Earth Tech
A Tyco International Ltd. Company

Bi-Annual Sampling Report
For Treatment Systems

October 2004- February 2005

Gladding Corporation Multi-Site Wells

Work Assignment Number D003821-27
Site Code # 7-09-009

Prepared for:
Superfund Standby Program
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March 2005

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1.0 INTRODUCTION

In accordance with the monitoring plan for the granular activated carbon (GAC) groundwater treatment system associated with the Gladding Corporation (Gladding) site, the 9th round of semi-annual water sampling was performed on February 7, 2005. The results of laboratory analyses for this sampling event are summarized in this report, as are subsequent actions, if any, taken in response to those results. Routine system maintenance and/or required modifications are also discussed. This report describes activities that occurred during the period October 2004 through February 2005.

1.1 SITE DESCRIPTION

The Gladding site (Site Code #7-09-009) is located in the Town of South Otselic, Chenango County, New York. The site occupies about 7.5 acres near the center of the hamlet. The site is bound to the east by the Otselic River, to the south by Gladding Street, to the west by Ridge Road and to the north by undeveloped agricultural lands. Past disposal practices of 1,1,1- trichloroethane (1,1,1-TCA) at the Gladding Corporation led to volatile organic compound (VOC) contamination of soil and groundwater, and closure of two municipal water supply wells located approximately 250 ft. south of the site. In 1990, the town of Otselic was awarded a Housing and Urban Development (HUD) grant to install a new municipal water supply well upgradient of the Gladding site.

A pump-and-treat system was constructed by the NYSDEC in 1996 to contain and remediate contaminated groundwater at the site. Groundwater from a domestic well at the NYSDEC South Otselic Fish Hatchery is being treated with a GAC system, maintained by Earth Tech under this Work Assignment. The groundwater at the fish hatchery presumably had been impacted by the disposal practices at the Gladding site.

1.2 TREATMENT SYSTEMS

1.2.1 South Otselic Fish Hatchery

The South Otselic Fish Hatchery well is located approximately one-mile southwest of the Gladding site. The NYSDEC began monitoring/maintaining this well in 1991.

The New York State Department of Health (NYSDOH) recommends potable water treatment with two carbon tanks connected in series for organics removal from drinking water. This configuration provides a primary and secondary GAC unit and allows for monitoring water quality between these units.

The South Otselic Fish Hatchery system consists of two activated carbon vessels for the removal of VOCs, and a Trojan model 708 ultraviolet (UV) disinfection unit. This system does not have a particle filter or a flow meter.

2.0 SAMPLING

2.1 SAMPLE LOCATIONS

Table 1 presents project information including location and well ID. Sampling points include raw, intermediate and effluent (final) ports. Final samples were collected from a sink in a nearby room.

2.2 SAMPLING PROTOCOL

Standard protocol is to allow a sampling tap to run for at least 15 minutes prior to sampling to insure that representative water is in the system. After purging, samples are collected in the following order: effluent, intermediate, and finally raw water in order to minimize the possibility of cross-contamination. Volatile organics samples are placed in 40-milliliter (ml) vials and capped and then checked to insure that no air bubbles are trapped in the vial. Care is taken during collection to minimize agitation and to immediately place sample containers on ice to prevent volatilization.

Bacteria sampling of the final (treated) water is conducted after volatile sampling. Sampling protocol requires decontamination of the water tap by heating with an open flame for one minute prior to sampling.

Samples are submitted for volatile organics analysis by the EPA Method 524.2 and total coliform analysis. The Division of Environmental Remediation Laboratory of Rensselaer, N.Y. provided analytical services for volatile organic analysis. Coliform analysis services are provided by Smith Environmental Laboratory of Hyde Park, New York, an M/WBE enterprise.

2.3 SAMPLING AND FLOW READINGS

All standard sampling procedures were followed except taps were not run for 15 minutes prior to sampling since water is regularly drawn through the systems and representative groundwater is already within the systems.

A flow meter was not installed as part of the DEC's requirements for the treatment system; therefore flow volume data are not available.

2.4 ANALYTICAL RESULTS

The laboratory data sheets for volatile organics analyses are distributed electronically by the laboratory to Earth Tech and NYSDEC, and are not included in this report. Historical and current raw water volatile organics analytical data are summarized on Table 2. VOC analytical results for raw, intermediate, and final water samples for this round (only) are summarized on Table 3. The coliform test result was negative, and is not tabulated. A copy of the total coliform analysis is included with this report.

