PROVIDING MORE EPCOR

GOLD BAR WASTEWATER TREATMENT PLANT
PLANT PERFORMANCE REPORT
August 2014

Digested Sludge: Total Monthly Volume (ML)	59.98

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	OUT-FAL 20 Total	MPW	UV Disinfected OUT-FAL 10 EPE	OUT-FAL 10 FEC
1-Aug-14	397.24	300.98	0.00	0.00	0.00	0.00	11.25	-	289.73
2-Aug-14	393.02	279.45	0.00	0.00	0.00	0.00	10.66	-	268.79
3-Aug-14	382.22	267.20	0.00	0.00	0.00	0.00	10.21	-	256.99
4-Aug-14	382.24	272.00	0.00	0.00	0.00	0.00	11.18	-	260.82
5-Aug-14	381.62	288.52	0.00	0.00	0.00	0.00	10.54	-	277.98
6-Aug-14	685.34	312.73	24.01	0.00	0.00	24.01	10.33	-	278.39
7-Aug-14	553.91	313.33	8.80	0.00	0.00	8.80	11.98	-	292.55
8-Aug-14	604.21	317.99	33.30	0.00	0.00	33.30	11.75	-	272.94
9-Aug-14	390.68	286.20	0.00	0.00	0.00	0.00	9.70	-	276.50
10-Aug-14	383.54	263.44	0.00	0.00	0.00	0.00	10.48	-	252.96
11-Aug-14	373.59	280.01	0.00	0.00	0.00	0.00	11.16	-	268.85
12-Aug-14	375.56	281.58	0.00	0.00	0.00	0.00	11.06	-	270.52
13-Aug-14	375.17	279.29	0.00	0.00	0.00	0.00	12.28	-	267.01
14-Aug-14	375.77	281.48	0.00	0.00	0.00	0.00	10.92	-	270.56
15-Aug-14	369.48	278.82	0.00	0.00	0.00	0.00	11.25	-	267.57
16-Aug-14	382.55	270.81	0.00	0.00	0.00	0.00	11.31	-	259.50
17-Aug-14	383.73	266.37	0.00	0.00	0.00	0.00	12.30	-	254.07
18-Aug-14	369.22	277.53	0.00	0.00	0.00	0.00	11.32	-	266.21
19-Aug-14	408.60	285.01	0.00	0.00	0.00	0.00	12.11	-	272.90
20-Aug-14	367.12	268.88	0.00	0.00	0.00	0.00	11.49	-	257.39
21-Aug-14	356.59	264.06	0.00	0.00	0.00	0.00	12.03	-	252.03
22-Aug-14	357.67	262.59	0.00	0.00	0.00	0.00	11.88	-	250.71
23-Aug-14	376.37	257.30	0.00	0.00	0.00	0.00	11.35	-	245.95
24-Aug-14	378.64	256.12	0.00	0.00	0.00	0.00	11.22	-	244.90
25-Aug-14	364.53	270.40	0.00	0.00	0.00	0.00	11.15	-	259.25
26-Aug-14	360.01	266.20	0.00	0.00	0.00	0.00	11.29	-	254.91
27-Aug-14	393.37	266.88	0.00	0.00	0.00	0.00	11.57	-	255.31
28-Aug-14	368.56	254.39	0.00	0.00	0.00	0.00	11.55	-	242.84
29-Aug-14	372.86	265.47	0.00	0.00	0.00	0.00	11.74	-	253.73
30-Aug-14	521.06	288.36	7.73	0.00	0.00	7.73	11.77	-	268.86
31-Aug-14	390.54	259.56	0.00	0.00	0.00	0.00	11.71	-	247.85
Average	405.65	276.87	2.38	0.00	0.00	2.38	11.31	---	263.18
Minimum	356.59	254.39	0.00	0.00	0.00	0.00	9.70	0.00	242.84
Maximum	685.34	317.99	33.30	0.00	0.00	33.30	12.30	0.00	292.55
GeoMean	---	---	---	---	---	---	---	---	---
TOTAL	---	8,583	73.84	0.00	0.00	73.84	350.54	0.00	8,159

