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NTC GREAT LAKES
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QUARTERLY O&M SAMPLING REPORT FOR SUPPLYSIDE LANDFILL MONITORING WELLS NAVAL TRAINING CENTER GREAT LAKES, ILLINOIS

ENVIRONMENTAL JOB ORDER CONTRACT (EJOC)
BPA MASTER NUMBER N68950-03-3018
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GAS PROJECT NO. 2003-0185.01

Submitted to:

Department of the Navy
Naval Training Center – Environmental Department
Building 1-A, 201 Decatur Avenue
Great Lakes, Illinois 60088-5600

Submitted by:

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1.0 Introduction

Graef, Anhalt, Schloemer & Associates, Inc. has been retained by the Department of the Navy, Naval Facilities Engineering Command under BPA Master Number N68950-03-3018, BPA Call Number 000301 to furnish the labor, transportation, supervision, material, and equipment in connection with the sampling, analysis, and reporting for the Supplyside Landfill monitoring wells located at the Great Lakes Naval Training Center (GLNTC) in Great Lakes, Illinois. The work is performed on a quarterly basis for one year.

This report document's the activities related to the 2004 second quarter sampling event for the groundwater monitoring wells located at the Supplyside Landfill (Figure 1). The purpose of the sampling event is to report the current groundwater quality conditions at the Supplyside Landfill to the Department of the Navy.

2.0 Field Activities

On April 29, 2004, depths to the static groundwater level were measured in monitoring wells MW-A through MW-F at the Supplyside Landfill utilizing a water level probe. The probe was decontaminated prior to each measurement by washing it with an Alconox soap solution and rinsing it with deionized water.

Following the measurement of the depth to static groundwater, groundwater samples were collected from monitoring wells MW-A through MW-F. Groundwater samples could not be collected from monitoring wells MW-G due to a bent well casing. Prior to collecting the groundwater samples, the wells were purged of three well volumes of water utilizing single use disposable polyethylene bailers. Purging was conducted to ensure the collection of a representative groundwater sample. After allowing sufficient time for recharge, groundwater samples were collected and transferred from the bailers to the appropriate laboratory-supplied sample containers. Samples for metal analysis were collected last and were filtered in the field utilizing a disposable in-line filtration module (0.45 micron filter).

The groundwater sample containers were placed in a cooler with ice and shipped to Test America, Inc. located in Watertown, Wisconsin using standard United States Environmental Protection Agency (USEPA) protocols.

3.0 Laboratory Analysis

The groundwater samples collected from the Supplyside Landfill's groundwater monitoring were analyzed for the following constituents in accordance with the Illinois Environmental Protection Agency (IEPA) protocols:

- Iron by Method 236.1;
- Lead by Method 239.2;
- Manganese by Method 243.1;
- Ammonia by Method 5M4500 NHH;
- Chloride by Method 325.2;
- Phenol by Method 420.2;
- Sulfate by Method 300.0;
- Total Dissolved Solids (TDS) by Method 160.1;
- Total Organic Carbon (TOC) by Method 415.1; and
- pH by Method 150.1;

The historical and current laboratory analytical results for the groundwater samples are summarized in Table 1 through Table 6 and a copy of the current laboratory analytical report is attached to this report.

Table 1
Analytical Results for Monitoring Well-A
Quartely O&M Sampling for
Supplyside Landfill Monitoring Wells

Monitoring Well	Sampling Round	Amonia	Chloride	PH	Sulfate	TDS	TOC	Phenolics	Iron	Lead	Manganese
MW-A	7/16/2003	14	17	7.0	150	750	16	<0.0056	2.4	<0.0014	0.49
MW-A	10/29/2003	11	58	6 9	130	740	14	<0.0056	8.0	<0.0014	0.42
MW-A	1/29/2004	0 48	48	6 9	310	990	9.6	0.0025	<0.0042	<0.0014	0.55
MW-A	4/28/2004	1.2	22	6.7	170	800	9.6	0.0042	<0.042	<0 0014	0.35
IEPA Groundwater Standards		N/A	200	6.5-8.5*	400	1,200	N/A	0.10	5	0.0075	0.15

Notes:
1. Concentrations are reported in milligrams per liter (mg/L).
2. Standards pertain to IEPA Class 1 Groundwater Quality Standards
3. N/A - Not Applicable, IEPA or USEPA standards have not been established for these constituents.
4. * - Reported limit is fronm USEPA National Drinking Water Regulations since there is no IEPA standard.
5. Shaded = exceeded groundwater standard.

Table 1
Analytical Results for Monitoring Well-A
Quarterly O&M Sampling for
Supplyside Landfill Monitoring Wells

Monitoring Well	Sampling Round	Ammonia	Chloride	PH	Sulfate	TDS	TOC	Phenolics	Iron	Lead	Manganese
MW-A	Jul-99	12.8	55.2	6.9	50.8	683	22.8	<0.10	10.6	<0.001	0.53
	Oct-99	7.5	46.1	6.85	102	679	25.7	<0.10	4.25	<0.001	0.478
	Jan-00	8.86	47.9	6.91	112	414	13.5	0.27	1.01	0.003	0.517
	Apr-00	110	10.0	7.02	190	700	19.0	0.036	0.12	3.0	0.24
	Jul-00	0.40	4.94	7.0	50.5	717	34	<0.005	10.7	<5.00	0.642
	Oct-00	6.0	44.3	7.06	2.84	706	11	<0.005	9.98	<0.004	0.147
	Jan-01	13.9	61.2	7.01	12.6	778	12	<0.005	16.8	<5.00	0.883
	Apr-01	0.0336	53.2	7.0	135	823	15	<0.005	2.66	<0.004	1.02
	Jul-01	20.4	50.4	6.6	66.2	795	20	<0.1	17.6	<0.003	0.61
	Oct-01	14.0	12.1	6.76	106.0	509	16.0	<0.1	9.32	<0.171	0.53
	Jan-02	20.3	47.2	6.58	71	773	9	<0.005	20.3	<0.171	0.518
	Apr-02	31	35	6.8	92	780	14	<0.005	13,000	<1.0	520
	Jul-02	9.9	-	6.82	57	770	13	0.005	11	0.002	0.46
	Oct-02	17.0	63.0	7.01	110	740	13	0.005	25	0.002	0.51
	Jan-03	16.2	55	6.96	270	834	9.18	<0.005	11.8	<0.002	0.578
	Apr-03	Not Yet Sampled									
IEPA Groundwater Standards		N/A	200	6.5-8.5*	400	1,200	N/A	0.10	5	0.0075	0.15

Notes:
1. Concentrations are reported in milligrams per liter (mg/L).
2. Standards pertain to IEPA Class 1 Groundwater Quality Standards.
3. N/A – Not Applicable, IEPA or USEPA standards have not been established for these constituents.
4. * - Reported limit is from USEPA National Secondary Drinking Water Regulations since there is no IEPA standard.
5. Shaded = exceeds groundwater standard.

Table 1
Analytical Results for Monitoring Well-B
Quartely O&M Sampling for
Supplyside Landfill Monitoring Wells

Monitoring Well	Sampling Round	Amonia	Chloride	PH	Sulfate	TDS	TOC	Phenolics	Iron	Lead	Manganese
MW-B	7/16/2003	9.5	290	6.8	140	1,800	7.2	<0 0056	6.2	<0 0017	0.83
MW-B	10/29/2003	9 7	280	6.8	150	1,600	24	0.0062	6.5	0.0018	0.073
MW-B	1/29/2004	9.7	300	6 8	110	1,600	22	<0.0028	7.8	<0.0014	0 088
MW-B	4/28/2004	11	310	6 8	110	1,700	25	0.0037	7.5	<0.0014	0.091
IEPA Groundwater Standards		N/A	200	6.5-8.5*	400	1,200	N/A	0.10	5	0.0075	0.15

Notes.
1. Concentrations are reported in milligrams per liter (mg/L).
2. Standards pertain to IEPA Class 1 Groundwater Quality Standards.
3. N/A - Not Applicable, IEPA or USEPA standards have not been established for these constituents.
4. * - Reported limit is fronm USEPA National Drinking Water Regulations since there is no IEPA standard.
5. Shaded = exceeded groundwater standard.

Table 2
Analytical Results for Monitoring Well-B
Quarterly O&M Sampling for
Supplyside Landfill Monitoring Wells

Monitoring Well	Sampling Round	Ammonia	Chloride	pH	Sulfate	TDS	TOC	Phenolics	Iron	Lead	Manganese
MW-B	Jul-99	5.5	254	7.02	122	< 10.0	24.4	< 0.10	5.85	< 0.001	0.252
	Oct-99	6.38	331	6.93	161	1,340	38.8	< 0.10	2.16	0.002	0.221
	Jan-00	4.95	425	6.93	147	1,470	25.8	< 0.10	5.08	< 0.001	0.163
	Apr-00	76	300	6.96	190	1,500	35	0.054	8.0	< 3.0	0.32
	Jul-00	0.96	7.61	7.5	378	1,099	36	< 0.005	8.36	< 5.00	0.193
	Oct-00	10.8	152	7.14	8.82	1,800	19	38.1	5.21	< 0.004	< 0.0001
	Jan-01	5.60	292	6.97	9.98	1,630	28	0.0127	10.6	< 5.00	0.117
	Apr-01	< 0.0277	390	7.0	132	332	23	0.00794	8.87	< 0.004	0.104
	Jul-01	8.7	360	6.64	127	1,560	21	< 0.1	9.24	< 0.003	0.145
	Oct-01	5.6	300	7.07	104	1,360	32	< 0.1	8.86	< 0.171	0.128
	Jan-02	97	382	6.62	113	1,500	20	0.01	9.44	< 0.171	0.133
	Apr-02	2	200	6.7	160	1,500	23	< 0.005	7,400	97	2.8
	Jul-02	8.7	-	6.87	150	1,700	21	0.005	3.9	0.002	0.11
	Oct-02	3.9	410	6.91	150	1,500	22	0.093	8	0.002	0.13
	Jan-03	18.6	360	6.90	330	1,410	16.6	< 0.005	6.82	< 0.002	0.129
	Apr-03	Not Yet Sampled									
IEPA Groundwater Standards		N/A	200	6.5-8.5*	400	1,200	N/A	0.10	5	0.0075	0.15

Notes:
1. Concentrations are reported in milligrams per liter (mg/L).
2. Standards pertain to IEPA Class 1 Groundwater Quality Standards.
3. N/A - Not Applicable, IEPA or USEPA standards have not been established for these constituents.
4. * - Reported limit is from USEPA National Secondary Drinking Water Regulations since there is no IEPA standard.
5. Shaded = exceeds groundwater standard.

