

Hamlet of Pangnirtung 2014 Wastewater Testing

2014

Client Sample I.D. Lab Sample I.D. Date Collected Date Received Date Reported			Influent
			B14-09199-1
			23-Apr-14
			30-Apr-14
			9-May-14
Parameters		MDL	
BOD	mg/L	3	420
Total Suspended Solids	mg/L	3	268
Hardness (as CaCO ₃)	mg/L	1	83
Alkalinity(CaCO ₃) to pH4.5	mg/L	5	535
Conductivity @25°C	µmho/cm	1	1450
pH @25°C	pH Units		7.39
Nitrite (N)	mg/L	0.1	< 0.1
Nitrate (N)	mg/L	0.1	0.2
Chloride	mg/L	0.5	63.4
Sulphate	mg/L	1	6
Total Organic Carbon	mg/L	0.2	106
Ammonia (N)-Total	mg/L	0.01	141
Phenolics	mg/L	0.001	0.246
Aluminum (total)	mg/L	0.01	2.41
Arsenic	mg/L	0.0005	0.0008
Calcium	mg/L	0.02	25.2
Cadmium	mg/L	0.005	< 0.005
Chromium	mg/L	0.002	0.005
Cobalt	mg/L	0.005	< 0.005
Copper	mg/L	0.002	0.384
Iron (Total)	mg/L	0.005	1.26
Lead	mg/L	0.02	< 0.02
Mercury	mg/L	0.00002	0.00012
Magnesium	mg/L	0.01	4.76
Manganese (Total)	mg/L	0.001	0.102
Nickel	mg/L	0.01	0.01
Potassium	mg/L	0.1	37.5
Sodium	mg/L	0.2	65.1
Zinc	mg/L	0.005	0.519
Oil & Grease-Total	mg/L	1	50
Fecal Coliform	cfu/100mL	1	4800000

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Effluent - 9:30am	Effluent - 9:35am	Raw Sewage	Influent	Effluent
B14-09199-2	B14-09199-3	B14-17905-1	B14-17905-2	B14-17905-3
23-Apr-14	23-Apr-14	15-Jul-14	15-Jul-14	15-Jul-14
30-Apr-14	30-Apr-14	18-Jul-14	18-Jul-14	18-Jul-14
9-May-14	9-May-14	24-Jul-14	24-Jul-14	24-Jul-14
204	287	557	521	558
260	200	336	208	390
69	47	65	54	57
194	205	440	355	359
784	776	1320	1100	1110
7.41	7.44	7.25	7.5	7.47
12.1	6.9	< 0.1	< 0.1	< 0.1
0.4	0.2	< 0.1	< 0.1	< 0.1
53	52.7	60.1	46	46.1
37	36	14	8	7
30	32	72	70	64.6
45	47.2	115	94.3	95.8
< 0.001	< 0.001	0.255	0.242	0.238
1.61	1.10	1.59	2.15	2.23
0.0005	< 0.0005	0.0017	0.0020	0.0008
21.8	14.9	17.6	14.9	15.7
< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
0.004	0.007	0.004	0.007	0.008
< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
0.202	0.155	0.161	0.234	0.256
1.34	1.05	0.733	1.14	1.23
< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
0.00008	0.00002	0.00003	0.00003	0.00003
3.42	2.46	5.17	4.1	4.28
0.069	0.065	0.09	0.072	0.091
< 0.01	0.01	0.02	0.01	0.02
25.2	24.1	32.8	26.6	27.5
58.8	58.2	64.9	52	53.4
0.342	0.221	0.348	0.355	0.391
2	2	76	83	91
41000	28000	9400000	61000000	54000000

