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17 April 2009
ECC Job No. 5700.007

TO: Mr. Todd Bober, RPM

LOCATION: BRAC PMO NE

FROM: Bob Phinney, Plant Operator

LOCATION: ECC-NAS Brunswick
GWETS Building 50

SUBJECT: Monthly Operations Report for 1 - 28 February 2009
Groundwater Extraction and Treatment System, Building 50
Naval Air Station, Brunswick, Maine
Contract No. N62472-02-D-0810, Delivery Order No. 0007

The following is the February 2009 monthly operations report for the Groundwater Extraction and Treatment System (GWETS) located at Naval Air Station, Brunswick, Maine. There was no overflow discharge to the Brunswick Sewer District collection system during this period.

Table 1 summarizes the GWETS process flow data and results of the daily in-plant water quality analysis. Table 2 provides a summary of daily individual extraction well pumping performance as well as monthly pumping efficiency during the reporting period. Table 3 provides the monthly laboratory analytical results for the Eastern Plume influent and GWETS effluent samples.

The GWETS treatment plant was operational for 99.70 % of the available hours during February 2009. Well performance based on well system capacity (all 4 wells) was 59.66%. There was one operational interruption or corrective action necessary to restore plant operations during February 2009.

All nine infiltration gallery sub-distribution cells are receiving GWETS effluent.

The combined treatment plant influent flow from Eastern Plume groundwater extraction wells EW-01, EW-02A, EW-04, and EW-05A averaged approximately 32 gpm through 28 February 2009.

Activities performed during February 2009 included:

- Performed routine cleaning, calibration, and equipment maintenance activities.
- Prepared and submitted monthly operations report
- Performed monthly safety inspections of fire extinguishers and building equipment

- Conducted monthly vehicle inspection and made repairs
 - Conducted monthly sampling.
 - Kept all exits clear and sanded
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I certify by my signature affixed that I have personally examined the information contained herein and, based on my inquiry of those individuals immediately responsible for obtaining and providing the information, I further certify that the information contained herein is true, accurate, and complete.



Robert Phinney
MEDEP Wastewater Operator No. 626

17 April 2009
Date

cc: BRAC PMO NE (P. Burgio)
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Table 1
Summary of Treatment System Process
Flow and In-Plant Water Quality
Groundwater Extraction and Treatment System (Building 50)
Naval Air Station, Brunswick, Maine

Date	Turbidity	Daily Flow	pH
Feb. 09	NTU	Gallons	Standard Units
1	(a)	43,020	(a)
2	0.22	45,636	6.42
3	0.24	41,921	6.42
4	(a)	41,921	(a)
5	0.21	42,920	6.43
6	0.16	42,881	6.43
7	(a)	42,881	(a)
8	(a)	42,881	(a)
9	0.26	42,748	6.42
10	0.27	41,604	6.42
11	0.19	44,195	6.42
12	(a)	44,195	(a)
13	0.19	41,133	6.42
14	(a)	41,133	(a)
15	(a)	41,133	(a)
16	0.19	41,092	6.42
17	0.17	42,043	6.43
18	0.23	40,576	6.42
19	0.195	43,772	6.42
20	0.22	39,260	6.42
21	(a)	39,260	(a)
22	(a)	39,260	(a)
23	0.20	50,775	6.43
24	0.24	36,650	6.42
25	(a)	36,650	(a)
26	0.21	40,962	6.44
27	0.17	41,018	6.42
28	(a)	41,018	(a)
Monthly Average pH (standard units) 6.42			
Monthly Process Flow Total (gallons) 1,172,538			
Monthly VOCs Removed (pounds) 0.71			
Notes: (a) Weekend/Holiday/Operator not present. Daily flow estimated on pump run times and flow history.			

Table 2
Summary of Extraction Well Performance
Groundwater Extraction and Treatment System (Building 50), Naval Air Station, Brunswick, Maine

February 2009 Day	EVD1			EVD2A			EVD3			EVD5A		
	Flow Rate GPM	Run Time Hours	Total Pumpage Gallons									
2	9.76	24	14054	3	24	4320	24	24	34560	1	24	1440
4	9.76	22	12883.2	3	22	3960	24	22	31680	1	22	1320
6	9.76	24	14054	3	24	4320	24	24	34560	1	24	1440
8	9.76	24	14054	3	24	4320	24	24	34560	1	24	1440
10	9.76	24	14054.4	3	24	4320	24	24	34560	1	24	1440
12	9.76	24	14054.4	3	24	4320	24	24	34560	1	24	1440
14	9.76	24	14054	3	24	4320	24	24	34560	1	24	1440
16	9.76	24	14054	3	24	4320	24	24	34560	1	24	1440
18	9.76	24	14054	3	24	4320	24	24	34560	1	24	1440
20	9.76	24	14054	3	24	4320	24	24	34560	1	24	1440
22	9.76	24	14054	3	24	4320	24	24	34560	1	24	1440
24	9.76	24	14054	3	24	4320	24	24	34560	1	24	1440
26	9.76	24	14054	3	24	4320	24	24	34560	1	24	1440
28	9.76	24	14054.4	3	24	4320	24	24	34560	1	24	1440
TOTALS		670.00	392,352	5	670.00	120,600		670.00	964,800		670.00	40,200