Table 1
Analytical Results for Monitoring Well-C
Quartely O&M Sampling for
Supplyside Landfill Monitoring Wells

Monitoring Well	Sampling Round	Amonia	Chloride	PH	Sulfate	TDS	TOC	Phenolics	Iron	Lead	Manganese
MW-C	7/16/2003	9.5	74	6.8	260	1,300	5.1	<0.0056	0.065	<0.0014	0.12
MW-C	10/29/2003	<0.10	81	7.0	290	1,000	3.6	<0.0056	0.24	<0.0014	0 083
MW-C	1/29/2004	0.79	58	7.1	150	670	1 8	<0.0022	<0.042	<0 0014	0.045
MW-C	4/28/2004	0.27	80	6.9	300	1,100	2.5	<0.0022	<0.042	<0 0014	0.010
IEPA Groundwater Standards		N/A	200	6.5-8.5*	400	1,200	N/A	0.10	5	0.0075	0.15

Notes:
1. Concentrations are reported in milligrams per liter (mg/L).
2. Standards pertain to IEPA Class 1 Groundwater Quality Standards
3 N/A - Not Applicable, IEPA or USEPA standards have not been established for these constituents.
4 * - Reported limit is fronm USEPA National Drinking Water Regulations since there is no IEPA standard.
5. Shaded = exceeded groundwater standard.

Table 3
Analytical Results for Monitoring Well-C
Quarterly O&M Sampling for
Supplyside Landfill Monitoring Wells

Monitoring Well	Sampling Round	Ammonia	Chloride	pH	Sulfate	TDS	TOC	Phenolics	Iron	Lead	Manganese
MW-C	Jul-99	0.14	138	7.28	342	1,150	5.5	<0.10	0.676	<0.001	0.19
	Oct-99	0.34	137	7.20	279	1,650	11.7	<0.10	<0.100	<0.001	0.170
	Jan-00	<0.10	175	7.26	291	1,040	5.5	<0.10	<0.100	<0.003	0.050
	Apr-00	48	150	7.19	380	1,100	5.6	0.078	0.21	<3	<0.10
	Jul-00	0.80	13.1	7.5	160	1,307	<9	<0.005	<0.0044	<5.00	<0.0001
	Oct-00	< 0.0277	140	7.32	15.2	1,070	<6	<0.005	<0.0044	<0.004	<0.0001
	Jan-01	< 0.0277	151	7.24	15.2	1,070	<9	<0.005	0.070	<5.00	<0.0001
	Apr-01	< 0.0277	160	6.5	203	1,100	<6	<0.005	<0.0044	<0.004	<0.15
	Jul-01	<0.4	137	6.91	318	1,100	<6	<0.1	<0.075	<0.003	<0.042
	Oct-01	<0.4	123	7.48	340	1,160	<6	<0.1	<0.116	<0.171	<0.042
	Jan-02	<0.4	124	6.96	331	1,130	<6	<0.005	<0.116	<0.171	<0.042
	Apr-02	0.94	140	6.9	300	1,000	2.3	<0.005	<100	1.0	35
	Jul-02	0.08	-	7.06	300	1,100	3	0.005	0.25	0.002	0.07
	Oct-02	0.24	110	6.98	210	1,100	2.6	0.005	0.05	0.002	0.017
	Jan-03	2.38	100	7.08	340	1,000	3	<0.005	<0.05	<0.002	0.017
	Apr-03	Not Yet Sampled									
IEPA Groundwater Standards		N/A	200	6.5-8.5*	400	1,200	N/A	0.10	5	0.0075	0.15

Notes:
1. Concentrations are reported in milligrams per liter (mg/L).
2. Standards pertain to IEPA Class 1 Groundwater Quality Standards.
3. N/A – Not Applicable, IEPA or USEPA standards have not been established for these constituents.
4. * - Reported limit is from USEPA National Secondary Drinking Water Regulations since there is no IEPA standard.
5. Shaded = exceeds groundwater standard.

Table 1
Analytical Results for Monitoring Well-D
Quartely O&M Sampling for
Supplyside Landfill Monitoring Wells

Monitoring Well	Sampling Round	Amonia	Chloride	PH	Sulfate	TDS	TOC	Phenolics	Iron	Lead	Manganese
MW-D	7/16/2003	<0.10	36	6.9	100	690	3.9	<0.0064	0.050	<0.0014	0.18
MW-D	10/29/2003	<0 10	41	7.1	140	780	3.0	0.0076	0 15	<0.0014	0.23
MW-D	1/29/2004	0.79	58	7.1	150	670	1.8	<0.0022	<0.042	<0.0014	0 045
MW-D	4/28/2004	0.54	44	7.5	130	1,000	2.1	0 0081	<0.042	<0.0014	0.14
IEPA Groundwater Standards		N/A	200	6.5-8 5*	400	1,200	N/A	0.10	5	0.0075	0.15

Notes
1. Concentrations are reported in milligrams per liter (mg/L).
2. Standards pertain to IEPA Class 1 Groundwater Quality Standards.
3. N/A - Not Applicable, IEPA or USEPA standards have not been established for these constituents.
4. * - Reported limit is fronm USEPA National Drinking Water Regulations since there is no IEPA standard.
5. Shaded = exceeded groundwater standard.

Table 4
Analytical Results for Monitoring Well-D
Quarterly O&M Sampling for
Supplyside Landfill Monitoring Wells

Monitoring Well	Sampling Round	Ammonia	Chloride	pH	Sulfate	TDS	TOC	Phenolics	Iron	Lead	Manganese
MW-D	Jul-99	0.16	42.1	7.40	59.9	589	23.6	<0.10	<0.100	<0.001	0.214
	Oct-99	0.24	49.6	7.17	217	811	25.4	0.17	0.113	<0.001	0.119
	Jan-00	<0.10	38.1	7.20	286	1,130	9.5	0.20	0.399	<0.002	0.387
	Apr-00	44	90	7.15	310	940	3.7	<0.005	1.1	<3.0	0.77
	Jul-00	0.30	13.1	7.5	125	1,110	6	<0.005	0.580	<5.00	0.662
	Oct-00	<0.0277	74.5	7.26	11.3	1,019	<6	<0.005	0.592	<0.004	0.234
	Jan-01	<0.0277	50.5	7.30	8.09	3,000	<9	<0.005	1.21	<5.00	0.327
	Apr-01	<0.0277	31.9	7.0	58.1	429	<6	0.0381	1.78	<0.004	0.388
	Jul-01	0.8	61	7.03	92.8	602	<6	<0.1	0.61	<0.003	1.04
	Oct-01	<0.4	14.8	7.22	19.8	399	<6	<0.1	0.259	<0.171	0.054
	Jan-02	<0.4	39.2	7.04	52.6	515	<6	<0.005	1.36	<0.171	0.486
	Apr-02	0.92	30	7.0	110	490	1.7	0.002	260	<1.0	250
	Jul-02	0.05	-	-	-	-	-	-	0.05	0.002	0.13
	Oct-02	0.26	48	7.01	140	770	2	0.005	0.048	0.002	0.39
	Jan-03	0.970	55	7.16	630	658	2.8	<0.005	<0.05	0.00739	0.257
	Apr-03	Not Yet Sampled									
IEPA Groundwater Standards		N/A	200	6.5-8.5*	400	1,200	N/A	0.10	5	0.0075	0.15

Notes:
1. Concentrations are reported in milligrams per liter (mg/L).
2. Standards pertain to IEPA Class 1 Groundwater Quality Standards.
3. N/A - Not Applicable, IEPA or USEPA standards have not been established for these constituents.
4. * - Reported limit is from USEPA National Secondary Drinking Water Regulations since there is no IEPA standard.
5. Shaded = exceeds groundwater standard.

Table 1
Analytical Results for Monitoring Well-E
Quartely O&M Sampling for
Supplyside Landfill Monitoring Wells

Monitoring Well	Sampling Round	Amonia	Chloride	PH	Sulfate	TDS	TOC	Phenolics	Iron	Lead	Manganese
MW-E	7/16/2003	<0.10	26	6.9	64	690	2.9	<0.0056	0.83	<0.0014	0.19
MW-E	10/29/2003	<0.10	44	7.2	72	530	2.4	0.0083	0.95	<0.0014	0.23
MW-E	1/29/2004	<0 10	34	7.1	63	510	2.3	<0.0022	0.85	<0.0014	0.19
MW-E	4/28/2004	0.24	32	7.2	57	750	2 3	0.0031	0.35	<0.0014	0.18
IEPA Groundwater Standards		N/A	200	6.5-8.5*	400	1,200	N/A	0.10	5	0.0075	0.15

Notes:
1. Concentrations are reported in milligrams per liter (mg/L).
2. Standards pertain to IEPA Class 1 Groundwater Quality Standards.
3. N/A - Not Applicable, IEPA or USEPA standards have not been established for these constituents.
4. * - Reported limit is fronm USEPA National Drinking Water Regulations since there is no IEPA standard.
5. Shaded = exceeded groundwater standard.

