New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Technical Support

ADDITIONS/CHANGES TO REGISTRY: SUMMARY OF APPROVALS

SITE NAME: Greer Tuyo† DEC I.D. NUMBER 314088

Current Classification 2 Volunteer Yes ____ No ____
Sign (7) below

Activity: ☐ Add as Class ____ ☑ Reclassify to 4 ☐ Delist Category ____ ☐ Modify ____

Approvals:

1. Regional Hazardous Waste Engineer — Yes ☑ No ☐ ____
2. BEEI of NYSDOH — Yes ☑ No ☐ ____
3. DEE — Yes ☑ No ☐ ____
4. ____ Remedial Action Bureau Director — Yes ☑ No ☐ ____
5. Site Control Section — Date 12/30/04
6. Director /S/ ____ Date 12/30/04
7. Assistant Division Director *(Required only **for** Class 2 sites)* ____ Date ____

Orginal misplaced, reconstructed by WRB

Completion Checklist for Registry Sites

		Completed By: Initials	Date
OWNER NOTIFICATION LETTER?	☑	WRB	4/2/05
ADJACENT PROPERTY OWNER NOTIFICATION LETTER?	☐	WRB	4/2/05
ENB / LEGAL NOTICE SENT? (For Deletion Only)	☐		
COMMENTS SUMMARIZED / PLACE IN REPOSITORY?	☐		
FINAL NOTIFICATION SENT TO OWNER? (For Deletion Only)	☐		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION

SITE INVESTIGATION INFORMATION

10/24/0

1. SITE NAME	2. SITE NUMBER	3. TOWN/CITY/VILLAGE	4. COUNTY
Greer Toyota Site, Wappingers Falls	314088	Wappingers Falls, NY	Dutchess

5. REGION	6. PROGRAM TYPE
3	BCP ☐ ERP ☐ SPILL ☐ **SUPERFUND X** If **Superfund: Current** _2_ Proposed _4_ Modification _____

c. Tax Map Number(s)Section 6157, Block 02, Lot 585606

d. Site Street Address 1420 rt. 9, Wappingers **Falls.** NY 12590

8. BRIEFLY DESCRIBE THE SITE [Attach site map showing disposal/sampling locations1 The Greer Toyota site was an automobile dealership and service garage. Floor drains from the garage were connected to an oil water separator, leading to a septic system. Two waste oil USTs were used and lay buried near the NW corner of the building. Chlorinated solvents and petroleum contaminants were found in the oil-water separator tank sample. The oil-water separator and the floor drains were abandoned in 1992. PCE, 1,1.l-TCA and TCE were identified in area wells and in soils surrounding the waste oil USTs. above NYSDEC SCGs. IRMs were used to remove the 2 waste oil USTs. The impacted soils were excavated to the extent possible. Perforated piping were installed in the tank excavations for soil vapor extraction. Further soil investigations were conducted in 1998/2001. Six bedrock monitoring wells were installed in 09/01 and determined that the GW in the bedrock aquifer flowed in a NW diraction towards Wappinger creek 6000 feet away. There is a private well sampling program in place conducted by Greer Toyota and the Halpin residence and Optimum Window (North of the propenyl are being supplied with carbon filtration systems. This region will be served by a municipal water line within the year. A soil vapor extraction system was put in place on 02/04 and a well monitoring plan is in effect on a quarterly basis. The original source area has been covered by an asphalt surface to protect against infiltration. Only the wells MW-4 and MW-5 are being monitored and the last quarter shows only a 6ppb presence of 1,1DCE in MW-4. Wells MW-1.2.3.6 conform to SCGs over two consecutive quarter monitoring. There is ongoing operation of the soil vapor extraction (SVE) system.

9. CONTAMINANTS DISPOSED (Hazardous Waste, Petroleum, Other. Includes EPA Hazardous Waste Numbers)

PCE (F001, F002), TCE (F001, F002), 1, 1 DCE (U 079)

10. ANALYTICAL DATA AVAILABLE

a. (X)Air (x)Groundwater ( )Surface Water (X)Sediment (x)Soil ( )Waste ( )Leachate ( )EPTox ( )TCLP
b. Contravention of Standards or Guidance Values

Soil boring investigations were conducted in 1998 and 2001. The soils surrounding the tank excavations were investigated in June, 2001. The GW monitoring wells have been sampled on 11/18/03, 2/18/04, 5/19/04, 08/24/04. The soil vapor extraction system has been monitored on a monthly basis since 2/18/04. The private Halpin Residence and the business location Optimum Window wells, both down gradient from the site, have been sampled on 10/1/03, 12/19/03, 3/31/04, 6/29/04.

