GOLD BAR WASTEWATER TREATMENT PLANT
PLANT PERFORMANCE REPORT
February 2014

Digested Sludge: Total Monthly Volume (ML)	57.92

Volume of Flow (ML), pH and TSS

DATE	Peak Flow (MLD)	Influent RAW	Effluent Non UV Disinfected BYPASS OUT-FAL 30	BYPASS OUT-FAL 20 PRIM	BYPASS OUT-FAL 20 SEC	BYPASS Total	MPW	UV Disinfected OUT-FAL 10 EPE!	UV Disinfected OUT-FAL 10 FEC	pH@25°C OUT-FAL 30	pH@25°C OUT-FAL 20	pH@25°C OUT-FAL 10	TSS (mg/L) RAW	TSS (mg/L) OUT-FAL30	TSS (mg/L) OUT-FAL20	TSS (mg/L) OUT-FAL 10
1-Feb-14	360.35	251.83	0.00	0.00	0.00	0.00	10.29	0.00	241.54	---	---	7.5	363	---	---	8.8
2-Feb-14	377.53	250.51	0.00	0.00	0.00	0.00	10.59	0.00	239.92	---	---	7.6	276	---	---	3.5
3-Feb-14	342.80	249.93	0.00	0.00	0.00	0.00	11.37	0.00	238.56	---	---	7.5	248	---	---	2.9
4-Feb-14	337.30	247.47	0.00	0.00	0.00	0.00	10.51	0.00	236.96	---	---	7.6	280	---	---	3.1
5-Feb-14	336.88	248.67	0.00	0.00	0.00	0.00	10.23	0.00	238.44	---	---	7.4	363	---	---	2.7
6-Feb-14	342.93	251.96	0.00	0.00	0.00	0.00	10.79	0.00	241.17	---	---	7.5	268	---	---	3.2
7-Feb-14	436.32	251.46	0.00	0.00	0.00	0.00	10.24	0.00	241.22	---	---	7.5	344	---	---	3.1
8-Feb-14	354.22	246.00	0.00	0.00	0.00	0.00	10.31	0.00	235.69	---	---	7.5	293	---	---	3.1
9-Feb-14	363.37	248.27	0.00	0.00	0.00	0.00	10.22	0.00	238.05	---	---	7.5	264	---	---	3.9
10-Feb-14	329.15	252.25	0.00	0.00	0.00	0.00	10.79	0.00	241.46	---	---	7.5	326	---	---	4.5
11-Feb-14	327.25	247.23	0.00	0.00	0.00	0.00	10.90	0.00	236.33	---	---	7.5	292	---	---	7.9
12-Feb-14	326.57	248.47	0.00	0.00	0.00	0.00	10.47	0.00	238.00	---	---	7.5	324	---	---	12.1
13-Feb-14	324.54	247.26	0.00	0.00	0.00	0.00	10.44	0.00	236.82	---	---	7.4	292	---	---	6.6
14-Feb-14	334.00	249.95	0.00	0.00	0.00	0.00	10.41	0.00	239.54	---	---	7.6	312	---	---	2.9
15-Feb-14	359.42	247.15	0.00	0.00	0.00	0.00	10.24	0.00	236.91	---	---	7.5	276	---	---	2.9
16-Feb-14	356.33	241.80	0.00	0.00	0.00	0.00	10.41	0.00	231.39	---	---	7.5	284	---	---	3.5
17-Feb-14	372.70	251.13	0.00	0.00	0.00	0.00	10.48	0.00	240.65	---	---	7.6	297	---	---	2.9
18-Feb-14	341.38	255.94	0.00	0.00	0.00	0.00	10.49	0.00	245.45	---	---	7.6	296	---	---	4.2
19-Feb-14	331.95	247.92	0.00	0.00	0.00	0.00	10.62	0.00	237.30	---	---	7.5	356	---	---	2.4
20-Feb-14	327.08	248.77	0.00	0.00	0.00	0.00	10.40	0.00	238.37	---	---	7.5	309	---	---	3.1
21-Feb-14	328.37	246.30	0.00	0.00	0.00	0.00	10.48	0.00	235.82	---	---	7.5	316	---	---	2.9
22-Feb-14	351.95	242.87	0.00	0.00	0.00	0.00	10.38	0.00	232.49	---	---	7.5	308	---	---	2.7
23-Feb-14	351.00	248.77	0.00	0.00	0.00	0.00	10.54	0.00	238.23	---	---	7.5	284	---	---	6.8
24-Feb-14	336.60	255.09	0.00	0.00	0.00	0.00	10.50	0.00	244.59	---	---	7.4	287	---	---	3.5
25-Feb-14	333.08	250.76	0.00	0.00	0.00	0.00	10.42	0.00	240.34	---	---	7.6	348	---	---	2.3
26-Feb-14	329.88	249.35	0.00	0.00	0.00	0.00	10.46	0.00	238.89	---	---	7.4	288	---	---	2.6
27-Feb-14	326.66	252.36	0.00	0.00	0.00	0.00	10.58	0.00	241.78	---	---	7.5	396	---	---	2.8
28-Feb-14	322.94	251.76	0.00	0.00	0.00	0.00	11.65	0.00	240.11	---	---	7.5	264	---	---	2.8
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Average	345.09	249.33	0.00	0.00	0.00	0.00	10.54	0.00	238.79	---	---	7.5	306	---	---	4.1
Minimum	322.94	241.80	0.00	0.00	0.00	0.00	10.22	0.00	231.39	---	---	7.4	248	---	---	2.3
Maximum	436.32	255.94	0.00	0.00	0.00	0.00	11.65	0.00	245.45	---	---	7.6	396	---	---	12.1
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	6,981	0.00	0.00	0.00	0.00	295.21	0.00	6,686	---	---	---	---	---	---	---