Table 5
Analytical Results for Monitoring Well-E
Quarterly O&M Sampling for
Supplyside Landfill Monitoring Wells

Monitoring Well	Sampling Round	Ammonia	Chloride	pH	Sulfate	TDS	TOC	Phenolics	Iron	Lead	Manganese
MW-E	Jul-99	0.14	20.4	7.38	45.9	530	5.5	<0.10	0.478	<0.001	0.328
	Oct-99	0.24	40.8	7.27	61.3	<10.0	24.0	0.31	0.909	<0.001	0.332
	Jan-00	<0.10	136	7.34	65.2	652	5.8	0.32	0.788	<0.001	<0.001
	Apr-00	53	35	7.26	130	450	4.0	0.042	0.71	<3.0	0.17
	Jul-00	0.40	2.63	7.5	19.5	240	13	<0.005	3.67	<5.00	1.66
	Oct-00	<0.0277	23.0	7.41	4.73	518	<6	<0.005	0.619	<0.004	<0.0001
	Jan-01	<0.0277	37.2	7.31	5.78	529	<3	<0.005	0.878	<5.00	0.169
	Apr-01	<0.0277	31.0	7.0	81.7	488	<6	0.0984	1.09	<0.004	0.270
	Jul-01	0.6	26.6	7.0	54.5	489	<3	<0.1	0.841	<0.003	0.194
	Oct-01	0.6	14.4	7.27	45.6	352	7	7.27	<0.116	<0.171	<0.042
	Jan-02	<0.4	23.8	6.98	50.3	469	<6	<0.005	1.54	<0.171	0.166
	Apr-02	1.5	30	7.0	290	470		<0.171	560	<1.0	180
	Jul-02	0.17	-	7.11	72	750	2.4	0.005	0.84	0.002	0.25
	Oct-02	1.2	31	7.04	120	550	2	0.0035	0.88	0.002	0.22
	Jan-03	1.51	35	7.22	300	544	2.4	<0.005	1.2	<0.002	0.298
	Apr-03	Not Yet Sampled									
IEPA Groundwater Standards		N/A	200	6.5-8.5*	400	1,200	N/A	0.10	5	0.0075	0.15

Notes:
1. Concentrations are reported in milligrams per liter (mg/L).
2. Standards pertain to IEPA Class 1 Groundwater Quality Standards.
3. N/A – Not Applicable, IEPA or USEPA standards have not been established for these constituents.
4. * - Reported limit is from USEPA National Secondary Drinking Water Regulations since there is no IEPA standard.
5. Shaded = exceeds groundwater standard.

Table 1
Analytical Results for Monitoring Well-F
Quartely O&M Sampling for
Supplyside Landfill Monitoring Wells

Monitoring Well	Sampling Round	Amonia	Chloride	PH	Sulfate	TDS	TOC	Phenolics	Iron	Lead	Manganese
MW-F	7/16/2003	0 40	10	7 0	180	760	6.4	<0.0056	0.48	<0.0014	0.38
MW-F	10/29/2003	2.2	16	6 9	180	740	8.4	<0.0056	5 3	<0.0014	1.3
MW-F	1/29/2004	0.64	23	7.1	360	1,200	9.4	<0.0066	1.4	<0 0014	0.81
MW-F	4/28/2004	0.89	21	7.0	330	1,100	7	0.0028	<0.042	<0.0014	0.19
IEPA Groundwater Standards		N/A	200	6.5-8.5*	400	1,200	N/A	0.10	5	0.0075	0.15

Notes:
1. Concentrations are reported in milligrams per liter (mg/L).
2. Standards pertain to IEPA Class 1 Groundwater Quality Standards.
3. N/A - Not Applicable, IEPA or USEPA standards have not been established for these constituents.
4. * - Reported limit is fronm USEPA National Drinking Water Regulations since there is no IEPA standard.
5 Shaded = exceeded groundwater standard.

Table 6
Analytical Results for Monitoring Well-F
Quarterly O&M Sampling for
Supplyside Landfill Monitoring Wells

Monitoring Well	Sampling Round	Ammonia	Chloride	pH	Sulfate	TDS	TOC	Phenolics	Iron	Lead	Manganese
MW-F	Jul-99	1.93	18.7	7.13	129	750	22.6	<0.10	1.58	<0.001	1.5
	Oct-99	3.13	21.3	7.02	470	1,170	38.4	<0.10	2.68	<0.001	1.47
	Jan-00	2.13	32.8	7.42	688	1,540	21.2	0.29	0.271	<0.001	0.894
	Apr-00	77	10	7.13	290	1,100	11	0.078	0.11	<3.0	<0.10
	Jul-00	2.80	9.98	7.5	12.4	854	17	<0.005	0.663	<5.00	0.210
	Oct-00	<0.0277	24.8	7.21	15.2	1,063	<6	86.4	0.685	<0.004	0.372
	Jan-01	<0.0277	17.7	7.28	9.98	85.0	<3	<0.005	0.027	<5.00	<0.0001
	Apr-01	<0.0277	15.1	7.0	162	675	<6	0.171	0.101	<0.004	0.077
	Jul-01	2	60.2	6.78	142	735	10	<0.1	0.153	<0.003	0.722
	Oct-01	0.4	20.8	7.44	130	465	8	<0.1	<0.116	<0.171	<0.042
	Jan-02	1.8	34.7	6.88	249	880	<6	<0.005	2.15	<0.171	0.683
	Apr-02	1.9	36	6.9	310	860	5.9	0.011	200	<1.0	370
	Jul-02	1.6	-	7.01	250	840	7.0	0.005	1.0	0.002	1.0
	Oct-02	1.8	19	6.98	210	820	7.9	0.005	4.2	0.002	1.2
	Jan-03	2.43	20	7.05	330	996	6.14	<0.005	4.41	<0.002	1.57
	Apr-03	Not Yet Sampled									
IEPA Groundwater Standards		N/A	200	6.5-8.5*	400	1,200	N/A	0.10	5	0.0075	0.15

Notes:
1. Concentrations are reported in milligrams per liter (mg/L).
2. Standards pertain to IEPA Class 1 Groundwater Quality Standards.
3. N/A - Not Applicable, IEPA or USEPA standards have not been established for these constituents.
4. * - Reported limit is from USEPA National Secondary Drinking Water Regulations since there is no IEPA standard.
5. Shaded = exceeds groundwater standard.

0403972

GRAEF ANHALT SCHLOEMER and Associates Inc.

FIELD WATER QUALITY SAMPLING AND ANALYSIS LOG

PROJECT	Great Lakes Naval Base
PROJECT NO	20030185
LOCATION	Great Lakes Naval Base
LABORATORY	Test America
DATE SENT	4/29/04

INSTRUMENT IDENTIFICATION:

TEMPERATURE	KIT #1
CONDUCTIVITY	KIT #1
pH	KIT #1
PUMP	NA

SAMPLE LOCATION	MW-A	MW-B	MW-C	MW-D	MW-E
TYPE	Monitoring well	Monitoring well	Monitoring well	Monitoring well	Monitoring well
DATE/TIME	4/28/04 10.00	4/28/04 11 00	4/28/04 14 00	4/28/04 12 00	4/28/04 13 00
WELL DEPTH (FT.)	14 70	17 00	17 20	17 90	17 70
DEPTH TO GW (FT.)	9 33	8 63	3 80	7 72	7 27
WATER COLUMN (FT.)	5 37	8 37	13 40	10.18	10 43
WELL VOLUME (GAL)	0 86	1 34	2 15	1 63	1 67
CALC. PURGE VOL. (GAL)	3 44	5 36	8 60	6 52	6 68
ACT. VOL. PURGED (GAL.)	3 50	5 50	8 75	6 75	7 00
MP ELEV. (FT. MSL)	676 92	676 11	680 19	675 38	674 92
GW ELEV. (FT. MSL)	667 59	667 48	676 39	667 66	667 65
SAMPLING DEVICE	Disposable Bailer	Disposable Bailer	Disposable Bailer	Disposable Bailer	Disposable Bailer
TEMPERATURE (°C)	10 5	11 4	12 7	12 2	13 0
CONDUCTIVITY (µS/cm)					
(mS/cm)	0 871	1 95	1 232	0 761	0 629
pH	7 47	7 30	7 58	7 84	7 68
DISSOLVED OXYGEN (ppm)					
REDOX (mV)	-25 7	-16 6	-32 6	-47 2	-47 5
COLOR	Colorless	Light Gray	Light Brown	Light Brown	Light Brown
ODOR	None Noticed	Swampy	None Noticed	None Noticed	None Noticed
CLARITY	Clear	Cloudy	Slightly Cloudy	Cloudy	Slightly Cloudy
SAMPLING PARAMETERS	NO. OF CONTAINERS & CONTAINER TYPE - VOA, PLASTIC, AMB. BTL PRESERVATIVE TYPE, FILTERED OR UNFILTERED				
Phenols	1-ltr amber, H2SO4, ice	1-ltr amber, H2SO4, ice	1-ltr amber, H2SO4, ice	1-ltr amber, H2SO4, ice	1-ltr amber, H2SO4, ice
TOC	250 ml plastic, H2SO4, ice	250 ml plastic, H2SO4, ice	250 ml plastic, H2SO4, ice	250 ml plastic, H2SO4, ice	250 ml plastic, H2SO4, ice
Ammonia as N	1 ltr plastic, H2SO4, ice	1 ltr plastic, H2SO4, ice	1 ltr plastic, H2SO4, ice	1 ltr plastic, H2SO4, ice	1 ltr plastic, H2SO4, ice
Fe, Mn, Pb	1 250 ml plastic, HNO3, field filtered, ice	1 250 ml plastic, HNO3, field filtered, ice	1 250 ml plastic, HNO3, field filtered, ice	1 250 ml plastic, HNO3, field filtered, ice	1 250 ml plastic, HNO3, field filtered, ice
Chloride, PH, TDS, Sulfate	1 ltr plastic, ice	1 ltr plastic, ice	1 ltr plastic, ice	1 ltr plastic, ice	1 ltr plastic, ice
SAMPLED BY:	EGD	EGD	EGD	EGD	EGD
REMARKS :	568551	568552	568553	568554	568555

WSL4-04A XLS

GRAEF ANHALT SCHLOEMER and Associates Inc.