11. CONCLUSION

Any significant threat to the public health or environment have been eliminated by removal of the USTs and the contaminated soil (800 tons]. The residence and business location down-gradient of the site where well contamination was found are monitored and carbon filtration systems provided for until a municipal water line is established soon. The soil vapor extraction system is performing well and the current influent analysis of soil gas indicates that the mass discharge rate has decreased from 16.9ppm (5/79/04) to 0.0 ppm (8/24/04).

a. institutional Controls *(IC)* Required? *(X)Y* *(x)N* *b. If* yes, identify Well water treated with carbon *filtration per* ROD *c.* Are these *ICs* in place and verified? *(X* J Y *(x)N*

12. SITE IMPACT DATA

a. Nearest Surface Water: Distance _1/5 mile(NW)_ ft. Direction Class D
b. Groundwater: Depth _3 to 50— ft. Flow Direction __North West ——— ( )Sole Source ( )Primary ( )Other High-Yield Aquifer
c. Water Supply: Distance _____ ft. Direction _____ Active ( )Yes ( )No
d. Nearest Building: Distance 0 ft. Direction _____ Use _____

e. Documented fish or wildlife mortality?	( )Y	(x)N	h. Exposed hazardous waste?	( )Y	(x)N
f. Impact an special status fish or wildlife resource?	( )Y	(x)N	i. Site Priority Ranking Sheet ---------Impact Score	1	
g. Controlled Site Access?	( )Y	(x)N	j. EPA ID# _____	HRS Score	_____

13. SITE OWNER'S NAME	14. ADDRESS	15. TELEPHONE NUMB
Cindy Greer	16 Bannerman View Dr. Newburg, NY 12550	845-486-1519

16. PREPARER	17. APPROVED
10/19/04	12/15/04
Signature Date	Signature Date
S. E. Mahamooth, Environmental Engineer 1, Remediation	Ramanand R. Pergadia, Region 3 Hazardous Waste Remediation Engineer 3

STATE OF NEW YORK
DEPARTMENT OF HEALTH

Flanigan Square, 547 River Street, Troy, New York 12180-2216

Antonia C. Novello, M.D., M.P.H., Dr.P.H.
Commissioner

Dennis P. Whalen
Executive Deputy Commissioner

November 12,2004

Ms. Kelly A. Lewandowski, Chief
Site Control Section
Bureau of Technical Support
Division of Environmental Remediation
NYS Department of Environmental Conservation
625 Broadway – 11th Floor
Albany, New York 12233-7020

Re: **Reclassification Petition**
Greer Toyota
Site # 314088
Wappinger, Dutchess County

Dear Ms. Lewandowski:

Staff reviewed the Petition to Reclassify the Greer Toyota site, submitted by the Chazen Companies. Based on that review, I understand that the remedy outlined in the March 2002 Record of Decision (ROD) has been implemented. Remedy elements include, the installation and operation of a dual-phase soil vapor extraction system (SVE), a private well survey to confirm all impacted wells have been identified and annual certification by the property owner to the NYSDEC that the site is in compliance with engineering controls outlined in the ROD. Also, long-term operation, maintenance and monitoring of the SVE system and existing groundwater treatment systems (carbon filters) on the impacted private supply wells is on-going.

Based on this information, I have no objections to the proposal to reclassify the site to a class 4.

Sincerely,

Steven M. Bates, Assistant Director
Bureau of Environmental Exposure Investigation

cc: G.A. Carlson
G. Litwin
B. Devine - MARO
W.S. Capowski - DHCD
R. Schick – NYSDEC
R. Pergadia – NYSDEC, Reg.3
P:\Bureau\Sites\Region_3\DUTCHESS\314088\GreerReclassConcur_ltr.doc

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, 11th Floor
625 Broadway, Albany, New York 12233-7014
Phone: (518) 402-9662 • **FAX:** (518) 402-9679
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

MEMORANDUM

TO: Kelly Lewendowski, Chief, Site Control Section, Bur. Of Technical Support
FROM: Robert Schick, Director, Remedial Bureau C, DER *Robert Schick*
SUBJECT: Petition to Reclassify Greer Toyota, Site No. 3-14-088

DATE: November 22,2004

Remedial Bureau C has reviewed the subject petition and based upon current conditions at the site, agrees with the request to reclassify this site from a class 2 to 4. I recommend this action be commenced at this time.

