubic Meters/Day)



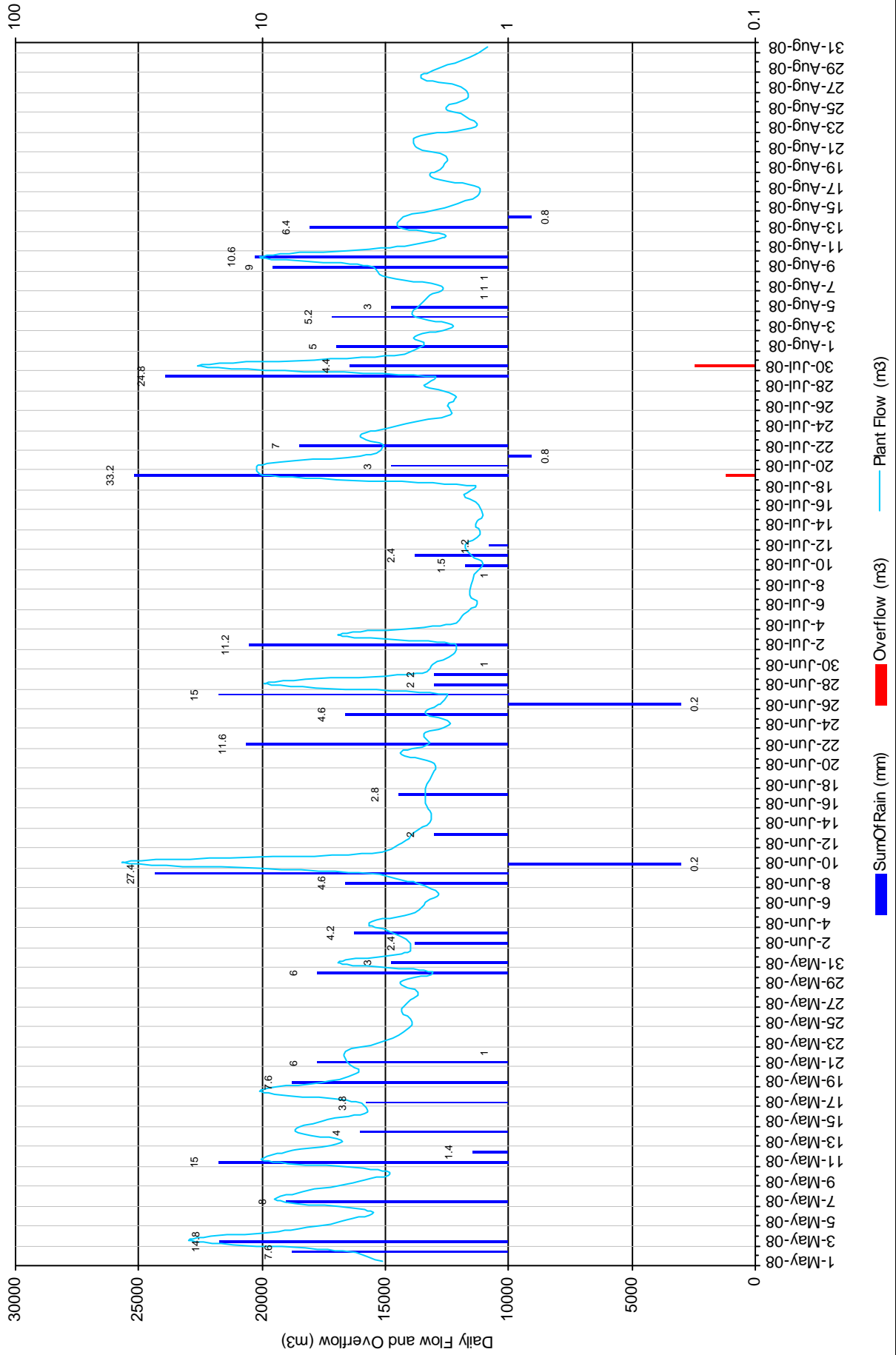
City of St. Thomas - Water Pollution Control Plant
Chart 3 - Annual % Capacity Utilized



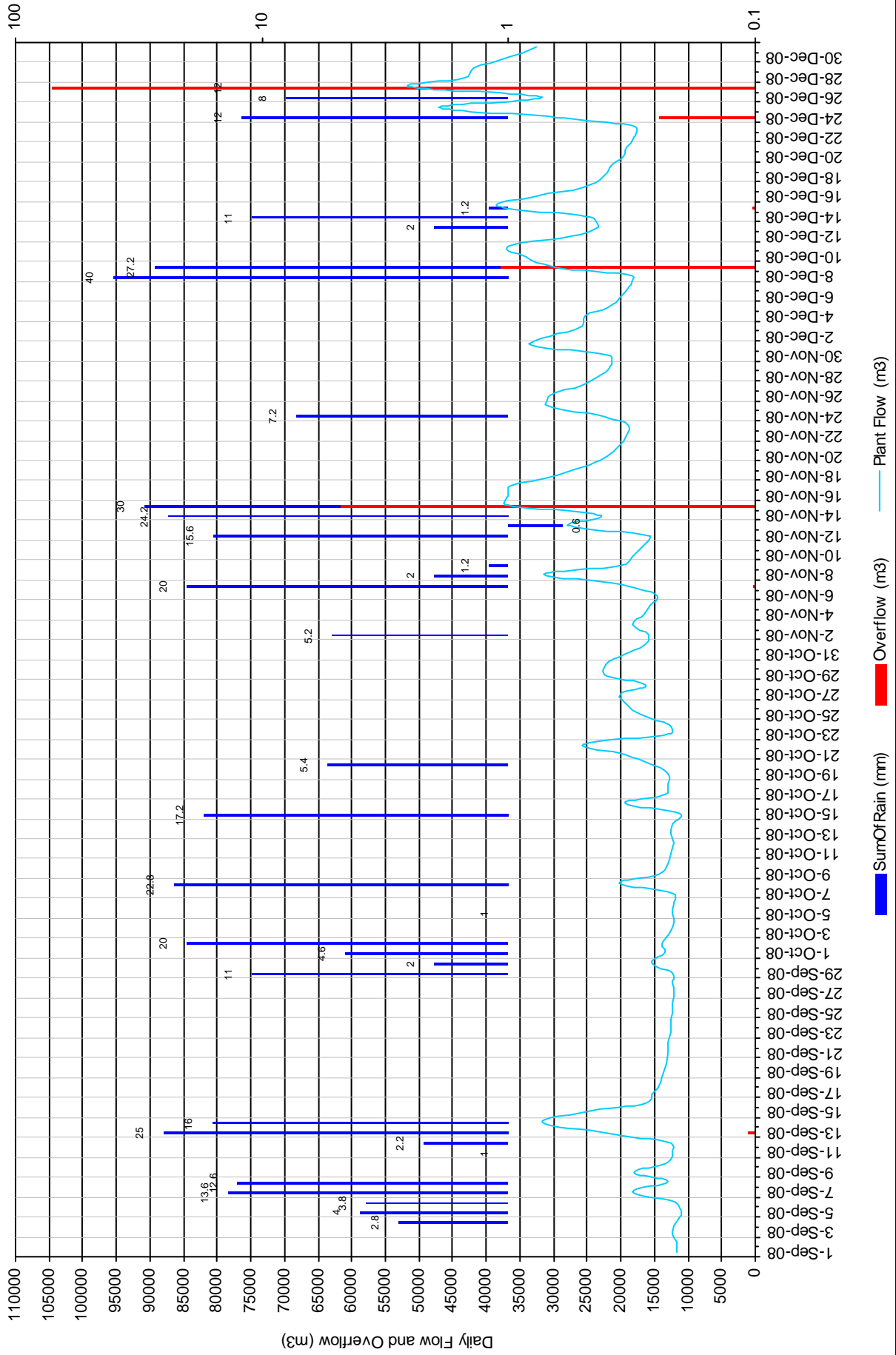
City of St. Thomas - Water Pollution Control Plant
 Chart 3C Daily Flow (m3) vs Rain Fall (mm) vs Overflow (m3)



City of St. Thomas - Water Pollution Control Plant
 Chart 3C Daily Flow (m3) vs Rain Fall (mm) vs Overflow (m3)



City of St. Thomas - Water Pollution Control Plant
 Chart 3C Daily Flow (m3) vs Rain Fall (mm) vs Overflow (m3)



The Corporation of the City of St. Thomas - Water Pollution Control Plant
 Table 3 - Weekly Plant Analytical Data

Date	pH	Temp C Eff	CBOD (mg/L)		TSS (mg/L)		Amm (mg/L)		TKN (mg/L)		NO2		NO3		NO2NO3		TP (mg/L)		Ecoli Final Eff.		UV% Power		Pb Inf.		U1 Amm Eff. (19 ug/L)
			Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	
02-Jan-08	6.8	12	79	5	59	7	0.2	18.4	0.25	1.4	0.58	17.9	18.5	18.5	18.5	18.5	1.77	0.43	22	60%	60%	0.001	0.27		
09-Jan-08	7.2	10.9	3	3	7	7	0.5	16.7	1.4	0.58	17.9	18.5	18.5	18.5	18.5	1.97	0.55	244	160%	160%	0.001	1.57			
16-Jan-08	7.2	12.2	3	3	5	5	0.1	18.2	0.5	0.24	18.5	18.7	18.7	18.7	18.7	2.27	0.54	4	60%	60%	0.001	0.35			
23-Jan-08	6.8	11.3	3	3	6	6	0.2	26.5	0.25	0.22	22.3	22.5	22.5	22.5	22.5	3.92	0.52	42	60%	60%	0.001	0.26			
30-Jan-08	6.4	10.6	0.5	0.5	10	10	0.2	19	2	0.32	19.6	19.9	19.9	19.9	19.9	1.95	0.73	58	64%	64%	0.001	0.10			
			79	3	59	7	0.24	19.76	0.88	0.29	19.36	19.64	19.64	19.64	19.64	2.38	0.55								
06-Feb-08	6.5	8.8	49	6	44	8	0.3	11	0.5	0.43	14.7	15.1	15.1	15.1	15.1	1.1	0.56	74	184%	184%	0.001	0.16			
13-Feb-08	6.4	10.5	2	2	9	9	0.2	23.1	1.8	1.26	18.9	20.2	20.2	20.2	20.2	2.91	0.54	1	160%	160%	0.001	0.10			
18-Feb-08																		120	0%	0%					
19-Feb-08			3	3	11	11	1.1	10.7	1.6	1.29	10.5	11.8	11.8	11.8	11.8	1.52	0.53	2200	0%	0%					
20-Feb-08			9	9	7	7	0.3	17.4	1.3	1.1	13	14.1	14.1	14.1	14.1	1.41	0.33	8	100%	100%					
27-Feb-08	7.1	10.1	9	9	3	3	1.4	23.9	2.5	1.76	17.1	18.9	18.9	18.9	18.9	1.71	0.5	4	100%	100%					
			49	6	44	8	0.66	17.22	1.54	1.17	14.84	16.02	16.02	16.02	16.02	1.73	0.49								
05-Mar-08	6.3	9.9	48	0.5	49	2	0.8	16.5	1.2	1.52	11.8	13.3	13.3	13.3	13.3	1.48	0.38	16	80%	80%	0.001	0.29			
12-Mar-08	7	10.5	3	3	4	4	1.1	22.5	1.9	2.78	17	19.8	19.8	19.8	19.8	2.55	0.63	2	96%	96%	0.001	2.12			
19-Mar-08	6.9	8.3	6	6	10	10	0.2	10.8	1	1.24	12.3	13.5	13.5	13.5	13.5	1.42	0.5	126	160%	160%	0.001	0.26			
26-Mar-08	7.7	10.3	4	4	10	10	1.6	12.9	1.5	3.08	12.4	15.5	15.5	15.5	15.5	1.79	0.5	2	160%	160%	0.001	15.10			
			48	3	49	7	0.93	15.68	1.40	2.16	13.38	15.53	15.53	15.53	15.53	1.81	0.50								
02-Apr-08	6.4	9.4	48	8	78	12	0.2	9.6	0.5	1.39	8.34	9.73	9.73	9.73	1.98	0.5	72	180%	180%	0.001	0.09				
09-Apr-08	6.6	13.1	3	3	7	7	0.6	15.4	1.6	1.9	13.4	15.3	15.3	15.3	2.08	0.63	14	124%	124%	0.001	0.56				
16-Apr-08	6.8	11	5	5	6	6	0.7	16	1.2	1.04	14.7	15.7	15.7	15.7	2.35	0.56	4	176%	176%	0.001	0.89				
23-Apr-08	6.9	13.5	2	2	4	4	0.4	21	0.8	0.55	21	21.6	21.6	21.6	2.76	0.64	1	196%	196%	0.001	0.77				
29-Apr-08																		2940	0%	0%					
30-Apr-08	7.2	13.2	4	4	4	4	1.4	23.3	1.2	0.54	22.3	22.8	22.8	22.8	2.46	0.66	74	96%	96%	0.001	5.26				
			48	4	78	7	0.66	17.06	1.06	1.08	15.95	17.03	17.03	17.03	2.33	0.60									
07-May-08	7	14	127	3	144	3	0.5	27.5	0.25	0.26	21.5	21.8	21.8	21.8	2.75	0.4	10	60%	60%	0.001	1.26				
14-May-08	6.9	14.3	3	3	4	4	0.2	24.3	0.25	0.19	21.4	21.6	21.6	21.6	2.65	0.39	1	60%	60%	0.001	0.41				
21-May-08	7.3	14.1	4	4	3	3	0.3	25.4	2	0.23	19	19.2	19.2	19.2	2.59	0.35	4	60%	60%	0.001	1.52				
28-May-08	7.8	15.5	3	3	6	6	0.2	26.9	0.8	0.33	23.1	23.4	23.4	23.4	3.2	0.65	24	60%	60%	0.001	3.52				
			127	3	144	4	0.30	26.03	0.83	0.25	21.25	21.50	21.50	21.50	2.80	0.45									

The Corporation of the City of St. Thomas - Water Pollution Control Plant
 Table 3 - Weekly Plant Analytical Data

Date	pH	Temp C Eff	CBOD (mg/L)		TSS (mg/L)		Amm (mg/L)		TKN (mg/L)		NO2		NO3 NO2NO3		TP (mg/L)		Ecoli Final Eff.	UV% Power	Pb Inf.	U1 Amm Eff. (19 ug/L)
			Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.						
04-Jun-08	6	16.3	110	3	156	3	0.6	21.9	1.4	0.34	21.4	21.7	2.88	0.7	8	60%	0.18			
11-Jun-08	6.1	17.1	93	4	474	4	0.3	21.2	2.1	0.22	14.4	14.6	2.27	0.63	46	96%	0.12			
18-Jun-08	6.6	17.7	129	6	197	6	0.6	32.5	1.1	0.34	23.5	23.8	2.86	0.76	2	60%	0.80			
25-Jun-08	6.4	18.4		5		3	0.05	24.8	0.5	0.03	22.9	22.9	3.49	0.75	4	60%	0.04			
			110.7	5	276	4	0.39	25.10	1.28	0.23	20.55	20.75	2.88	0.71						
02-Jul-08	6.3	20.3	130	2	282	2	0.9	29.2	2.2	0.3	18.9	19.2	7.82	0.54	4	60%	0.73			
09-Jul-08	6.4	19.3		4		4	0.5	23.8	1.8	0.48	23.8	24.3	2.92	0.44	6	60%	0.47			
16-Jul-08	6.4	21.4		4		4	0.5	28.2	2	0.16	24.9	25.1	1.74	0.54	20	60%	0.55			
23-Jul-08	6.7	19.8		4		4	0.7	19.8	1.2	0.13	19.8	19.9	2.28	0.5	2	60%	1.37			
30-Jul-08	6.8	20.6		8		4	1.1	29.9	3.3	0.27	22	22.3	5.21	0.74	4	65%	2.86			
			130	4	282	4	0.74	26.18	2.10	0.27	21.88	22.16	3.99	0.55						
06-Aug-08	6.7	21	120	3	155	6	0.2	25.4	3.7	0.18	23.3	23.5	3.26	0.75	42	60%	0.43			
13-Aug-08	6.8	20.7		2		5	0.05	22.1	0.7	0.11	22.9	23	2.53	0.6	32	60%	0.13			
20-Aug-08	6.85	20.3		8		4	2.3	23.5	3	0.36	20.5	20.9	3.1	0.64	90	60%	6.57			
27-Aug-08				3		7	1.4	24.8	4	0.25	24.2	24.5	3.57	0.82	22					
			120	4	155	6	0.99	23.95	2.85	0.23	22.73	22.98	3.12	0.70						
03-Sep-08	6.9	21.6		2		4	1.5	21.6	2.2	0.16	18.9	19.1	3.65	0.96	12	60%	5.28			
10-Sep-08	6.9	20.2		3		4	0.2	19.8	1.5	0.03	17.3	17.3	2.41	0.55	10	60%	0.64			
17-Sep-08	6.8	20.4		3		3	0.05	18.3	0.9	0.03	14.3	14.3	1.42	0.42	6	60%	0.13			
24-Sep-08	7.5	20.9		3		3	0.05	28	1.7	0.03	20.8	20.8	3.51	0.46	2	60%	0.66			
30-Sep-08			136		248											60%				
			136	3	248	4	0.45	21.93	1.58	0.06	17.83	17.88	2.75	0.60						
01-Oct-08			130	3	128	3	3.4	28.9	3.9	0.09	14.8	14.9	3.16	0.45	6					
08-Oct-08	6.85	19.7		5		8	5	14.8	6.2	0.16	15.9	16.1	3.88	0.55	18	60%	13.68			
15-Oct-08	7.3	19.9		2		7	4.7	33.4	5.3	0.23	16.4	16.6	4.76	0.62	10	60%	36.58			
22-Oct-08	7.3	18.6		4		4	3.2	28.7	3.9	0.21	16.3	16.5	3.46	0.4	4	60%	22.65			
29-Oct-08	7	17		5		8	2.3	23.8	2.1	0.41	14.8	15.2	2.94	0.53	10	60%	7.28			
			130	4	128	6	3.72	25.92	4.28	0.22	15.64	15.86	3.64	0.51						
05-Nov-08	7.3	17.1		6		10	1.6	21.5	1.9	0.5	17	17.5	2.15	0.71	20	60%	10.14			
12-Nov-08	7.5	16.1		4		4	0.2	40	4.2	0.44	18	18.4	4.34	0.53	8	60%	1.86			
20-Nov-08	7.4	15	72	3	124	7	0.2	17.4	1.3	0.03	14.3	14.3	2.33	0.4	8	64%	1.36			
26-Nov-08	7.4	14.2		4		10	0.2	12	0.44	0.12	13.2	13.3	0.82	0.44	4	174%	1.28			
			72	4	124	8	0.55	22.73	1.96	0.27	15.63	15.88	2.41	0.52						

The Corporation of the City of St. Thomas - Water Pollution Control Plant
 Table 3 - Weekly Plant Analytical Data

Date	pH	Temp C		CBOD (mg/L)		TSS (mg/L)		Amm (mg/L)		TKN (mg/L)		NO2		NO3		NO2NO3		TP (mg/L)		Ecoli		UV%		Pb		Uf Amm					
		Eff	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Final	Eff.	Power	Inf.	Eff.	Inf.	Eff.	Inf.				
03-Dec-08	7.4	13.5	49	3	54	7	0.05	0.6	0.08	12.3	12.4	0.73	0.36	18	74%	0.30															
10-Dec-08	7.4	11.2		3		2	0.4	0.9	0.38	13.5	13.9	1.14	0.3	28	160%	2.04															
17-Dec-08	7.6	12.1								11.6		1.5		172	65%																
18-Dec-08				1		4	0.05	0.25	0.15	14.2	14.4		0.34																		
22-Dec-08	7.3	11.9		3		7	0.05	18.1	0.9	0.08	16.9	17	2.35	0.38	30	60%	0.21														
29-Dec-08	7.4	10.6		5		12	0.4	6.3	0.5	0.17	9.57	9.74	0.69	0.25	72	160%	1.95														
				49	3	54	6	0.19	11.80	0.63	0.17	13.29	13.49	1.28	0.33																