Carbon changeout will typically occur if an intermediate or final water sample VOC concentration of a site-related compound equals or exceeds 1 µg/l. Breakthrough of site-related VOCs (in this case 1,1,1 – TCA) was reported at or above the 1µg/ action level, and a carbon changeout has been scheduled for mid March.

3.0 SYSTEM MAINTENANCE AND MODIFICATIONS

This round of sampling included servicing the UV disinfection unit. The quartz sleeve was removed and cleaned and the UV bulb was replaced as part of the annual UV maintenance requirements.

System modifications were performed during the sampling site visit. A faulty photo-eye was replaced on the UV light.

4.0 CONCLUSIONS

The GAC water treatment system at the South Otselic Fish Hatchery is operating satisfactorily.

The next sampling round is due August 2005.

TABLES

TABLES

Table 1
Gladding Corporation, Town of South Ostelic, N.Y.
Resident and System Information

Location	Owner/Contact	Phone #	Well ID	System Location
South Otselic Fish Hatchery PO Box 170 NYS Route 26 South Otselic, NY 13155	Patrick Emerson, Hatchery Manager Tom Kielbasinski, Assistant Manager	(315) 653-7727	GLADD	Side room off of kitchen.

Table 2
Gladding Corporation, Town of South Ostelic, N.Y.
Historical Raw Water Analytical Summary

Data up to and including June 2000 was provided by the NYSDEC

Location	Well ID	10-May-99	30-Nov-99	12-Jun-00	6-Feb-01	29-Aug-01	25-Feb-02	14-Aug-02	4-Feb-03	19-Aug-03	23-Feb-04	24-Aug-04	7-Feb-05
Gladding	**GLADD**												
1,1,1-Trichloroethane		5.8	8.0	6.0	ND	ND	4.0	7.0	6.0	7.0	3.0	10.0	6.0

* indicates duplicate sample result.
Concentrations in ug/l (ppb).
NS indicates no sample taken
ND indicates below detection limit
Results are shown only for detected analytes
J = estimated value

Table 2
Gladding Corporation, Town of South Ostelic, N.Y.
Historical Raw Water Analytical Summary

Data up to and including June 2000 was provided by the NYSDEC

Location	Well ID	19-Feb-91	28-Jun-91	11-Mar-92	25-Mar-92	17-Sep-92	16-Mar-94	10-Nov-94	5-Apr-95	24-Oct-95	4-Jun-97	20-Nov-98
Gladding	**GLADD**											
1,1,1-Trichloroethane		ND	ND	8.0	9.4	19.0	9.0	ND	6.0	9.0	8.0	6.0

* indicates duplicate sample result.
Concentrations in ug/l (ppb).
NS indicates no sample taken
ND indicates below detection limit
Results are shown only for detected analytes
J = estimated value

TABLE 3

Current Round Analytical Summary
Sampling Date : 2/07/05

Compound	GLADD - R	GLADD - I	GLADD - F
1,1,1- Trichloroethane	6	1	ND
J = estimated	ND= non detect		
E= estimated above calibration range.	All concentrations are in ug/L		
R= raw water sample	D= diluted sample		
I= intermediate water sample	* = duplicate sample		
F= final water sample	B= detected in method blank		
Only detected analytes are shown in this table.			
Refer to Table 4 for a comprehensive list of analytes included in EPA Method 524.2.			

SMITH LABORATORY

ENVIRONMENTAL TESTING
4 SCENIC DRIVE & RT. 9
HYDE PARK, NEW YORK 12538
(845) 229-6536

CERTIFICATE OF ANALYSIS

Client: Earth Tech
Attn: Bob Sweeny
40 British American Blvd.
Latham NY 12110 **PO #**

Sample Type: Water
Client Project Name: Gladding
Order ID: 36930
Order comment:

Sample Collected By: SRG
Date/Time sample collected: 2/7/05 9:35
Date/Time sample received: 2/8/05 10:45 **Received by:** Kelly
Sample Comment: Temp = 5.0 C
Sample Location: Glad/UV
Sample Number: 63732
Date/Time Sample Analyzed: 2/8/05 12:30 **Tech:** VZ

Parameter	Test Result*	Units	Test Method
Total Coliform	Absent	CFU/100mL	SM 20 9223
E. Coli	Absent	CFU/100mL	SM 20 9223

Test results (do meet) / ~~do not meet~~ **EPA drinking water standards.**

*Bacteriological test results are expressed as Colony Forming Units.

Results Comment:

Reviewed by: Anne G. Smith, Laboratory Director, ELAP Lab ID #10924 14-Feb-05

Smith Laboratory is approved as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation (NELAC) Standards.

The total number of pages in this report is 1 (one).