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End of Ground	Influent	Effluent	Client Sample I.D.		
B14-17905-4	B15-05812-1	B15-05812-2	Lab Sample I.D.		
15-Jul-14	11-Mar-15	11-Mar-15	Date Collected		
18-Jul-14	23-Mar-15	23-Mar-15	Date Received		
24-Jul-14	30-Mar-15	30-Mar-15	Date Reported		
				Units	MDL
363	720	36	BOD	mg/L	3
240	630	< 3	Total Suspended Solids	mg/L	3
58	54	57	TDS (Calc. from Cond.)	mg/L	
361	483		Hardness (as CaCO3)	mg/L	1
1070	1160	1240	Alkalinity(CaCO3) to pH4.5	mg/L	5
7.47	7.34		Conductivity @25°C	µmho/cm	1
< 0.1	< 0.1		Turbidity	NTU	0.1
< 0.1	< 0.1		pH @25°C	pH Units	
48.6	57.1		Nitrite (N)	mg/L	0.1
20	< 1		Nitrate (N)	mg/L	0.1
62.2	205		Chloride	mg/L	0.5
91	99.7		Sulphate	mg/L	1
0.272	0.506	0.002	COD	mg/L	5
1.82	2.19	0.04	Total Organic Carbon	mg/L	0.2
0.0022	0.0017	0.0048	Dissolved Organic Carbon	mg/L	0.2
15.6	14.4	10.2	Total Kjeldahl Nitrogen	mg/L	
< 0.005	< 0.005	< 0.005	Ammonia (N)-Total	mg/L	0.01
0.006	0.004	< 0.002	o-Phosphate (P)	mg/L	0.01
< 0.005	< 0.005	< 0.005	Phosphorus-Total	mg/L	
0.283	0.292	0.072	Phenolics	mg/L	0.001
1.26	3.36	0.241	Aluminum (total)	mg/L	0.01
< 0.02	< 0.02	< 0.02	Arsenic	mg/L	0.0005
0.00003	0.00011	< 0.00002	Barium	mg/L	0.001
4.54	4.32	7.58	Beryllium	mg/L	0.002
0.072	0.101	0.028	Bismuth	mg/L	0.02
0.01	< 0.01	< 0.01	Boron	mg/L	0.005
27.9	29.6	31.8	Calcium	mg/L	0.02
54.2	84.8	213	Cadmium	mg/L	0.005
0.354	0.328	0.192	Chromium	mg/L	0.002
82			Cobalt	mg/L	0.005
65000000			Copper	mg/L	0.002
			Iron (Total)	mg/L	0.005
			Lead	mg/L	0.02
			Magnesium	mg/L	0.01
			Manganese (Total)	mg/L	0.001
			Mercury	mg/L	0.00002
			Molybdenum	mg/L	0.01
			Nickel	mg/L	0.01
			Silicon	mg/L	0.01
			Silver	mg/L	0.005

Sodium	mg/L	0.2
Zinc	mg/L	0.005
Oil & Grease-Total	mg/L	1
Total Coliform	cfu/100mL	1
E coli	cfu/100mL	1
Fecal Coliform	cfu/100mL	1
Fecal Strep.	cfu/100mL	1

[illegible]

67.5	68	66.1	117	109	100	50
0.33	0.345	0.341	0.164	0.116	0.143	0.303
82.1	95.2	76.5	< 1.0	< 1.0	< 1.0	88.7
79000000	1.09E+08	7300000	<10	<10	<10	96000000
2800000	2400000	2600000	<10	<10	<10	8800000
3500000	4400000	2700000	<10	<10	<10	26000000
990000	620000	710000	<10	<10	<10	420000

[illegible]

108	111	59.1	62	60.3	116	121
7.22	0.13	0.673	0.486	0.768	0.133	0.131
78.6	30	130	87.6	102	1.2	2.3
37000000	20	109000000	85000000	88000000	<10	<10
500000	<10	3100000	1200000	1100000	<10	<10
1100000	<10	3200000	1400000	1300000	<10	<10
340000	<10	3100000	2700000	1400000	<10	<10

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Before UV #3	Membrane #1	Membrane #2	Membrane #3	Final Effluent-Rawial	Effluent-Membr
B15-19418-3	B15-19419-1	B15-19419-2	B15-19419-3	B15-19420-1	B15-19420-2
31-Jul-15	29-Jul-15	29-Jul-15	29-Jul-15	23-Jul-15	23-Jul-15
31-Jul-15	31-Jul-15	31-Jul-15	31-Jul-15	31-Jul-15	31-Jul-15
17-Aug-15	17-Aug-15	17-Aug-15	17-Aug-15	17-Aug-15	17-Aug-15