The Region 3 office is the lead for this project and should be contacted regarding preparation of any necessary documentation.

cc: R. Pergadia, Region 3
M. Rivara, NYSDOH
M. Ryan

48

New York State Department of Environmental Conservation
Division of Environmental Remediation, 12th Floor
5 Broadway, Albany, New York 12233-7011
Phone: (518) 402-9706 • **FAX:** (518) 402-9020
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

DEC 30 2004

Hi Sara!

I got this copy from Karen Quinn after you have a copy in your daybook.

Wayne

Mr. William G. Olsen
Geologist
Chazen Environmental Services, Inc.
21 **Fox** Street
Poughkeepsie, New York 12601

Re: Petition to Reclassify
Greer Toyota Inactive Hazardous Waste Disposal Site
Site ID 314088

Dear Mr. Olsen:

This is in response to your petition letter of September 22, 2004 requesting that the subject site be reclassified from a Class 2 to a Class 4 in the Registry of Inactive Hazardous Waste Disposal Sites in New York State.

The Department has determined that your petition may be granted. This letter will serve as notice of the reclassification.

If you have any questions or problems concerning this determination, please contact Ms. Kelly Lewandowski of the Bureau of Technical Support at (518) 402-9553.

Sincerely,

Dale A. Desnoyers
Director
Division of Environmental Remediation

bcc: CCU#200405202

bec: D. Desnoyers
S. Ervolina
A. English
A. Grant
G. Litwin
R. Schick
Pergadia, Region 3
K. Lewandowski
A. Sylvester
W. Bayer

WB/srh

New York State Department of Environmental Conservation
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Erin M. Crotty
Commissioner

MEMORANDUM

TO: Kelly Lewendowski, Chief, Site Control Section, Bur. Of Technical **Support**
FROM: Robert Schick, Director, Remedial Bureau **C,** DER *Robert Schick*
SUBJECT: Petition to Reclassify Greer Toyota, Site No. 3-14-088

DATE: November 22,2004

Remedial Bureau C **has** reviewed the subject petition and based upon current conditions at the site, agrees with the request to reclassify this site from a class 2 to 4. I recommend this action be commenced at this time.

The Region 3 office is the lead for this project **and** should be contacted regarding preparation of any necessary documentation.

cc: R. Pergadia, Region 3
M. Rivara, NYSDOH
M. Ryan

Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision
Greer Toyota Site
Town of Wappinger, Dutchess County
Site Number 3-14-088

March 2002

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* ERIN M. CROTTY, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

Greer Toyota Inactive Hazardous Waste Disposal Site
Town of Wappinger, Dutchess County, New York
Site No. 3-14-088

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Greer Toyota Class 2 inactive hazardous waste disposal site which was chosen in accordance with the New York State Environmental Conservation Law. The remedial program selected is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300).

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Greer Toyota inactive hazardous waste disposal site and upon public input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. **A** listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened release of hazardous waste constituents from this site, if not addressed by implementing the response action selected in this ROD, presents a current or potential significant threat to public health and the environment.

Description of Selected Remedy

Based on the results of the Remedial Investigation/Feasibility Study (RI/FS) for the Greer Toyota site and the criteria identified for evaluation of alternatives, the NYSDEC has selected source remediation via soil vapor extraction and enhanced bioremediation. The components of the remedy are as follows:

A conceptual design and details necessary for the construction, operation and maintenance, and monitoring of a two phase remedial program including soil vapor extraction (SVE) system and enhanced bioremediation treatment.

- A soil and groundwater monitoring program for each phase of the remedial program.
- Maintenance and monitoring of existing treatment (carbon filters) on impacted private supply wells until one half the drinking water standards are met for four consecutive quarterly sampling events.