Liquid Stream Quality

DATE	$BOD_5/cBOD_5$ (mg/L) RAW BOD_5	OUT-FAL30 $cBOD_5$	OUT-FAL30 BOD_5	OUT-FAL20 $cBOD_5$	OUT-FAL20 BOD_5	OUT-FAL 10 $cBOD_5$	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
1-Feb-14	278	---	---	---	---	4.0	6.18	---	---	0.40	28.1	---	---	9.11	0.110
2-Feb-14	262	---	---	---	---	2.0	7.58	---	---	0.24	32.3	---	---	10.1	0.088
3-Feb-14	260	---	---	---	---	3.0	8.19	---	---	0.24	41.5	---	---	10.5	0.049
4-Feb-14	312	---	---	---	---	3.0	8.05	---	---	0.21	37.7	---	---	6.72	0.060
5-Feb-14	350	---	---	---	---	3.0	8.61	---	---	0.20	41.4	---	---	6.03	0.068
6-Feb-14	322	---	---	---	---	3.0	8.76	---	---	0.20	47.7	---	---	7.35	0.116
7-Feb-14	310	---	---	---	---	2.0	8.04	---	---	0.23	40.0	---	---	6.08	0.069
8-Feb-14	318	---	---	---	---	2.0	6.09	---	---	0.21	36.3	---	---	6.77	0.062
9-Feb-14	320	---	---	---	---	3.0	6.18	---	---	0.24	33.9	---	---	7.36	0.058
10-Feb-14	364	---	---	---	---	3.0	6.66	---	---	0.28	34.1	---	---	7.31	0.091
11-Feb-14	303	---	---	---	---	4.0	6.72	---	---	0.43	30.8	---	---	5.87	0.038
12-Feb-14	301	---	---	---	---	6.0	6.61	---	---	0.61	32.5	---	---	5.15	0.041
13-Feb-14	* 346	---	---	---	---	* 3.0	6.21	---	---	0.38	35.1	---	---	4.07	0.035
14-Feb-14	313	---	---	---	---	2.0	6.99	---	---	0.21	35.7	---	---	2.98	0.034
15-Feb-14	300	---	---	---	---	3.0	6.49	---	---	0.19	34.1	---	---	3.19	0.047
16-Feb-14	* 337	---	---	---	---	* 3.0	5.71	---	---	0.18	33.9	---	---	4.19	0.041
17-Feb-14	366	---	---	---	---	3.0	6.19	---	---	0.18	26.2	---	---	4.13	0.036
18-Feb-14	312	---	---	---	---	3.0	6.14	---	---	0.23	27.7	---	---	5.15	0.022
19-Feb-14	* 314	---	---	---	---	* 3.0	6.45	---	---	0.19	31.8	---	---	3.91	0.039
20-Feb-14	326	---	---	---	---	3.0	6.52	---	---	0.30	34.1	---	---	4.42	0.072
21-Feb-14	287	---	---	---	---	2.0	6.97	---	---	0.26	26.8	---	---	4.45	0.049
22-Feb-14	330	---	---	---	---	2.0	7.19	---	---	0.25	30.1	---	---	4.21	0.039
23-Feb-14	299	---	---	---	---	2.0	6.37	---	---	0.35	30.6	---	---	5.80	0.052
24-Feb-14	* 310	---	---	---	---	* 2.0	6.47	---	---	0.25	35.0	---	---	4.87	0.044
25-Feb-14	236	---	---	---	---	2.0	6.85	---	---	0.19	26.8	---	---	3.18	0.040
26-Feb-14	301	---	---	---	---	3.0	6.79	---	---	0.20	27.0	---	---	3.46	0.033
27-Feb-14	334	---	---	---	---	2.0	7.86	---	---	0.21	34.3	---	---	3.89	0.031
28-Feb-14	328	---	---	---	---	3.0	5.82	---	---	0.19	27.5	---	---	3.93	0.024
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Average	312	---	---	---	---	3	6.88	---	---	0.26	33.3	---	---	5.51	0.053
Minimum	236	---	---	---	---	< 2	5.71	---	---	0.18	26.2	---	---	2.98	0.022
Maximum	366	---	---	---	---	6	8.8	---	---	0.61	47.7	---	---	10.50	0.116
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