Liquid Stream Quality

DATE	pH@25°C OUT-FAL 30	OUT-FAL 20	OUT-FAL 10	TSS (mg/L) RAW	OUT-FAL30	OUT-FAL20	OUT-FAL 10	BOD5/cBOD5 (mg/L) RAW BOD5	OUT-FAL30 cBOD5	OUT-FAL30 BOD5	OUT-FAL20 cBOD5	OUT-FAL20 BOD5	OUT-FAL 10 cBOD5
1-Aug-14	-	-	7.7	268	-	-	4.1	* 224	-	-	-	-	2
2-Aug-14	-	-	7.6	245	-	-	4.2	252	-	-	-	-	3
3-Aug-14	-	-	7.7	260	-	-	4.5	248	-	-	-	-	< 2
4-Aug-14	-	-	7.5	268	-	-	5.5	247	-	-	-	-	3
5-Aug-14	-	-	7.6	278	-	-	10.4	* 241	-	-	-	-	* 2
6-Aug-14	-	-	7.6	344	84	-	5.8	256	70	93	-	-	3
7-Aug-14	-	-	7.7	328	22	-	4.7	197	* 26	* 32	-	-	3
8-Aug-14	-	-	7.7	234	30	-	6.0	193	36	45	-	-	3
9-Aug-14	-	-	7.6	222	-	-	5.1	* 182	-	-	-	-	* 3
10-Aug-14	-	-	7.5	251	-	-	6.2	310	-	-	-	-	3
11-Aug-14	-	-	7.7	271	-	-	4.8	274	-	-	-	-	3
12-Aug-14	-	-	7.6	272	-	-	4.3	* 251	-	-	-	-	* 2
13-Aug-14	-	-	7.5	260	-	-	4.4	232	-	-	-	-	2
14-Aug-14	-	-	7.6	268	-	-	5.4	* 316	-	-	-	-	* 3
15-Aug-14	-	-	7.6	276	-	-	4.7	169	-	-	-	-	5
16-Aug-14	-	-	7.6	320	-	-	9.8	410	-	-	-	-	4
17-Aug-14	-	-	7.6	283	-	-	5.0	254	-	-	-	-	3
18-Aug-14	-	-	7.5	277	-	-	5.3	271	-	-	-	-	3
19-Aug-14	-	-	7.6	366	-	-	6.2	251	-	-	-	-	4
20-Aug-14	-	-	7.5	262	-	-	4.8	* 300	-	-	-	-	* 2
21-Aug-14	-	-	7.6	292	-	-	2.9	389	-	-	-	-	3
22-Aug-14	-	-	7.5	303	-	-	5.0	245	-	-	-	-	3
23-Aug-14	-	-	7.6	254	-	-	2.2	275	-	-	-	-	3
24-Aug-14	-	-	7.6	260	-	-	2.3	226	-	-	-	-	3
25-Aug-14	-	-	7.6	270	-	-	3.2	283	-	-	-	-	3
26-Aug-14	-	-	7.6	298	-	-	3.7	304	-	-	-	-	4
27-Aug-14	-	-	7.7	247	-	-	3.6	290	-	-	-	-	5
28-Aug-14	-	-	7.7	312	-	-	4.4	305	-	-	-	-	4
29-Aug-14	-	-	7.6	280	-	-	4.1	248	-	-	-	-	4
30-Aug-14	-	-	7.7	348	-	-	3.8	284	-	-	-	-	4
31-Aug-14	-	-	7.6	283	-	-	3.8	246	-	-	-	-	4
Average	---	---	7.6	281	45.3	---	4.8	264	44	57	---	---	---
Minimum	---	---	7.5	222	22.0	---	2.2	169	26	32	---	---	< 2
Maximum	---	---	7.7	366	84.0	---	10.4	410	70	93	---	---	5
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---