The Corporation of the City of St. Thomas - Water Pollution Control Plant

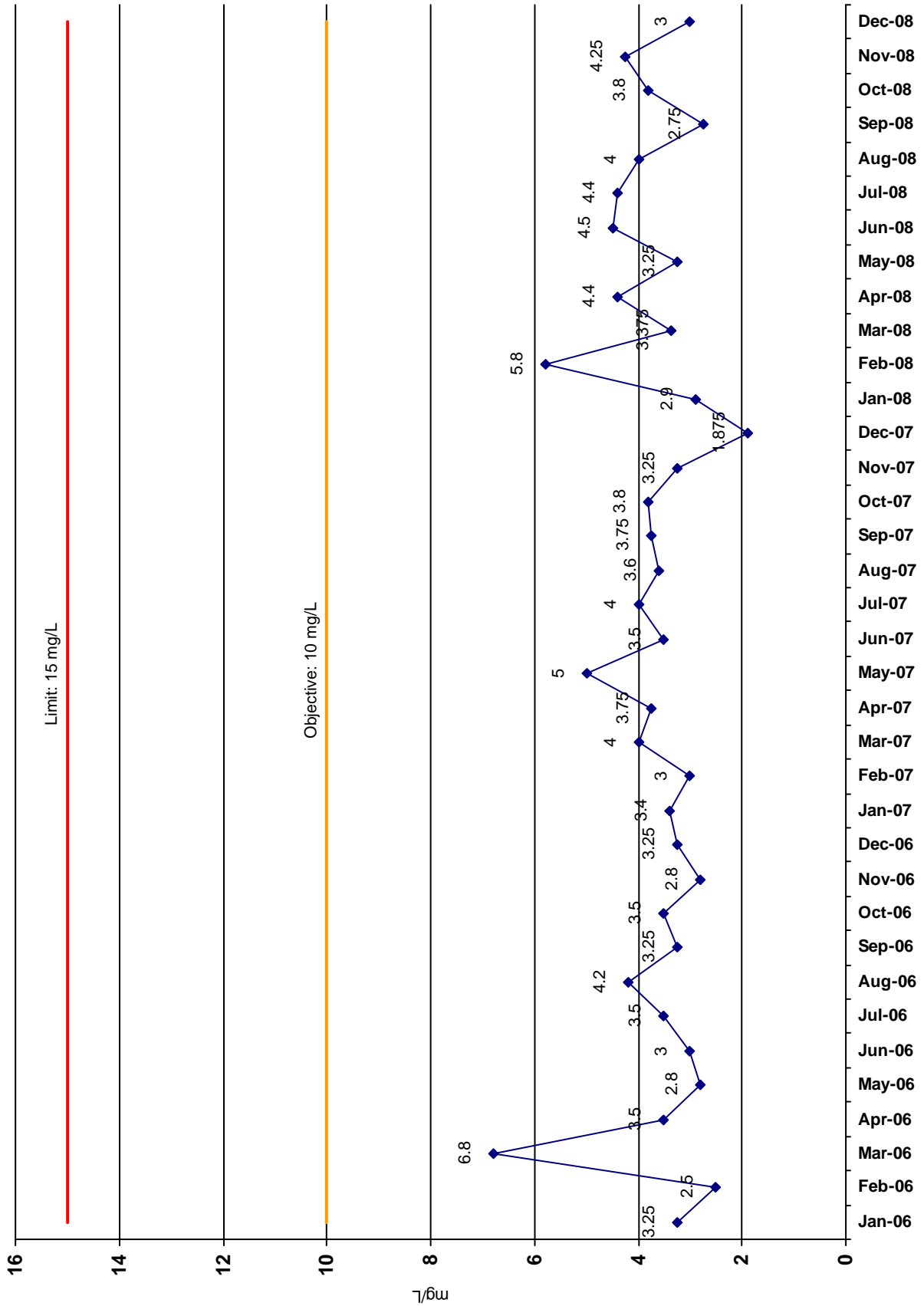
Table 4 - Monthly Average Influent/Effluent Concentrations and Loadings

Date	# of Days	Total Flow (m3)	# of Samples	CBOD		TSS		Eff. Amm		TKN		TP		E.coli		pH
				Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	
				15(10)mg/L	20(15)mg/L	D-A (3) M-N 5(1)mg/L	M-N 136.5 (27.3)	M-N 136.5 (27.3)	D-A 81.9 kg/d	1(0.8)mg/L	27.3(21.8 kg/d)	1(0.8)mg/L	27.3(21.8 kg/d)	Geomean	Min/Max	
1	January 2008	31 658463	5 1	(mg/L): 79	(kg/day): 1678	3 59	7 1253	149 5.1	0.24 0.88	19.76 0.88	2 2	0.55 11.8	35	6.4 7.2		
2	February 2008	29 624773	3 1	(mg/L): 49	(kg/day): 1056	6 125	8 164	14.2	0.66 1.54	17.22 1.54	2 2	0.49 10.6	29	6.4 7.1		
3	March 2008	31 779755	4 1	(mg/L): 48	(kg/day): 1207	3 85	7 163	23.3	0.93 1.4	15.68 1.4	2 2	0.50 12.6	9	6.3 7.7		
4	April 2008	30 693477	5 1	(mg/L): 48	(kg/day): 1110	4 102	7 153	15.3	0.66 1.06	17.06 1.06	2 2	0.60 13.8	31	6.4 7.2		
5	May 2008	31 515367	4 1	(mg/L): 127	(kg/day): 2111	3 54	4 66	5.0	0.30 0.825	26.03 0.825	3 3	0.45 7.4	6	6.9 7.8		
6	June 2008	30 429099	4 3	(mg/L): 111	(kg/day): 1583	5 64	57 57	5.5	0.39 1.275	25.1 1.275	3 3	0.71 10.2	7	6 6.6		
7	July 2008	31 415553	5 1	(mg/L): 130	(kg/day): 1743	4 59	48 48	9.9	0.74 2.1	26.18 2.1	4 4	0.55 7.4	5	6.3 6.8		
8	August 2008	31 408171	3 1	(mg/L): 120	(kg/day): 1580	4 53	72 72	13.0	0.99 2.85	23.95 2.85	3 3	0.70 9.2	40	6.7 6.85		
9	September 2008	30 437046	4 1	(mg/L): 136	(kg/day): 1981	3 40	51 51	6.6	0.45 1.575	21.93 1.575	3 3	0.60 8.7	6	6.8 7.5		
10	October 2008	31 478491	4 1	(mg/L): 130	(kg/day): 2007	4 59	93 93	57.4	3.72 4.28	25.92 4.28	4 4	0.51 7.9	8	6.85 7.3		
11	November 2008	30 690731	4 1	(mg/L): 72	(kg/day): 1658	4 98	178 178	12.7	0.55 1.96	22.73 1.96	2 2	0.52 12.0	8	7.3 7.5		
12	December 2008	31 897879	5 1	(mg/L): 49	(kg/day): 1419	3 87	185 185	5.5	0.19 0.63	11.8 0.63	1 1	0.33 9.4	45	7.3 7.6		
Annual Averages		366 7028805	50 14	(mg/L): 92	(kg/day): 1594	4 74	2284 115	14	0.82 1.70	21.11 1.70	3 3	0.54 47	10			

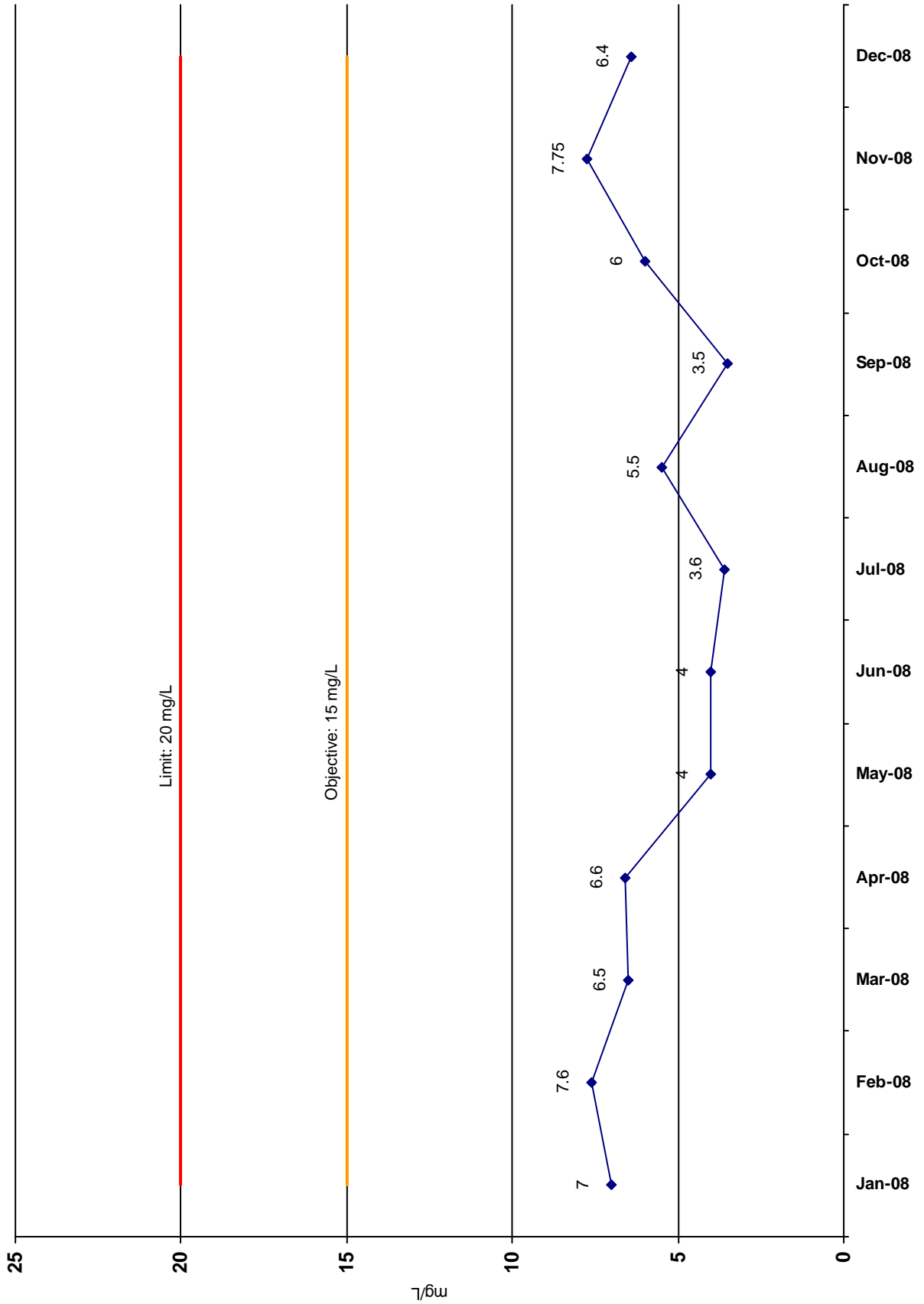
May to November Limits
December to April Limits

Monday, March 16, 2009

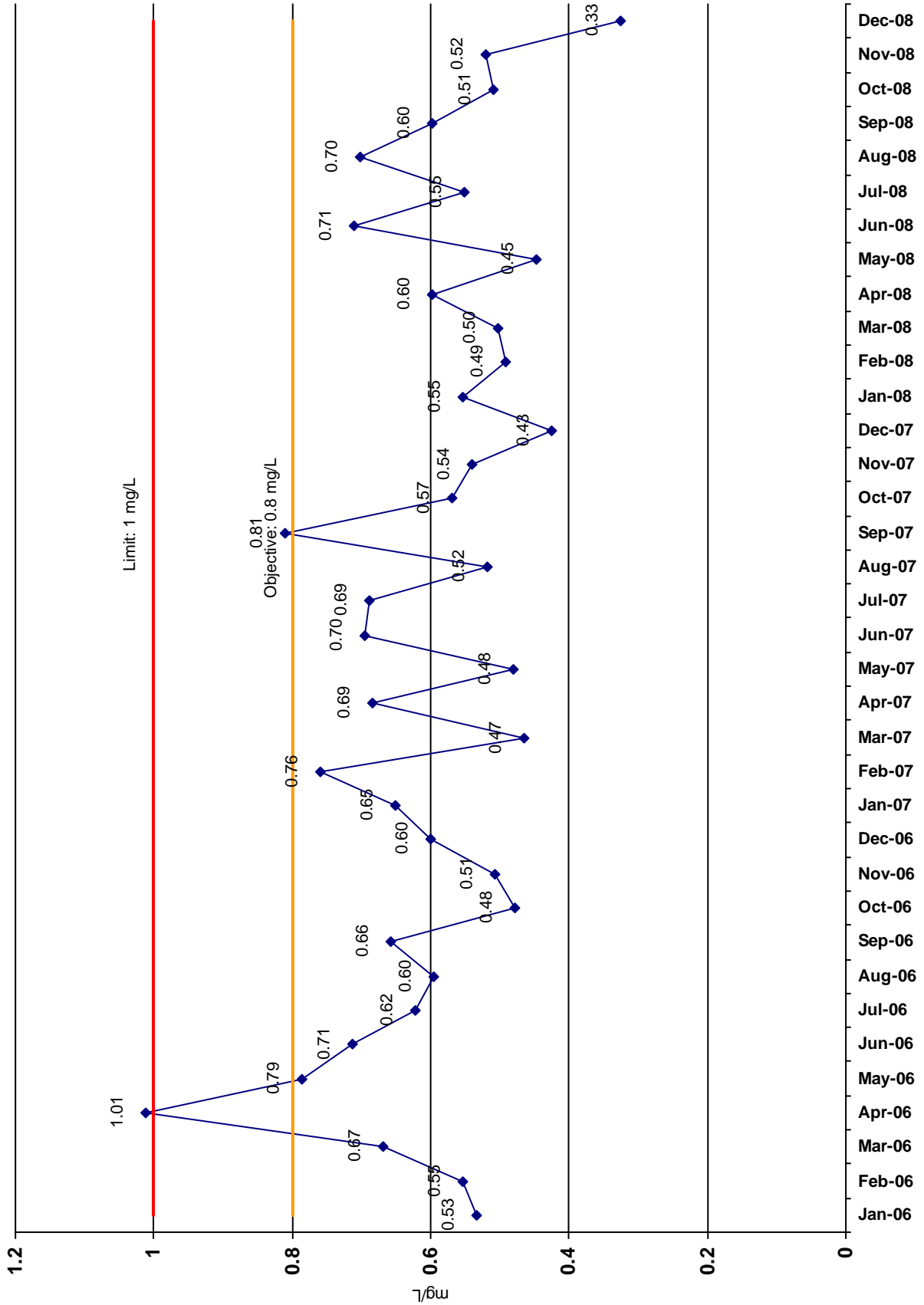
Corporation of the City of St. Thomas - Water Pollution Control Plant
 Chart 4 - Monthly Average Effluent CBOD (mg/L)



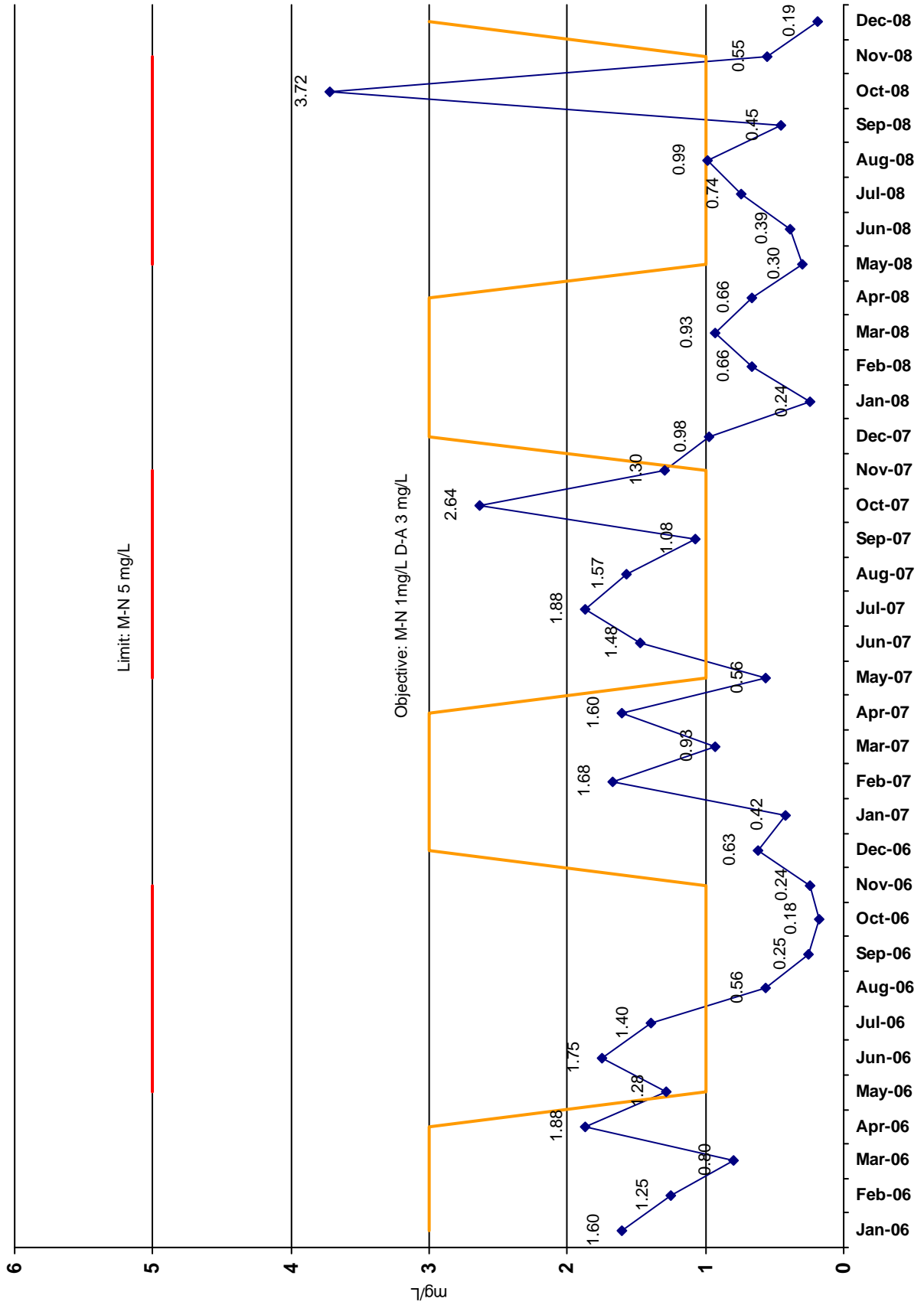
Corporation of the City of St. Thomas - Water Pollution Control Plant
 Chart 5 - Monthly Average Effluent TSS (mg/L)



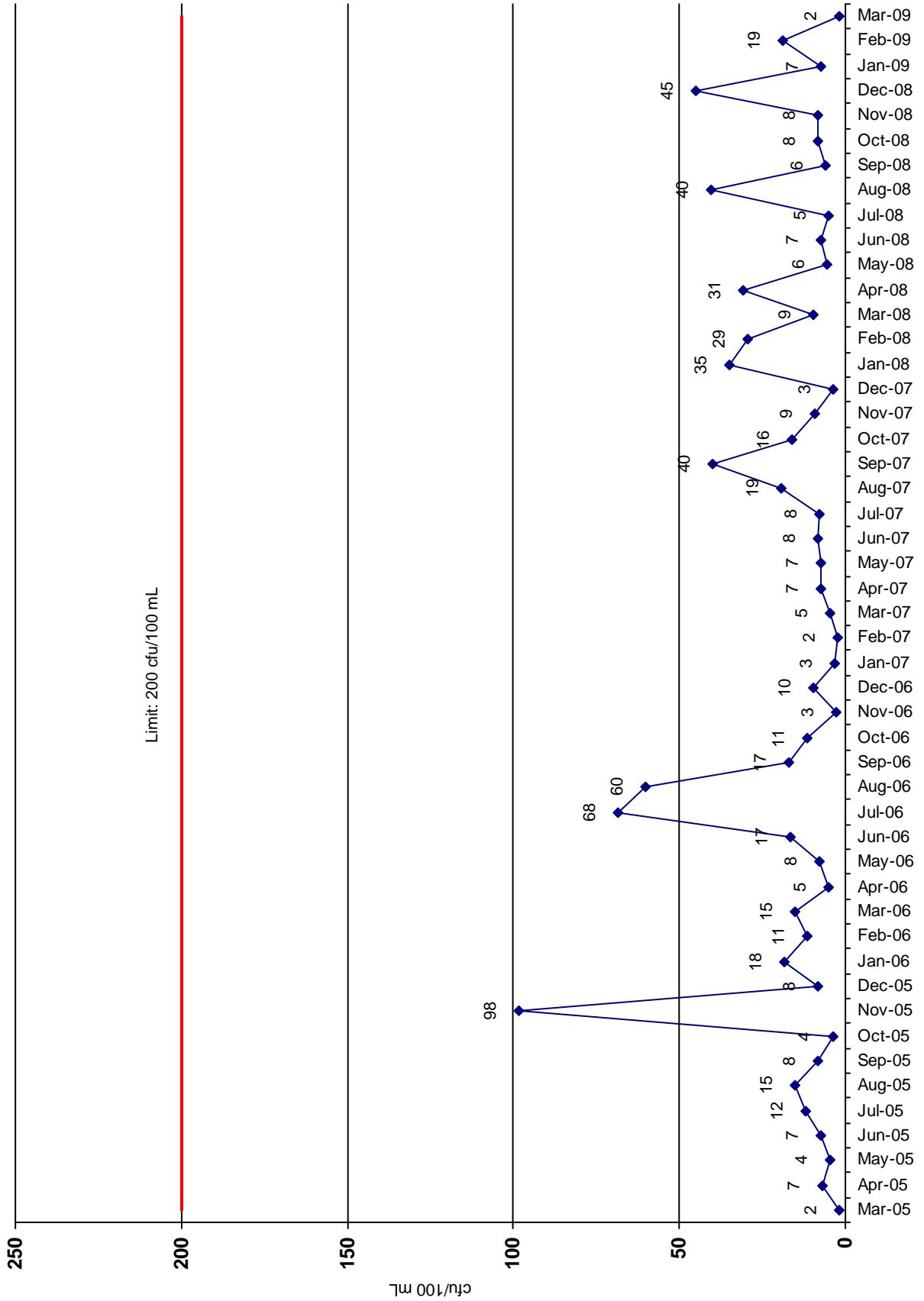
Corporation of the City of St. Thomas - Water Pollution Control Plant
 Chart 6 - Monthly Average Effluent Total Phosphorus (mg/L)