- Paving of site and continued maintenance that will reduce infiltration into the source region. Annual certification by property owner to the NYSDEC that the site is in compliance with engineering controls outlined in the ROD.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the remedy selected for this site as being protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

3/29/2002
Date

Michael J. O'Toole, Jr., Director
Division of Environmental Remediation

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RECORD OF DECISION

Greer Toyota Site
Town of Wappinger, Dutchess County
Site No. 3-14-088
March 2002

SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) has selected this remedy to address the significant threat to human health and/or the environment created by the presence of hazardous waste at the Greer Toyota Class 2, inactive hazardous waste disposal site. **As** more fully described in Sections 3 and 4 of this document, historical disposal of chlorinated solvents through floor drains have resulted in the disposal of a number of hazardous wastes, including tetrachloroethene, 1,1-dichloroethene, 1,1,1-trichloroethane, trichloroethene, and vinyl chloride at the site, some of which were released or have migrated from the site to surrounding areas, including one residential drinking water supply and one commercial drinking water supply located about 200 feet downgradient of the site. These disposal activities have resulted in the following significant threats to the public health and/or the environment:

- a significant threat to human health associated with contaminated potable water supplies.

- a significant environmental threat associated with the impacts of contaminants to New York State groundwaters.

In order to eliminate or mitigate the significant threats to the public health and/or the environment that the hazardous waste disposed at the Greer Toyota site have caused, the following remedy was selected:

- **A** conceptual design and details necessary for the construction, operation and maintenance, and monitoring of a two phase remedial program including soil vapor extraction (SVE) system and enhanced bioremediation treatment.

- **A** soil and groundwater monitoring program for each phase of the remedial program.

- Maintenance and monitoring of existing treatment (carbon filters) on impacted private supply wells until one half the drinking water standards are met for four consecutive quarterly sampling events.

- Paving of site and continued maintenance that will reduce infiltration into the source region. Annual certification by property owner to the NYSDEC that the site is in compliance with engineering controls outlined in the ROD.

The selected remedy, discussed in detail in Section 8 of this document, is intended to attain the remediation goals selected for this site, in Section 6 of this Record of Decision (ROD), in conformity with applicable standards, criteria, and guidance (SCGs).

SECTION 2: SITE LOCATION AND DESCRIPTION

The site is located at 1420 Route 9 in the Town of Wappinger, Dutchess County between Route 9 and Old Route 9 at the corner of Hopewell Rd. The site is approximately 2.3 acres. The site is located along Route 9 which has commercial businesses; automobile dealerships, gasoline stations, convenience stores, restaurants, and shopping plazas. The site is approximately four miles west of the Hudson-Wappinger Watershed. See Figure 1 for location map.

Water is supplied at the site from a private on-site well. All adjacent properties are also supplied by private wells located on their properties. There are no municipal sewers in the area of the site. A stream exists approximately 1300 feet down gradient to the north and northwest of the site.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

Greer Toyota is an automobile dealership that also has a garage to repair and maintain automobiles. The garage uses various products to clean automobile parts, some of these products contain chlorinated solvents. Spent chlorinated solvents are regulated as hazardous wastes. Until 1992, floor drains in the garage were connected together and discharged into a 250 gallon underground steel tank that operated as an oil/water separator located outside the garage. The outlet of the oil/water separator was connected to the site's septic system. The septic system consisted of a diffuser tank which was substituted for a leach field since there is limited overburden soil on site to install a leach field. The diffuser tank at the site is a rectangular concrete chamber with a gravel bottom to allow the flow of liquid into the ground.

3.2: Remedial History

1989 The NYSDEC discovered that Greer Toyota was illegally discharging wastewater. Greer Toyota entered into a Consent Order with the NYSDEC to stop discharging wastewater.

1991 The Dutchess County Health Department (DCHD) conducted a drinking water survey along Route 9 and discovered three residential wells contaminated with chlorinated solvents. DCHD informed the NYSDEC and NYSDOH of the contamination and continued the survey.

1992 Inspections were conducted of area businesses that may have contributed to the contamination of groundwater with chlorinated solvents. The DCHD and NYSDEC conducted an inspection of the Greer Toyota dealership. During the inspection the floor drain system described above was discovered and sampled. Results are shown in Table 2.

Based on the presence of chlorinated solvents and petroleum contaminants in the oil/water separator, the site was listed as a Class 2 in the New York State Registry of Inactive Hazardous Waste Disposal Sites. A Class 2 designation indicates that a significant threat to the public health or environment exists and action is required. The NYSDEC investigated the site for violation of the 1989 Consent Order. This resulted in the oil/water separator being cleaned and sealed in 1992.

The same chlorinated solvents detected in the oil/water separator were detected in water supply wells of several down-gradient nearby residential and commercial properties.

1993 NYSDOH ordered Greer Toyota to place carbon filters on three private drinking water wells (2 commercial wells and 1 residential well) impacted by the site (see Figure 2). Greer Toyota was fined for violating the 1989 Consent Order.