FIELD WATER QUALITY SAMPLING AND ANALYSIS LOG

PROJECT	Great Lakes Landfill
PROJECT NO	20030185
LOCATION	Great Lakes Naval Base
LABORATORY	Test America
DATE SENT	4/29/04

INSTRUMENT IDENTIFICATION:

TEMPERATURE	KIT #1
CONDUCTIVITY	KIT #1
pH	KIT #1
PUMP	NA

SAMPLE LOCATION	MW-F				
TYPE	Monitoring well				
DATE/TIME	4/28/04 9 10				
WELL DEPTH (FT.)	17 04				
DEPTH TO GW (FT.)	9 98				
WATER COLUMN (FT.)	7 06				
WELL VOLUME (GAL)	1 13				
CALC. PURGE VOL. (GAL)	4 56				
ACT. VOL. PURGED (GAL.)	4 75				
MP ELEV. (FT. MSL)	681 74				
GW ELEV. (FT. MSL)	671.76	0 00	0 00	0 00	0 00
SAMPLING DEVICE	Disposable Bailer				
TEMPERATURE (°C)	10 3				
CONDUCTIVITY (µS/cm)					
(mS/cm)	1 029				
pH	7 55				
DISSOLVED OXYGEN (ppm)					
REDOX (mV)	-30 5				
COLOR	Light Brown				
ODOR	None Noticed				
CLARITY	Slightly Cloudy				
SAMPLING PARAMETERS :	NO. OF CONTAINERS & CONTAINER TYPE : VOA, PLASTIC, AMB. BTL PRESERVATIVE TYPE : FILTERED OR UNFILTERED				
Ammonia	1-ltr amber, H2SO4, ice				
Chloride/ Sulfate/ TDS/ PH	250 ml plastic, H2SO4, ice				
TOC	1 ltr plastic, H2SO4, ice				
Iron / Manganese / Lead	1 250 ml plastic, HNO3, field filtered, ice				
Phenols	1 ltr plastic, ice				
SAMPLED BY:	EGD				

REMARKS : 968556

WSL4 04 B XLS

Sampling Date: 4/28/2004

Well	A	B	C	D	E	F
Well Top	96.01	95.2	99.28	94.47	94.01	100.83
Ground Surface	93.69	92.31	96.47	91.44	91.12	97.58
Well Depth	14.7	17	17.2	17.9	17.7	17.1
Stickup	2.32	2.89	2.81	3.03	2.89	3.25
D pth to Water	**9.33**	**8.63**	**13.4**	**10.18**	**10.43**	**9.98**
Well Elevation	676.92	676.11	680.19	675.38	674.92	681.74
Ground Water Elevation	**667.59**	**667.48**	**666.79**	**665.2**	**664.49**	**671.76**
Bottom Elevation	**662.22**	**659.11**	**662.99**	**657.48**	**657.22**	**664.64**
Temperature (Degrees C)	**4.9**	**4.5**	**3.7**	**3.9**	**2.1**	**2.9**
Conductivity (mS/cm)	**1.61**	**1.351**	**1.653**	**1.093**	**0.879**	**1.61**
Depth To Water (bgs)	**7.01**	**5.74**	**10.59**	**7.15**	**7.54**	**6.73**

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECORD CODE: L P C S M 0 1 (1–7) TRANS CODE: A (8)

REPORT DUE DATE __/__/__ (36 M D Y 41)

FEDERAL ID NUMBER _____

SITE INVENTORY NUMBER 0 9 7 8 1 1 0 0 0 2 (9–18)

MONITOR POINT NUMBER (see Instructions) M W - 4 (19–22)

REGION 5 CO. GREAT LAKES

DATE COLLECTED 0 7 / 2 8 / 0 4 (23 M D Y 28)

FACILITY NAME US NAVAL BASE #2

FOR IEPA USE ONLY

LAB ____ (29)

DATE RECEIVED __/__/__ (42 M D Y 47)

BACKGROUND SAMPLE (X) ____ (54)

TIME COLLECTED (24 Hr. Clock) 1 0 : 0 0 (55 H M 58)

UNABLE TO COLLECT SAMPLE (see Instructions) ____ (59)

MONITOR POINT SAMPLED BY (see Instructions) X (60) EGD OTHER (SPECIFY)

SAMPLE FIELD FILTERED — INORGANICS (X) X (61) ORGANICS (X) ____ (62)

SAMPLE APPEARANCE C O L O R L E S S (63–102)

COLLECTOR COMMENTS N O N E (103–142)

LAB COMMENTS N O N E (150–199)

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER	Remarks See Inst.	Replicate	< or >	VALUE
Q	TEMP OF WATER (unfiltered °F)	00011 (30–31)	(35)	(36)	(37)	50.9 (38–47)
Q	SPEC COND (unfiltered umhos)	00094				0871.
Q	pH (unfilted units)	00400				7.47
Q	ELEV OF GW SURF (ft ref MSL)	71993				667.59
Q	DEPTH OF WATER (ft below LS)	72019				7.01
A	BTM WELL ELEV (ft ref MSL)	72020				662.22
Q	DEPTH TO WATER FR MEA PT (ft)	72109				9.33

IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE | L | P | C | S | M | 0 | 2 | (1–7) TRANS CODE | A | (8)

SITE INVENTORY NUMBER 0 9 7 8 1 1 0 0 0 2 (9–18)

CO. GREAT LAKES REGION #5

US NAVAL BASE #2

FACILITY NAME

MONITOR POINT NUMBER M W-A (19–22)

DATE COLLECTED 04/28/04 (23 M D Y 28)

LAB TEST AMERICA (29)

	LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–34)	Remarks See Inst. (35)	Replicate (36)	< or > (37)	VALUE (38–47)
	N-Ammonia (mg/L)	00608				1.2
	Chloride (mg/L)	00941				22.
	Sulfate (mg/L)	00946				170.
	TDS (mg/L)	70300				800.
	TOC (mg/L)	00680				9.6
	Phenolics (mg/L)	32730				0.0042
	Iron (mg/L)	01046				<0.042
	Lead (mg/L)	01049				<0.0014
	Manganese (mg/L)	01056				0.35

All analytical procedures must be performed in accordance with the methods contained in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," SW-846, 3rd Edition, September 1986 or equivalent methods approved by the Agency. Proper sample chain of custody control and quality assurance/quality control procedures must be maintained in accordance with the facility sampling and analysis plan.

Only Keypunch with Data in Column 35 or Columns 38-47

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECORD CODE: L P C S M 0 1 (1–7) TRANS CODE: A (8)

REPORT DUE DATE __/__/__ (36 M D Y 41)

FEDERAL ID NUMBER _____

SITE INVENTORY NUMBER 0 9 7 8 1 1 0 0 0 2 (9–18)

MONITOR POINT NUMBER (see Instructions) M W - B (19–22)

REGION 5 CO. GREAT LAKES

DATE COLLECTED 0 4 / 2 8 / 0 4 (23 M D Y 28)

FACILITY NAME US NAVAL BASE #2

FOR IEPA USE ONLY

LAB ____ (29)

DATE RECEIVED __/__/__ (42 M D Y 47)

BACKGROUND SAMPLE (X) ____ (54)

TIME COLLECTED (24 Hr. Clock) 1 1 : 0 0 (55 H M 58)

UNABLE TO COLLECT SAMPLE (see Instructions) ____ (59)

MONITOR POINT SAMPLED BY (see Instructions) X (60) ECO OTHER (SPECIFY)

SAMPLE FIELD FILTERED — INORGANICS (X) X (61) ORGANICS (X) ____ (62)

SAMPLE APPEARANCE LIGHT GRAY CLOUDY (63–102)

COLLECTOR COMMENTS SWAMPY ODOR (103–142)

LAB COMMENTS NONE (150–199)

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–31)	Remarks See Inst. (35)	Replicate (36)	< or > (37)	VALUE (38–47)
Q	TEMP OF WATER (unfiltered °F)	00011				52.5
Q	SPEC COND (unfiltered umhos)	00094				1950.
Q	pH (unfilted units)	00400				7.30
Q	ELEV OF GW SURF (ft ref MSL)	71993				667.48
Q	DEPTH OF WATER (ft below LS)	72019				5.74
A	BTM WELL ELEV (ft ref MSL)	72020				659.11
Q	DEPTH TO WATER FR MEA PT (ft)	72109				8.63

IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE | L | P | C | S | M | 0 | 2 | (1–7) TRANS CODE | A | (8)

SITE INVENTORY NUMBER 0 9 7 8 1 1 0 0 0 2 (9–18)

MONITOR POINT NUMBER M W-B (19–22)

CO. GREAT LAKES REGION #5

DATE COLLECTED 4/28/04 (23 M D Y 28)

US NAVAL BASE #2
FACILITY NAME

LAB TEST AMERICA (29)

LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–34)	Remarks See Inst. (35)	Replicate (36)	< or > (37)	VALUE (38–47)
N-Ammonia (mg/L)	00608				11.
Chloride (mg/L)	00941				310.
Sulfate (mg/L)	00946				110.
TDS (mg/L)	70300				1700.
TOC (mg/L)	00680				25.
Phenolics (mg/L)	32730				0.0037
Iron (mg/L)	01046				7.5
Lead (mg/L)	01049				<0.0014
Manganese (mg/L)	01056				0.091

All analytical procedures must be performed in accordance with the methods contained in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," SW-846, 3rd Edition, September 1986 or equivalent methods approved by the Agency. Proper sample chain of custody control and quality assurance/quality control procedures must be maintained in accordance with the facility sampling and analysis plan.

