GOLD BAR WASTEWATER TREATMENT PLANT
PLANT PERFORMANCE REPORT
September 2014

Digested Sludge: Total Monthly Volume (ML)	59.53

Volume of Flow (ML)

DATE	Peak Flow (MLD)	Influent RAW	Effluent – Non UV Disinfected – BYPASS – OUT-FAL 30	OUT-FAL 20 PRIM	OUT-FAL 20 SEC	Total	MPW	UV Disinfected – OUT-FAL 10 EPE!	OUT-FAL 10 FEC
1-Sep-2014	400.81	265.44	0.00	0.00	0.00	0.00	11.63	0.00	253.81
2-Sep-2014	381.72	331.48	0.00	0.00	0.00	0.00	11.48	0.00	320.00
3-Sep-2014	376.04	267.29	0.00	0.00	0.00	0.00	11.42	0.00	255.87
4-Sep-2014	380.88	267.80	0.00	0.00	0.00	0.00	11.46	0.00	256.34
5-Sep-2014	363.24	260.83	0.00	0.00	0.00	0.00	11.18	0.00	249.65
6-Sep-2014	382.78	256.87	0.00	0.00	0.00	0.00	9.57	0.00	247.30
7-Sep-2014	531.22	280.55	15.62	0.00	0.00	15.62	7.87	0.00	257.06
8-Sep-2014	614.45	395.65	79.51	0.00	0.00	79.51	9.25	0.00	306.89
9-Sep-2014	383.14	270.98	0.00	0.00	0.00	0.00	8.66	0.00	262.32
10-Sep-2014	371.78	283.91	0.00	0.00	0.00	0.00	7.33	0.00	276.58
11-Sep-2014	400.35	267.02	0.00	0.00	0.00	0.00	7.95	0.00	259.07
12-Sep-2014	384.62	267.01	0.00	0.00	0.00	0.00	8.13	0.00	258.88
13-Sep-2014	387.49	257.82	0.00	0.00	0.00	0.00	8.31	0.00	249.51
14-Sep-2014	397.07	259.77	0.00	0.00	0.00	0.00	7.90	0.00	251.87
15-Sep-2014	381.30	268.86	0.00	0.00	0.00	0.00	9.12	0.00	259.74
16-Sep-2014	384.90	265.41	0.00	0.00	0.00	0.00	10.08	0.00	255.33
17-Sep-2014	373.58	265.16	0.00	0.00	0.00	0.00	9.21	0.00	255.95
18-Sep-2014	369.37	262.84	0.00	0.00	0.00	0.00	9.23	0.00	253.61
19-Sep-2014	374.52	263.36	0.00	0.00	0.00	0.00	10.59	0.00	252.77
20-Sep-2014	387.35	255.75	0.00	0.00	0.00	0.00	9.80	0.00	245.95
21-Sep-2014	391.42	254.02	0.00	0.00	0.00	0.00	10.57	0.00	243.45
22-Sep-2014	368.08	265.64	0.00	0.00	0.00	0.00	10.54	0.00	255.10
23-Sep-2014	365.70	257.57	0.00	0.00	0.00	0.00	11.04	0.00	246.53
24-Sep-2014	363.79	260.29	0.00	0.00	0.00	0.00	11.42	0.00	248.87
25-Sep-2014	360.58	257.26	0.00	0.00	0.00	0.00	10.35	0.00	246.91
26-Sep-2014	709.05	338.11	42.37	0.00	0.00	42.37	11.61	0.00	284.13
27-Sep-2014	385.73	259.00	0.00	0.00	0.00	0.00	11.13	0.00	247.87
28-Sep-2014	378.58	256.08	0.00	0.00	0.00	0.00	11.76	0.00	244.32
29-Sep-2014	375.27	264.42	0.00	0.00	0.00	0.00	11.24	0.00	253.18
30-Sep-2014	357.32	257.57	0.00	0.00	0.00	0.00	10.94	0.00	246.63
Average	402.74	272.79	4.58	0.00	0.00	4.58	10.03	0.00	258.18
Minimum	357.32	254.02	0.00	0.00	0.00	0.00	7.33	0.00	243.45
Maximum	709.05	395.65	79.51	0.00	0.00	79.51	11.76	0.00	320.00
GeoMean	---	---	---	---	---	---	---	---	---
TOTAL	---	8,184	137.50	0.00	0.00	137.50	300.77	0.00	7,745