SECTION 4: SITE CONTAMINATION

To evaluate the contamination present at the site, and to evaluate alternatives to address the significant threat to human health and the environment posed by the presence of hazardous waste a Consent Order was executed in 1997 between Greer Toyota and the NYSDEC. The NYSDEC required Greer Toyota to perform a focused Remedial Investigation/Feasibility Study (RI/FS). Greer Toyota conducted an RI/FS in August of 1999. Additional investigations were conducted in October 2000 and August 2001 resulting in the Expanded Remedial Investigation/Feasibility Study and Interim Remedial Measures Report dated November 2001.

4.1: Summary of the Remedial Investigation

The purpose of the RI/FS was to define the nature and extent of any contamination resulting from previous activities at the site.

The RI/FS was conducted in a number of phases. The first phase was conducted between September 1997 and January 1999, the second phase was conducted in June 1999, the third phase was conducted in November 2000 and a fourth phase was conducted in August 2001. A report entitled Expanded RI/FS and Interim Remedial Measures Report dated November 2001, has been prepared which describes the field activities and findings of the RI in detail.

The RI included the following activities:

- Installation of nine soil borings for the chemical and physical analysis of soils in the area of the subsurface disposal system.
- Excavation of four test pits to locate underground diffuser tanks.
- Thirty-one soil samples to determine chemical and physical analysis of soils in the area of the underground storage tanks.

- Sixteen soil borings to delineate the extent of contaminated soils from the Underground Storage Tank (UST) locations.

- Installation and sampling of six groundwater monitoring wells located both up and down gradient.

To determine which media (soil, groundwater, etc.) are contaminated at levels of concern, the RI analytical data was compared to environmental standards, criteria, and guidance values (SCGs). Groundwater and drinking water SCGs identified for the Greer Toyota site are based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part 5 of New York State Sanitary Code. For soils, NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 provides soil cleanup guidelines that are based on the protection of groundwater, background conditions, and health-based exposure scenarios. In addition, for soils, site specific background concentration levels can be considered for certain classes of contaminants.

Based on the comparison of the RI results to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site require remediation. These are summarized below. More complete information can be found in the Expanded Remedial Investigation/Feasibility Report and Interim Remedial Measures Report dated November 2001.

Chemical concentrations are reported in parts per billion (ppb) for groundwater and parts per million (ppm) for soils. For comparison purposes, where applicable, SCGs are provided for each medium.

4.1.1: Site Geology and Hydrogeology

Surficial geology consists of fill or glacial till. Areas of bedrock outcrops exist east and west of the property. The till contains brown to gray silt and clay with some fine to coarse sand and little to trace amounts of fine to coarse gravel. The fill is primarily coarse gravel, cobbles and rock fragments and ranges from 2 to **8** feet below grade.

Fractured bedrock is present at the site. Depth to bedrock ranges from 4 to 15 feet below grade and consists of Ordovician Austin Glen formation. Austin Glen formation is variable graywacke and sandstone interbedded with dark, occasionally massive deep-water shales. Depth to groundwater on the site is approximately 13 feet. Groundwater flow in the vicinity of the site is generally east to west.

4.1.2: Nature of Contamination

As described in the RI report, many soil and groundwater samples were collected at the site to characterize the nature and extent of contamination. The main categories of contaminants which exceed their SCGs are volatile organic compounds (VOCs). The primary VOCs of concern are tetrachloroethene (PCE), 1,1,1-trichloroethane (1,1,1-TCA), trichloroethene (TCE), and their associated breakdown products. In addition, a number of petroleum compounds were found on site and include, but are not limited to, benzene, toluene, xylene and methyl-tert-butyl-ether (MTBE).

4.1.3: Extent of Contamination

Table 1 summarizes the extent of contamination for the contaminants of concern in groundwater and soil and compares the data with the SCGs for the site. The following are the media which were investigated and a summary of the findings of the investigation.

Soil

In April 1998, six soil borings (B-1 through B-6) were installed in the area of the diffuser system (see Figure 3). The soil borings went down to bedrock, which ranged from one foot to 14 feet below grade. No chlorinated solvents were detected in any of these samples. Petroleum compounds were detected in sample B-2.