Only Keypunch with Data in Column 35 or Columns 38-47

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECORD CODE: L P C S M 0 1 (1–7) TRANS CODE: A (8)

REPORT DUE DATE ___/___/___ (36 M D Y 41)

FEDERAL ID NUMBER _____

SITE INVENTORY NUMBER 0 9 7 8 1 1 0 0 0 2 (9–18)

MONITOR POINT NUMBER (see Instructions) M W - C (19–22)

REGION 5 CO. GREAT LAKES

DATE COLLECTED 0 4 / 2 8 / 0 4 (23 M D Y 28)

FACILITY NAME US NAVAL BASE #2

FOR IEPA USE ONLY

LAB ____ (29)

DATE RECEIVED ___/___/___ (42 M D Y 47)

BACKGROUND SAMPLE (X) ____ (54)

TIME COLLECTED (24 Hr. Clock) 1 4 : 0 0 (55 H M 58)

UNABLE TO COLLECT SAMPLE (see Instructions) ____ (59)

MONITOR POINT SAMPLED BY (see Instructions) X (60) EGD (OTHER (SPECIFY))

SAMPLE FIELD FILTERED — INORGANICS (X) X (61) ORGANICS (X) ____ (62)

SAMPLE APPEARANCE (63–102): LIGHT BROWN CLOUDY

COLLECTOR COMMENTS (103–142): NONE

LAB COMMENTS (150–199): NONE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–31)	Remarks See Inst. (35)	Replicate (36)	< or > (37)	VALUE (38–47)
Q	TEMP OF WATER (unfiltered °F)	0 0 0 1 1				54.8
Q	SPEC COND (unfiltered umhos)	0 0 0 9 4				1232.
Q	pH (unfilted units)	0 0 4 0 0				7.58
Q	ELEV OF GW SURF (ft ref MSL)	7 1 9 9 3				667.59
Q	DEPTH OF WATER (ft below LS)	7 2 0 1 9				10.59
A	BTM WELL ELEV (ft ref MSL)	7 2 0 2 0				662.99
Q	DEPTH TO WATER FR MEA PT (ft)	7 2 1 0 5				13.4

IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE | L | P | C | S | M | 0 | 2 | (1–7) TRANS CODE | A | (8)

SITE INVENTORY NUMBER 0 9 7 8 1 1 0 0 0 2 (9–18)

MONITOR POINT NUMBER M W-C (19–22)

CO. GREAT LAKES REGION #5

DATE COLLECTED 04/28/04 (23 M D Y 28)

US NAVAL BASE #2
FACILITY NAME

LAB TEST AMERICA (29)

	LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER	Remarks See Inst.	Replicate	< or >	VALUE
	N-Ammonia (mg/L)	00608 (30–34)	(35)	(36)	(37)	0.27 (38–47)
	Chloride (mg/L)	00941				80.
	Sulfate (mg/L)	00946				300.
	TDS (mg/L)	70300				1100.
	TOC (mg/L)	00680				2.5
	Phenolics (mg/L)	32730				<0.0022
	Iron (mg/L)	01046				<0.042
	Lead (mg/L)	01049				<0.0014
	Manganese (mg/L)	01056				0.010
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All analytical procedures must be performed in accordance with the methods contained in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," SW-846, 3rd Edition, September 1986 or equivalent methods approved by the Agency. Proper sample chain of custody control and quality assurance/quality control procedures must be maintained in accordance with the facility sampling and analysis plan.

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECORD CODE: L P C S M 0 1 (1–7) TRANS CODE: A (8)

REPORT DUE DATE ___/___/___ (36 M D Y 41)

FEDERAL ID NUMBER _____

SITE INVENTORY NUMBER 0 9 7 8 1 1 0 0 0 2 (9–18)

MONITOR POINT NUMBER (see Instructions) M W - D (19–22)

REGION 5 CO. GREAT LAKES

DATE COLLECTED 0 4 / 2 8 / 0 4 (23 M D Y 28)

FACILITY NAME US NAVAL BASE #2

FOR IEPA USE ONLY

LAB _____ (29)

DATE RECEIVED ___/___/___ (42 M D Y 47)

BACKGROUND SAMPLE (X) _____ (54)

TIME COLLECTED (24 Hr. Clock) 1 2 : 0 0 (55 H M 58)

UNABLE TO COLLECT SAMPLE (see Instructions) _____ (59)

MONITOR POINT SAMPLED BY (see Instructions) X (60) ECD OTHER (SPECIFY)

SAMPLE FIELD FILTERED — INORGANICS (X) X (61) ORGANICS (X) _____ (62)

SAMPLE APPEARANCE (63–102): LIGHT BROWN CLOUDY

COLLECTOR COMMENTS (103–142): NONE

LAB COMMENTS (150–199): NONE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–34)	Remarks See Inst. (35)	Replicate (36)	< or > (37)	VALUE (38–47)
Q	TEMP OF WATER (unfiltered °F)	0 0 0 1 1				53.9
Q	SPEC COND (unfiltered umhos)	0 0 0 9 4				761.
Q	pH (unfilted units)	0 0 4 0 0				7.84
Q	ELEV OF GW SURF (ft ref MSL)	7 1 9 9 3				665.2
Q	DEPTH OF WATER (ft below LS)	7 2 0 1 9				7.15
A	BTM WELL ELEV (ft ref MSL)	7 2 0 2 0				657.48
Q	DEPTH TO WATER FR MEA PT (ft)	7 2 1 0 3				10.18

IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE | L | P | C | S | M | 0 | 2 | (1–7) TRANS CODE | A | (8)

SITE INVENTORY NUMBER 0 9 7 8 1 1 0 0 0 2 (9–18)

MONITOR POINT NUMBER M W-D (19–22)

CO. GREAT LAKES REGION #5

DATE COLLECTED 0 4 / 2 6 / 0 4 (23 M D Y 28)

US NAVAL BASE #2
FACILITY NAME

LAB TEST AMERICA (29)

	LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–34)	Remarks See Inst. (35)	Replicate (36)	< or > (37)	VALUE (38–47)
	N-Ammonia (mg/L)	00608				0.54
	Chloride (mg/L)	00941				44.
	Sulfate (mg/L)	00946				130.
	TDS (mg/L)	70300				1000.
	TOC (mg/L)	00680				2.1
	Phenolics (mg/L)	32730				0.0081
	Iron (mg/L)	01046				<0.042
	Lead (mg/L)	01049				<0.0014
	Manganese (mg/L)	01056				0.14
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All analytical procedures must be performed in accordance with the methods contained in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," SW-846, 3rd Edition, September 1986 or equivalent methods approved by the Agency. Proper sample chain of custody control and quality assurance/quality control procedures must be maintained in accordance with the facility sampling and analysis plan.

Only Keypunch with Data in Column 35 or Columns 38-47

Printed on Recycled Paper

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECORD CODE: L P C S M 0 1 (1–7)
TRANS CODE: A (8)

REPORT DUE DATE ___/___/___ (36 M D Y 41)

FEDERAL ID NUMBER _____

SITE INVENTORY NUMBER 0 9 7 8 1 1 0 0 0 2 (9–18)

MONITOR POINT NUMBER (see Instructions) M W - E (19–22)

REGION 5 CO. GREAT LAKES

DATE COLLECTED 04/28/04 (23 M D Y 28)

FACILITY NAME US NAVAL BASE #2

FOR IEPA USE ONLY

LAB ____ (29)

DATE RECEIVED ___/___/___ (42 M D Y 47)

BACKGROUND SAMPLE (X) ____ (54)

TIME COLLECTED (24 Hr. Clock) 1 3 : 0 0 (55 H M 58)

UNABLE TO COLLECT SAMPLE (see Instructions) ____ (59)

MONITOR POINT SAMPLED BY (see Instructions) X (60) EGD OTHER (SPECIFY)

SAMPLE FIELD FILTERED — INORGANICS (X) X (61) ORGANICS (X) ____ (62)

SAMPLE APPEARANCE (63–102): LIGHT BROWN CLOUDY

COLLECTOR COMMENTS (103–142): NONE

LAB COMMENTS (150–199): NONE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–31)	Remarks See Inst. (35)	Replicate (36)	< or > (37)	VALUE (38–47)
Q	TEMP OF WATER (unfiltered °F)	00011				55.4
Q	SPEC COND (unfiltered umhos)	00094				629.
Q	pH (unfilted units)	00400				7.68
Q	ELEV OF GW SURF (ft ref MSL)	71993				664.49
Q	DEPTH OF WATER (ft below LS)	72019				7.54
A	BTM WELL ELEV (ft ref MSL)	72020				657.22
Q	DEPTH TO WATER FR MEA PT (ft)	72109				10.43

IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE | L | P | C | S | M | 0 | 2 | (1–7) TRANS CODE | A | (8)

SITE INVENTORY NUMBER 0 9 7 8 1 1 0 0 0 2 (9–18)

CO. GREAT LAKES REGION #5

US NAVAL BASE #2

FACILITY NAME

MONITOR POINT NUMBER M W-E (19–22)

DATE COLLECTED 04/28/04 (23 M D Y 28)

LAB TEST AMERICA (29)

	LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–34)	Remarks See Inst. (35)	Replicate (36)	< or > (37)	VALUE (38–47)
	N-Ammonia (mg/L)	00608				0.24
	Chloride (mg/L)	00941				32.
	Sulfate (mg/L)	00946				57.
	TDS (mg/L)	70300				750.
	TOC (mg/L)	00680				2.3
	Phenolics (mg/L)	32730				0.0031
	Iron (mg/L)	01046				0.35
	Lead (mg/L)	01049				<0.0014
	Manganese (mg/L)	01056				0.18
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All analytical procedures must be performed in accordance with the methods contained in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," SW-846, 3rd Edition, September 1986 or equivalent methods approved by the Agency. Proper sample chain of custody control and quality assurance/quality control procedures must be maintained in accordance with the facility sampling and analysis plan.