3	1640	1470	1520	3	5
< 3	7000	7500	7300	< 3	< 3
480	471	477	472	453	452
31	327	344	343	28	30
89	201	228	172	85	86
678	666	676	668	641	640
0.9	> 1000	> 1000	> 1000	0.4	0.4
7.64	7.61	7.63	7.66	7.52	7.54
< 0.1	0.3	0.7	0.3	< 0.1	< 0.1
29.3	4.3	0.5	2.5	29.6	29.5
58.7	57.1	54.3	59.8	59	58.8
27	27	26	30	27	27
64	8400	10600	8510	38	42
21	55.1	60.7	43.9	18.9	19.1
18	46.5	48.2	42.9	17.8	18.4
1.86	306	56.3	406	2.13	2.16
< 0.01	3.81	2.96	4.27	< 0.01	0.02
11.6	12.4	13.9	13	11.5	8.82
14.1	117	153	143	13.8	14
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
0.05	75.6	80.1	79.6	0.05	0.04
< 0.03	0.0154	0.0186	0.0163	0.0007	0.0006
< 0.001	0.503	0.526	0.529	< 0.001	< 0.001
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
< 0.02	0.28	0.29	0.3	< 0.02	< 0.02
0.298	0.378	0.367	0.391	0.267	0.286
7.57	92.3	97.7	96.9	6.91	7.36
< 0.005	0.011	0.012	0.011	< 0.005	< 0.005
< 0.002	0.088	0.087	0.091	< 0.002	< 0.002
< 0.005	0.02	0.019	0.02	< 0.005	< 0.005
0.068	6.16	6.53	6.65	0.056	0.06
0.241	37.6	38.6	38.3	0.247	0.168
< 0.02	0.18	0.19	0.21	< 0.02	< 0.02
3.01	23.4	24.3	24.4	2.72	2.94
< 0.001	1.94	2.05	2.03	< 0.001	< 0.001
< 0.00002	0.0058	0.00568	0.00631	< 0.00002	< 0.00002
< 0.01	0.02	0.02	0.02	< 0.01	< 0.01
< 0.01	0.07	0.07	0.07	< 0.01	< 0.01
3.13	27.1	27.1	27.4	2.71	2.9
< 0.005	0.01	0.008	0.007	< 0.005	< 0.005

125	127	121	130	112	119
0.142	7.68	8.24	8.29	0.113	0.118
1.1	33.8	37.8	67.7	< 1.0	< 1.0
<10	125000000	82000000	76000000	<10	<10
<10	3900000	2500000	2600000	<10	<10
<10	4100000	3800000	3000000	<10	<10
<10	10200000	6000000	5600000	<10	10

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Final Effluent-UV	Influent (Truck)	Q Tank	Raw	Membrane	Effluent
B15-19420-3	B15-26231-1	B15-26231-2	B15-27078-1	B15-27078-2	B15-27078-3
23-Jul-15	01-Oct-15	01-Oct-15	14-Oct-15	14-Oct-15	14-Oct-15
31-Jul-15	7-Oct-15	7-Oct-15	15-Oct-15	15-Oct-15	15-Oct-15
17-Aug-15	14-Oct-15	14-Oct-15	29-Oct-15	29-Oct-15	29-Oct-15
6	649	356	407	840	< 3
< 3	356	310	320	10000	< 3
457	984	770	766	566	565
30	46	43	46	289	17
87	470	420	385	284	187
647	1390	1100	1110	832	831
0.3	411	292	344	> 1000	0.4
7.55	7.45	7.39	7.25	7.41	7.63
< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
29.5	< 0.1	< 0.1	< 0.1	3	27
59	83.6	46.7	53.7	50.7	54.6
27	10	< 1	7	39	36
39	1030	743	1050	10500	85
18.6	159	129	97	372	54
18.3	135	100	78	260	45.5
1.96	135	121	127	571	3.54
< 0.01	116	101	106	3.38	0.73
9.61	12.3	11.9	24.3	17.3	14.9
13.4	14.1	14.5	25.5	161	15.2
< 0.001	0.309	0.404	0.333	0.002	< 0.001
0.04	1.44	1.79	1.52	95	0.06
0.0008	0.0022	0.0023	0.0013	0.0288	0.0018
< 0.001	0.02	0.023	0.025	0.608	< 0.001
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
< 0.02	0.03	< 0.02	< 0.02	0.24	< 0.02
0.284	0.334	0.256	0.261	0.379	0.256
7.4	10.4	10.5	12.6	77.9	4.12
< 0.005	< 0.005	< 0.005	< 0.005	0.013	< 0.005
< 0.002	0.003	0.003	0.004	0.101	< 0.002
< 0.005	< 0.005	< 0.005	< 0.005	0.020	< 0.005
0.06	0.184	0.257	0.206	7.04	0.113
0.185	0.883	1.69	1.22	43.5	0.159
< 0.02	< 0.02	< 0.02	< 0.02	0.24	< 0.02
2.89	4.97	4.06	3.54	22.9	1.75
< 0.001	0.048	0.073	0.057	1.76	0.026
< 0.00002	0.00023	0.00022	0.00015	0.00756	< 0.00002
< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01
< 0.01	< 0.01	< 0.01	< 0.01	0.08	< 0.01
2.87	3.98	3.49	3.0	20.7	4.42
< 0.005	< 0.005	< 0.005	< 0.005	0.008	< 0.005

118	74.5	49.7	46.6	172	152
0.123	0.267	0.344	0.376	7.43	0.091
< 1.0	85.4	59.4	95	50	< 1.0
<10	103000000	8200000	55000000	34000000	<10
<10	74000	29000	410000	290000	<2
<10	88000	41000	1120000	690000	<2
<10	640000	61000	3400000	850000	< 2