Liquid Stream Quality

DATE	pH@25°C OUT-FAL 30	pH OUT-FAL 20	pH OUT-FAL 10	TSS (mg/L) RAW	TSS OUT-FAL30	TSS OUT-FAL20	TSS OUT-FAL 10	BOD_5/$cBOD_5$ (mg/L) RAW BOD_5	OUT-FAL30 $cBOD_5$	OUT-FAL30 BOD_5	OUT-FAL20 $cBOD_5$	OUT-FAL20 BOD_5	OUT-FAL 10 $cBOD_5$
1-Sep-2014	---	---	7.5	268	---		3.7	260	---	---	---	---	4.0
2-Sep-2014	---	---	7.6	256	---		4.5	281	---	---	---	---	4.0
3-Sep-2014	---	---	7.6	280	---		4.9	287	---	---	---	---	4.0
4-Sep-2014	---	---	7.8	280	---		4.6	277	---	---	---	---	4.0
5-Sep-2014	---	---	7.6	293	---		9.7	343	---	---	---	---	4.0
6-Sep-2014	---	---	7.5	302	---		5.1	286	---	---	---	---	3.0
7-Sep-2014	---	---	7.6	280	24.0		4.6	335	54.0	54.0	---	---	3.0
8-Sep-2014	---	---	7.6	105	22.0		4.2	143	53.0	61.0	---	---	3.0
9-Sep-2014	---	---	7.4	282	---		5.6	340	---	---	---	---	3.0
10-Sep-2014	---	---	7.6	308	---		4.8	252	---	---	---	---	3.0
11-Sep-2014	---	---	7.5	323	---		7.1	281	---	---	---	---	3.0
12-Sep-2014	---	---	7.5	290	---		3.8	299	---	---	---	---	3.0
13-Sep-2014	---	---	7.5	264	---		4.0	278	---	---	---	---	3.0
14-Sep-2014	---	---	7.6	266	---		4.4	260	---	---	---	---	3.0
15-Sep-2014	---	---	7.5	296	---		8.8	265	---	---	---	---	3.0
16-Sep-2014	---	---	7.7	304	---		5.5	290	---	---	---	---	4.0
17-Sep-2014	---	---	7.9	312	---		4.8	334	---	---	---	---	4.0
18-Sep-2014	---	---	7.6	304	---		5.4	302	---	---	---	---	3.0
19-Sep-2014	---	---	7.6	280	---		4.4	278	---	---	---	---	3.0
20-Sep-2014	---	---	7.5	269	---		4.3	283	---	---	---	---	4.0
21-Sep-2014	---	---	7.7	264	---		4.7	332	---	---	---	---	5.0
22-Sep-2014	---	---	7.7	257	---		4.9	287	---	---	---	---	3.0
23-Sep-2014	---	---	7.6	284	---		4.9	322	---	---	---	---	3.0
24-Sep-2014	---	---	7.6	274	---		4.3	318	---	---	---	---	2.0
25-Sep-2014	---	---	7.6	300	---		4.8	350	---	---	---	---	* 2.0
26-Sep-2014	---	---	7.5	330	34.0		3.9	222	40.0	45.0	---	---	3.0
27-Sep-2014	---	---	7.5	272	---		4.5	247	---	---	---	---	3.0
28-Sep-2014	---	---	7.5	240	---		5.2	298	---	---	---	---	3.0
29-Sep-2014	---	---	7.2	294	---		4.8	298	---	---	---	---	3.0
30-Sep-2014	---	---	7.6	200	---		4.8	269	---	---	---	---	3.0
Average	---	---	7.6	276	26.7	---	5.0	287	49.0	53.3	---	---	3
Minimum	---	---	7.2	105	22.0	---	3.7	143	40.0	45.0	---	---	2
Maximum	---	---	7.9	330	34.0	---	9.7	350	54.0	61.0	---	---	5
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---