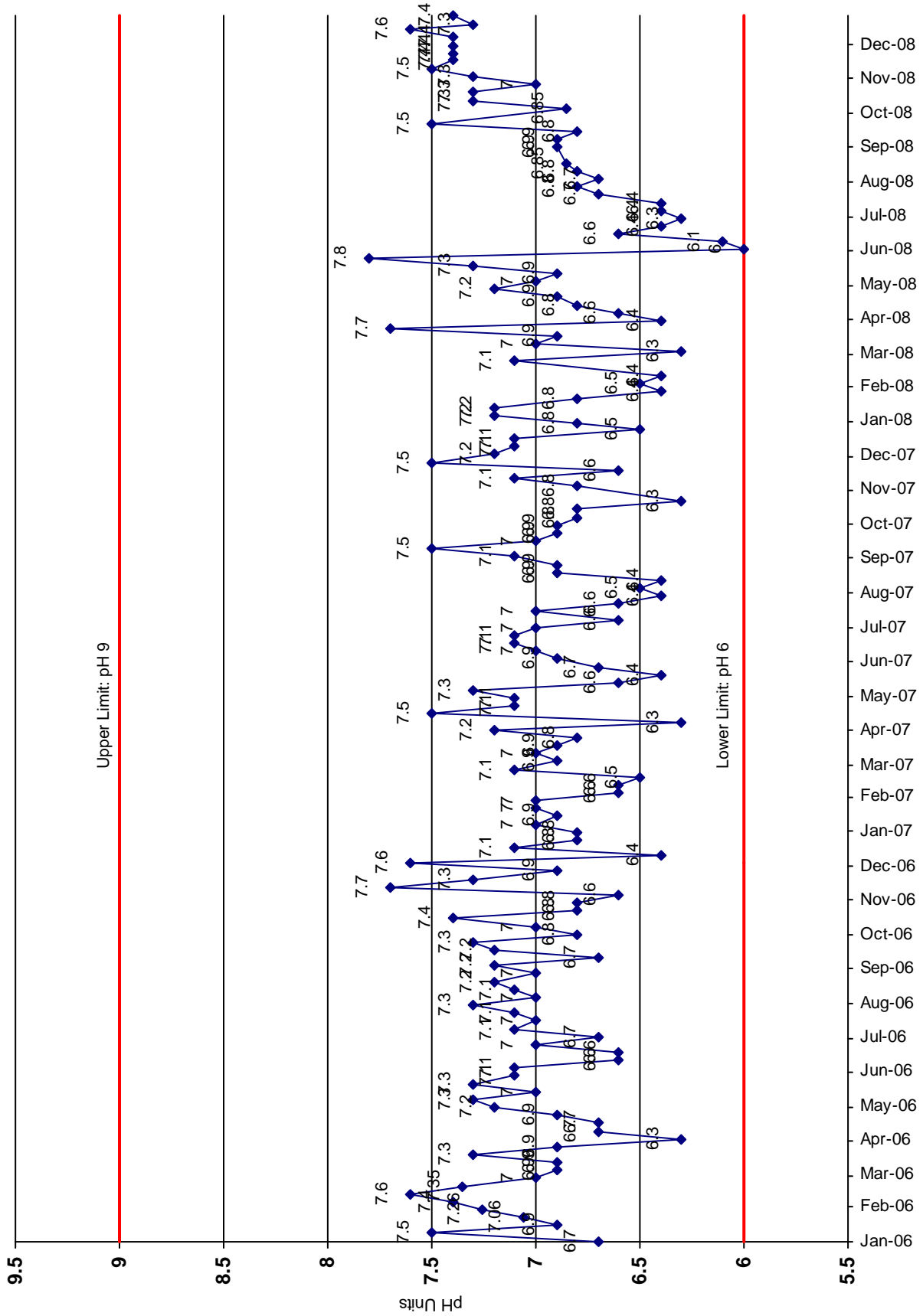
Corporation of the City of St. Thomas - Water Pollution Control Plant
 Chart 7 - Monthly Average Effluent Ammonia+Ammonium (mg/L)



Corporation of the City of St. Thomas - Water Pollution Control Plant
 Chart 8 - Monthly GeoMean Effluent E.Coli. (mg/L)



Corporation of the City of St. Thomas - Water Pollution Control Plant
 Chart 9 - Weekly Effluent pH



Data Interpretation:

The following represents a comprehensive interpretation of all monitoring and analytical data obtained during the 2008 reporting period, comparing plant effluent quality and quantity to the criteria stipulated in the C of A in Conditions 1.1 through 1.8.

Peak Flow:

The highest peak flow measured through the plant at any one time was December 2008 at 51425 m³/day. This represents 94% of the C of A limit peak flow rate of 54600 m³/day.

Average Daily Flow:

The average daily flow for the year measured through the plant in 2008 was 19212 m³/day. This represents 70% of the C of A limit average daily flow of 27300 m³/day for any period greater than one (1) calendar year. A three (3) year average daily flow for, 2006–21287 m³/day, 2007-16418 m³/day and 2008–19212 m³/day is 18972 m³/day or 70% of Plant Capacity.

Overflow and Bypass:

There were no diversions of sewage from any portion of the sewage treatment plant under C of A 5276-5M9JW7 during 2008. Diversions of sewage of this nature are prohibited.

CBOD₅:

The highest monthly average CBOD₅ in effluent was 6 mg/L in February of 2008 with an annual average of 4.0 mg/L. Effluent Loadings were highest in February of 2008 at 125 kg/d averaging 74 kg/d over 2008. As per the C of A, the monthly average limit of 15 mg/L with yearly average loading limits of 409.5 kg/d were not exceeded at any time in 2008.

Suspended Solids:

The highest monthly average Suspended Solids in effluent was 8 mg/L in February and November of 2008 with an annual average of 6 mg/L. Effluent Loadings were highest in December at 185 kg/d averaging 115 kg/d over 2008. As per the C of A, the monthly average limit of 20 mg/L with annual average loading limits of 546 kg/d were not exceeded at any time in 2008.

Total Phosphorus:

The highest monthly average Total Phosphorus in effluent was 0.71 mg/L in June of 2008 with an annual average of 0.54 mg/L. Effluent Loadings were highest in April at 13.8 kg/d averaging 10 kg/d over 2008. As per the C of A, the monthly average limit of 1 mg/L with yearly average loading limits of 27.3 kg/d were not exceeded at any time in 2008.

(Ammonia + Ammonium) Nitrogen:

The highest monthly average (Ammonia + Ammonium) Nitrogen in effluent was 3.72 mg/L in October of 2008 with an annual average of 0.82 mg/L. Effluent Loadings were highest in January at 57.4 kg/d averaging 14 kg/d over 2008. As per the C of A, the monthly average limit of 5 mg/L with annual average loading limits of 136.5 kg/d between May and November were not exceeded at any time in 2008.

Effluent pH:

pH ranged from 6 to 7.8 throughout 2007. As per the C of A, the range of 6.0 to 9.5 was not exceeded at any time over 2008.

Disinfection:

The highest monthly geomean E.coli was 45 cfu/100 ml in December of 2008. As per the C of A, the monthly geomean limit of 200 cfu/100 ml was not exceeded at any time over 2008.

Operational Summaries

The following tables, Table 5 through 8, represent a summary of effluent quality assurance/control measures, major maintenance conducted at the plant, mitigative measures for environmental and operational problems, future plant alterations and upgrades and monitoring equipment calibration/maintenance procedures:

The Corporation of the City of St. Thomas - Water Pollution Control Plant

Table 5 - Summary of Effluent Quality Assurance/Control and Environmental Operating Issues

Date	Effluent Quality Assurance/Control Environmental Operating Issues	Mitigative Measures
Jan 1 - Dec 31, 2006	Ammonia slightly above objective.	In most cases, unless otherwise noted, the corrective action taken was to increase the retention time and adjust the dissolved oxygen levels.
Jan 1 - Dec 31, 2006	Phosphorous slightly above objective.	In most cases, unless otherwise noted, the corrective action taken was to increase the alum dosage.
Feb 19, 20, 2006	Plant 3N and 4A finals down for repairs	Flow diverted to other tanks.
Feb 19 - 22, 2006	Plant 4E primaries out of service for repair.	Flow diverted to other tanks.
8-Mar-06	Sludge bulking in 3S final caused by board getting stuck in channel blocking 3N aeration outfall overnight resulting in 3S being overloaded.	Shut down 3S and diverted flows to other tanks. Installed temporary baffles in finals to prevent sludge overflow. Turned on second UV bank to compensate for higher TSS.
April 2006	Leak detected in Alum System. Low Alum dosage occurring resulted in some higher Phosphorus results.	System was repaired. Alum flow resumed at normal levels.
May 1, 2006	Plant 4 Primary Tank taken down for repair possibly resulting in higher Ammonia Ammonium results.	System was repaired.
June 1, 2006	Plant 2 Aeration Tank taken down for inspection of aeration system possibly resulting in higher Ammonia Ammonium results.	System returned to normal operation ASAP. Inspection was to prepare for upgrade to aeration system.
July 1, 2006	Rising sludge in final tanks.	Increase in wasting to try and control the rising sludge problems.
June 7, 2007	Over Amm Objective.	DO's in Plant 2 and 3 are <2 mg/L little nitrification occurring. Inefficient aeration.
July 7, 2007	Over Amm Objective.	DO's in Plant 2 and 3 are <2 mg/L little nitrification occurring. Inefficient aeration.
August 7, 2007	Over Amm Objective.	DO's in Plant 2 and 3 are <2 mg/L little nitrification occurring. Inefficient aeration. Turn on additional Blower. Plant 2 and 3 aeration systems need to be upgraded!
September 7, 2007	Over Amm Objective.	Aerations needs to be upgraded, have a hard time distributing air flows.
September 7, 2007	Over Total Phosphorus Objective.	Corrective action was taken after test results were known. Increasing feed rate.
October 7, 2007	Over Amm Objective.	Aerations needs to be upgraded, have a hard time distributing air flows.
November 7, 2007	Over Amm Objective.	Aerations needs to be upgraded, have a hard time distributing air flows.
October 2008	Over Amm Objective.	Due to Digester Start-up, large volumes and possible high solids content of the supernatant went to the head works of the plant causing a greater oxygen demand in the aeration system. This time frame was during the expected 6 -8 weeks it takes to start-up a digester.

The Corporation of the City of St. Thomas - Water Pollution Control Plant

Table 6 - Summary of Major Maintenance Items

Date	Major Maintenance Items	Comments
JAN. 1/07 TO DEC. 31/07	APPROX. 480 PREVENTATIVE MAINTENANCE WORK ORDERS WERE ISSUED FOR ALL MAJOR EQUIPMENT AT THE PLANT AND PUMPING STATIONS.	PREVENTATIVE MAINTENANCE INCLUDES [BUT IS NOT ALL INCLUSIVE TO] INSPECTIONS, ADJUSTMENTS, CALIBRATIONS, TESTING, LUBRICATION, OIL CHANGES, REPLACEMENT OF WEARING PARTS, ETC.
	IN ADDITION, CORRECTIVE ACTION WAS TAKEN TO REPAIR, OR REPLACE, OR UPGRADE EQUIPMENT AS NECESSARY. EXAMPLES ARE [BUT NOT ALL INCLUSIVE];	
	MOTORISED THE PLANT EFFLUENT DISCHARGE CHANNEL GATE.	
	REPLACED 80 U.V. BULBS IN BANK "A".	
	REPLACED AN INSTRUMENT AIR COMPRESSOR IN THE BLOWER BLDG.	
	COMPLETED THE REBUILDING OF PROCESS AIR BLOWERS # 4 AND # 5.	
	REBUILT THE ROTATING ASSEMBLY FOR RAS PUMP # 4 IN GALLERY # 2.	
	REBUILT POLYMER PUMP # 2 IN CENTRIFUGE BLDG.	
	REPAIRS AND IMPROVEMENTS MADE TO THE OPERATION OF BAR SCREEN # 1.	
	ORDERED IN DIFFUSERS TO BE INSTALLED IN PLANT # 3 AERATION TANKS.	
	ORDERED IN SPARE PUMPS FOR DALEWOOD STATION, CRESCENT STATION, HUGHES STATION, AND ROTATING ASSEMBLIES FOR ST. GEORGE STATION, HARPER STATION.	
	UPGRADE CONTROL PANEL FOR CONFEDERATION STATION.	
Jan 01 to Dec 31, 2008	APPROX. 682 PREVENTATIVE MAINTENANCE WORK ORDERS WERE ISSUED FOR ALL MAJOR EQUIPMENT AT THE PLANT AND PUMPING STATIONS.	PREVENTATIVE MAINTENANCE INCLUDES [BUT IS NOT ALL INCLUSIVE TO] INSPECTIONS, ADJUSTMENTS, CALIBRATIONS, TESTING, LUBRICATION, OIL CHANGES, REPLACEMENT OF WEARING PARTS, ETC.
	IN ADDITION, CORRECTIVE ACTION WAS TAKEN TO REPAIR, OR REPLACE, OR UPGRADE EQUIPMENT AS NECESSARY.	

The Corporation of the City of St. Thomas - Water Pollution Control Plant

Table 7 - Summary of Future Upgrade Planning

Estimated Date	Planned Upgrade Items	Comments
2004	Chain and Flight Replacements	Completed
2004	Scum Trough Improvements	Ongoing
2004	Grit Tank Bucket Improvements	Completed
2005	Upgrading SCADA Computer	Documentation Completed
2005	Repairs to the Digester Gas Control and waste burner System	Completed
2005	Repairs or possible replacement of Sludge pump	Ongoing
2005	Chain and Flygt Replacement	Completed
2006	Air Blower Overhaul	Completed
2006	CSO Sampler	Completed 2008
2007	Aeration System Plant #2 and 3	Plant #3 replace diffusers
2007	Emergency Hydro Needs Review	To be completed under needs study
2007	Effluent Gate Control	completed
2007	Chemical Feedline repairs	Completed 2008
2007	Replace wash water flushing lines	completed
2007	Grating repairs	completed
2007	Decommission Chlorine Contact Chamber	scheduled
2008	Gas Detection Equipment Replacement	Completed
2008	Influent control valve	
2008	Grating Repairs On-going	Ongoing
2008	Digester Clean-out	Completed 2008
2008	Final Tank Chains and Shafts	
2008	Effluent Pump Overhaul	scheduled 2009
2008	Gas Condensation Traps / Modifications	scheduled 2009
2008	Digester Deep Well Pumps	
2009	Stop/Start Blower Controls	
2009	Pneumatic Control Air Drier	
2009	Ground water pumps	
2009	Acid Clean diffusers plant 4	

**The Corporation of the City of St. Thomas - Water Pollution Control Plant
Table 8 - Summary of Monitoring Equipment Calibration/Maintenance Procedures**

Date	Calibration/Maintenance of Monitoring Equipment	Comments
11-Nov-04	FIT-212 U.V. Building Effluent Flow Meter Plants 3/4 North	Pass 0.00% to 0.13 % Error.
11-Nov-04	FIT-211 U.V. Building Effluent Flow Meter Plants 2/3 South	Pass 0.00% to 0.67 % Error.
16-Dec-05	FIT-212 U.V. Building Effluent Flow Meter Plants 3/4 North	Pass -0.33% to 0.00 % Error.
16-Dec-05	FIT-211 U.V. Building Effluent Flow Meter Plants 2/3 South	Pass 0.00% to 0.48 % Error.
23-Oct-06	FIT-212 U.V. Building Effluent Flow Meter Plants 3/4 North	Pass -0.22% to 0.00 % Error.
23-Oct-06	FIT-211 U.V. Building Effluent Flow Meter Plants 2/3 South	Pass 0.00% to 0.49 % Error.
12-Nov-07	FIT-212 U.V. Building Effluent Flow Meter Plants 3/4 North	Pass -0.19% to 0.16% Error.
12-Nov-07	FIT-211 U.V. Building Effluent Flow Meter Plants 2/3 South	Pass -0.22% to 0.61 % Error.
1-Oct-08	FIT-212 U.V. Building Effluent Flow Meter Plants 3/4 North	Pass-0.13 to 0.16 % Error.
1-Oct-08	FIT-211 U.V. Building Effluent Flow Meter Plants 2/3 South	Pass -0.03 to 0.24 % Error.

Sludge Production:

This activated sludge plant, transfers sludge to three anaerobic digesters. Digested sludge is then centrifuged into a solid using polymer.

As part of the plants latest upgrades, a larger capacity centrifuge was commissioned resulting in an increased dewatering efficiency. It is anticipated that quantity of sludge produced during 2009 will be equal to or less than the 2834 tonnes produced in 2008.

Sludge Disposal:

Currently, anaerobically digested plant sludge is dewatered by centrifuge and transferred into a City owned and operated dump truck under Waste Management System C of A A051601. Once the dump truck is filled (approximately 12 tonnes), it drives to the Green Lane Landfill where the sludge is dumped. The City of St. Thomas has assigned its waste service contract with BFI Canada Inc. All WPCP sludge produced over 2009 will continue to be disposed of at this landfill. Green Lane Landfill is now owned by the City of Toronto and operated by BFI Canada Inc.

Digester 1, 2 and 3 were cleaned out during the summer of 2008. The content were land applied in liquid form.

For sludge disposal contingency purposes, the plant could utilize its sludge drying bed, which has an approximate storage capacity of one year of sludge production. Alternatively, in the past, the City of St. Thomas has land applied dewatered sludge to local farmland. Land application of dewatered sludge has proven unappealing to local farmers, difficult to work with and cost prohibitive. Biosolids are tested and maintained at land application quality.

