PROVIDING MORE EPCOR

Gold Bar Wastewater Treatment Plant
Plant Performance Report
September 2015

Digested Sludge: Total Monthly Volume (ML)	55.66

Volume of Flow (ML)

DATE	Peak Flow (MLD)	Influent RAW	Effluent Non UV Disinfected OUT-FAL30 BYPASS	Effluent Non UV Disinfected MPW	UV Disinfected EPEPS	UV Disinfected OUTFAL 10 FEC	UV Disinfected OUTFAL 10 FE
Tue 01	379.97	256.22	0.00	11.23		244.99	244.99
Wed 02	416.06	261.09	0.00	12.07		249.02	249.02
Thu 03	413.32	261.19	0.00	10.63		250.56	250.56
Fri 04	496.44	275.45	14.26	11.11		250.08	250.08
Sat 05	363.73	237.32	0.00	11.76		225.56	225.56
Sun 06	779.59	605.70	254.33	11.75		339.62	339.62
Mon 07	584.19	353.06	26.99	11.05		315.02	315.02
Tue 08	386.32	275.65	0.00	9.73		265.92	265.92
Wed 09	389.29	267.13	0.00	11.48		255.65	255.65
Thu 10	355.42	261.59	0.00	11.99		249.60	249.60
Fri 11	354.27	263.92	0.00	11.89		252.03	252.03
Sat 12	762.36	284.26	23.72	11.44		249.10	249.10
Sun 13	745.45	319.73	24.94	10.78		284.01	284.01
Mon 14	386.12	269.34	0.00	10.50		258.84	258.84
Tue 15	788.69	452.01	128.97	10.55	19.54	312.49	292.95
Wed 16	433.85	311.74	10.58	10.88		290.28	290.28
Thu 17	370.00	272.04	0.00	11.98		260.06	260.06
Fri 18	367.13	266.32	0.00	11.69		254.63	254.63
Sat 19	380.40	260.59	0.00	11.94		248.65	248.65
Sun 20	664.45	281.70	20.23	11.93		249.54	249.54
Mon 21	631.21	318.83	25.80	11.73		281.30	281.30
Tue 22	358.09	262.98	0.00	11.89		251.09	251.09
Wed 23	362.41	258.63	0.00	11.66		246.97	246.97
Thu 24	358.17	261.54	0.00	11.90		249.64	249.64
Fri 25	356.06	259.78	0.00	11.16		248.62	248.62
Sat 26	376.84	254.87	0.00	10.92		243.95	243.95
Sun 27	379.68	255.95	0.00	11.17		244.78	244.78
Mon 28	357.36	262.29	0.00	10.78		251.51	251.51
Tue 29	345.72	257.12	0.00	10.77		246.35	246.35
Wed 30	351.32	255.35	0.00	10.55		244.80	244.80
Average	456.46	289.45	17.66	11.30	19.54	260.49	259.84
Minimum	345.72	237.32	0.00	9.73	19.54	225.56	225.56
Maximum	788.69	605.70	254.33	12.07	19.54	339.62	339.62
GeoMean	---	---	---	---	---	---	---
TOTAL	---	8,683	529.82	338.91	19.54	7,815	7,795

Liquid Stream Quality

DATE	pH@25°C RAW	pH OUT-FAL30	pH OUT-FAL10 FEC	TSS (mg/L) RAW	TSS OUT-FAL30	TSS EPEPS	TSS OUTFAL 10 FEC	TSS OUTFAL 10 FE	BOD_5/$cBOD_5$ (mg/L) RAW BOD_5	OUT-FAL30 BOD_5	EPEPS $cBOD_5$	OUTFAL 10 FEC $cBOD_5$	OUTFAL 10 FE $cBOD_5$
Tue 01	7.4		7.5	360			7.5	7.5	297			3.0	3.0
Wed 02	7.5		7.5	314			6.4	6.4	235			4.0	4.0
Thu 03	7.6		7.5	332			7.1	7.1	* 226			3.0	3.0
Fri 04	7.5	7.7	7.5	332	69.3		6.9	6.9	336	80		4.0	4.0
Sat 05	7.5		7.6	286			6.0	6.0	281			4.0	4.0
Sun 06	7.4	7.5	7.4	232	44.0		6.2	6.2	137	39		4.0	4.0
Mon 07	7.5	7.6	7.3	156	23.0		5.2	5.2	162	42		3.0	3.0
Tue 08	7.6		7.6	308			6.2	6.2	256			4.0	4.0
Wed 09	7.5		7.5	340			11.7	11.7	286			5.0	5.0
Thu 10	7.6		7.4	284			8.0	8.0	311			4.0	4.0
Fri 11	7.5		7.5	338			9.2	9.2	236			4.0	4.0
Sat 12	7.6	7.6	7.6	348	70.0		7.2	7.2	272	130		4.0	4.0
Sun 13	7.5	7.6	7.4	276	59.4		7.9	7.9	229	74		4.0	4.0
Mon 14	7.6		7.5	290			6.5	6.5	303			5.0	5.0
Tue 15	7.5	7.7	7.5	323	28.5	28.5	8.9	7.6	182	40	40	5.0	2.7
Wed 16	7.6	8.1	7.4	270	53.3		6.2	6.2	243	78		4.0	4.0
Thu 17	7.6		7.5	280			7.2	7.2	262			4.0	4.0
Fri 18	7.6		7.5	276			7.2	7.2	239			5.0	5.0
Sat 19	7.5		7.5	308			7.1	7.1	268			4.0	4.0
Sun 20	7.5	7.5	7.6	320	91.0		7.8	7.8	277	117		4.0	4.0
Mon 21	7.4	7.4	7.5	287	18.6		13.2	13.2	238	57		5.0	5.0
Tue 22	7.6		7.6	229			11.5	11.5	216			4.0	4.0
Wed 23	7.5		7.6	328			7.8	7.8	314			3.0	3.0
Thu 24	7.5		7.6	280			5.4	5.4	286			3.0	3.0
Fri 25	7.5		7.6	312			3.3	3.3	319			2.0	2.0
Sat 26	7.6		7.7	258			3.2	3.2	281			< 2.0	2.0
Sun 27	7.6		7.6	270			3.8	3.8	292			2.0	2.0
Mon 28	7.6		7.6	264			3.8	3.8	307			2.0	2.0
Tue 29	7.5		7.6	276			4.1	4.1	275			2.0	2.0
Wed 30	7.6		7.6	266			3.9	3.9	265			2.0	2.0
Average	7.5	7.6	7.5	291	50.8	29	--- 6.88	6.84	261	73	40	3.6	3.5
Minimum	7.4	7.4	7.3	156	18.6	29	--- 3.2	3.2	137	39	40	< 2.0	2.0
Maximum	7.6	8.1	7.7	360	91.0	29	--- 13.2	13.2	336	130	40	5.0	5.0
GeoMean	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---