DATE	TP (mg/L) RAW	TP OUT-FAL30	TP OUT-FAL20	TP OUT-FAL 10	NH3-N (mg/L) RAW	NH3-N OUT-FAL30	NH3-N OUT-FAL20	NH3-N OUT-FAL 10	un-ioned ammonia (mg/L) OUT-FAL 10	TKN (mg/L) RAW	TKN OUT-FAL30	TKN OUT-FAL20	TKN OUT-FAL 10
1-Sep-2014	6.95	---	---	0.28	31.1	---	---	0.45		54.0	---	---	2.02
2-Sep-2014	6.95	---	---	0.30	31.7	---	---	0.23	0.005	51.9	---	---	1.76
3-Sep-2014	6.43	---	---	0.42	32.8	---	---	0.05		52.7	---	---	1.84
4-Sep-2014	6.44	---	---	0.26	28.3	---	---	0.04	< 0.001	52.2	---	---	1.77
5-Sep-2014	6.48	---	---	0.29	34.7	---	---	0.05	< 0.001	52.4	---	---	1.73
6-Sep-2014	6.73	---	---	0.28	33.9	---	---	0.16	< 0.001	52.6	---	---	1.81
7-Sep-2014	6.84	2.21	---	0.55	29.5	13.1	---	0.29	0.001	54.1	18.0	---	3.97
8-Sep-2014	4.72	3.30	---	0.39	20.5	27.2	---	0.07	0.002	39.2	34.1	---	1.55
9-Sep-2014	7.23	---	---	0.36	30.4	---	---	0.12	< 0.001	53.9	---	---	1.66
10-Sep-2014	5.95	---	---	0.26	27.8	---	---	0.07		49.4	---	---	1.56
11-Sep-2014	6.57	---	---	0.24	32.9	---	---	0.06	< 0.001	52.0	---	---	1.61
12-Sep-2014	6.24	---	---	0.22	32.4	---	---	0.04	< 0.001	51.4	---	---	1.65
13-Sep-2014	5.78	---	---	0.22	28.5	---	---	0.06	< 0.001	50.3	---	---	1.66
14-Sep-2014	6.23	---	---	0.21	32.9	---	---	0.12	< 0.001	54.3	---	---	1.82
15-Sep-2014	6.06	---	---	0.31	32.5	---	---	0.06	0.001	51.4	---	---	2.47
16-Sep-2014	6.30	---	---	0.32	32.9	---	---	0.07	< 0.001	52.4	---	---	1.81
17-Sep-2014	7.69	---	---	0.27	30.0	---	---	0.07		59.7	---	---	1.62
18-Sep-2014	7.19	---	---	0.30	34.4	---	---	0.07	0.001	55.6	---	---	1.78
19-Sep-2014	7.16	---	---	0.29	34.1	---	---	0.05	< 0.001	61.7	---	---	1.62
20-Sep-2014	6.76	---	---	0.26	25.9	---	---	0.03	< 0.001	55.5	---	---	1.66
21-Sep-2014	6.62	---	---	0.26	30.9	---	---	0.05	< 0.001	56.0	---	---	1.48
22-Sep-2014	6.48	---	---	0.23	32.1	---	---	0.04	< 0.001	51.3	---	---	1.45
23-Sep-2014	6.46	---	---	0.30	32.8	---	---	0.03	< 0.001	51.7	---	---	1.52
24-Sep-2014	9.14	---	---	0.23	33.0	---	---	0.03		52.3	---	---	1.37
25-Sep-2014	6.94	---	---	0.21	34.8	---	---	0.05	< 0.001	54.2	---	---	1.42
26-Sep-2014	6.54	4.34	---	0.24	25.0	29.4	---	0.04	< 0.001	46.7	37.8	---	1.50
27-Sep-2014	7.06	---	---	0.27	32.1	---	---	0.58	< 0.001	54.7	---	---	2.58
28-Sep-2014	6.56	---	---	0.26	36.1	---	---	0.65	0.006	53.1	---	---	2.54
29-Sep-2014	6.07	---	---	0.25	32.1	---	---	0.22	0.009	47.4	---	---	1.88
30-Sep-2014	10.9	---	---	0.26	45.2	---	---	0.06	0.001	64.0	---	---	1.72
Average	6.78	3.28	---	0.28	31.7	23.2	---	0.13	0.002	52.9	30.0	---	1.83
Minimum	4.72	2.21	---	0.21	20.5	13.1	---	0.03	< 0.001	39.2	18.0	---	1.37
Maximum	10.9	4.34	---	0.55	45.2	29.4	---	0.65	0.009	64.0	37.8	---	3.97
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---