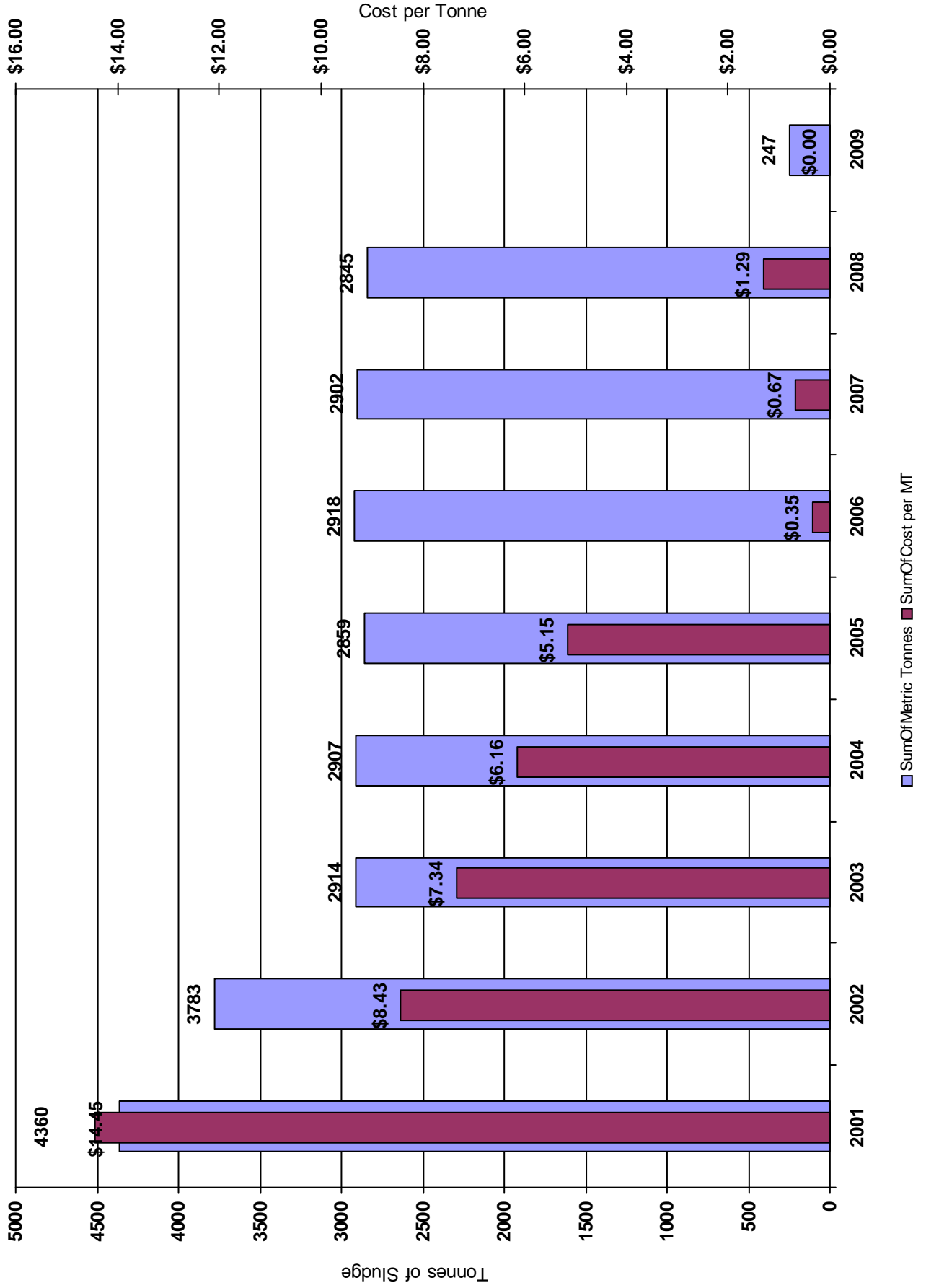
The following table represents a summary of the monthly production of digested dewatered sludge processed in 2008:

**The Corporation of the City of St. Thomas - Water Pollution Control Plant
Table 9 - Dewatered Sludge Production/Disposal**

Year: 2008

Month	Total Tonnes	Tonnes > 1st Load
January 2008	263	10
February 2008	220	0
March 2008	226	0
April 2008	271	0
May 2008	238	9
June 2008	260	21
July 2008	249	0
August 2008	289	51
September 2008	77	0
October 2008	244	10
November 2008	226	0
December 2008	283	53
Total:	2845	154

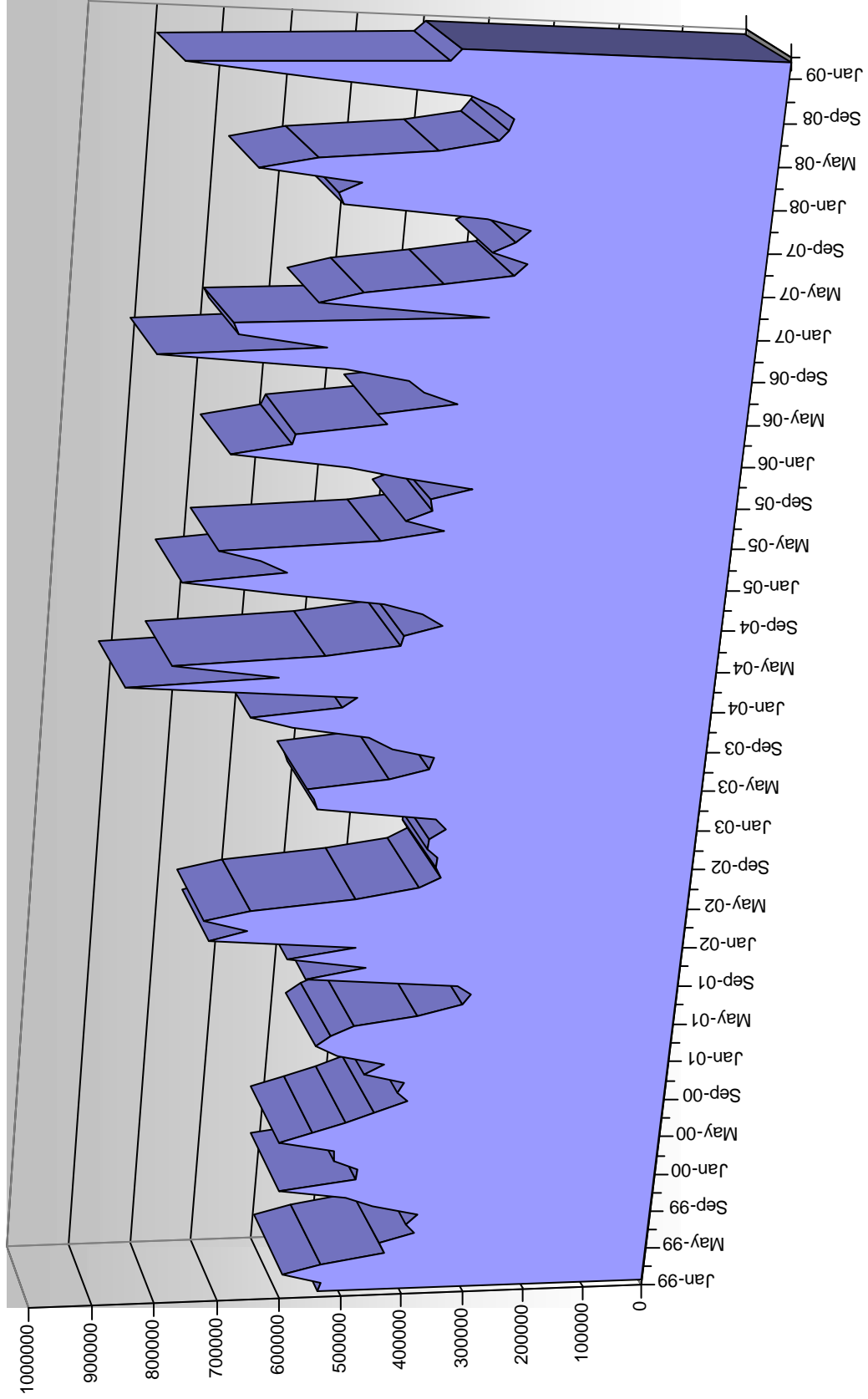
City of St. Thomas Water Pollution Control Plant
 Chart 10 - Annual Dewatered Sludge Disposal (Tonnes) and Disposal Cost per Tonne



**City of St. Thomas Water Pollution Control Plant
Appendix 1 - Historical Flow Capacity Data**

Year	Total Monthly Flow (m3)	Average Monthly Flow (m3)	Max of Monthly Flow (m3)	% Flow Capacity (27300 m3/day)
1999	5855042	15975	46682	59%
2000	6026225	16616	41431	61%
2001	5870506	16326	39166	60%
2002	6520059	17788	43184	65%
2003	6476804	17736	44213	65%
2004	7361170	20097	47637	74%
2005	7071505	19374	47976	71%
2006	7767828	21282	41380	78%
2007	6002256	16445	52240	60%
2008	7028805	19204	51425	70%

City of St. Thomas - Water Pollution Control Plant
Appendix 2 - Total Monthly Flow (m³)



**The Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 3 - Historical Plant Certified Analytical Data**

Date	pH	Temp C		CBOD (mg/L)		TSS (mg/L)		Amm (mg/L)		TKN (mg/L)		NO2		NO3		NO2NO3		TP (mg/L)		Ecoli		UV%		Pb		Uj Amm			
		Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Final	Eff.	Power	Inf.	Eff.	Power	Inf.	Eff.		
07-Jan-04		10.6	101	8	106	8	7.1	22	7.4	0.49	10.5	11	2.38	0.64	1													190.00	
14-Jan-04		11		2	3	3	3.6	23	4.5	0.56	15.2	15.8	2.24	0.51	4													45.00	
21-Jan-04		11		19	6	6	5.6	24.7	6.2	0.8	19	19.8	4.26	0.72	10													70.00	
28-Jan-04		10.7		3	6	6	5	39.6	9	0.81	20.2	21	5.03	0.72	6													43.00	
04-Feb-04		10.7	180	5	586	7	2.3	19.3	3.8	0.68	16.3	17	3.65	0.68	4													8.00	
11-Feb-04		11	112	3	332	6	1.5	32.1	2.5	0.4	19.3	19.7	4.89	0.13	2													8.00	
18-Feb-04		10.9		1	4	4	0.8	30.4	0.9	0.4	22.1	22.5	12	0.68	4													5.00	
25-Feb-04		10.2		3	9	9	0.3	17.3	1	0.22	16	16.2	1.86	0.46	6													4.00	
03-Mar-04		9.9	63	9	98	8	0.1	8.4	0.7	0.08	11.6	11.7	1.01	0.41	13													0.00	
06-Mar-04																													0.00
10-Mar-04		10.4		5	5	5	0.3	15.5	3.2	0.18	13.6	13.8	1.81	0.42	4													7.00	
17-Mar-04		10		4	10	10	0.8	21.7	2	0.29	16	16.3	2.13	0.58	13													17.00	
24-Mar-04				8	2	2	0.2	15.8	0.5	0.34	15.5	15.8	1.83	0.5	3													0.00	
26-Mar-04																													0.00
30-Mar-04																													0.00
31-Mar-04		10.1		2	9	9	0.4	11.9	1.8	0.19	11.7	0.4	1.5	0.54	15													1.00	
07-Apr-04			59	2	120	6	1	18.4	1.8	0.22	17.5	17.7	2.12	0.61	19													5.00	
14-Apr-04		13		3	3	4	1.8	21.8	2.1	0.37	17.8	18.2	2.24	0.66	13													210.00	
21-Apr-04		13.5	84	3	158	3	1.7	28.6	2	0.42	19	19.4	3.3	0.77	1													5.00	
28-Apr-04		12.9		3	4	4	0.5	17.2	1.3	0.06	16.8	16.8	2.13	0.83	8													1.00	
05-May-04		13.1	74	1	92	5	1.7	21.8	2.4	0.38	16.2	16.6	2.23	1.26	4													77.00	
12-May-04		14.1		3	6	6	0.1	9.9	0.7	0.11	10.4	10.5	1.44	0.43	13													2.00	
19-May-04		15.1		2	4	4	1	20.1	2	0.39	16.9	17.3	3.09	0.64	7													2.00	
26-May-04		14.2		1	3	3	0.2	13	0.5	0.23	12.5	12.7	2.69	0.39	6													4.00	
02-Jun-04		16		3	5	5	0.7	24.1	0.5	0.43	16.2	16.6	5.54	0.82	2300													3.00	
09-Jun-04		17.3		2	4	4	1.1	23.3	1.7	0.48	17.8	18.3	2.63	0.7	1													11.00	
16-Jun-04		17.1	89	5	120	3	0.2	22.6	3.5	0.28	17.8	18.1	2.5	0.63	6													5.00	
23-Jun-04		17.9		3	4	4	0.6	22.4	2.2	0.31	17.9	18.2	2.06	0.62	100													15.00	
30-Jun-04		19.2		3	5	5	0.6	23.9	1.9	0.24	18.8	19	2.52	0.66	300													4.00	
07-Jul-04		18.9	130	4	186	4	0.2	28.3	0.5	0.21	23.6	23.8	3.79	0.89	2													2.00	
14-Jul-04		19.2		10	5	5	0.5	21.4	2	0.12	19.8	19.9	4.74	0.6	12													2.00	
21-Jul-04		19.9		2	3	3	0.1	22.8	0.5	0.06	19.7	19.7	2.96	0.65	2													4.00	
28-Jul-04		19.5	103	2	236	4	0.3	26.1	0.8	0.15	24	24.2	4.89	0.66	12													14.00	
04-Aug-04		19.9	97	3	4	4	0.3	24.1	1.4	0.08	20	20.1	3.76	0.64	13													3.00	
11-Aug-04		20.4	103	1	4	4	0.9	24	1.9	0.13	19	19.1	3.44	0.78	42													6.00	
18-Aug-04		20.5	91	3	5	5	1.6	7.2	1.9	0.06	22.9	22.9	3.84	0.77	11													4.00	
25-Aug-04		21.2		3	142	4	0.3	24.9	2.1	0.08	20.3	20.4	3.07	0.71	3													3.00	

**The Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 3 - Historical Plant Certified Analytical Data**

Date	pH	Temp C		CBOD (mg/L)		TSS (mg/L)		Amm (mg/L)		TKN (mg/L)		NO2		NO3		NO2NO3		TP (mg/L)		Ecoli		UV% Power		Pb Inf.		Uj Amm Eff.	
		Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Final	Power	Inf.	Eff.	Final	Eff.
01-Sep-04		21	79	4	143	6	4	0.2	24.3	1.3	0.1	19.5	19.6	19.5	19.6	2.4	0.4	18	60%	60%	0.00						
08-Sep-04		20.9		4		4		0.7	29.5	2.2	0.2	18.9	19.1	18.9	19.1	6.18	0.59	120	60%	60%	2.00						
15-Sep-04		21.3		3		5		0.6	26.3	3	0.1	19.8	19.8	19.8	19.8	3.69	0.98	32	60%	60%	5.00						
22-Sep-04		20.3		3		4		0.1	23.5	0.7	0.06	23.8	23.8	23.8	23.8	3.09	0.56	20	60%	60%	0.00						
29-Sep-04		20.5		3		7		0.4	26.3	1.7	0.16	23.7	23.9	23.7	23.9	3.28	0.65	20	60%	60%	2.00						
06-Oct-04		19.4	99	2	178	7		0.3	26	0.5	0.2	23.1	23.3	23.1	23.3	3.6	0.7	2760	60%	60%	0.00						
13-Oct-04		19.1		2		6		3.1	38.4	4.4	0.56	20.9	21.5	20.9	21.5	7.62	0.67	40	60%	60%	12.00						
20-Oct-04		18.4		2		5		1	31.7	3.1	0.42	24.5	24.9	24.5	24.9	4.12	0.44	60	60%	60%	4.00						
27-Oct-04		18.8		3		12		0.5	27	2.2	0.41	47.3	47.7	47.3	47.7	3.19	0.42	4	60%	60%	3.00						
03-Nov-04		17.7	83	3	156	2		0.9	24.6	1	0.25	19.4	19.6	19.4	19.6	2.95	0.41	6	60%	60%	16.00						
10-Nov-04		16.8		3		3		0.3	25.9	0.5	0.48	24.3	24.8	24.3	24.8	3.27	0.48	4	72%	72%	5.00						
17-Nov-04		17.2		1		4		0.9	28.6	1	0.16	26.1	26.3	26.1	26.3	2.64	0.62	162	72%	72%	5.00						
24-Nov-04		16.6		2		5		1.3	34.7	2.6	0.28	22.8	23.1	22.8	23.1	10.5	0.66	11	72%	72%	3.00						
01-Dec-04		13.7	93	2	162	2		0.7	18.1	1.4	0.09	16.6	16.7	16.6	16.7	2.27	0.42	16	96%	96%	0.00						
08-Dec-04		14		3		6		1.8	13.3	2.6	0.44	15.9	16.3	15.9	16.3	2.08	0.45	18	93%	93%	7.00						
15-Dec-04		13.2	78	4	112	6		0.4	14.9	3.4	0.29	16.4	16.7	16.4	16.7	2.33	0.55	16	84%	84%	0.00						
22-Dec-04		12		3		3		2.2	22.7	3.1	0.55	14.5	15.1	14.5	15.1	2.95	0.62	10	68%	68%	7.00						
29-Dec-04		12.5		4		6		10.4	20.6	10.9	1.45	17.3	18.8	17.3	18.8	3.02	0.9	34	60%	60%	6.00						
06-Jan-05		10.9		2		9		0.8	15.3	0.6	0.27	10.7	11	10.7	11	1.67	0.4	2	147%	147%	4.00						
12-Jan-05		12		5		4		0.8	19	1	0.4	14.6	15	14.6	15	3.02	0.42	4	160%	160%	3.00						
19-Jan-05		11	87	3	96	7		0.8	16.9	1.1	0.51	16.1	16.6	16.1	16.6	2.12	0.45	32	92%	92%	0.40						
26-Jan-05		11.1		2		5		0.8	23.4	3.3	0.77	16.1	16.9	16.1	16.9	3.38	0.73	16	88%	88%	7.00						
02-Feb-05		11.2	155	5	248	7		0.8	29.2	0.5	1.11	19.8	20.9	19.8	20.9	6.29	1.11	26	80%	80%	9.00						
09-Feb-05		10.3		4		7		0.4	12.4	0.5	0.59	11.7	12.3	11.7	12.3	1.2	0.66	2	136%	136%	6.00						
16-Feb-05		8.5		3		3		0.2	7.5	0.5	0.3	10.5	10.8	10.5	10.8	0.74	0.48	24	172%	172%	2.00						
23-Feb-05		10.1		8		8		0.4	20.6	0.5	0.36	16.3	16.7	16.3	16.7	2.61	0.72	8	92%	92%	4.00						
02-Mar-05		9.8		4		5		0.3	19.3	0.8	0.09	18.5	18.6	18.5	18.6	2.34	0.89	10	84%	84%	1.00						
09-Mar-05		9.7		5		4		0.1	14.6	0.9	0.06	13.9	13.9	13.9	13.9	1.61	0.3	20	94%	94%	1.00						
16-Mar-05		10.4	99	1	172	6		0.2	23.3	0.8	0.17	20.7	20.9	20.7	20.9	2.8	0.46	10	78%	78%	2.00						
23-Mar-05		9.3		2		6		0.2	12.6	0.5	0.17	15.1	15.3	15.1	15.3	1.68	0.45	2	140%	140%	1.00						
30-Mar-05		10.3		7		6		0.2	15.8	1.1	0.17	14.1	14.3	14.1	14.3	2.21	0.09	2	74%	74%	3.00						
06-Apr-05		10.6	50	2	82	8		0.3	13.8	0.8	0.12	14.1	14.2	14.1	14.2	1.39	0.36	2	140%	140%	4.00						
13-Apr-05		10.9		2		5		0.2	21.2	1.3	0.17	18.5	18.7	18.5	18.7	2.92	0.47	10	96%	96%	3.00						
20-Apr-05		13.2		3		7		0.8	26	1.7	0.32	22	22.3	22	22.3	2.71	0.77	18	60%	60%	10.00						
27-Apr-05		11.6		1		9		0.1	12.3	0.6	0.09	13.3	13.4	13.3	13.4	1.68	0.58	6	88%	88%	2.00						

**The Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 3 - Historical Plant Certified Analytical Data**

Date	pH	Temp C		CBOD (mg/L)		TSS (mg/L)		Amm (mg/L)		TKN (mg/L)		NO2		NO3		NO2NO3		TP (mg/L)		Ecoli		UV% Power		Pb Inf.		Uj Amm Eff.				
		Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	
04-May-05		12.4	96	4	172	6	0.2	20.4	0.5	0.14	20.1	20.2	20.1	20.2	3.06	0.83	2	64%	14.5	6.00										
11-May-05		14.2		5		4	0.4	25.4	0.5	0.32	21.1	21.4	21.1	21.4	3.36	0.46	8	60%	19.5	8.00										
18-May-05		14		10		4	0.2	24.2	1.6	0.1	22.7	22.8	22.7	22.8	2.65	0.45	4	60%	14.2	3.00										
25-May-05		14.9		3		6	0.1	23.1	1.8	0.6	18.2	18.2	18.2	18.2	3.34	0.64	6	60%	16.2	1.00										
01-Jun-05		16.2	107	2	249	5	1	29	2.4	0.68	22.2	22.9	22.2	22.9	4.87	0.77	8	60%	36.6	12.00										
08-Jun-05		17.6		2		4	2.1	25.7	2.1	0.82	18.5	19.3	18.5	19.3	2.8	0.51	2	60%	20.2	7.00										
15-Jun-05		18.2		2		4	1.5	20.4	1.9	0.41	20.3	20.7	20.3	20.7	2.97	0.42	4	60%	25	3.00										
22-Jun-05		18.1		7		5	0.3	29.9	1.1	0.22	23.1	23.3	23.1	23.3	3.43	0.31	10	60%	43.8	3.00										
29-Jun-05		19.8		2		7	0.9	23.4	2.3	0.33	19.8	20.1	19.8	20.1	2.73	0.48	32	60%	77.7	3.00										
06-Jul-05		19.1	103	3	169	4	1.6	25.3	1.8	0.51	18.8	19.3	18.8	19.3	3.67	0.46	2	60%	13.8	6.00										
13-Jul-05		20.2		2		7	1.1	26.3	0.5	0.56	18.7	19.3	18.7	19.3	4.06	0.67	4	60%	26.4	6.00										
20-Jul-05		20.8		2		5	0.6	24	1.2	0.56	16.6	17.2	16.6	17.2	4.05	0.47	4	60%	25.7	14.00										
27-Jul-05		20.6		2		6	1.9	13.6	2	0.26	10.7	11	10.7	11	1.8	0.38	620	80%	44	8.00										
03-Aug-05	7	20.8	91	3	91	3	0.4	22.1	1	0.18	14.3	14.5	14.3	14.5	3.83	0.48	2	60%	41	1.67										
10-Aug-05	7.3	21.3		5		7	0.9	26.1	1.3	0.33	17.7	18	17.7	18	3.6	0.69	4	60%	15.8	7.75										
17-Aug-05	7.3	21.4		3		5	0.2	19.7	0.5	0.18	15.7	15.9	15.7	15.9	2.87	0.59	18	60%	12	1.73										
24-Aug-05	7.81	21		3		3	0.6	23.6	5	0.18	15.4	15.6	15.4	15.6	2.84	0.7	176	60%	12.7	16.06										
31-Aug-05	6.9	21.7		5		6	1.1	26.8	1.8	0.29	20.2	20.5	20.2	20.5	3.05	0.46	32	60%	25.5	3.90										
07-Sep-05	7.25	21.6	99	5	287	7	0.5	27.2	1.4	0.18	16	16.2	16	16.2	2.9	0.48	10	60%	31.2	3.93										
14-Sep-05	7	22.3		3		5	1.9	29	3.8	0.22	22.7	22.9	22.7	22.9	6.06	0.71	22	60%	31.5	8.85										
21-Sep-05	7.1	22.1		5		6	0.8	24.3	1.4	0.17	18	18.2	18	18.2	3.77	0.55	10	60%	26.6	4.62										
28-Sep-05	7.3	20.4		3		5	0.5	18.4	1.1	0.08	14.1	14.2	14.1	14.2	3.01	0.57	2	60%	26.1	4.04										
05-Oct-05	7.7	22	91	3	150	5	1.4	27.8	2.6	0.09	18.4	18.5	18.4	18.5	3.73	0.71	14	60%	19.8	31.42										
13-Oct-05	7	20.5		4		5	0.1	27.9	0.9	0.1	21	21.1	21	21.1	3.52	0.62	2	60%	24.7	0.41										
19-Oct-05	6.8	18.8		3		6	0.9	27.5	1.9	0.12	20.4	20.4	20.4	20.4	3.32	0.75	4	60%	17.7	2.05										
26-Oct-05	6.8	18.8		3		4	1.6	29.4	4.1	0.14	19.8	19.9	19.8	19.9	3.65	0.63	2	60%	24.3	3.65										
02-Nov-05	6.9	18.1	136	6	192	5	1.9	24.8	2.2	0.17	19	19.2	19	19.2	3.72	0.56	12	60%	12.2	5.18										
09-Nov-05	7.1	17		4		6	5.5	27.2	6	0.18	19.9	20.1	19.9	20.1	3.58	0.84	1200	88%	16.5	21.88										
16-Nov-05	7.1	14.8		5		10	2.5	18.8	3.7	0.19	14.4	14.6	14.4	14.6	2.28	0.83	40	76%	15.1	8.43										
23-Nov-05	6.9	16.5		2		4	0.7	24.4	0.9	0.1	18.2	18.3	18.2	18.3	2.91	0.83	198	64%	1.7	1.70										
30-Nov-05	7.1	15.4		2		3	0.4	10	2	0.18	10.9	11.1	10.9	11.1	2.97	0.5	80	68%	168	1.41										
07-Dec-05	7.4	14	118	3	170	4	0.7	22.9	0.7	0.26	17.5	17.8	17.5	17.8	2.69	0.58	2	60%	7.4	4.42										
14-Dec-05	7.1	14		4		6	1.8	25.8	2.6	1.8	0.34	21.8	21.8	0.34	21.8	3.32	0.65	54	60%	19.1	5.72									
21-Dec-05	6.8	13.8		4		5	2.6	32.6	2.9	0.42	18.8	19.2	18.8	19.2	4.11	0.77	10	60%	5.5	4.08										
28-Dec-05	7.4	11.6		8		5	3	19	3.8	0.66	13.3	14	13.3	14	4.32	0.31	4	68%	75.9	15.77										

The Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 3 - Historical Plant Certified Analytical Data

Date	pH	Temp C		CBOD (mg/L)		TSS (mg/L)		Amm (mg/L)		TKN (mg/L)		NO2		NO3		NO2NO3		TP (mg/L)		Ecoli Final Eff.		UV% Power		Pb Inf.		Uj Amm Eff.	
		Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.
04-Jan-06	6.7	8.3	63	2	106	3	0.8	13.7	0.8	0.52	12	12.5	12	12.5	12	12.5	12	12.5	1.57	0.5	20	80%	10.1	0.65	15.70	15.70	
11-Jan-06	7.5	12.6	5	4	2.2	38	3.2	1.2	1.2	1.2	15.7	16.9	15.7	16.9	15.7	16.9	15.7	16.9	9.16	0.68	14	64%	28.8	6.16	13.29	13.29	
18-Jan-06	6.9	10.2	3	5	1.8	15.5	3.5	0.98	13.8	14.8	13.8	14.8	13.8	14.8	13.8	14.8	13.8	14.8	2.01	0.51	66	96%	23.4	2.69	3.89	3.89	
25-Jan-06	7.06	11.7	3	2	1.6	19.5	1.8	1.21	14.2	15.4	14.2	15.4	14.2	15.4	14.2	15.4	14.2	15.4	2.01	0.44	6	68%	49	0.00	6.16	6.16	
01-Feb-06	7.26	12.2	133	3	214	3	1	16.6	1.4	1.27	12.4	13.7	12.4	13.7	12.4	13.7	12.4	13.7	2.19	0.45	4	76%	171	0.00	13.29	13.29	
08-Feb-06	7.4	11.3	3	8	1.2	14.5	2.6	1.58	11	12.6	11	12.6	11	12.6	11	12.6	11	12.6	2.18	0.71	6	80%	50	6.16	6.16	6.16	
15-Feb-06	7.6	11.6	3	7	1.6	26.5	2.8	2.43	14.7	17.1	14.7	17.1	14.7	17.1	14.7	17.1	14.7	17.1	3.19	0.56	4	68%	12.5	5.33	5.33	5.33	
22-Feb-06	7.35	10.9	1	2	1.2	19	1.9	0.8	13.2	14	13.2	14	13.2	14	13.2	14	13.2	14	2.44	0.49	168	76%	10.4	3.35	3.35	3.35	
01-Mar-06	7	10.8	110	1	168	5	1.7	23.8	2.7	1.16	17.4	18.6	17.4	18.6	17.4	18.6	17.4	18.6	3.07	0.51	14	68%	10.4	3.35	3.35	3.35	
08-Mar-06	6.9	10.9	26	76	0.2	20.5	1	0.2	16.4	16.6	16.4	16.6	16.4	16.6	16.4	16.6	16.4	16.6	2.5	1.59	62	72%	13	0.32	0.32	0.32	
15-Mar-06	6.9	10	2	2	0.2	12.9	2.4	0.2	11	11.2	11	11.2	11	11.2	11	11.2	11	11.2	1.31	0.21	48	84%	3.8	0.29	0.29	0.29	
22-Mar-06	7.3	10.8	3	2	0.7	18.4	0.8	0.3	17.5	17.8	17.5	17.8	17.5	17.8	17.5	17.8	17.5	17.8	2.3	0.35	10	68%	6.7	2.75	2.75	2.75	
29-Mar-06	6.9	11.9	2	2	1.2	20.5	1.2	0.35	18.4	18.8	18.4	18.8	18.4	18.8	18.4	18.8	18.4	18.8	2.27	0.68	2	69%	5.81	2.05	2.05	2.05	
05-Apr-06	6.3	11.4	108	4	120	3	2.4	24.7	3	0.36	18.5	18.9	18.5	18.9	18.5	18.9	18.5	18.9	2.4	0.9	10	68%	7.77	0.99	0.99	0.99	
12-Apr-06	6.7	13.5	3	2	1.9	24.8	2.3	0.38	19.3	19.7	19.3	19.7	19.3	19.7	19.3	19.7	19.3	19.7	2.82	0.75	4	64%	6.58	2.32	2.32	2.32	
19-Apr-06	6.7	13.6	3	8	2.3	23.3	2.4	0.45	18.1	18.6	18.1	18.6	18.1	18.6	18.1	18.6	18.1	18.6	2.94	1.57	8	72%	19.3	2.83	2.83	2.83	
26-Apr-06	6.9	13.4	4	5	0.9	25.5	1.6	0.34	17.3	17.6	17.3	17.6	17.3	17.6	17.3	17.6	17.3	17.6	2.97	0.83	2	72%	16.6	1.72	1.72	1.72	
03-May-06	7.2	14.7	149	3	168	4	0.9	28.6	2.8	0.44	19.1	19.5	19.1	19.5	19.1	19.5	19.1	19.5	4.46	1.14	8	68%	5.2	3.79	3.79	3.79	
10-May-06	7.3	14	3	4	2.1	34.4	2.7	0.57	21.5	22.1	21.5	22.1	21.5	22.1	21.5	22.1	21.5	22.1	4.38	1.15	14	68%	17.3	10.55	10.55	10.55	
17-May-06	7	15	3	3	1.1	15.7	1.8	0.46	16.3	16.8	16.3	16.8	16.3	16.8	16.3	16.8	16.3	16.8	1.98	0.67	6	74%	17.9	3.00	3.00	3.00	
24-May-06	7.3	15.4	4	3	1.5	24.8	1.7	0.48	17.1	17.6	17.1	17.6	17.1	17.6	17.1	17.6	17.1	17.6	2.84	0.46	2	76%	8.38	8.38	8.38	8.38	
31-May-06	7.1	17.6	1	2	0.8	23.4	2.4	0.33	17.9	18.2	17.9	18.2	17.9	18.2	17.9	18.2	17.9	18.2	2.58	0.51	20	60%	3.33	3.33	3.33	3.33	
07-Jun-06	7.1	17.6	100	3	200	3	0.3	22.3	1.8	0.33	17.4	17.7	17.4	17.7	17.4	17.7	17.4	17.7	2.84	0.56	34	60%	1.25	1.25	1.25	1.25	
14-Jun-06	6.6	18.7	4	4	4.7	26.4	4.7	0.41	17.7	18.1	17.7	18.1	17.7	18.1	17.7	18.1	17.7	18.1	2.61	0.84	6	60%	6.73	6.73	6.73	6.73	
21-Jun-06	6.6	18.7	3	3	1	27.6	1.3	0.46	24.2	24.7	24.2	24.7	24.2	24.7	24.2	24.7	24.2	24.7	3.51	0.77	26	60%	1.43	1.43	1.43	1.43	
28-Jun-06	7	19.6	2	5	1	28.5	1.7	0.58	22.8	23.4	22.8	23.4	22.8	23.4	22.8	23.4	22.8	23.4	3.64	0.68	14	60%	3.83	3.83	3.83	3.83	
05-Jul-06	6.7	19.3	98	3	229	3	1.2	17	1.3	0.34	15.6	15.9	15.6	15.9	15.6	15.9	15.6	15.9	2.39	0.59	108	60%	2.26	2.26	2.26	2.26	
12-Jul-06	7.1	19.5	4	8	1.3	26.8	1.9	0.4	19.9	20.3	19.9	20.3	19.9	20.3	19.9	20.3	19.9	20.3	3.19	0.7	1960	60%	6.22	6.22	6.22	6.22	
19-Jul-06	7	21.2	4	3	1.8	34.3	2.6	0.84	18.2	19	18.2	19	18.2	19	18.2	19	18.2	19	4.58	0.67	4	60%	7.75	7.75	7.75	7.75	
26-Jul-06	7.1	20.6	3	5	1.3	17.7	3.6	0.19	13.3	13.5	13.3	13.5	13.3	13.5	13.3	13.5	13.3	13.5	2.36	0.53	26	60%	6.74	6.74	6.74	6.74	
02-Aug-06	7.3	23.4	95	5	128	2	0.1	21.7	2.1	0.06	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	2.69	0.48	20	60%	31.8	1.00	1.00	1.00	
09-Aug-06	7	21.8	3	3	0.7	25.6	1.2	0.17	17.6	17.8	17.6	17.8	17.6	17.8	17.6	17.8	17.6	17.8	4.04	0.47	8	60%	3.15	3.15	3.15	3.15	
16-Aug-06	7.1	21.4	4	3	0.5	26.5	1.2	0.16	19.9	20.1	19.9	20.1	19.9	20.1	19.9	20.1	19.9	20.1	3.9	0.64	28	60%	2.75	2.75	2.75	2.75	
23-Aug-06	7.2	21.5	5	5	1.4	33.8	1.7	0.24	17.8	18	17.8	18	17.8	18	17.8	18	17.8	18	2.25	0.82	5200	60%	9.73	9.73	9.73	9.73	
30-Aug-06	7	21.7	4	2	0.1	20.9	0.7	0.06	14.9	15	14.9	15	14.9	15	14.9	15	14.9	15	1.78	0.57	34	60%	0.45	0.45	0.45	0.45	

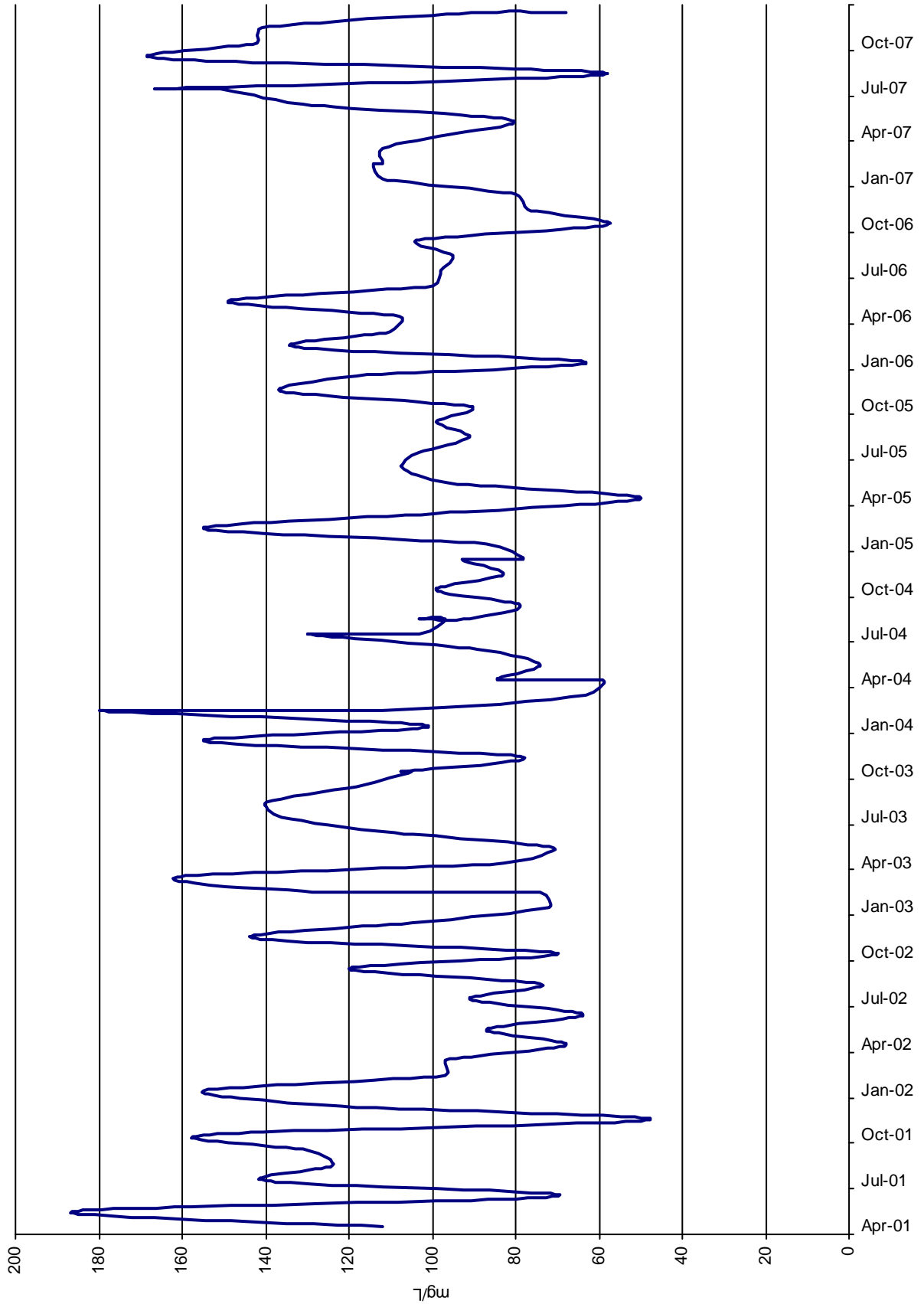
**The Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 3 - Historical Plant Certified Analytical Data**

Date	pH	Temp C		CBOD (mg/L)		TSS (mg/L)		Amm (mg/L)		TKN (mg/L)		NO2		NO3		NO2NO3		TP (mg/L)		Ecoli		UV%		Pb		Uj Amm	
		Eff	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Eff.	Inf.	Final	Eff.	Power	Inf.	Final	Eff.	Power	Inf.	Final	Eff.
06-Sep-06	7.2	21.4	103	2	138	2	138	2	0.1	22.6	3.2	0.06	20.9	20.9	19.2	19.4	20.9	20.9	2.34	0.55	22	60%	60%	0.011	0.69	0.69	
13-Sep-06	6.7	20.7	4	5	5	5	5	5	0.7	21.4	1.9	0.16	19.2	19.2	19.4	19.4	19.2	19.4	3.35	0.84	980	92%	92%	0.011	1.46	1.46	
20-Sep-06	7.2	19.8	4	10	10	10	10	10	0.1	15	1.2	0.1	11	11.1	11.1	11.1	11.1	11.1	1.47	0.67	2	200%	200%	0.011	0.61	0.61	
27-Sep-06	7.3	20	3	5	5	5	5	5	0.1	17.2	2.1	0.06	15.3	15.3	15.3	15.3	15.3	15.3	2.26	0.57	2	60%	60%	0.011	0.78	0.78	
04-Oct-06	6.8	20.4	58	3	116	6	116	6	0.2	12.7	0.5	0.1	10.7	10.8	10.8	10.8	10.8	10.8	1.68	0.42	26	192%	192%	23.2	0.51	0.51	
11-Oct-06	7	19.9	3	4	4	4	4	4	0.2	16.5	1.6	0.12	16.7	16.8	16.8	16.8	16.8	16.8	1.83	0.56	4	176%	176%	0.011	0.78	0.78	
18-Oct-06	7.4	17	5	4	4	4	4	4	0.1	4.8	0.5	0.06	8.86	8.86	8.86	8.86	8.86	8.86	0.77	0.44	40	180%	180%	0.011	0.79	0.79	
25-Oct-06	6.8	16.9	3	3	3	3	3	3	0.2	12.2	0.6	0.06	12.3	12.3	12.3	12.3	12.3	12.3	1.8	0.49	4	60%	60%	0.011	0.40	0.40	
01-Nov-06	6.8	16.3	77	3	122	2	122	2	0.1	13.6	0.5	0.06	12.8	12.8	12.8	12.8	12.8	12.8	2.02	0.58	2	60%	60%	0.011	0.19	0.19	
08-Nov-06	6.6	17.3	2	2	2	2	2	2	0.4	16.3	0.9	0.11	16.4	16.5	16.5	16.5	16.5	16.5	2.1	0.64	2	60%	60%	0.011	0.52	0.52	
15-Nov-06	7.7	16.5	2	10	10	10	10	10	0.1	20.8	1.4	0.1	20.6	20.7	20.7	20.7	20.7	20.7	2.39	0.28	2	60%	60%	0.011	1.51	1.51	
22-Nov-06	7.3	15.6	2	4	4	4	4	4	0.4	20.4	1.4	0.18	16.5	16.7	16.7	16.7	16.7	16.7	2.94	0.31	4	60%	60%	0.011	2.27	2.27	
29-Nov-06	6.9	15.8	5	4	4	4	4	4	0.2	24.5	2.2	0.06	0.05	0.06	0.06	0.06	0.06	0.06	2.69	0.72	6	60%	60%	0.011	0.46	0.46	
06-Dec-06	7.6	13.9	80	3	124	4	124	4	0.1	20.6	1.6	0.35	14	14.4	14.4	14.4	14.4	14.4	2.39	0.5	6	60%	60%	0.011	0.99	0.99	
13-Dec-06	6.4	13.4	2	6	6	6	6	6	0.3	14.9	0.8	0.44	13.1	13.5	13.5	13.5	13.5	13.5	1.72	0.61	8	75%	75%	0.011	0.18	0.18	
20-Dec-06	7.1	13.6	5	4	4	4	4	4	1.8	22.6	2	0.8	15	15.8	15.8	15.8	15.8	15.8	1.95	0.78	30	75%	75%	0.011	5.54	5.54	
27-Dec-06	6.8	12.9	3	3	3	3	3	3	0.3	15.3	0.9	0.98	12.2	13.2	13.2	13.2	13.2	13.2	1.89	0.51	6	60%	60%	0.011	0.44	0.44	
03-Jan-07	6.8	13.3	112	4	160	4	160	4	0.5	19.1	0.7	1.95	13.9	15.9	15.9	15.9	15.9	15.9	2.41	0.52	2	60%	60%	9.23	0.76	0.76	
10-Jan-07	7	12	3	4	4	4	4	4	0.1	12.3	1.2	0.42	10.9	11.3	11.3	11.3	11.3	11.3	1.97	0.63	2	60%	60%	0.011	0.22	0.22	
17-Jan-07	6.9	11.5	3	7	7	7	7	7	0.2	12	0.5	0.81	11.2	12	12	12	12	12	1.39	0.59	4	64%	64%	0.011	0.33	0.33	
24-Jan-07	7	11.9	3	5	5	5	5	5	0.5	20.6	0.7	1.97	16.9	18.9	18.9	18.9	18.9	18.9	2.69	0.78	2	60%	60%	0.011	1.07	1.07	
31-Jan-07	7	11.2	4	4	4	4	4	4	0.8	24.8	1.5	1.7	18.6	18.6	18.6	18.6	18.6	18.6	3.1	0.73	12	60%	60%	0.011	1.63	1.63	
07-Feb-07	6.6	10.5	114	1	174	3	174	3	3.1	27.4	3	0.88	18.7	19.6	19.6	19.6	19.6	19.6	3.04	0.72	2	60%	60%	0.011	2.38	2.38	
14-Feb-07	6.6	10.8	5	7	7	7	7	7	0.5	27.6	3.1	0.29	24.4	24.7	24.7	24.7	24.7	24.7	4.13	0.99	4	60%	60%	0.011	0.39	0.39	
21-Feb-07	6.5	11	112	4	68	3	68	3	1.3	31.1	2.4	0.38	21.8	22.2	22.2	22.2	22.2	22.2	3.31	0.81	2	60%	60%	0.011	0.83	0.83	
28-Feb-07	7.1	11.4	2	4	4	4	4	4	1.8	27.7	2.3	0.42	20.2	20.6	20.6	20.6	20.6	20.6	3.36	0.52	2	60%	60%	0.011	4.68	4.68	
07-Mar-07	6.9	10.2	112	4	116	6	116	6	1.1	28	2.6	0.44	21.8	22.2	22.2	22.2	22.2	22.2	3.07	0.44	2	60%	60%	0.011	1.65	1.65	
14-Mar-07	7	10.3	5	10	10	10	10	10	0.5	13.6	1.1	0.27	11.8	12.1	12.1	12.1	12.1	12.1	1.83	0.41	12	68%	68%	0.011	0.95	0.95	
21-Mar-07	6.9	10.2	2	4	4	4	4	4	1.6	22.6	1.7	0.54	19.1	19.6	19.6	19.6	19.6	19.6	2.47	0.57	10	75%	75%	0.011	2.39	2.39	
28-Mar-07	6.8	10.7	5	4	4	4	4	4	0.5	12.6	0.6	0.24	12.2	12.4	12.4	12.4	12.4	12.4	1.84	0.44	2	64%	64%	0.011	0.62	0.62	
04-Apr-07	7.2	11.8	94	6	136	4	136	4	2.2	24.5	3.1	0.43	19.8	20.2	20.2	20.2	20.2	20.2	3.35	0.65	2	60%	60%	0.011	7.43	7.43	
11-Apr-07	6.3	11.7	2	7	7	7	7	7	2.2	27.2	2.8	0.45	19.6	20	20	20	20	20	3.29	0.93	5	60%	60%	0.011	0.93	0.93	
18-Apr-07	7.5	11.6	4	5	5	5	5	5	0.6	21.2	2.1	0.22	18.2	18.4	18.4	18.4	18.4	18.4	2.59	0.51	18	60%	60%	0.011	3.97	3.97	
25-Apr-07	7.1	12.5	3	3	3	3	3	3	1.4	22.9	3.2	0.41	20.5	20.9	20.9	20.9	20.9	20.9	3.12	0.65	16	68%	68%	0.011	3.96	3.96	