Only Keypunch with Data in Column 35 or Columns 38-47

Printed on Recycled Paper

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECORD CODE: L P C S M 0 1 (1–7) TRANS CODE: A (8)

REPORT DUE DATE __/__/__ (36 M D Y 41)

FEDERAL ID NUMBER _____

SITE INVENTORY NUMBER 0 9 7 8 1 1 0 0 0 2 (9–18)

MONITOR POINT NUMBER (see Instructions) M W - E (19–22)

REGION 5 CO. GREAT LAKES

DATE COLLECTED 0 4 / 2 8 / 0 4 (23 M D Y 28)

FACILITY NAME US NAVAL BASE #2

FOR IEPA USE ONLY

LAB ____ (29)

DATE RECEIVED __/__/__ (42 M D Y 47)

BACKGROUND SAMPLE (X) ____ (54)

TIME COLLECTED (24 Hr. Clock) 9:10 (55 H M 58)

UNABLE TO COLLECT SAMPLE (see Instructions) ____ (59)

MONITOR POINT SAMPLED BY (see Instructions) X (60) EGD OTHER (SPECIFY)

SAMPLE FIELD FILTERED — INORGANICS (X) X (61) ORGANICS (X) ____ (62)

SAMPLE APPEARANCE LIGHT BROWN CLOUDY (63–102)

COLLECTOR COMMENTS NONE (103–142)

LAB COMMENTS NONE (150–199)

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–31)	Remarks See Inst. (35)	Replicate (36)	< or > (37)	VALUE (38–47)
Q	TEMP OF WATER (unfiltered °F)	00011				50.5
Q	SPEC COND (unfiltered umhos)	00094				1029.
Q	pH (unfilted units)	00400				7.55
Q	ELEV OF GW SURF (ft ref MSL)	71993				671.76
Q	DEPTH OF WATER (ft below LS)	72019				6.73
A	BTM WELL ELEV (ft ref MSL)	72020				664.64
Q	DEPTH TO WATER FR MEA PT (ft)	72109				9.99

IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE | L | P | C | S | M | 0 | 2 | (1–7) TRANS CODE | A | (8)

SITE INVENTORY NUMBER 0 9 7 8 1 1 0 0 0 2 (9–18)

MONITOR POINT NUMBER M W-F (19–22)

CO. GREAT LAKES REGION #5

DATE COLLECTED 04/28/04 (23 M D Y 28)

US NAVAL BASE #2
FACILITY NAME

LAB TEST AMERICA (29)

	LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–34)	Remarks See Inst. (35)	Replicate (36)	< or > (37)	VALUE (38–47)
	N-Ammonia (mg/L)	00608				0.89
	Chloride (mg/L)	00941				21.
	Sulfate (mg/L)	00946				330.
	TDS (mg/L)	70300				1100.
	TOC (mg/L)	00680				7.
	Phenolics (mg/L)	32730				0.0028
	Iron (mg/L)	01046				<0.042
	Lead (mg/L)	01049				<0.0014
	Manganese (mg/L)	01056				0.19
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All analytical procedures must be performed in accordance with the methods contained in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," SW-846, 3rd Edition, September 1986 or equivalent methods approved by the Agency. Proper sample chain of custody control and quality assurance/quality control procedures must be maintained in accordance with the facility sampling and analysis plan.

*Only Keypunch with Data in Column 35 or Columns 38-47

Printed on Recycled Paper

TestAmerica
ANALYTICAL TESTING CORPORATION

WDNR No. 128053530
602 Commerce Drive • Watertown, WI 53094 • 920-261-1660 • 920-261-8120 Fax

ANALYTICAL REPORT

Mr. Brian Schneider
GRAEF, ANHALT, SCHLOEMER
& ASSOCIATES, INC.
125 S. 84th St. Suite 401
Milwaukee, WI 53214-1470

05/25/2004

Job No: 04.03972

The following samples were received by TestAmerica for analysis:

0978110002 Great Lakes Naval Base

Sample Number	Sample Description	Date Taken	Date Received
568551	MW-A	04/28/2004	04/29/2004
568552	MW-B	04/28/2004	04/29/2004
568553	MW-C	04/28/2004	04/29/2004
568554	MW-D	04/28/2004	04/29/2004
568555	MW-E	04/28/2004	04/29/2004
568556	MW-F	04/28/2004	04/29/2004

Karen R. Wenta
Inorganic Operations Manager

GRAEF, ANHALT, SCHLOEMER
Job No: 04.03972

05/25/2004

KEY TO DATA FLAGS

The attached sample(s) may have a result flag shown on the report. The following are the result flag definitions:

A = Analyzed/extracted past hold time
B = Blank is contaminated
C = Standard outside of control limits
D = Diluted for analysis
E = TCLP extraction outside of method required temperature range
F = Sample filtered in lab
G = Received past hold time
H = Late eluting hydrocarbons present
I = Improperly handled sample
J = Estimated concentration
L = Common lab solvent
M = Matrix interference
P = Improperly preserved sample
Q = Result confirmed via re-analysis
S = Sediment present
T = Does not match typical pattern
W = BOD re-set due to missed dilution
X = Unidentified compound(s) present
Z = Internal standard outside limits
* = See Case Narrative

KEY TO ANALYST INITIALS

The attached sample(s) may have been analyzed by another certified laboratory. If a number appears in the Analyst Initials field, the following are the appropriate certifications (if the lab code does not appear below, that means that certification is not required for the work performed):

Lab Code	Certification Number
008	WDNR - 999766900
009	WDNR - 241293690
020	WDNR - 999447680
030	ILNELAC - 100230; WDNR - 998294430
060	ILNELAC - 100221; WDNR - 999447130
070	IA - 007; ILNELAC - 000668; MDH - 019-999-319; WDNR - 999917270
130	WDNR - 632021390
147	WDNR - 721026460
300	FLNELAC - 87358; IA - 131; MDH - 047-999-345; WDNR - 998020430
400	WDNR - 113133790
510	WDNR - 241249360
520	WDNR - 999518190; ILNELAC - 100439
700	WDNR - 113289110

TestAmerica Watertown Certifications: WI DNR - 128053530; IA DNR - 294; MN DoH - 055-999-366; ND DoH R-046; AR DEQ - 88-0808

Unless sub-contracted (see above), volatiles analyses (including VOC, PVOC, GRO, BTEX and TPH Gasoline) performed by TestAmerica Watertown at 1101 Industrial Drive, Units 9&10. All other analyses performed at 602 Commerce Drive, Watertown WI 53094.

Results reported between the Method Detection Limit (MDL) and Limit of Quantitation (LOQ) are less certain than results at or above the LOQ.

For questions regarding this report, please contact Dan Milewsky or Warren Topel.

TestAmerica
ANALYTICAL TESTING CORPORATION
WDNR No. 128053530
602 Commerce Drive • Watertown, WI 53094 • 920-261-1660 • 920-261-8120 Fax

ANALYTICAL REPORT

Mr. Brian Schneider
GRAEF, ANHALT, SCHLOEMER
& ASSOCIATES, INC.
125 S. 84th St. Suite 401
Milwaukee, WI 53214-1470

05/25/2004
Job No: 04.03972
Account No: 32700
Purchase Order:

Job Description: 0978110002 Great Lakes Naval Base
Great Lakes, IL
Rec'd on ice

Parameter		Results	Units	MDL	LOQ	Method	Date Analyzed	Analyst	Prep/Run Batch
568551 MW-A			Date/Time Taken: 04/28/2004 10:00						
Groundwater Elev.		667.59	MSL	n/a	n/a		04/28/2004	pam	3637
Depth to GW		9.33	Feet	n/a	n/a		04/28/2004	pam	3593
Depth to Water Below LS		7.01	Feet				04/28/2004	pam	383
Bottom Elevation		662.22	Feet				04/28/2004	pam	383
Chloride		22	mg/L	1.0	3.3	EPA 325.2	05/06/2004	gaf	2277
N-Ammonia		1.2	mg/L	0.10	0.33	SM 4500NHH	05/03/2004	tds	1588
pH, Lab		6.7	units		n/a	EPA 150.1	05/03/2004	kls	2753
Phenols, Colorimetric	B	0.0042	mg/L	0.0022	0.0078	EPA 420.2	05/05/2004	070	363
Solids, Total Dissolved		800	mg/L	1.0	3.3	EPA 160.1	05/04/2004	clj	1250
Sulfate, IC		170	mg/L	2.0	6.7	EPA 300.0	05/11/2004	tds	1755
Total Organic Carbon	M	9.6	mg/L	0.12	0.41	SW 9060	05/06/2004	070	612
Iron, Dissolved		<0.042	mg/L	0.042	0.14	EPA 236.1	05/10/2004	gaf	2226
Lead, Dissolved, GFAA		<0.0014	mg/L	0.0014	0.0051	EPA 239.2	05/05/2004	gaf	2499
Manganese, Dissolved		0.35	mg/L	0.0018	0.0063	EPA 243.1	05/11/2004	gaf	1427
Temperature, field		4.9	C	n/a	n/a		04/28/2004	pam	3701
pH, Field		7.47	units	n/a	n/a	EPA 150.1	04/28/2004	pam	3976
Field Conductivity @ 25 C		871	umhos/cm	n/a	n/a		04/28/2004	pam	3479
568552 MW-B			Date/Time Taken: 04/28/2004 11:00						
Groundwater Elev.		667.48	MSL	n/a	n/a		04/28/2004	pam	3637
Depth to GW		8.63	Feet	n/a	n/a		04/28/2004	pam	3593
Depth to Water Below LS		5.74	Feet				04/28/2004	pam	383
Bottom Elevation		659.11	Feet				04/28/2004	pam	383
Chloride		310	mg/L	1.0	3.3	EPA 325.2	05/06/2004	gaf	2277
N-Ammonia		11	mg/L	0.10	0.33	SM 4500NHH	05/03/2004	tds	1588
pH, Lab		6.8	units		n/a	EPA 150.1	05/03/2004	kls	2753
Phenols, Colorimetric	B	0.0037	mg/L	0 0022	0.0078	EPA 420.2	05/05/2004	070	363
Solids, Total Dissolved		1,700	mg/L	1.0	3.3	EPA 160.1	05/04/2004	clj	1250
Sulfate, IC		110	mg/L	2.0	6.7	EPA 300.0	05/11/2004	tds	1755
Total Organic Carbon	M	25	mg/L	0.12	0.41	SW 9060	05/10/2004	070	613
Iron, Dissolved		7.5	mg/L	0.042	0.14	EPA 236.1	05/10/2004	gaf	2226
Lead, Dissolved, GFAA		<0.0014	mg/L	0.0014	0.0051	EPA 239 2	05/05/2004	gaf	2499
Manganese, Dissolved		0.091	mg/L	0.0018	0.0063	EPA 243.1	05/11/2004	gaf	1427
Temperature, field		11.4	C	n/a	n/a		04/28/2004	pam	3701