DATE	TP (mg/L) RAW	OUT-FAL30	OUT-FAL20	OUT-FAL 10	NH3-N (mg/L) RAW	OUT-FAL30	OUT-FAL20	OUT-FAL 10	un-ionied ammonia (mg/L) OUT-FAL 10	TKN (mg/L) RAW	OUT-FAL30	OUT-FAL20	OUT-FAL 10
1-Aug-14	6.81	-	-	0.32	19.0	-	-	0.09	0.001	45.3	-	-	1.55
2-Aug-14	6.96	-	-	0.38	28.8	-	-	0.28	0.004	40.8	-	-	1.54
3-Aug-14	6.00	-	-	0.34	16.9	-	-	0.14	0.002	41.7	-	-	1.54
4-Aug-14	6.59	-	-	0.35	30.7	-	-	0.17	0.002	43.7	-	-	1.64
5-Aug-14	5.56	-	-	0.36	27.9	-	-	0.08	-	42.5	-	-	1.74
6-Aug-14	6.54	4.59	-	0.32	26.4	21.9	-	0.06	0.001	46.5	29.7	-	1.60
7-Aug-14	5.38	2.17	-	0.24	26.0	8.9	-	0.09	0.001	40.2	19.5	-	1.54
8-Aug-14	5.33	2.41	-	0.24	26.4	17.3	-	0.08	0.001	38.7	24.2	-	1.54
9-Aug-14	5.59	-	-	0.26	26.2	-	-	0.05	< 0.001	40.7	-	-	1.44
10-Aug-14	5.89	-	-	0.26	29.7	-	-	0.08	0.001	43.8	-	-	1.42
11-Aug-14	5.90	-	-	0.26	29.1	-	-	0.08	0.001	44.1	-	-	1.36
12-Aug-14	5.89	-	-	0.26	28.6	-	-	0.06		41.9	-	-	1.36
13-Aug-14	-	-	-	-	27.0	-	-	0.06	< 0.001	-	-	-	NR
14-Aug-14	5.96	-	-	0.21	28.9	-	-	0.05	< 0.001	46.0	-	-	1.54
15-Aug-14	5.81	-	-	0.20	28.1	-	-	0.04	< 0.001	44.5	-	-	1.56
16-Aug-14	6.80	-	-	0.21	27.4	-	-	0.03	< 0.001	55.3	-	-	1.70
17-Aug-14	5.82	-	-	0.17	22.7	-	-	0.07	< 0.001	47.3	-	-	1.38
18-Aug-14	5.72	-	-	0.26	28.4	-	-	0.03	< 0.001	44.8	-	-	1.53
19-Aug-14	6.27	-	-	0.20	25.2	-	-	0.02		47.2	-	-	1.60
20-Aug-14	6.08	-	-	0.18	30.6	-	-	0.04	0.001	44.6	-	-	1.34
21-Aug-14	6.61	-	-	0.17	28.4	-	-	0.03	< 0.001	47.6	-	-	1.33
22-Aug-14	6.90	-	-	0.16	21.1	-	-	0.05	< 0.001	47.0	-	-	1.27
23-Aug-14	6.28	-	-	0.16	28.1	-	-	0.04	< 0.001	47.9	-	-	1.36
24-Aug-14	6.19	-	-	0.16	31.3	-	-	0.06	< 0.001	48.8	-	-	1.39
25-Aug-14	6.59	-	-	0.19	32.6	-	-	0.04	< 0.001	48.8	-	-	1.42
26-Aug-14	6.5	-	-	0.19	28.2	-	-	0.05		48.6	-	-	1.41
27-Aug-14	6.52	-	-	0.20	30.3	-	-	0.05	0.001	48.3	-	-	1.43
28-Aug-14	6.33	-	-	0.21	27.6	-	-	0.07	0.001	50.8	-	-	1.72
29-Aug-14	6.45	-	-	0.21	29.1	-	-	0.07	< 0.001	50.3	-	-	1.72
30-Aug-14	6.27	-	-	0.21	26.6	-	-	0.24	0.003	47.7	-	-	1.81
31-Aug-14	6.23	-	-	0.21	26.6	-	-	0.31	0.003	52.0	-	-	2.02
Average	6.19	3.06	---	0.24	27.2	16.0	---	0.08	0.001	45.9	24.5	---	1.53
Minimum	5.33	2.17	---	0.16	16.9	8.9	---	0.02	< 0.001	38.7	19.5	---	1.27
Maximum	6.96	4.59	---	0.38	32.6	21.9	---	0.31	0.004	55.3	29.7	---	2.02
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---