In June 1999 three additional soil borings (SB-1 through SB-3) were installed in the area of the diffuser system using a Geoprobe sampler (see Figure 3). An excavation was conducted to expose the top and edge of the diffuser tanks and borings were placed around the edge of the diffuser tanks for sample collection. Low levels of petroleum compounds were detected in all three soil borings. SB-1 contained chlorobenzene at 0.28 ppm and m&p-xylene at 0.05 ppm. SB-2 contained in 2-butanone at 0.017 ppm and SB-3 contained in 2-butanone at 0.012 ppm and m&p-xylene at 0.0085 ppm. The levels detected in the soil borings were below soil SCGs for all contaminants.

In November 2000 and August 2001 soil samples were taken from the area northwest of the main building to further delineate the extent of contamination (see Figures 4 and 5). Contaminants found at levels above SCGs [the Recommended Soil Cleanup Objective (RSCO) are shown in parentheses after contaminant levels]: benzene up to 240 ppm (0.06 ppm), MTBE up to 38 ppm (0.12 ppm), ethylbenzene up to 380 ppm (5.5 ppm), tetrachloroethene up to 2.1 ppm (1.4 ppm), toluene up to 1800 ppm (1.5 ppm), o-xylene up to 590 ppm (1.2 ppm), m&p-xylene up to 1500 ppm (1.2 ppm) and other petroleum breakdown component compounds. Additional results and locations of these samples can be found in the RI/FS.

Groundwater

In April 1998, a water table sample was collected from the B-2 soil boring (at a depth of 8-10 feet) based on field analysis of the soil sample. The B-2 water table sample was collected directly from the borehole, therefore the sample may not be representative of the groundwater aquifer and these results were not included in Table 1. The B-2 water sample had petroleum contamination, with each contaminant concentration listed below and followed in parentheses by the groundwater standard for that contaminant: benzene at 10 ppb (1 ppb), ethylbenzene at 33 ppb (5 ppb), toluene at 30 ppb (5 ppb), o-xylene at 27 ppb (5 ppb), and m&p-xylene at 220 ppb (5 ppb).

In June 1999, three groundwater samples were collected during Geoprobe sampling to a depth of five feet below grade in close proximity to the diffuser system. These samples may not be representative of the groundwater aquifer and these results were not included in Table 1. The sampling results are consistent with the three soil samples that were collected. Low levels of petroleum compounds were

detected in all three groundwater samples. One sample, SB-1, contained chlorobenzene at 6.2 ppb and toluene at 19 ppb. SB-2 contained toluene at 44 ppb. SB-3 contained toluene at 36 ppb.

Water samples were collected from residential and commercial water supply wells in the vicinity of the site. Since 1994 the Dutchess County Health Department (DCHD) has been collecting drinking water samples from a Curry Road residence and a residence on Old Route 9. These properties have granular activated carbon filters to remove the VOC contamination. At the Curry Road residence the total VOC contamination for untreated water is 31.2 ppb (from 2001 data). The primary contaminants in this well are 1,1-dichloroethane, cis-1,2-dichloroethene, and tetrachloroethene. At the Old Route 9 residence the total VOC contamination is 4.9 ppb (from 1999 data). The primary contaminants in this well are listed and followed in parentheses with their respective drinking water standard: 1,1-dichloroethane (5 ppb) and 1,1,1-trichloroethane (5 ppb). In December 1999, eleven residential and commercial water supply wells were sampled (including the two mentioned above) by the DCHD and analyzed by the NYSDOH's laboratory. Contaminants were detected in seven water supply wells. Three of those wells, including a well on the Greer Toyota site, had detections above drinking water standards. In total, seven properties were found to have petroleum contamination, of which three also had chlorinated solvent Contamination. The most recent sampling results are represented on Tables 3 and 4.

In August 2001 six groundwater monitoring wells were installed on the Greer property (upgradient and downgradient of the source area) to assess groundwater contamination and flow direction (see Figure 6). Wells MW-1, MW-2, MW-3, MW-4 and MW-6 were installed to 50 feet. MW-5 was installed to 100 feet. Groundwater analyses indicated the following contamination in wells down gradient of the source area above groundwater standards, the groundwater standard for each contaminant follows in parentheses: methyl-tert-butyl-ether (MTBE) at 86 ppb (10 ppb), bis(2-ethylhexyl)phthalate at 7 ppb (5 ppb), 1,l-dichloroethane at 7.7 ppb (5 ppb), 1,1,1-trichloroethane at 5.6 ppb (5 ppb), and vinyl chloride at 2.3 ppb (2 ppb).