DATE	NO_2+NO_3 (mg/L) RAW	NO_2+NO_3 OUT-FAL30	NO_2+NO_3 OUT-FAL20	NO_2+NO_3 OUT-FAL 10	Chloride (mg/L) RAW	Chloride OUT-FAL30	Chloride OUT-FAL20	Chloride OUT-FAL 10	E.Coli (Counts/100 mL) RAW X10^6	E.Coli OUT-FAL30 X10^6	E.Coli OUT-FAL20 X10^6	E.Coli OUT-FAL 10
1-Sep-2014	---	---	---	12.1	63.7	---	---	65.8	---	---	---	1
2-Sep-2014	< 0.01	---	---	13.3	70.0	---	---	66.9	---	---	---	5
3-Sep-2014	---	---	---	11.7	68.6	---	---	72.4	---	---	---	8
4-Sep-2014	---	---	---	12.7	66.3	---	---	71.3	---	---	---	10
5-Sep-2014	---	---	---	13.6	61.8	---	---	73.0	---	---	---	15
6-Sep-2014	---	---	---	13.6	64.3	---	---	70.5	---	---	---	3
7-Sep-2014	---	5.63	---	13.2	75.3	65.2	---	65.7	---	0.040	---	3
8-Sep-2014	---	0.21	---	9.1	58.8	49.3	---	67.0	---	1.9	---	22
9-Sep-2014	NR	---	---	11.6	70.8	---	---	64.8	---	---	---	12
10-Sep-2014	---	---	---	12.2	68.3	---	---	68.4	---	---	---	16
11-Sep-2014	---	---	---	10.9	68.1	---	---	66.9	---	---	---	9
12-Sep-2014	---	---	---	11.0	74.9	---	---	76.2	---	---	---	3
13-Sep-2014	---	---	---	11.5	66.4	---	---	77.5	---	---	---	6
14-Sep-2014	---	---	---	11.7	66.5	---	---	74.5	---	---	---	1
15-Sep-2014	---	---	---	10.7	70.1	---	---	74.2	---	---	---	6
16-Sep-2014	< 0.10	---	---	10.1	70.0	---	---	76.8	---	---	---	9
17-Sep-2014	---	---	---	11.5	70.9	---	---	76.2	---	---	---	5
18-Sep-2014	---	---	---	13.5	73.6	---	---	76.6	---	---	---	10
19-Sep-2014	---	---	---	16.5	76.5	---	---	78.8	---	---	---	4
20-Sep-2014	---	---	---	15.5	66.7	---	---	75.8	---	---	---	2
21-Sep-2014	---	---	---	9.9	67.3	---	---	71.2	---	---	---	6
22-Sep-2014	---	---	---	7.3	68.6	---	---	68.0	---	---	---	8
23-Sep-2014	< 0.01	---	---	7.2	70.5	---	---	73.6	---	---	---	2
24-Sep-2014	---	---	---	9.0	71.1	---	---	76.4	---	---	---	23
25-Sep-2014	---	---	---	9.9	72.9	---	---	76.4	5.2	---	---	4
26-Sep-2014	---	1.74	---	12.0	72.3	72.6	---	79.4	---	0.19	---	9
27-Sep-2014	---	---	---	12.1	64.2	---	---	73.0	---	---	---	6
28-Sep-2014	---	---	---	14.4	64.0	---	---	68.0	---	---	---	2
29-Sep-2014	---	---	---	13.6	67.2	---	---	66.7	---	---	---	5
30-Sep-2014	< 0.01	---	---	13.1	69.9	---	---	71.2	---	---	---	2
Average	0.03	2.53	---	11.8	69	62	---	72.1	---	---	---	---
Minimum	< 0.01	0.21	---	7.22	59	49	---	64.8	5.2	0.040	---	1
Maximum	0.10	5.63	---	16.5	77	73	---	79.4	5.2	1.9	---	23
GeoMean	---	---	---	---	---	---	---	---	5.2	0.24	---	5
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---

* contact Laboratory for information about the quality assurance associated with the result

! The values in EPE (flow) column indicate wet weather events, then the OUT FAL 10 Average calculation exclude numbers for that day (grey/italics)

x - analysis performed at an ISO 17025 Accredited external laboratory.

RAW ⇨ Plant Influent (Untreated Wastewater)
PRIM ⇨ Primary
SEC ⇨ Secondary
EPT ⇨ Enhanced Primary Treatment
EPEPS ⇨ Enhanced Primary Effluent and Pump St.
MPW ⇨ Membrane Product Water (Effluent re-use water)
OUT FAL 10 ⇨ Combined, UV-disinfected (FE +EPEPS)
OUT FAL 20 ⇨ Combined Bypass (RAW + PE + EPE)
OUT FAL 30 ⇨ Combined Bypass (INF + INFS + PE30 + EPE)
ML ⇨ Megalitres (1,000,000 Litres)
MPN ⇨ Most Probable Number
E ⇨ Estimated Value
A ⇨ Average
nr ⇨ No Result
ns ⇨ No Sample
ws ⇨ Wrong Sample

Report Comments

AESRD Ref #

* ESRD - Alberta Environment & Sustainable Resource and Development

Abhishek Bhargava
Senior Manager, Operations

Date (mm/dd/yyyy)

Debra Long
Senior Manager, Analytical Operations

10/29/2014
Date (mm/dd/yyyy)