DATE	TP (mg/L) RAW	TP OUT-FAL30	TP EPEPS	TP OUTFAL 10 FEC	TP OUTFAL 10 FE	NH3-N (mg/L) RAW	NH3-N OUT-FAL30	NH3-N EPEPS	NH3-N OUTFAL 10 FEC	NH3-N OUTFAL 10 FE
Tue 01	6.91			0.27	0.27	33.0			0.10	0.10
Wed 02	6.69			0.30	0.30	35.5			0.11	0.11
Thu 03	6.19			0.35	0.35	35.9			0.24	0.24
Fri 04	6.62	3.21		0.60	0.60	30.3	32.7		0.07	0.07
Sat 05	7.02			0.28	0.28	38.4			0.11	0.11
Sun 06	3.18	0.84		0.24	0.24	13.5	12.8		0.08	0.08
Mon 07	4.09	1.01		0.24	0.24	27.1	15.6		0.10	0.10
Tue 08	6.61			0.27	0.27	33.9			0.32	0.32
Wed 09	6.59			0.45	0.45	33.9			0.19	0.19
Thu 10	6.61			0.36	0.36	35.0			0.05	0.05
Fri 11	6.40			0.36	0.36	34.1			0.20	0.20
Sat 12	6.99	3.43		4.58	4.58	31.2	25.1		0.23	0.23
Sun 13	5.01	2.12		1.18	1.18	25.8	15.2		0.30	0.30
Mon 14	6.32			0.31	0.31	32.0			0.23	0.23
Tue 15	4.26	1.40	1.40	0.39	0.32	20.0	15.6	10.0	0.83	0.22
Wed 16	5.61	1.48		0.28	0.28	29.3	21.9		0.22	0.22
Thu 17	6.41			0.29	0.29	33.1			0.17	0.17
Fri 18	5.71			0.29	0.29	32.6			0.15	0.15
Sat 19	6.41			0.31	0.31	33.5			0.23	0.23
Sun 20	6.00	2.82		0.38	0.38	34.0	20.2		0.39	0.39
Mon 21	5.56	1.17		0.52	0.52	28.2	17.1		0.31	0.31
Tue 22	6.30			0.40	0.40	33.4			0.15	0.15
Wed 23	7.12			0.37	0.37	34.7			0.10	0.10
Thu 24	6.79			0.27	0.27	34.3			0.13	0.13
Fri 25	6.91			0.25	0.25	34.8			0.20	0.20
Sat 26	6.44			0.23	0.23	34.8			0.49	0.49
Sun 27	6.14			0.31	0.31	33.3			0.77	0.77
Mon 28	6.12			0.24	0.24	32.4			0.48	0.48
Tue 29	6.35			0.24	0.24	35.5			0.18	0.18
Wed 30	5.94			0.23	0.23	34.6			0.19	0.19
Average	6.11	1.94	1.40	--- 0.49	0.49	31.9	19.6	10.00	---	0.22
Minimum	3.18	0.84	1.40	--- 0.23	0.23	13.5	12.8	10.00	---	0.05
Maximum	7.1	3.43	1.40	--- 4.58	4.58	38.4	32.7	10.00	---	0.77
GeoMean	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---