DATE	NO_2+NO_3 (mg/L) RAW	OUT-FAL30	OUT-FAL20	OUT-FAL 10	Chloride (mg/L) RAW	OUT-FAL30	OUT-FAL20	OUT-FAL 10	*E. coli* (Counts/100 mL) RAW X10^6	OUT-FAL30 X10^6	OUT-FAL20 X10^6	OUT-FAL 10
1-Aug-14	-	-	-	10.5	82	-	-	78	-		-	1
2-Aug-14	-	-	-	10.7	67	-	-	79	-		-	1
3-Aug-14	-	-	-	11.7	67	-	-	74	-		-	1
4-Aug-14	-	-	-	11.5	67	-	-	72	-		-	4
5-Aug-14	< 0.10	-	-	10.2	76	-	-	73	-		-	3
6-Aug-14	-	1.37	-	9.7	72	75	-	80	-	0.90	-	5
7-Aug-14	-	0.914	-	7.5	68	53	-	75	-	1.4	-	19
8-Aug-14	-	0.347	-	9.1	70	65	-	79	-	1.1	-	11
9-Aug-14	-	-	-	8.2	69	-	-	80	-	-	-	5
10-Aug-14	-	-	-	9.8	68	-	-	72	-	-	-	1
11-Aug-14	-	-	-	8.0	70	-	-	70	-	-	-	3
12-Aug-14	< 0.10	-	-	8.3	71	-	-	76	-	-	-	13
13-Aug-14	-	-	-	8.3	72	-	-	80	6.13	-	-	6
14-Aug-14	-	-	-	7.3	69	-	-	79	-	-	-	5
15-Aug-14	-	-	-	8.2	69	-	-	74	-	-	-	< 1
16-Aug-14	-	-	-	7.2	67	-	-	76	-	-	-	2
17-Aug-14	-	-	-	7.6	64	-	-	76	-	-	-	< 1
18-Aug-14	-	-	-	7.2	70	-	-	73	-	-	-	2
19-Aug-14	0.04	-	-	6.1	77	-	-	78	-	-	-	50
20-Aug-14	-	-	-	7.4	71	-	-	75	-	-	-	10
21-Aug-14	-	-	-	7.8	76	-	-	77	-	-	-	6
22-Aug-14	-	-	-	8.5	77	-	-	74	-	-	-	5
23-Aug-14	-	-	-	8.5	66	-	-	76	-	-	-	< 1
24-Aug-14	-	-	-	8.4	77	-	-	72	-	-	-	1
25-Aug-14	-	-	-	8.8	75	-	-	70	-	-	-	7
26-Aug-14	< 0.01	-	-	8.2	75	-	-	77	-	-	-	2
27-Aug-14	-	-	-	10.5	73	-	-	78	-	-	-	2
28-Aug-14	-	-	-	8.2	75	-	-	80	-	-	-	6
29-Aug-14	-	-	-	9.9	70	-	-	79	-	-	-	5
30-Aug-14	-	-	-	10.0	70	-	-	76	-	-	-	4
31-Aug-14	-	-	-	12.1	66	-	-	70	-	-	-	5
Average	0.06	0.88	---	8.9	71	64	---	76	---	---	---	---
Minimum	< 0.01	0.35	---	6.10	64	53	---	70	6.13	0.90	---	< 1
Maximum	0.10	1.37	---	12.1	82	75	---	80	6.13	1.4	---	50
GeoMean	---	---	---	---	---	---	---	---	6.13	1.11	---	4
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 #

---	Standard Method Code B - Dilution water blanks exceeded 0.20 mg/L depletion
---	Standard Method Code A - GGA reference recovery not within acceptable QC limits
---	Standard Method Code H - Sample overaged (>48 hours from final sample collection time).

* AESRD - Alberta Environment & Sustainable Resource and Development

Abhishek Bhargava
Senior Manager, Operations
Date (mm/dd/yyyy)

Debra Long
Senior Manager, Analytical Operations
10/03/2014
Date (mm/dd/yyyy)