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ANALYTICAL REPORT

Mr. Brian Schneider
GRAEF, ANHALT, SCHLOEMER
& ASSOCIATES, INC.
125 S. 84th St. Suite 401
Milwaukee, WI 53214-1470

05/25/2004
Job No: 04.03972
Account No: 32700
Purchase Order:

Job Description: 0978110002 Great Lakes Naval Base
Great Lakes, IL
Rec'd on ice

Parameter		Results	Units	MDL	LOQ	Method	Date Analyzed	Analyst	Prep/Run Batch
568552 MW-B			Date/Time Taken: 04/28/2004 11:00						
pH, Field		7.30	units	n/a	n/a	EPA 150.1	04/28/2004	pam	3976
Field Conductivity @ 25 C		1,950	umhos/cm	n/a	n/a		04/28/2004	pam	3479
568553 MW-C			Date/Time Taken: 04/28/2004 14:00						
Groundwater Elev.		666.79	MSL	n/a	n/a		04/28/2004	pam	3637
Depth to GW		13.4	Feet	n/a	n/a		04/28/2004	pam	3593
Depth to Water Below LS		10.59	Feet				04/28/2004	pam	383
Bottom Elevation		662.99	Feet				04/28/2004	pam	383
Chloride		80	mg/L	1.0	3.3	EPA 325.2	05/06/2004	gaf	2277
N-Ammonia		0.27	mg/L	0.10	0.33	SM 4500NHH	05/03/2004	tds	1588
pH, Lab		6.9	units		n/a	EPA 150.1	05/03/2004	kls	2754
Phenols, Colorimetric	B	<0.0022	mg/L	0.0022	0.0078	EPA 420.2	05/05/2004	070	363
Solids, Total Dissolved		1,100	mg/L	1.0	3 3	EPA 160.1	05/04/2004	clj	1250
Sulfate, IC		300	mg/L	2.0	6.7	EPA 300.0	05/11/2004	tds	1755
Total Organic Carbon	M	2.5	mg/L	0.12	0.41	SW 9060	05/06/2004	070	612
Iron, Dissolved		<0.042	mg/L	0.042	0.14	EPA 236.1	05/10/2004	gaf	2226
Lead, Dissolved, GFAA		<0.0014	mg/L	0.0014	0.0051	EPA 239.2	05/05/2004	gaf	2499
Manganese, Dissolved		0.010	mg/L	0.0018	0.0063	EPA 243.1	05/11/2004	gaf	1427
Temperature, field		12.7	C	n/a	n/a		04/28/2004	pam	3701
pH, Field		7.58	units	n/a	n/a	EPA 150.1	04/28/2004	pam	3976
Field Conductivity @ 25 C		1,653	umhos/cm	n/a	n/a		04/28/2004	pam	3479
568554 MW-D			Date/Time Taken: 04/28/2004 12:00						
Groundwater Elev.		665.2	MSL	n/a	n/a		04/28/2004	pam	3637
Depth to GW		10.18	Feet	n/a	n/a		04/28/2004	pam	3593
Depth to Water Below LS		7.15	Feet				04/28/2004	pam	383
Bottom Elevation		657.48	Feet				04/28/2004	pam	383
Chloride		44	mg/L	1.0	3.3	EPA 325.2	05/06/2004	gaf	2277
N-Ammonia		0.54	mg/L	0.10	0.33	SM 4500NHH	05/03/2004	tds	1588
pH, Lab		7.5	units		n/a	EPA 150.1	05/03/2004	kls	2754
Phenols, Colorimetric	B	0.0081	mg/L	0.0022	0.0078	EPA 420.2	05/05/2004	070	363
Solids, Total Dissolved		1,000	mg/L	1 0	3.3	EPA 160 1	05/04/2004	clj	1250
Sulfate, IC		130	mg/L	2.0	6.7	EPA 300.0	05/11/2004	tds	1755

TestAmerica
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ANALYTICAL REPORT

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& ASSOCIATES, INC.
125 S. 84th St. Suite 401
Milwaukee, WI 53214-1470

05/25/2004
Job No: 04.03972
Account No: 32700
Purchase Order:

Job Description: 0978110002 Great Lakes Naval Base
Great Lakes, IL
Rec'd on ice

Parameter		Results	Units	MDL	LOQ	Method	Date Analyzed	Analyst	Prep/Run Batch
568554 MW-D			Date/Time Taken: 04/28/2004 12:00						
Total Organic Carbon		2.1	mg/L	0.12	0.41	SW 9060	05/06/2004	070	612
Iron, Dissolved		<0.042	mg/L	0.042	0.14	EPA 236.1	05/10/2004	gaf	2226
Lead, Dissolved, GFAA		<0.0014	mg/L	0.0014	0.0051	EPA 239.2	05/05/2004	gaf	2499
Manganese, Dissolved		0.14	mg/L	0.0018	0.0063	EPA 243.1	05/11/2004	gaf	1427
Temperature, field		12.2	C	n/a	n/a		04/28/2004	pam	3701
pH, Field		7.84	units	n/a	n/a	EPA 150.1	04/28/2004	pam	3976
Field Conductivity @ 25 C		761	umhos/cm	n/a	n/a		04/28/2004	pam	3479
568555 MW-E			Date/Time Taken: 04/28/2004 13:00						
Groundwater Elev.		664.49	MSL	n/a	n/a		04/28/2004	pam	3637
Depth to GW		10.43	Feet	n/a	n/a		04/28/2004	pam	3593
Depth to Water Below LS		7.54	Feet				04/28/2004	pam	383
Bottom Elevation		657.22	Feet				04/28/2004	pam	383
Chloride		32	mg/L	1.0	3.3	EPA 325.2	05/06/2004	gaf	2277
N-Ammonia		0.24	mg/L	0.10	0.33	SM 4500NHH	05/03/2004	tds	1588
pH, Lab		7.2	units		n/a	EPA 150.1	05/03/2004	kls	2754
Phenols, Colorimetric	B	0.0031	mg/L	0.0022	0.0078	EPA 420.2	05/05/2004	070	363
Solids, Total Dissolved		750	mg/L	1.0	3.3	EPA 160 1	05/04/2004	clj	1250
Sulfate, IC		57	mg/L	2.0	6 7	EPA 300 0	05/11/2004	tds	1755
Total Organic Carbon		2.3	mg/L	0.12	0.41	SW 9060	05/06/2004	070	612
Iron, Dissolved		0.35	mg/L	0.042	0.14	EPA 236.1	05/10/2004	gaf	2226
Lead, Dissolved, GFAA		<0.0014	mg/L	0.0014	0.0051	EPA 239.2	05/05/2004	gaf	2499
Manganese, Dissolved		0.18	mg/L	0.0018	0.0063	EPA 243.1	05/11/2004	gaf	1427
Temperature, field		13.0	C	n/a	n/a		04/28/2004	pam	3701
pH, Field		7.68	units	n/a	n/a	EPA 150.1	04/28/2004	pam	3976
Field Conductivity @ 25 C		629	umhos/cm	n/a	n/a		04/28/2004	pam	3479

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ANALYTICAL REPORT

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Milwaukee, WI 53214-1470

05/25/2004
Job No: 04.03972
Account No: 32700
Purchase Order:

Job Description: 0978110002 Great Lakes Naval Base
Great Lakes, IL
Rec'd on ice

568556 MW-F — Date/Time Taken: 04/28/2004 09:10

Parameter		Results	Units	MDL	LOQ	Method	Date Analyzed	Analyst	Prep/Run Batch
Groundwater Elev.		671.76	MSL	n/a	n/a		04/28/2004	pam	3637
Depth to GW		9.98	Feet	n/a	n/a		04/28/2004	pam	3593
Depth to Water Below LS		6.73	Feet				04/28/2004	pam	383
Bottom Elevation		664.64	Feet				04/28/2004	pam	383
Chloride		21	mg/L	1.0	3.3	EPA 325.2	05/06/2004	gaf	2277
N-Ammonia		0.89	mg/L	0.10	0.33	SM 4500NHH	05/03/2004	tds	1588
pH, Lab		7.0	units		n/a	EPA 150 1	05/03/2004	kls	2754
Phenols, Colorimetric	B	0.0028	mg/L	0.0022	0.0078	EPA 420.2	05/05/2004	070	363
Solids, Total Dissolved		1,100	mg/L	1.0	3.3	EPA 160.1	05/04/2004	clj	1250
Sulfate, IC		330	mg/L	2.0	6.7	EPA 300 0	05/11/2004	tds	1755
Total Organic Carbon		7 0	mg/L	0.12	0.41	SW 9060	05/06/2004	070	612
Iron, Dissolved		<0.042	mg/L	0 042	0.14	EPA 236.1	05/10/2004	gaf	2226
Lead, Dissolved, GFAA		<0.0014	mg/L	0.0014	0.0051	EPA 239.2	05/05/2004	gaf	2499
Manganese, Dissolved		0.19	mg/L	0.0018	0.0063	EPA 243.1	05/11/2004	gaf	1427
Temperature, field		10.3	C	n/a	n/a		04/28/2004	pam	3701
pH, Field		7.55	units	n/a	n/a	EPA 150.1	04/28/2004	pam	3976
Field Conductivity @ 25 C		1,029	umhos/cm	n/a	n/a		04/28/2004	pam	3479

TestAmerica
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QUALITY CONTROL REPORT
CONTINUING CALIBRATION VERIFICATION

05/25/2004

Mr. Brian Schneider
GRAEF, ANHALT, SCHLOEMER
& ASSOCIATES, INC.
125 S. 84th St. Suite 401
Milwaukee, WI 53214-1470

Job No: 04.03972
Account No: 32700

Job Description: 0978110002 Great Lakes Naval Base

Parameter	Run Batch	True Value	Observed Value	Percent Recovery	Control Limits
Chloride	2277	20.0	20.8	104	90 - 110
Chloride	2277	20.0	20.0	100	90 - 110
N-Ammonia	1588	10.0	10.3	103	90 - 110
N-Ammonia	1588	10.0	10.2	102	90 - 110
pH, Lab	2753	7.00	6.93	99	98.6 - 101
pH, Lab	2753	7.00	7.00	100	98.6 - 101
pH, Lab	2754	7.00	6.96	99	98.6 - 101
pH, Lab	2754	7.00	7.00	100	98.6 - 101
Sulfate, IC	1755	40.0	43.1	108	90 - 110
Sulfate, IC	1755	40.0	36.7	92	90 - 110
Total Organic Carbon	613	4.9	4.9	100	90 - 110
Iron, Dissolved	2226	0.500	0.501	100	90 - 110
Iron, Dissolved	2226	0.500	0.498	100	90 - 110
Lead, Dissolved, GFAA	2499	0.0250	0.0268	107	90 - 110
Lead, Dissolved, GFAA	2499	0.0250	0.0264	106	90 - 110
Manganese, Dissolved	1427	0.500	0.520	104	90 - 110
Manganese, Dissolved	1427	0.500	0.519	104	90 - 110

TestAmerica
ANALYTICAL TESTING CORPORATION
WDNR No. 128053530
602 Commerce Drive • Watertown, WI 53094 • 920-261-1660 • 920-261-8120 Fax

QUALITY CONTROL REPORT
BLANKS

05/25/2004

Mr. Brian Schneider
GRAEF, ANHALT, SCHLOEMER
& ASSOCIATES, INC.
125 S. 84th St. Suite 401
Milwaukee, WI 53214-1470

Job No: 04.03972
Account No: 32700

Job Description: 0978110002 Great Lakes Naval Base

Parameter	Prep Batch	Run Batch	Blank Result	MDL	LOQ	Units
Chloride		2277	<1.0	1.0	3.3	mg/L
N-Ammonia		1588	<0.10	0.10	0.33	mg/L
Phenols, Colorimetric		363	0.0080	0.0022	0.0078	mg/L
Sulfate, IC		1755	<2.0	2.0	6.7	mg/L
Total Organic Carbon		612	<0.12	0.12	0.41	mg/L
Total Organic Carbon		613	0.16	0.12	0.41	mg/L
Iron, Dissolved		2226	<0.042	0.042	0.14	mg/L
Lead, Dissolved, GFAA		2499	<0.0014	0.0014	0.0051	mg/L
Manganese, Dissolved		1427	<0.0018	0.0018	0.0063	mg/L

Method blank results exceed control limits when results are higher than the highest of any of the following: 1 - The limit of detection; 2 - Five percent of the regulatory limit for that analyte; 3 - Five percent of the measured concentration in the sample. NR149.14 (3)d

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QUALITY CONTROL REPORT
MATRIX SPIKE/MATRIX SPIKE DUPLICATE

05/25/2004

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Job Description: 0978110002 Great Lakes Naval Base

Analyte	Prep Batch Number	Run Batch Number	Sample Result	Spike Amount	Units	Matrix Spike Result	MSD Result	MS Percent Recovery	MSD Percent Recovery	Control Limits	Relative Percent Difference
Chloride		2277	490	500	mg/L	957	968	93	96	64 - 132	1.1
N-Ammonia		1588	11	50.0	mg/L	63.3	64 2	105	106	60 - 136	1.4
Manganese, Dissolved		1427	0.061	0.50	mg/L	0.537	0.538	95	95	81 - 116	0 2

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QUALITY CONTROL REPORT
SPIKES

05/25/2004

Mr. Brian Schneider
GRAEF, ANHALT, SCHLOEMER
& ASSOCIATES, INC.
125 S. 84th St. Suite 401
Milwaukee, WI 53214-1470

Job No: 04.03972
Account No: 32700

Job Description: 0978110002 Great Lakes Naval Base

Analyte	Prep Batch Number	Run Batch Number	Sample Result	Spike Amount	Units	Spike Result	Percent Recovery	Control Limits
Lead, Dissolved, GFAA		2499	<0.0014	0.0200	mg/L	0.0201	100	73 - 122
Lead, Dissolved, GFAA		2499	0.0015	0.0200	mg/L	0 0218	102	73 - 122

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QUALITY CONTROL REPORT
DUPLICATES

05/25/2004

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Job No: 04.03972
Account No: 32700

Job Description: 0978110002 Great Lakes Naval Base

Parameter	Prep Batch Number	Run Batch Number	Sample Value	Duplicate Value	Units	RPD	Control Limit
Chloride		2277	32	32.3	mg/L	0.9	19
Chloride		2277	21	20.3	mg/L	3.4	19
N-Ammonia		1588	0.22	0.11	mg/L	67	22
pH, Lab		2753	6.8	6.71	units	1.3	
pH, Lab		2753	6.8	6.75	units	0.7	
pH, Lab		2754	7.5	7.09	units	5.6	
pH, Lab		2754	8.1	8.15	units	0.6	
Solids, Total Dissolved		1250	1,400	1,430	mg/L	2.1	10
Sulfate, IC		1755	170	210	mg/L	21	22
Manganese, Dissolved		1427	0.14	0.136	mg/L	2.9	15

04.03972

CHAIN OF CUSTODY RECORD

GRAEF ANHALT SCHLOEMER and Associates Inc.
Engineers & Scientists
One Honey Creek Corporate Center
125 South 84th Street
Milwaukee, WI 53214-1470
Phone: (414) 259-1500
FAX: (414) 259-0037

Project Number: 0978110002

Laboratory: TEST AMERICA

Sample Collector(s): ECD

GAS PROJECT # 2003-0185

Property Owner: GREAT LAKES NAVAL BASE

Property Address: GREAT LAKES IL

Telephone Number (include area code):

I hereby certify that I received, properly handled, and disposed of these samples as noted below:

Relinquished By (Signature)	Date/Time/Temp.	Received By (Signature)
Edward C. [signature]	4/29/04 1150	[signature]
[signature]	4/29/04 1400	
	4/29 1415	[signature]

Sample Condition on Receipt by Laboratory
LABORATORY USE ONLY

Temperature of temperature blank: on ice

Page 1 of 1

If samples were received on ice and there was ice remaining, you may report the temperature as "received on ice." If all of the ice was melted, the temperature of the melt may be substituted for a temperature blank.

Field ID Number[1]	Date Collected	Time Collected	Sample Type[2]	Sample Device[3]	Preserv. Type	Field Screening	Description	Analysis Type	No./Type of Containers	Lab ID Number	Cracked /Broken	Improperly Sealed	Good Condition	Other Comments
MW-A	4-29-04	10:00	Groundwater Disp	Bailer	H2SO4 H2SO4 ICE	NA	MW-A	PHENOLS TOC	1-LTR, AMB 250 mL PL					
					H2SO4 HNO3 ICE			AMMONIA AS N FE, MN PH	1-LTR. PL 1-250 mL					
					ICE			CHLORIDE, PH, TDS, SULFATE	1-LTR PL					
MW-B		11:00					MW-B							
MW-C		2:00					MW-C							
MW-D		12:00					MW-D							
MW-E		1:00					MW-E							
MW-F		9:10					MW-F							

[1]Sample description must clearly correlate the sample ID to the sampling location shown on a map.
[2]Specify groundwater, surface water, soil, leachate, sludge, etc.
[3]Type of sampling device; split spoon, hand auger, metal spatula, soil syringe, etc.

Remarks: NORMAL TAT
METAL SAMPLES FIELD FILTERED
* SAME ANALYSIS ON ALL SAMPLES

Report Results to: BRIAN SCHNEIDER

DEPARTMENT USE ONLY

Split samples: Offered? ☐ Yes ☐ No (Check one)
Accepted? ☐ Yes ☐ No (Check one)

Accepted By: _____
Signature

DEPARTMENT USE/OPTIONAL FOR SOIL SAMPLERS

Disposition of unused portion of sample
Laboratory should:
☐ Dispose ☐ Retain for ____ days
☐ Return ☐ Other

White–Accompanies Shipment, Yellow–Laboratory Files, Pink–GAS

R 4/30/04