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Bi-Annual Sampling Report
For Treatment Systems

April 2002- September 2002

Gladding Cordage Corporation Multi-Site Wells

Work Assignment Number D003821-27

Prepared for:
Superfund Standby Program
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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 Cordage Corporation (Gladding) site, the fourth round of semi-annual water sampling was performed on August 14, 2002. The results of laboratory analyses for this sampling event are summarized in this report, as are subsequent actions, if any, taken in response to the analysis. Routine system maintenance and/or required modifications are also discussed. This report covers activities that occurred during the period April through September 2002.

1.1 SITE DESCRIPTION

The Gladding site (Site Code #7-09-009) is located in the hamlet of South Otselic, Town of Ostelic, 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 site 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 (GLADD)

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 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 2-1 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.

Bi-annual samples are submitted for volatile 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 analyses are distributed electronically by the laboratory to Earth Tech and NYSDEC, and are not included in this report. Historical raw water analytical data are summarized on Table 2-2. VOC analytical results for raw, intermediate, and final water samples for this round (only) are summarized on Table 2-3. 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 equals or exceeds 1 µg/l. No breakthrough of site-related VOCs was reported, and carbon changeouts were therefore not required at the hatchery.

The August 14, 2002 sampling results reported 7.0 ppb of 1,1,1-TCA in the raw water. The intermediate and final water samples were non-detect.

3.0 SYSTEM MAINTENANCE AND MODIFICATIONS

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

4.0 CONCLUSIONS

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

The next sampling round is scheduled for February 2003.

TABLES

Table 2-1
Gladding Site, South Otselic, 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 2-2
Gladding Site
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
Gladding	**GLADD**										
1,1,1-Trichloroethane		ND	ND	8.0	9.4	19.0	9.0	ND	6.0	9.0	8.0

* 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 2-2
Gladding Site
Historical Raw Water Analytical Summary

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

Location	Well ID	20-Nov-98	10-May-99	30-Nov-99	12-Jun-00	6-Feb-01	29-Aug-01	25-Feb-02	14-Aug-02
Gladding	**GLADD**								
1,1,1-Trichloroethane		6.0	5.8	8.0	6.0	ND	ND	4.0	7.0

* 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 2-3

Current Round Analytical Summary-EPA Method 524.2
Sampling Date : 8/14/02

Compound	GLADD - R	GLADD - I	GLADD - F
1,1,1- Trichloroethane	7.0	ND	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
Only detected analytes are shown in this table.
Refer to Table 2-4 for a comprehensive list of analytes included in EPA Method 524.2.

TABLE 2-4
Volatile Organic Compounds Included in EPA Method 524.2

Compound	
Dichlorodifluromethane	Toluene
Chloromethane	Ethyl methacrylate
Vinyl chloride	trans-1,3- Dichloropropene
Bromomethane	1,1,2- Trichloroethane
Chloroethane	Tetrachloroethene
Trichlorofluoromethane	1,3 - Dichloropropane
cis- 1,2- Dichloroethene	2- Hexanone
Diethyl ether	Dibromochloromethane
1,1- Dichloroethene	1,2- Dibromoethane
Acetone	Chlorobenzene
Iodomethane	Ethylbenzene
Carbon disulfide	1,1,1,2- Tetrachloroethane
Allyl chloride	m,p- Xylene
Methylene chloride	o- Xylene
trans- 1,2- Dichloroethene	Styrene
Methyl-t-butyl ether	Bromoform
Acrylonitrile	Isopropylbenzene
1,1- Dichloroethane	1,1,2,2- Tetrachloroethane
2,2 Dichloropropane	Bromobenzene
2-Butanone	n- Propylbenzene
Methyl acrylate	trans- 1,4-Dichloro- 2- buten
Propionitrile	1,2,3 - Trichloropropane
Bromodichloromethane	2- Chlorotoluene
Tetrahydrofuran	1,3,5- Trimethylbenzene
Methacrylonitrile	4- Chlorotoluene
Chloroform	tert- Butylbenzene
1,1,1- Trichloroethane	1,2,4- Trimethylbenzene
1- Chlorobutane	Pentachloroethane
Carbon Tetrachloride	sec- Butylbenzene
1,1- Dichloropropene	p- Isopropyltoluene
Benzene	1,3- Dichlorobenzene
1,2- Dichloroethane	1,4- Dichlorobenzene
Trichloroethene	n- Butylbenzene
1,2- Dichloropropane	1,2- Dichlorobenzene
Methyl methacrylate	Hexachloroethane
Dibromomethane	1,2- Dibromo-3- chloroprop
Bromodichloromethane	Nitrobenzene
2- Nitropropane	1,2,4- Trichlorobenzene
Chloroacetonitrile	Hexachlorobutadiene
cis- 1,3- Dichloropropene	Naphthalene
4-methyl-2-pentanone	1,2,3- Trichlorobenzene
1,1- dichloropropanone	

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LAB NO. B- 25846

FORWARD REPORT TO: (PLEASE PRINT)
Bob Sweeney Earth Tech
NAME
40 British American Blvd
STREET ADDRESS
Latham NY 12110
CITY STATE ZIP

TYPE OF FACILITY:
☐ PUBLIC WATER SUPPLY (ID # _____)
☐ PRIVATE RESIDENCE
☐ WASTEWATER TREATMENT FACILITY
☐ OTHER: _____

FACILITY NAME: GlAdding ADDRESS: _____ PHONE # _____
SAMPLING POINT: GlAdding ☐ MONITORING SAMPLE ☐ CHECK SAMPLE
SOURCE: ☑ DRINKING WATER; ☐ SURFACE WATER; ☐ WASTE WATER; ☐ OTHER: _____
TREATMENT: ☐ CHLORINATED (_____ PPM ☐ FREE RESIDUAL ☐ TOTAL RESIDUAL) ☐ UV ☐ OTHER: _____
COLLECTED BY: Bob S. RECEIVED AT LAB BY: ICPeap
DELIVERED BY: Fed Ex SAMPLE BOTTLE: SCPO 10SC

DATE SAMPLED	TIME	ICED	RECEIVED	TIME	ICED	EXAMINED	TIME	REPORTED	TECHNICIAN(S)
8/14/02	9 00 AM PM	☐ YES ☐ NO	8/15/02	11 45 AM PM	☐ YES ☐ NO	8/15/02	5 AM (PM)	8/16/02	DH ajp

☐ MFT ☐ MPN ☑ PA TOTAL COLIFORM Absent + PER 100 ML
☐ MFT ☐ MPN FECAL COLIFORM COUNT _____ PER 100 ML
☐ MFT FECAL STREP. COUNT _____ PER 100 ML
☐ HETEROTROPHIC PLATE COUNT _____ COLONY FORMING UNITS PER 1 ML
☑ E. COLI Absent + ☐ OTHER Tested over 30 hr holding time

THESE RESULTS INDICATE THAT THE WATER SAMPLE ☐ DID ☐ DID NOT NA
MEET SATISFACTORY SANITARY QUALITY FOR ☐ DRINKING ☐ SWIMMING ☐ WASTEWATER EFFLUENT

WHEN THE SAMPLE WAS COLLECTED. FOR
INFORMATION CONCERNING UNSATISFACTORY SAMPLES
PLEASE CALL: SMITH LABORATORY AT (845) 229-6536

REPORT NOT VALID WITHOUT CORPORATE SEAL

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