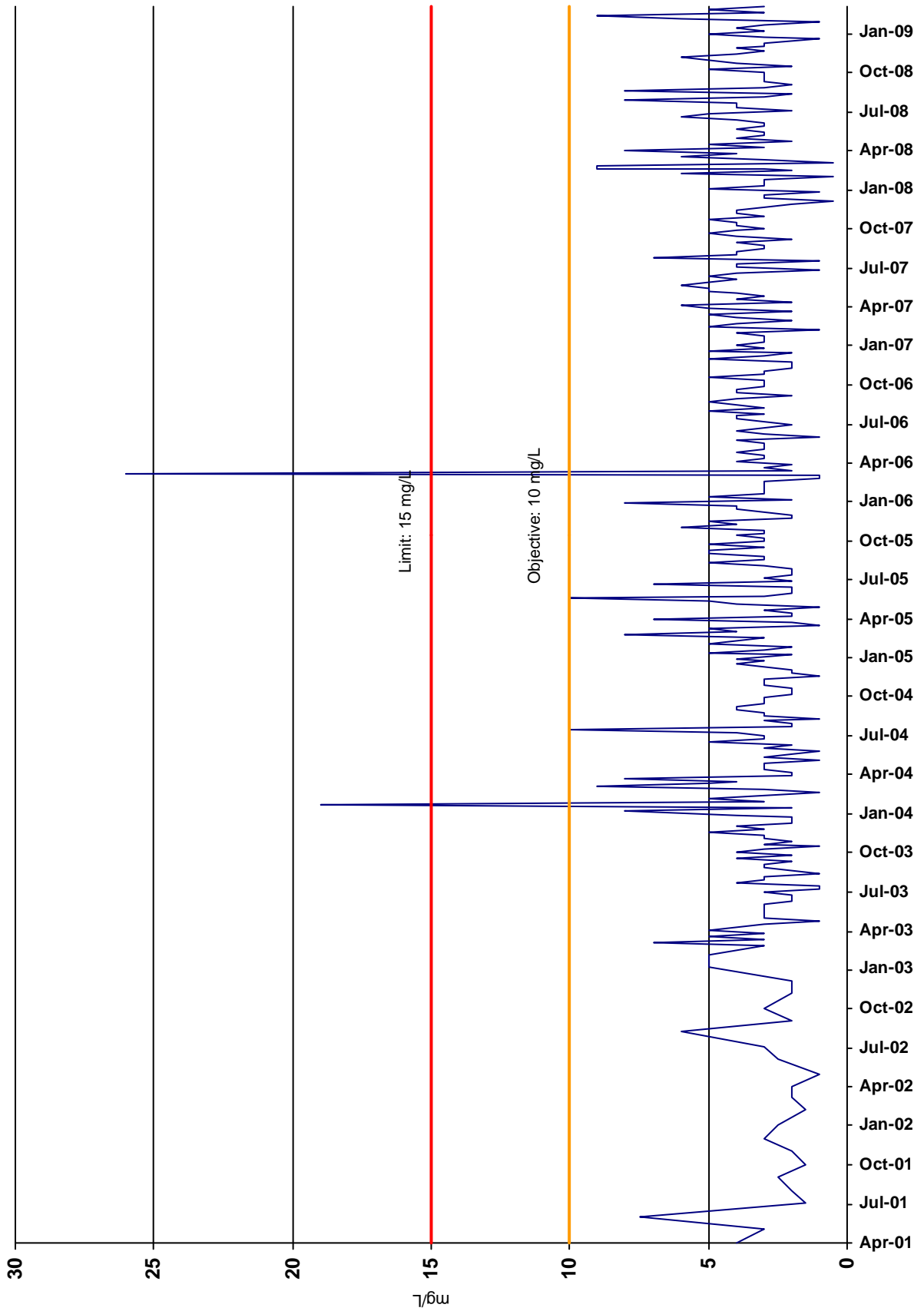
**The Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 3 - Historical Plant Certified Analytical Data**

Date	pH	Temp C		CBOD (mg/L)		TSS (mg/L)		Amm (mg/L)		TKN (mg/L)		NO2		NO3		NO2NO3		TP (mg/L)		Ecoli		UV% Power		Pb Inf.		Uj Amm Eff.	
		Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Eff	Inf	Final Eff.	Final Eff.	60%	200%	60%	60%	60%	60%
02-May-07	7.1	12.9	82	4	140	4	0.2	17.9	1.2	0.13	1.8	0.24	20.8	21	17.8	17.9	2.14	0.42	100	60%	60%	4	4.58	0.4	4	2.57	
09-May-07	7.3	14.3	5	4	4	4	0.5	24.8	1.8	0.24	3.4	0.46	21.2	21.7	2.8	0.55	2	1.18									
16-May-07	6.6	14.8	5	4	4	1.1	26.4	3.4	0.47	22.4	22.9	3.77	0.53	2	0.67												
23-May-07	6.4	16	6	4	4	0.9	28.8	3.4	0.35	23.1	23.5	2.94	0.5	14	0.15												
30-May-07	6.7	16.4	5	3	3	0.1	27.2	0.5	0.75	21.9	22.7	3.22	0.6	20	2.31												
06-Jun-07	6.9	18.9	131	4	206	3	0.8	31.6	1.8	0.75	21.5	22.3	3.49	0.66	6	3.75											
13-Jun-07	7	18	5	6	4	1.1	27.4	1.4	0.44	18.6	19	3.22	0.76	18	11.82												
20-Jun-07	7.1	18.8	4	7	2.6	24.8	3.1	0.44	23.4	23.8	6.06	0.76	2	6.80													
27-Jun-07	7.1	19.7	1	5	1.4	33.6	2.4	0.44	21.9	22.1	6.16	0.6	4	0.36													
04-Jul-07	7	18.7	151	4	262	3	0.1	28.9	1.6	0.17	21.9	22.1	4.81	0.87	16	3.65											
11-Jul-07	6.6	20.1	165	4	208	6	2.3	30.4	3.1	0.39	27.3	27.7	6.08	0.68	8	17.59											
18-Jul-07	7	21.5	1	5	4	30.3	5.8	0.42	23.7	24.1	3.64	0.6	8	1.76													
25-Jul-07	6.6	20.2	7	4	4	1.1	26.4	1	0.25	24.1	24.4	4.66	0.68	6	1.67												
01-Aug-07	6.4	21.6	58	4	191	3	1.5	32.7	2.3	0.4	26.9	27.3	3.27	0.42	18	4.88											
08-Aug-07	6.5	21.5	4	4	3.5	23	3.8	0.23	17.3	17.5	3.88	0.44	156	2.36													
15-Aug-07	6.4	21.7	3	2	2.1	28.6	3.5	0.45	20.4	20.6	3.49	0.52	16	2.34													
22-Aug-07	6.9	20.9	3	4	0.7	30	3.4	0.19	26.1	26.3	4.12	0.53	10	0.18													
29-Aug-07	6.9	21.9	4	6	0.05	29.9	1.2	0.22	22.4	22.4	4.27	0.58	14	1.14													
05-Sep-07	7.1	21.9	166	2	154	7	0.2	31.6	4	0.03	20.1	20.4	2.49	0.56	102	7.98											
12-Sep-07	7.5	21	4	10	0.6	24.9	1.7	0.3	25.4	25.6	2.77	1	64	5.51													
19-Sep-07	7	21	5	8	1.3	32.7	1.1	0.24	26.8	27.2	3.57	1.1	28	7.86													
26-Sep-07	6.9	21.8	4	8	2.2	33	4	0.36	25.8	26.1	4.1	0.74	280	4.48													
03-Oct-07	6.9	21.3	142	3	160	6	1.3	33.3	3.1	0.34	20.6	20.9	4.2	0.54	152	9.38											
10-Oct-07	6.8	21	4	2	3.5	34.2	4.3	0.31	24.7	25	1.4	0.57	2	11.81													
17-Oct-07	6.8	20.4	4	5	4.6	28.7	5.6	0.33	23.8	24	2.36	0.5	6	1.66													
24-Oct-07	6.3	19.4	5	7	2.2	23.5	2.5	0.23	28.1	28.4	3.75	0.5	2	120%													
31-Oct-07			3	1	1.6	32.3	3.4	0.28	24.4	24.6	3.66	0.6	12	3.10													
07-Nov-07	6.8	18.4	141	4	204	8	1.4	28	2.3	0.22	25.4	25.6	2.31	0.61	16	2.53											
14-Nov-07	7.1	17.8	4	7	0.6	31.4	0.6	0.16	26.1	26.3	2.85	0.59	10	3.59													
21-Nov-07	6.6	17.7	3	4	2.7	31.1	3.1	0.24	21	21.2	3.24	0.36	4	4.34													
28-Nov-07	7.5	15.2	2	1	0.5	24.2	1.2	0.19	17	17	2.26	0.24	4	0.38													
05-Dec-07	7.2	13.5	88	0.5	102	6	0.1	19.6	0.9	0.06	19.6	20	1.5	0.56	1	7.95											
12-Dec-07	7.1	13.5	3	4	2.6	22.4	3.7	0.36	22.3	22.5	2.72	0.61	18	3.13													
19-Dec-07	7.1	13.8	68	3	45	3	1	29	1.5	2.1	17.1	17.2	2.3	0.29	2	0.14											
27-Dec-07	6.5	12.7	1	4	0.2	20.2	0.25	0.07																			

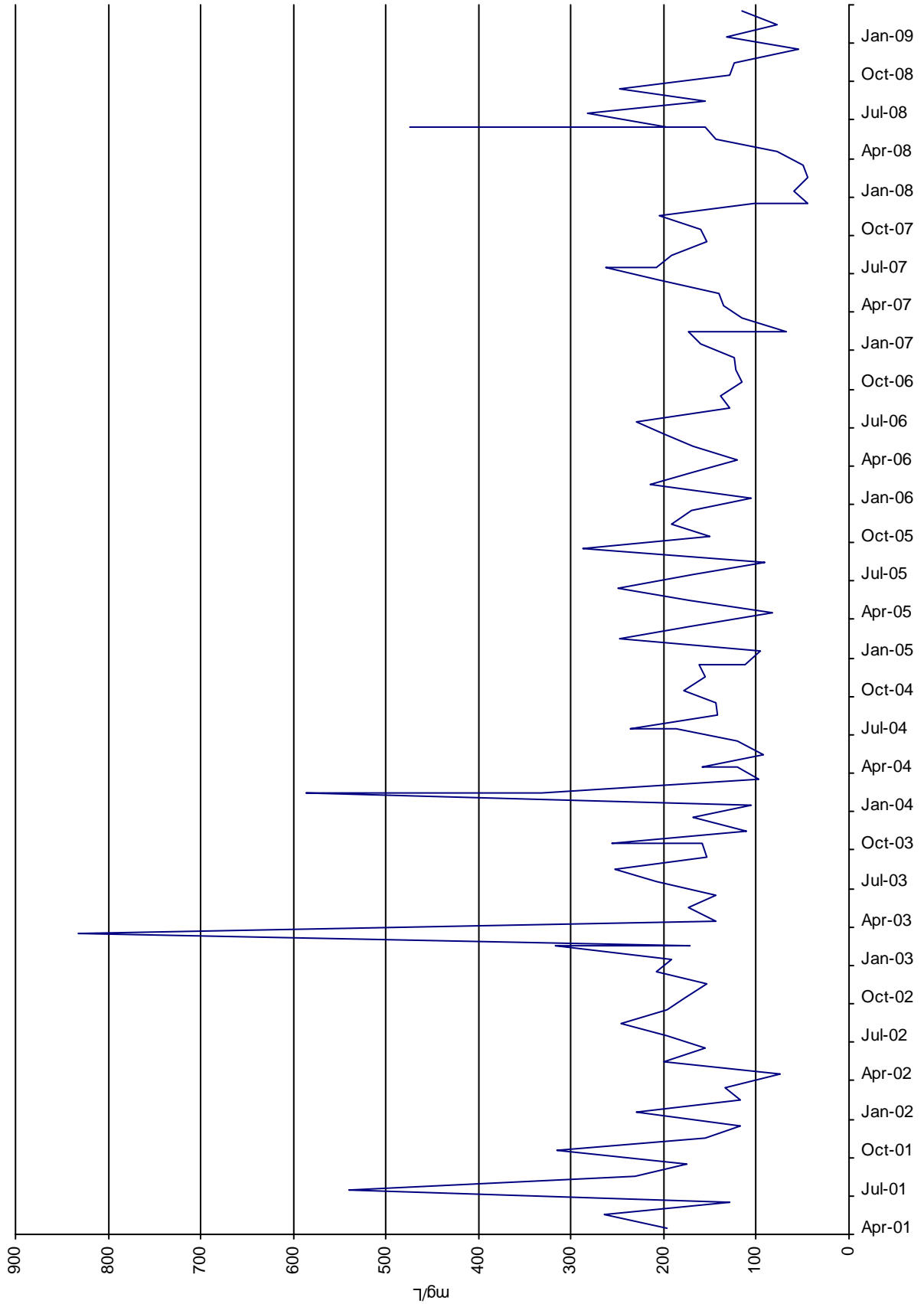
Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 4 - Influent CBOD (mg/L)



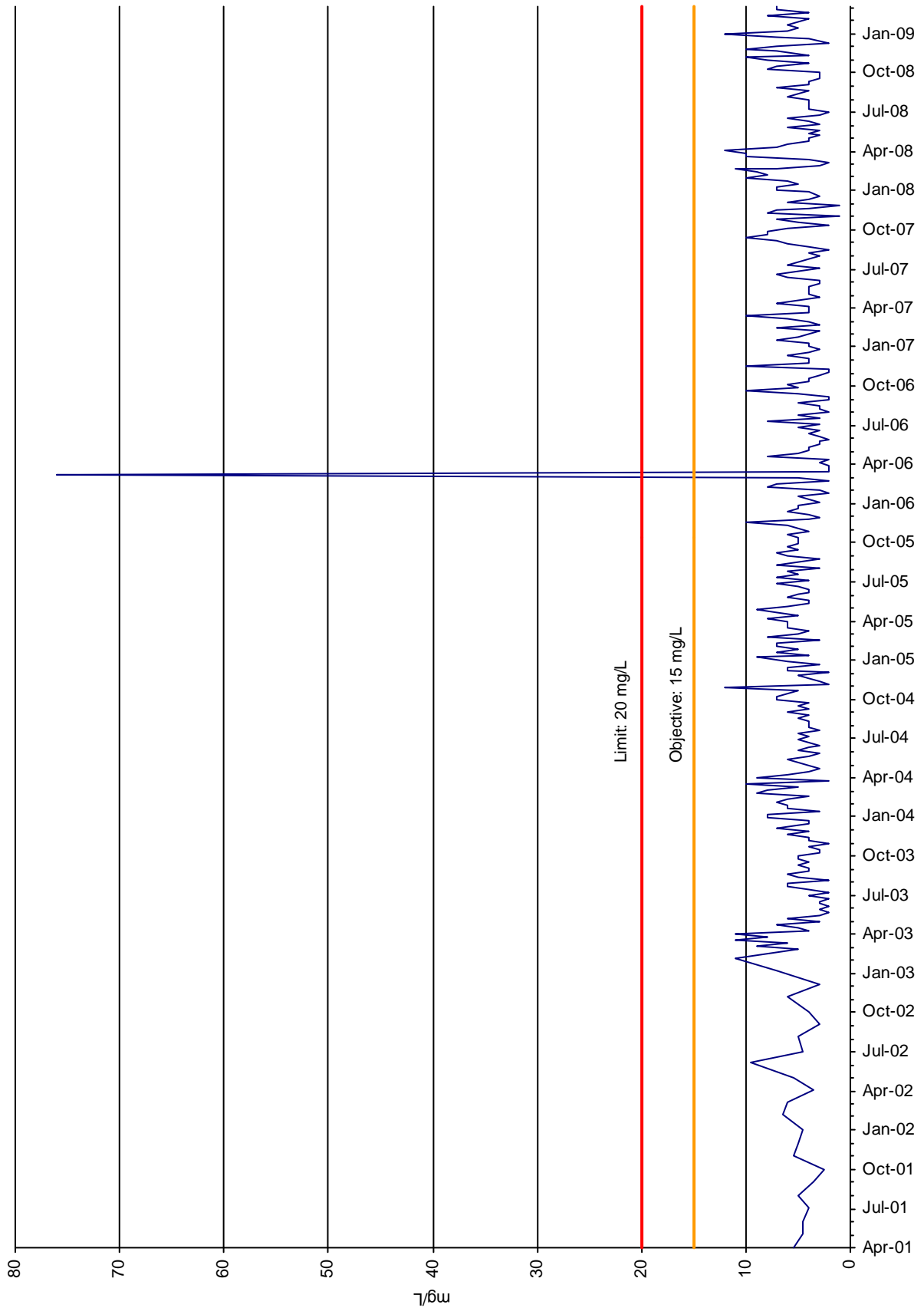
Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 5 - Effluent CBOD (mg/L)