DATE	TKN (mg/L) RAW	TKN OUT-FAL30	TKN OUT-FAL10 FEC	NO_2+NO_3 (mg/L) RAW	NO_2+NO_3 OUT-FAL30	NO_2+NO_3 OUT-FAL10 FEC	Chloride (mg/L) RAW	Chloride OUT-FAL30	Chloride OUT-FAL10 FEC	E. coli (Counts/100 mL) RAW X10^6	E. coli OUT-FAL30 X10^6	E. coli OUT-FAL10 FEC
Tue 01	53.9		1.5			7.9	68		72			2
Wed 02	49.2		1.6			7.8	73		74			1
Thu 03	48.8		1.7			8.1	71		74			5
Fri 04	50.3	46.0	1.9		0.02	8.1	68	77	74		0.14	2
Sat 05	55.9		1.7			7.8	65		71			3
Sun 06	21.9	15.9	2.0		0.45	5.2	36	42	59		0.05	5
Mon 07	35.6	26.8	1.9		0.24	5.6	53	38	47		0.03	26
Tue 08	48.6		2.1			8.6	80		67			4
Wed 09	50.0		2.1			8.3	71		83			3
Thu 10	49.2		1.9			9.3	69		76			3
Fri 11	49.0		2.2			9.4	73		79			2
Sat 12	49.8	34.5	2.0		0.14	9.9	77	76	82		1.50	3
Sun 13	40.7	19.5	1.9		0.03	7.3	57	53	67		0.69	6
Mon 14	47.5		1.6			9.0	68		65	0.67		< 1
Tue 15	28.8	16.7	2.5		0.48	6.3	52	48	68		* 0.51	95
Wed 16	43.4	24.4	1.4		0.17	7.8	70	62	61		0.33	3
Thu 17	48.5		1.6			8.8	74		72			3
Fri 18	45.5		1.6			10.1	76		77			1
Sat 19	47.7		1.7			10.3	73		79			5
Sun 20	47.1	25.7	2.0		1.82	9.0	72	69	73		* 0.45	1
Mon 21	43.5	19.9	2.4		0.42	7.8	60	54	64		* 0.12	4
Tue 22	49.0		1.9			9.0	72		70			6
Wed 23	52.8		1.8			9.2	79		82			2
Thu 24	54.8		1.6			8.9	76		80			6
Fri 25	55.9		1.7			7.3	76		79			6
Sat 26	54.1		2.0			8.0	71		77			1
Sun 27	53.3		2.3			7.9	69		73			< 1
Mon 28	51.3		2.0			8.1	71		70			2
Tue 29	56.8		1.69			8.4	73		75			8
Wed 30	49.6		1.68			8.3	75		76			2
Average	47.7	25.5	1.87	---	0.42	8.2	69	57	72	---	---	---
Minimum	21.9	15.9	1.40	---	0.02	5.21	36	38	47	0.67	0.03	< 1
Maximum	56.8	46.0	2.53	---	1.82	10.3	80	77	83	0.67	1.50	95
GeoMean	---	---	---	---	---	---	---	---	---	0.67	0.2	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)

Enhanced Primary Treatment (EPT) Usage

Total Bypass (hrs)	EPT Usage (hrs)	% Usage	Total Bypass YTD (hrs)	EPT Usage YTD (hrs)	% Usage
57	57	100%	428	380	88.80%

Report Comments

Sep-15	Sept 12 Outfall 30 pH result was entered incorrectly. It was changed on 28-Jan-2016 from 76.0 to 7.6.
Sep-15	OUTFAL 30 results were used for EPEPS TSS, BOD and TP estimation since EPT wasn't decoupled from the conventional primaries during the event. 10.0 was used for EPEPS NH3 estimation to get FE NH3 result which was comparable to prior/post of the event.

AEP Ref #

Abbrev.		Meaning
RAW	⇨	Untreated influent into the plant
INF	⇨	Untreated Wastewater from collection system
INFs	⇨	Influent, screened at the Headworks Diversion Structure.
PE	⇨	Primary Effluent from conventional primaries
PE 30	⇨	Primary Effluent from conventional primaries discharged via OUTFAL 30
EPT	⇨	Enhanced Primary Treatment
EPE	⇨	Enhanced Primary Effluent
EPEPS	⇨	Enhanced Primary Effluent and Pump Station
FE	⇨	Final Effluent from secondary treatment process (with biological nutrient removal). Pre-ultraviolet disinfection.
FEC	⇨	Combined pre - UV disinfection (FE+EPEPS)
OUT FAL 10	⇨	UV-disinfected, discharged via OUTFAL 10
OUT FAL 20	⇨	Combined Bypass (RAW + PE + EPE)
OUT FAL 30	⇨	Combined Bypass (INF + INFS + PE30 + EPE)
MPW	⇨	Membrane Product Water (Effluent re-use water)
ML	⇨	Megalitre (1,000,000 Litre)
MPN	⇨	Most Probable Number
nr	⇨	No Result
ns	⇨	No Sample

01/28/2016

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

01/28/2016

Debra Long
Senior Manager, Analytical Operations
(mm/dd/yyyy)

Report was originally issued on October 30, 2015. It was reissued on January 28, 2016 due to error on Sept 12 Outfall 30 pH data entry. The value was changed on 28-Jan-2016 from 76.0 to 7.6.