DATE	TKN (mg/L) RAW	TKN OUT-FAL30	TKN OUT-FAL20	TKN OUT-FAL 10	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-Feb-14	46.4	---	---	11.1		---	---	6.4	65	---	---	83	---	---	---	1
2-Feb-14	53.8	---	---	11.3		---	---	6.9	67	---	---	77	---	---	---	2
3-Feb-14	58.4	---	---	12.3		---	---	7.0	71	---	---	74	---	---	---	25
4-Feb-14	57.0	---	---	8.31	0.26	---	---	8.0	65	---	---	76	---	---	---	8
5-Feb-14	55.1	---	---	7.44		---	---	7.7	68	---	---	77	---	---	---	2
6-Feb-14	59.6	---	---	8.66		---	---	7.7	68	---	---	74	---	---	---	8
7-Feb-14	57.1	---	---	8.84		---	---	7.8	68	---	---	75	---	---	---	2
8-Feb-14	46.5	---	---	7.63		---	---	8.3	60	---	---	73	---	---	---	48
9-Feb-14	46.3	---	---	9.20		---	---	8.4	56	---	---	68	---	---	---	1
10-Feb-14	51.3	---	---	9.06		---	---	7.1	66	---	---	65	3.26	---	---	5
11-Feb-14	52.0	---	---	8.53	0.02	---	---	8.1	67	---	---	73	---	---	---	5
12-Feb-14	50.9	---	---	7.51		---	---	8.7	67	---	---	75	---	---	---	6
13-Feb-14	47.6	---	---	5.66		---	---	8.1	70	---	---	77	---	---	---	3
14-Feb-14	54.2	---	---	4.57		---	---	7.7	72	---	---	79	---	---	---	1
15-Feb-14	52.1	---	---	5.24		---	---	8.5	71	---	---	81	---	---	---	< 1
16-Feb-14	46.1	---	---	5.88		---	---	7.4	70	---	---	76	---	---	---	2
17-Feb-14	49.7	---	---	6.48		---	---	7.3	72	---	---	73	---	---	---	1
18-Feb-14	46.8	---	---	6.61	0.04	---	---	6.6	105	---	---	82	---	---	---	5
19-Feb-14	49.6	---	---	5.37		---	---	7.6	81	---	---	97	---	---	---	3
20-Feb-14	51.5	---	---	6.23		---	---	6.3	77	---	---	86	---	---	---	4
21-Feb-14	53.6	---	---	6.49		---	---	6.9	74	---	---	84	---	---	---	28
22-Feb-14	55.7	---	---	7.22		---	---	7.8	68	---	---	82	---	---	---	7
23-Feb-14	51.8	---	---	8.53		---	---	20.4	63	---	---	75	---	---	---	< 1
24-Feb-14	50.1	---	---	7.30		---	---	6.8	69	---	---	71	4.61	---	---	4
25-Feb-14	52.0	---	---	5.59	0.13	---	---	7.5	70	---	---	77	---	---	---	2
26-Feb-14	52.2	---	---	5.43		---	---	8.3	73	---	---	82	---	---	---	1
27-Feb-14	55.4	---	---	5.31		---	---	7.3	74	---	---	90	---	---	---	6
28-Feb-14	44.0	---	---	5.31		---	---	7.7	62	---	---	81	---	---	---	4
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Average	51.7	---	---	7.40	0.11	---	---	8.0	70	---	---	78	---	---	---	---
Minimum	44.0	---	---	4.57	0.02	---	---	6.33	56	---	---	65	3.26	---	---	1
Maximum	59.6	---	---	12.30	0.26	---	---	20.4	105	---	---	97	4.61	---	---	48
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	3.88	---	---	3
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

ESRD Ref #	
---	Standard Method Code B - Dilution water blanks exceeded 0.20 mg/L depletion
---	Standard Method Code C - %Range of sample replicate not within acceptable QC limits

* ESRD - Alberta Environment & Sustainable Resource Development

04/08/2014

Geoff Heise — Date (mm/dd/yyyy)

Senior Manager, Operations

04/02/2014

Debra Long — Date (mm/dd/yyyy)

Senior Manager, Analytical Operations