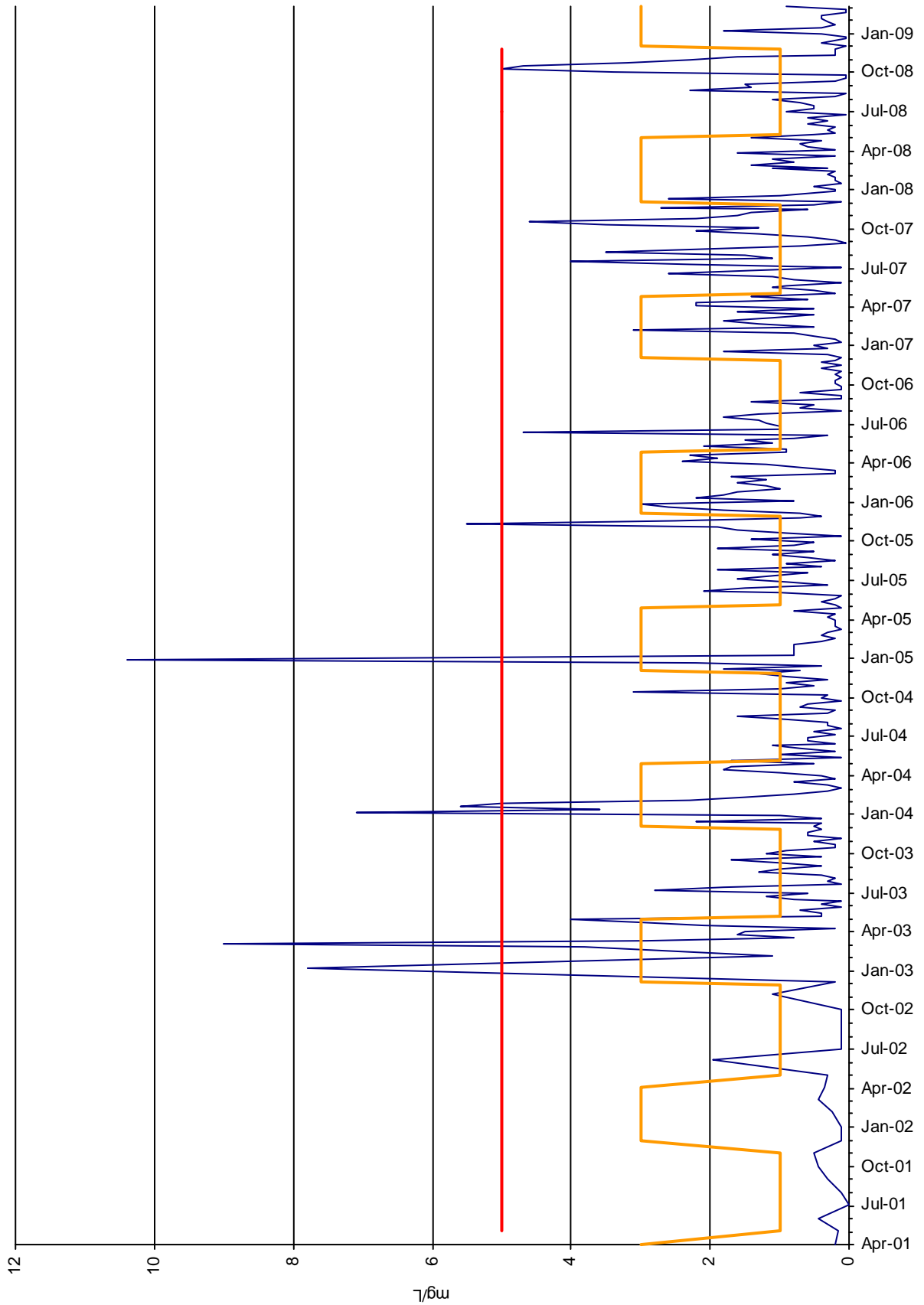
Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 6 - Influent Total Suspended Solids (mg/L)



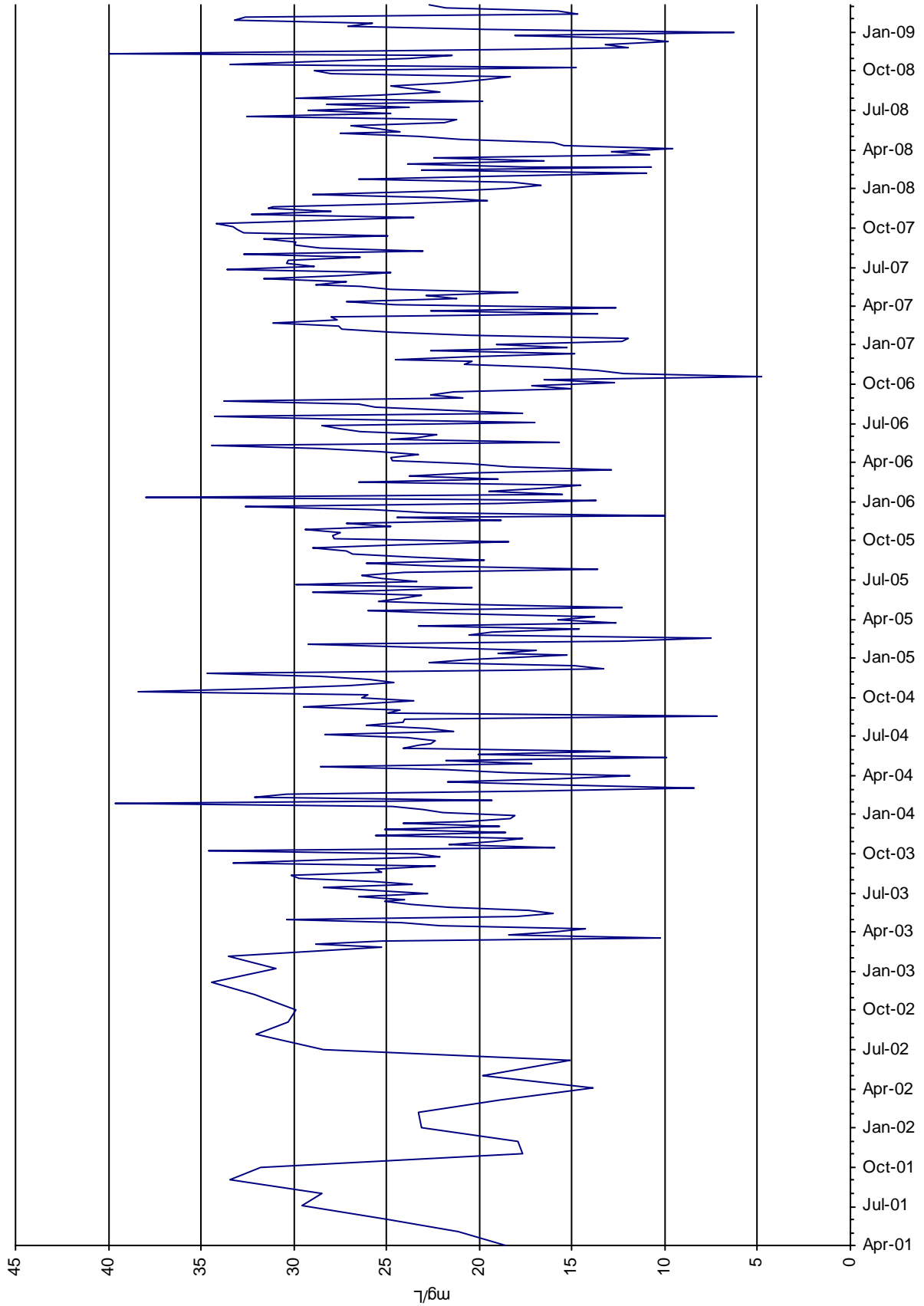
Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 7 - Effluent Total Suspended Solids (mg/L)



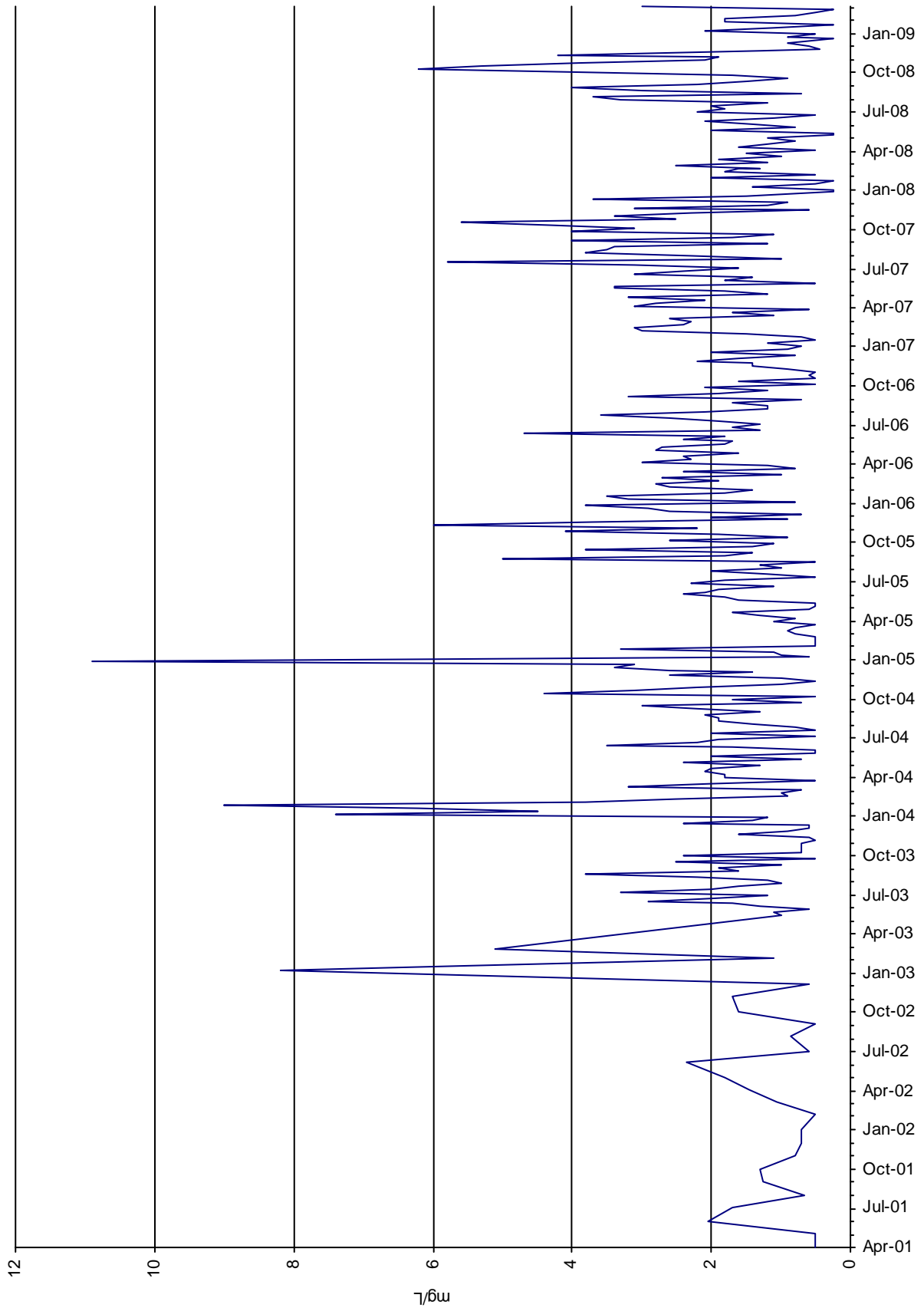
Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 8 - Effluent Ammonia+Ammonium (mg/L)



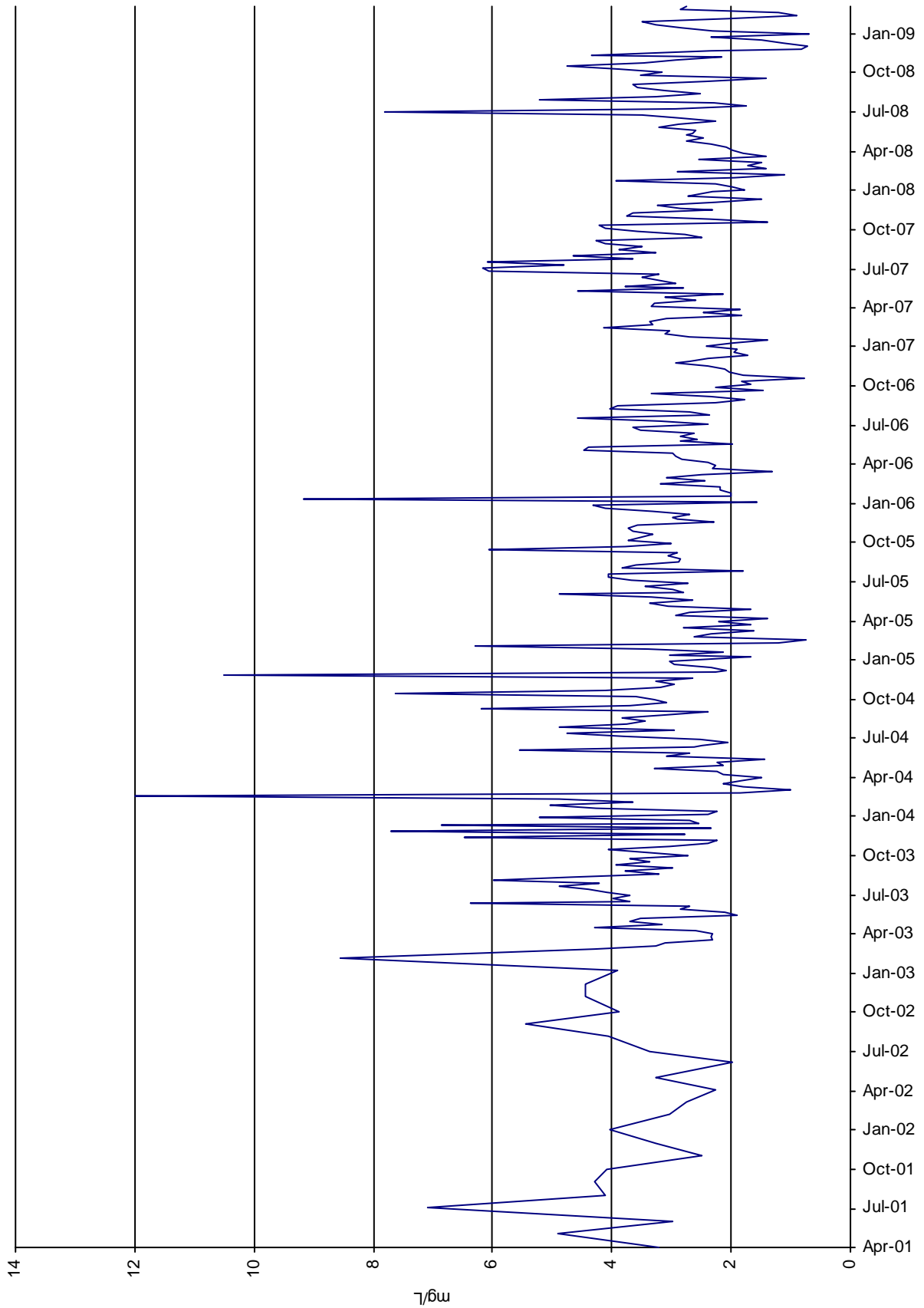
Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 9 - Influent Total Kjeldahl Nitrogen (mg/L)



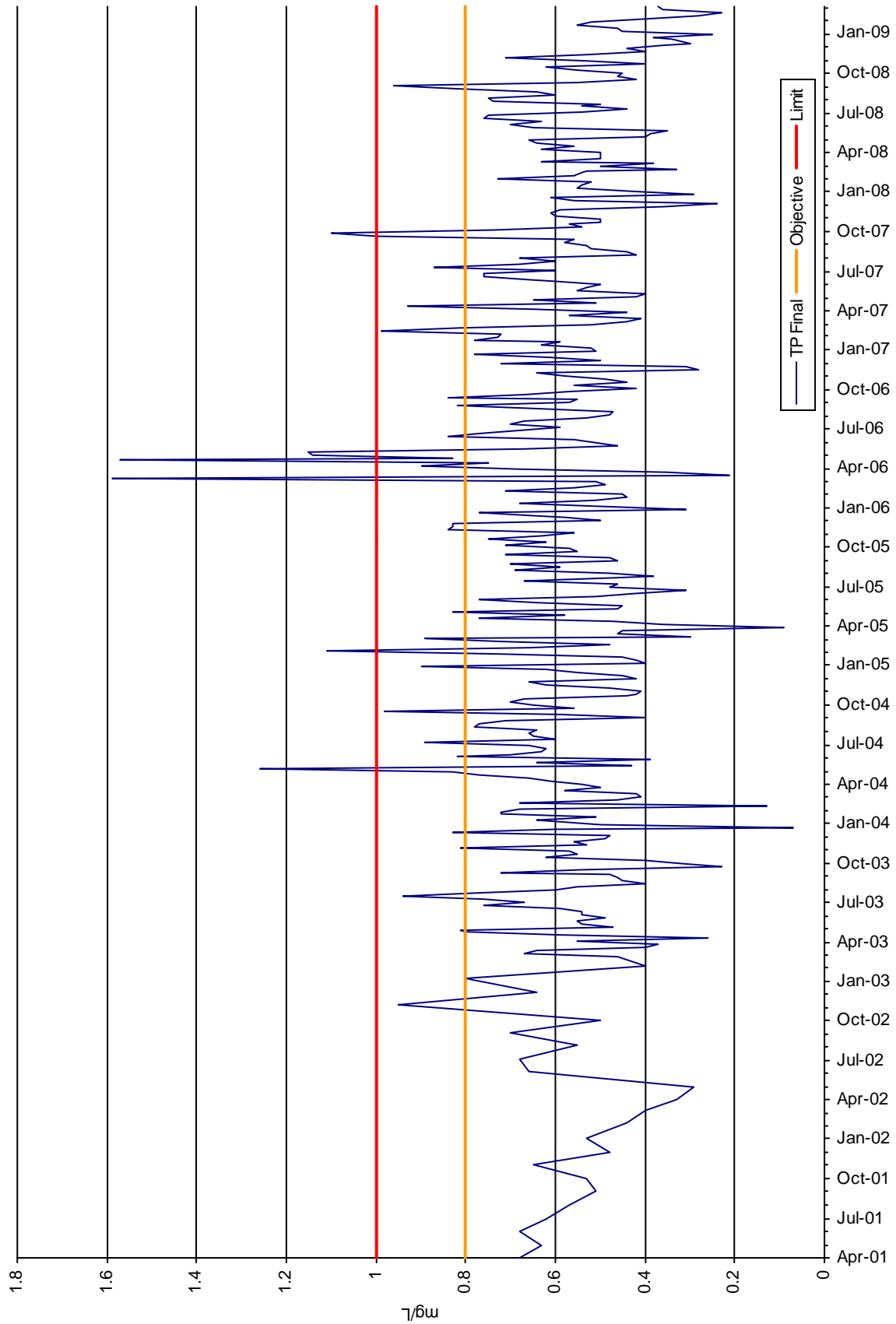
Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 10 - Effluent Total Kjeldahl Nitrogen (mg/L)



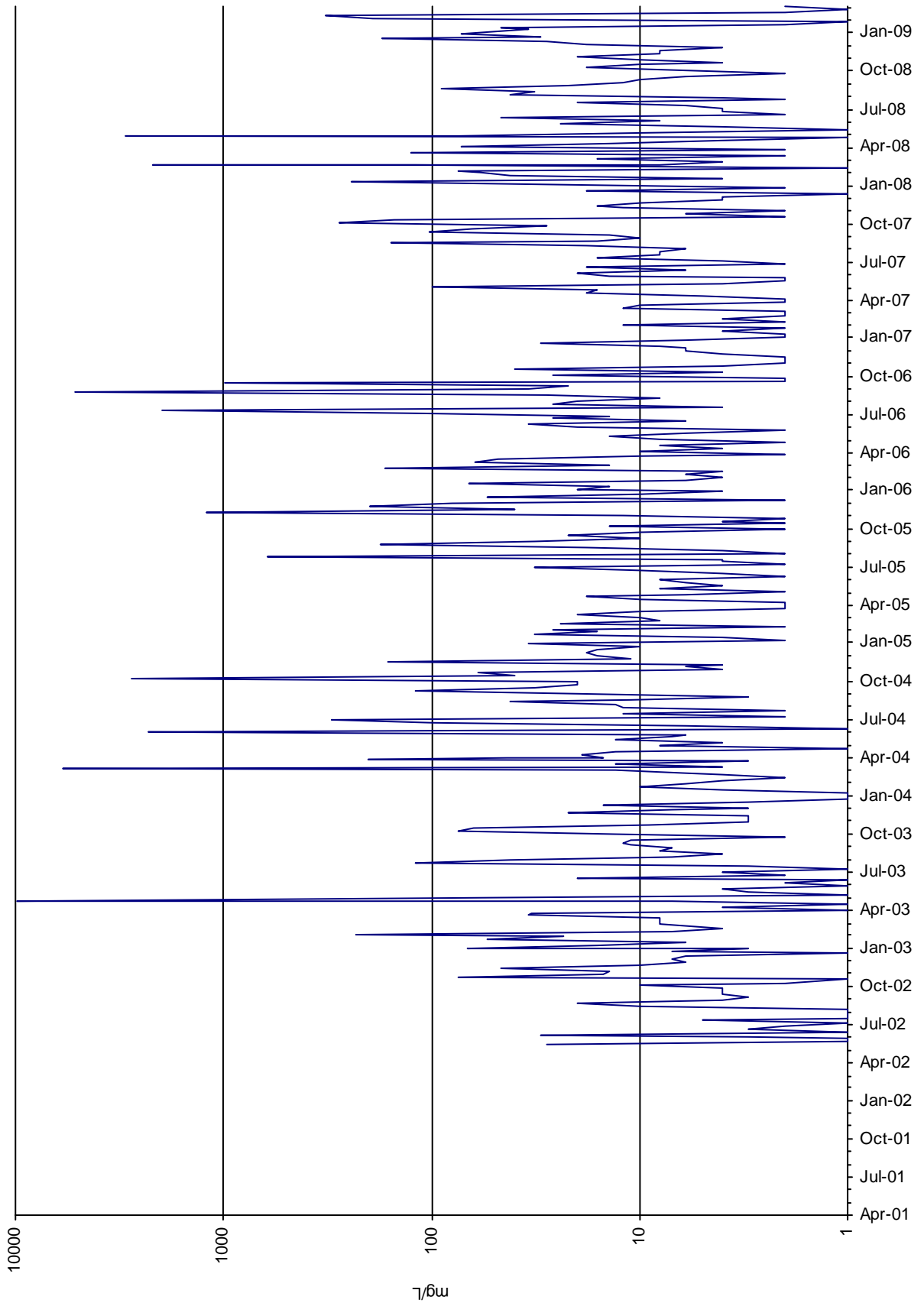
Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 11 - Influent Total Phosphorus (mg/L)



Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 12 - Effluent Total Phosphorus (mg/L)



Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 13 - Effluent Ecoli (cfu/100 mL)



The Corporation of the City of St. Thoma

Appendix 14 - % Reduction of Volatile Solids in Digested Sludge

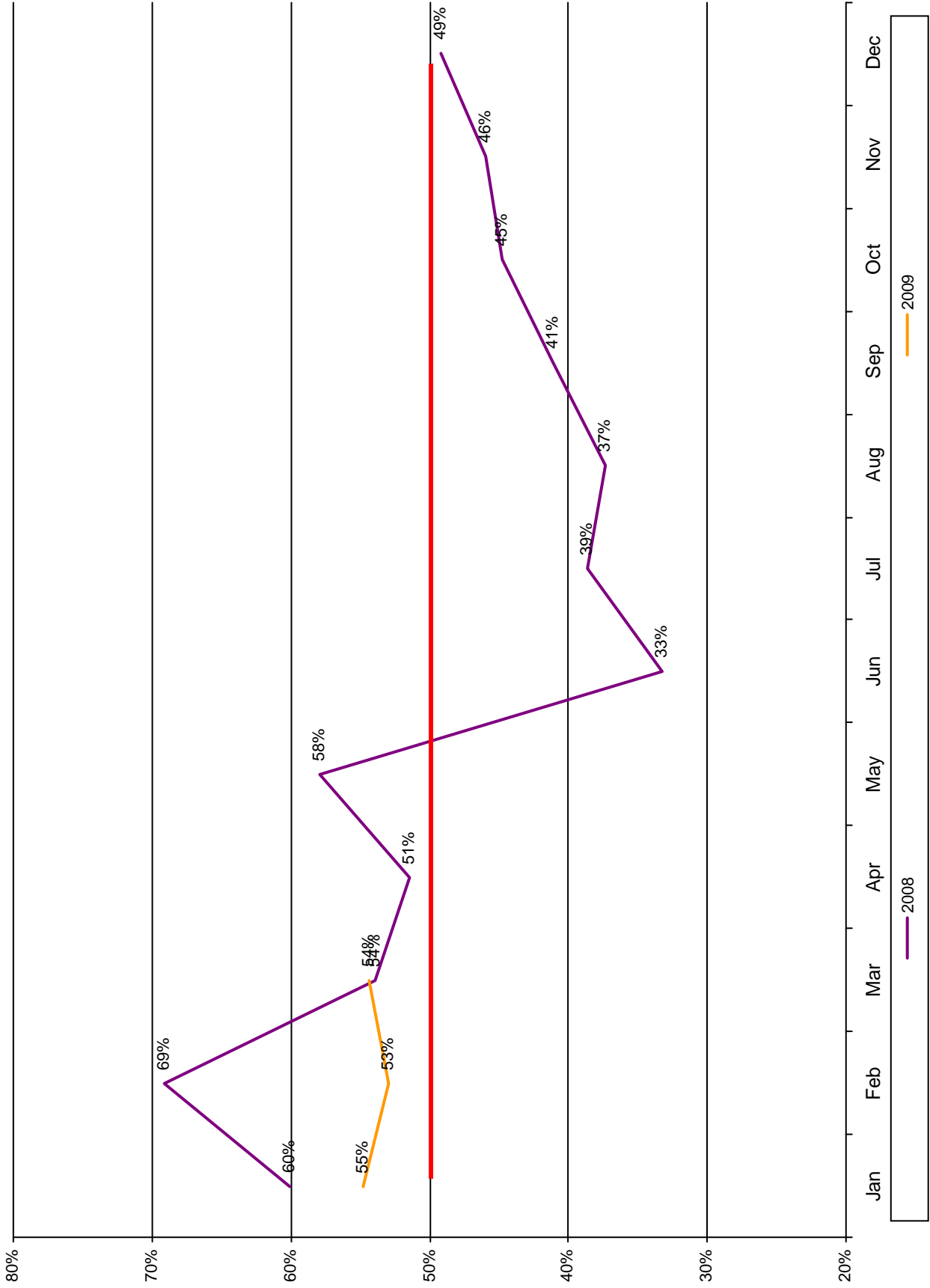
Year: 2009

Month	Average of Raw Total Solids	Average of Raw Volatile Solids	Average of Digested Total Solids	Average of Digested Volatile	Average of Dewatered Total Solids	% Reduction	Number of Samples
01 January	4.23%	76.70%	2.53%	59.81%	20.06%	54.79%	7
02 February	4.40%	74.07%	2.38%	57.30%	17.51%	53.01%	7
03 March	3.81%	75.82%	2.78%	58.88%	20.13%	54.35%	4
Average:	4.15%	75.53%	2.57%	58.66%		54.05%	
Minimum:						53.01%	
Maximum:						54.79%	

Year: 2008

Month	Average of Raw Total Solids	Average of Raw Volatile Solids	Average of Digested Total Solids	Average of Digested Volatile	Average of Dewatered Total Solids	% Reduction	Number of Samples
01 January	4.54%	74.46%	2.75%	53.79%	21.56%	60.08%	8
02 February	3.30%	78.57%	2.53%	53.06%	19.98%	69.17%	4
03 March	3.81%	75.64%	2.45%	58.86%	21.69%	53.91%	8
04 April	3.44%	74.77%	2.49%	59.01%	19.93%	51.41%	7
05 May	3.64%	77.97%	2.63%	59.86%	19.34%	57.86%	6
06 June	4.62%	72.75%	2.28%	64.04%	23.73%	33.29%	4
07 July	3.83%	71.00%	2.59%	60.02%	18.68%	38.68%	9
08 August	3.92%	68.54%	3.09%	57.71%	21.51%	37.38%	2
09 September	3.78%	74.61%	3.03%	63.39%	19.82%	41.08%	3
10 October	3.07%	74.60%	2.94%	61.87%	20.54%	44.75%	7
11 November	3.95%	74.62%	2.44%	61.36%	19.84%	45.98%	5
12 December	4.02%	75.67%	2.12%	61.27%	19.32%	49.15%	8
Average:	3.83%	74.43%	2.61%	59.52%		48.56%	
Minimum:						33.29%	
Maximum:						69.17%	

The Corporation of the City of St. Thomas - Water Pollution Control Plant
 Appendix 15 - % Reduction Digester Performance



City of St. Thomas Water Pollution Control Plant

Appendix 16 - Digester Sludge Volatile Acids Ratio

Note: <0.1 Acceptable, >0.5 Indicates Possible Upset

Date	Digester	Volatile Acids mg/L	Alkalinity mg/L as CaCO3	pH Units	Volatile Acids Ratio
02-Jan-08	3	734	2480	6.92	0.2960 X
30-Jan-08	1	48	2490	7.44	0.0193
05-Mar-08	3	40	2190	7.05	0.0183
02-Apr-08	3	40	2420	7	0.0165
16-May-08	3	3010	2150	6.35	1.4000 X
28-May-08	2	40	2890	7.22	0.0138
11-Jun-08	2	40	2960	7.43	0.0135
18-Jun-08	3	40	3390	7.53	0.0118
19-Jun-08	2	40	3040	8.03	0.0132
20-Jun-08	1	239	3800	7.62	0.0629
12-Sep-08	3	5900	1570	5.11	3.7580 X
24-Sep-08	3	6100	1540	5.22	3.9610 X
01-Oct-08	3	5420	1590	5.25	3.4088 X
08-Oct-08	3	4990	1580	5.34	3.1582 X
08-Oct-08	1	6100	1930	5.25	3.1606 X
15-Oct-08	1	5570	1790	5.47	3.1117 X
22-Oct-08	1	3650	2400	6.84	1.5208 X
22-Oct-08	3	5560	1650	5.33	3.3697 X
29-Oct-08	3	3710	2060	6.81	1.8010 X
05-Nov-08	2	2950	2450	6.7	1.2041 X
06-Nov-08	3	3440	2100	6.33	1.6381 X
12-Nov-08	2	2640	3000	6.99	0.8800 X
12-Nov-08	3	3170	1700	6.5	1.8647 X
20-Nov-08	3	2720	1640	7.48	1.6585 X
20-Nov-08	2	2450	2310	7.26	1.0606 X
03-Dec-08	3	1990	3510	6.89	0.5670 X
03-Dec-08	2	373	3090	7.29	0.1207 X
10-Dec-08	2	164	3170	7.48	0.0517
10-Dec-08	3	1250	2680	7.14	0.4664 X
17-Dec-08	2	227	3400	7.5	0.0668
17-Dec-08	3	818	3030	7.3	0.2700 X
22-Dec-08	2	413	3600	7.53	0.1147 X
22-Dec-08	3	414	3180	7.24	0.1302 X
29-Dec-08	2	240	3450	7.46	0.0696
29-Dec-08	3	230	3070	7.17	0.0749
07-Jan-09	3	92	2580	7.35	0.0357
10-Mar-09	3	120	2659	7.21	0.0451

**The Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 17 - Sludge Analytical Data**

Digester 1

Date	Total Solids mg/L	SG	Ammonia as N mg/L	As mg/L	Cd mg/L	Co mg/L	Cr mg/L	Cu mg/L	Hg mg/L	Mo mg/L	Ni mg/L	P mg/L	Pb mg/L	Se mg/L	Zn mg/L	Ecoli (cfu/1gm dry wht):	Ecoli (cfu/100 gm)
07-Jun-06	25300	1.01	810	0.07	0.04	0.08	1.3	15	0.019	0.3	0.6	770	6.2	0.1	14	28854	73000
05-Jul-06	26000	1	783	0.079	0.03	0.09	1.5	19	0.029	0.4	0.7	940	6.5	0.11	17	11923	31000
01-Aug-06	30000	0.99	695	0.074	0.04	0.11	1.8	25	0.072	0.7	0.8	1070	16	0.14	22	60000	180000
06-Sep-06	26700	1	679	0.12	0.04	0.09	1.6	19	0.052	0.4	0.6	870	9.3	0.12	18	14981	40000
01-May-07	21400	1	704	0.1	0.003	0.07	0.9	14	0.012	0.1	0.4	640	2.7	0.16	12	25234	54000
06-Jun-07	21100	1	712	0.09	0.015	0.06	1	15	0.027	0.2	0.4	670	2.7	0.13	12	58294	123000
01-Aug-07	11200	1	763	0.01	0.015	0.025	0.5	8	0.003	0.1	0.2	410	2.3	0.07	7.1	17857	20000
05-Sep-07	29000	1	698	0.1	0.04	0.09	1.8	25	0.017	0.5	0.7	1100	7.4	0.18	23	2069	6000
19-Dec-07	28200	1	956	0.1	0.06	0.09	1.7	23	0.110	0.3	0.7	1000	6.3	0.17	20	3191	9000
06-Feb-08	162000	1.1	1300	0.25	0.17	0.6	8.7	120	0.200	1.5	4	6700	23	0.35	110	25123	370000
01-Oct-08	29600	1	588	0.11	0.05	0.09	1.4	17	0.027	0.2	0.5	830	4.5	0.1	17	676	2000
03-Dec-08	7550	1	540	0.047	0.015	0.025	0.3	3.8	0.003	0.05	0.05	270	1.3	0.025	4.5	13200	10000
04-Feb-09	13000	1	978	0.08	0.015	0.025	0.8	10	0.017	0.05	0.3	570	2.4	0.07	10	9231	12000

**The Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 18 - Digester 1 MOE Criteria Requirements**

	Averages 30-Jan-08 to 04-Feb-09 (mg/L)		
Total Solids	46890.00		
Specific Gravity	1.03		
Phosphorus as P	1840.00		
Ammonia as N	841.60		
		Nitrogen to Metal Ratio	Minimum Acceptable Nitrogen to Metal Ratio
Arsenic as As	0.15	5710	100
Cadmium as C	0.05	15879	500
Cobalt as Co	0.16	5132	50
Chromium as C	2.46	342	6
Copper as Cu	33.56	25	10
Mercury as Hg	0.06	15002	1500
Molybdenum as M	0.40	2104	180
Nickel as Ni	1.07	787	40
Lead as Pb	6.88	122	15
Selenium as S	0.18	4702	500
Zinc as Zn	31.30	27	4

**The Corporation of the City of St. Thomas - Water Pollution Control Plant
Appendix 19 - Sludge Analytical Data**

Dewatered Sludge

Date	Total Solids mg/L	SG	Ammonia as N mg/L	As mg/L	Cd mg/L	Co mg/L	Cr mg/L	Cu mg/L	Hg mg/L	Mo mg/L	Ni mg/L	P mg/L	Pb mg/L	Se mg/L	Zn mg/L	Ecoli (cfu/1gm dry wht):	Ecoli (cfu/100 gm)
04-May-05	230000	1.09	1853	0.95	0.21	1	11	140	0.200	1.9	5.3	6400	53	0.85	120	4170	88000
03-Aug-05	239000	1.08	1170	0.82	0.38	1	14	190	0.700	4.6	6.8	7200	170	1.2	150	316318	7000000
02-Nov-05	212000	1.08	108	0.57	0.28	0.54	21	160	0.500	3.3	7.6	6800	40	0.99	120	422830	8300000
01-Feb-06	219000	1.09	1600	1	0.25	0.8	15	210	0.200	3.3	6	8700	190	2	150	36831	740000
02-Mar-06	239000	1.12	1670	1	0.2	0.7	11	160	0.500	2.6	5	6200	160	1	130	182762	3900000
02-May-06	218000	1.09	1640	1	0.24	0.58	11	160	0.300	1.8	5	7100	38	1	130	104500	2090000
01-Nov-06	197000	1.13	1200	1	2.2	0.8	11	130	4.700	1	6	5700	85	1	1	23518	410000
03-Jan-07	207000	1.05	2000	2	0.05	0.15	4.4	83	0.130	1.1	3	4700	2.1	0.5	64	45145	890000
04-Apr-07	271000	1.4	2100	3	0.34	1.2	14	220	0.300	1.3	8	9700	41	1	190	45166	900000
10-Jul-07	204000	1.1	1600	0.5	0.27	0.6	11	170	0.300	2.1	5	7600	54	1	150	454216	8200000
03-Oct-07	223000	1.2	1200	0.7	0.31	0.7	13	170	0.300	2.1	5	8200	54	1.6	170	3.1E+07	600000000
07-May-08	217000	1.2	2300	0.3	0.36	0.8	13	180	0.300	1.9	6	7800	44	0.4	160	34839	630000
01-Oct-08	212000	1.2	910	0.8	0.23	0.7	9.7	130	0.200	1.8	4	6800	32	1.1	130	1415	25000
18-Nov-08	251000	1.3	1570	0.25	0.31	0.7	13	170	0.600	2.4	7	8800	70	0.35	170	6215	120000
03-Dec-08	226000	1.2	1750	1.4	0.36	0.8	12	170	0.200	1.9	3	9200	65	1.8	160	2973451	5600000

The Corporation of the City of St. Thomas - Water Pollution Control Plant

Appendix 20 - Land Application Criteria

Data Collected: 07-May-08 to 03-Dec-08

Data Compiled From: Dewatered

	Averages (mg/L)		
Total Solids	226500.00	Application Rate at 8 tones of solids/hectare:	35.3 cubic meters/hectare
Specific Gravity	1.23		
Phosphorus as	8150.00		
Ammonia as N	1632.50	Metal Concentration (mg/Kg of Solids)	Maximum Metal Concentration (mg/Kg of Solids)
Arsenic as As	0.69	3.04	170
Cadmium as C	0.32	1.39	34
Cobalt as Co	0.75	3.31	340
Chromium as C	11.93	52.65	2800
Copper as Cu	162.50	717.44	1700
Mercury as Hg	0.33	1.43	11
Molybdenum as M	2.00	8.83	94
Nickel as Ni	5.00	22.08	420
Lead as Pb	52.75	232.89	1100
Selenium as S	0.91	4.03	34
Zinc as Zn	155.00	684.33	4200
Ecoli	(cfu/1gm dry wh 753980		
	(cfu/100 gm 14193750		

City of St. Thomas - Water Pollution Control Plant
Appendix 21 - Hauled Sewage Volumes

Date	Contractor	Source	Address	Volume (gal)	Comments
08-Jan-08	Erie Excavating	Rapley	19 Sunset Drive	1500	
18-Jan-08	Erie Excavating	Heritage Lanes	1213 Talbot St.	1500	
29-Jan-08	Erie Excavating	Elgin Transmission	1241 Talbot St.	1500	
31-Jan-08	Erie Excavating	Heritage Lanes	1213 Talbot St.	1500	
05-Feb-08	Erie Excavating	Elgin Transmission	1241 Talbot St.	1500	
11-Feb-08	Erie Excavating	Rapley	19 Sunset Drive	1500	
15-Feb-08	Erie Excavating	Kwikway Storage	50 Burwell Rd.	1500	
20-Feb-08	Erie Excavating	Heritage Lanes	1213 Talbot St.	1500	
20-Feb-08	Erie Excavating	Rapley	19 Sunset Drive	1000	
04-Mar-08	Erie Excavating	Elmdale Cemetary	190 Sunset Drive	1000	
11-Mar-08	Erie Excavating	Heritage Lanes	1213 Talbot St.	1000	
13-Mar-08	Erie Excavating	Elgin Transmission	1241 Talbot St.	1000	
17-Mar-08	Erie Excavating	Rapley	19 Sunset Drive	1000	
18-Mar-08	Erie Excavating	Elgin Transmission	1241 Talbot St.	1000	
25-Mar-08	Erie Excavating	Elgin Transmission	1241 Talbot St.	1000	
27-Mar-08	Erie Excavating	Elmdale Cemetary	190 Sunset Drive	1000	
28-Mar-08	Erie Excavating	Heritage Lanes	1213 Talbot St.	1000	
02-Apr-08	Erie Excavating	Elgin Transmission	1241 Talbot St.	1500	
03-Apr-08	Erie Excavating	Heritage Lanes	1213 Talbot St.	1500	
10-Apr-08	Erie Excavating	Rapley	19 Sunset Drive	2000	
24-Apr-08	Erie Excavating	Heritage Lanes	1213 Talbot St.	1500	
29-Apr-08	Erie Excavating	Rapley	19 Sunset Drive	1500	
06-May-08	Erie Excavating	Heritage Lanes	1213 Talbot St.	1500	
20-May-08	Erie Excavating	Elgin Transmission	1241 Talbot St.	2000	
29-May-08	Erie Excavating	Heritage Lanes	1213 Talbot St.	2000	
02-Jun-08	Erie Excavating	Rapley	19 Sunset Drive	1500	
12-Jun-08	Erie Excavating		16 Hill Street	1500	
26-Jun-08	Erie Excavating	Elgin Transmission	1241 Talbot St.	1500	
30-Jun-08	Erie Excavating	Heritage Lanes	1213 Talbot St.	1500	
09-Jul-08	Erie Excavating	Elgin Transmission	1241 Talbot St.	1500	
16-Jul-08	Erie Excavating	Heritage Lanes	1213 Talbot St.	1500	
18-Jul-08	Erie Excavating	Rapley	19 Sunset Drive	1500	
25-Jul-08	Erie Excavating	Elgin Transmission	1241 Talbot St.	1500	
01-Aug-08	Erie Excavating	Elgin Transmission	1241 Talbot St.	1500	
14-Aug-08	Erie Excavating	Heritage Lanes	1213 Talbot St.	1500	
15-Aug-08	Erie Excavating	Elmdale Cemetary	190 Sunset Drive	1500	
22-Aug-08	Erie Excavating	Elgin Transmission	1241 Talbot St.	1500	
26-Sep-08	Erie Excavating	Elmdale Cemetary	190 Sunset Drive	1500	
26-Sep-08	Erie Excavating	Elgin Transmission	1241 Talbot St.	1500	
10-Oct-08	Erie Excavating	Rapley	19 Sunset Drive	1500	
12-Nov-08	Erie Excavating	Kwikway Storage	50 Burwell Rd.	1500	
19-Nov-08	Erie Excavating	Rapley	19 Sunset Drive	1500	
10-Dec-08	Erie Excavating	Elgin Transmission	1241 Talbot St.	1500	
16-Dec-08	Erie Excavating	Elgin Transmission	1241 Talbot St.	1500	
				63000	(gal)
				238	(cubic meters)

**City of St Thomas - Water Pollution Control Plant
Appendix 22 - Hauled Sewage Summary**

Year	Total Volume (gal)	# of Loads	Total Volume (cubic meters)
2001	78000	40	295
2002	66500	32	252
2003	2232000	596	8449
2004	80800	35	306
2005	98100	39	371
2006	53500	32	203
2007	53000	35	201
2008	63000	44	238
2009	15000	7	57