EXPECTED WELL GPM	10	15	25	7
EFFECTIVENESS OF WELL	0.879	0.180	0.865	0.129
MONTH AVERAGE GPM	8.79	2.70	21.61	0.90

PERFORMANCE BASED ON WELL SYSTEM CAPACITY (all four wells):	59.66%
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Table 3
Summary of Analytical Results
Treatment System Influent and Effluent
Samples Collected on 2 February 2009
Groundwater Extraction and Treatment System Building 50)
Naval Air Station, Brunswick, Maine

Parameter ^(a)	Method	Result	Treatment Plant Duplicate	Discharge Limit ^(b)	MEG (ppb)	MCL (ppb)
EASTERN PLUME INFLUENT						
1,1,1-Trichloroethane	EPA8260B	NS	NR	NA	200	200
1,1-Dichloroethane	EPA8260B	NS	NR	NA	70	NA
1,1-Dichloroethene	EPA8260B	NS	NR	NA	0.6	7
<i>cis</i> -1,2-Dichloroethene	EPA8260B	NS	NR	NA	70	70
<i>trans</i> -1,2-Dichloroethene	EPA8260B	NS	NR	NA	140	100
Methylene chloride	EPA8260B	NS	NR	NA	NA	NA
Tetrachloroethene	EPA8260B	NS	NR	NA	7	5
Trichloroethene	EPA8260B	NS	NR	NA	32	5
Vinyl chloride	EPA8260B	NS	NR	NA	0.2	2
1,4-Dioxane	EPA8260B/SIM	4.3	NR	NA	32	NA
Arsenic, Total	EPA6010B	NS	NR	NA	10	10
Iron, Total	EPA6010B	NS	NR	NA	NA	NA
Manganese, Total	EPA6010B	NS	NR	NA	500	NA
TREATMENT PLANT EFFLUENT						
Arsenic, Total	EPA6010B	NS	NR	50	10	10
Chromium, Total	EPA6010B	NS	NR	10	40	100
Cyanide, Total	EPA9010	NS	NR	34	140	200
Nickel, Total	EPA6010B	NS	NR	78	140	100*
Lead, Total	EPA6010B	NS	NR	15	10	15
Zinc, Total	EPA6010B	NS	NR	200	2000	2000*
Iron, Total	EPA6010B	NS	NR	NA	NA	NA
Manganese, Total	EPA6010B	NS	NR	NA	500	NA
1,1,1-Trichloroethane	EPA8260B	NS	NR	750	200	200
1,1-Dichloroethane	EPA8260B	NS	NR	94	70	NA
1,1-Dichloroethene	EPA8260B	NS	NR	7	0.6	7
<i>cis</i> -1,2-Dichloroethene	EPA8260B	NS	NR	70 ^(c)	70	70
<i>trans</i> -1,2-Dichloroethene	EPA8260B	NS	NR	--	140	100
Methylene chloride	EPA8260B	NS	NR	5	NA	NA
Tetrachloroethene	EPA8260B	NS	NR	5	7	5
Trichloroethene	EPA8260B	NS	NR	5	32	5
Vinyl chloride	EPA8260B	NS	NR	2	0.2	2
1,4-Dioxane	EPA8260B/SIM	4.3	4.4	NA	32	NA

(a) Results reported in µg/L.

(b) Maximum effluent discharge limit established by Brunswick Sewer District Draft Permit (Dec. 1994).

(c) Combined 1, 2-dichloroethane (*cis* and *trans*) not to exceed 70 µg/L.

* - EPA Health Advisory

NOTE: EPA = U.S. Environmental Protection Agency.

D = Analysis conducted at a secondary dilution factor.

NR = Analysis not required.

NA = Discharge limit applicable to treatment plant effluent only.

B = Compound also detected in associated method blank.

NS = Not Sampled

SIM = Selective Ion Monitoring

ND (U) = Not detected above laboratory reporting limit (<5.0 U)

Trip blank (TP-162-QT1) results for EPA Method 8260B/SIM were non-detect.