4.2: Interim Remedial Measures

An Interim Remedial Measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/FS.

In November 2000 an IRM was undertaken to remove the two underground storage tanks (see Figure 3) that had been used as waste oil storage tanks. The soils impacted from the release of contaminants from those tanks were removed to the extent feasible.

Soil samples obtained after the tank removal indicated numerous exceedances of SCGs. These were the highest contaminant levels on the site. Refer to section 4.1.3 for detailed results. Due to physical limitations at the site contaminated soils were not excavated completely, therefore some remaining soil may exceed the RSCO.

4.3: Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site. **A** more detailed discussion of the health risks can be found in Section **6** of the RI report.

An exposure pathway is the manner by which an individual may come in contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and *5)* the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

Pathways which are known to or may exist at the site include:

- Ingestion of contaminated groundwater from private drinking water wells.
- Inhalation of vapors from contaminated groundwater during showering.
- Direct contact with contaminated groundwater from private drinking water systems.

Carbon filter treatment systems have been installed and are being maintained on drinking water wells that are impacted. Quarterly sampling is being conducted to insure that contaminants are being removed by the carbon filter units.

4.4: Summary of Environmental Exposure Pathways

This section summarizes the types of environmental exposures and ecological risks which may be presented by the site. The Contaminant Fate and Transport evaluation included in the RI presents a discussion of the potential impacts from the site. No surface water or wildlife habitats were identified at the site. **A** wetland and unnamed tributary to Wappingers Creek are present approximately 1300 feet northwest of the site. Sampling results from private wells between the site and the creek indicate that the contamination has not reached this area.

Groundwater has been impacted by past site operations and cannot be used as a source of potable water without treatment.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The NYSDEC and Greer Toyota entered into a Consent Order on July 22, 1997. The Order obligates the responsible parties to implement a RI/FS remedial program. Upon issuance of the Record of Decision the NYSDEC will approach the PRPs to implement the selected remedy under an Order on Consent.

The following is the chronological enforcement history of this site.

Date	Index No.	Subject of Order
1/5/93	*WPI18-92*	Discharging wastewater without a State Pollutant Discharge Elimination System (SPDES) Permit.
1/5/93	*W3-0660-93-09*	Failure to ensure delivery of hazardous waste by an authorized Part 364 transporter.
7/22/97	*W3-0660-93-10*	Focused RI/FS.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375-1.10. The overall remedial goal is to meet all SCGs and be protective of human health and the environment. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

The goals selected for this site are:

- *Eliminate ingestion of groundwater affected by the site that does not attain NYSDOH Part 5 Drinking Water Standards.*
- *Eliminate, to the extent practicable, off-site migration of groundwater that does not attain NYSDEC Class GA Ambient Water Quality Criteria.*
- *Eliminate, to the extent practicable, exposures to soil and groundwater.*
- *Eliminate, to the extent practicable, the migration of contaminants into the groundwater.*

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

The selected remedy must be protective of human health and the environment, be cost effective, comply with other statutory laws and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. Potential remedial alternatives for the Greer Toyota site were identified, screened and evaluated in the report entitled Expanded Remedial Investigation/Feasibility Study and Interim Remedial Measures Report dated November 2001.

A summary of the detailed analysis follows. As presented below, the time to implement reflects only the time required to implement the remedy, and does not include the time required to design the remedy, procure contracts for design and construction or to negotiate with responsible parties for implementation of the remedy.

7.1: Description of Remedial Alternatives

The potential remedies are intended to address the contaminated soil and groundwater at the site.

All alternatives will include continued maintenance of the existing carbon filtration units at the private impacted drinking water wells and paving of the site that would reduce infiltration into the source region.

Alternative 1: No Further Action

Present Worth:	$230,580
Capital Cost:	$ 0
Annual O&M:	$ 15,000
Time to Implement	3 months

This alternative recognizes remediation of the site conducted under previously completed IRMs. Only continued monitoring would be necessary to evaluate the effectiveness of the remediation completed under the IRM.

Alternative 2: Source Removal using Soil Vapor Extraction (SVE) and Enhanced Bioremediation

Present Worth:	$450,000
Capital Cost:	$75,000
Annual O&M:	$22,500
Time to Implement	**3-9** months

The SVE system would entail extraction of air containing VOCs and SVOCs from the soil in the unsaturated zone. The SVE system would be phase one of this alternative and would be comprised of either a regenerative or a positive displacement type blower, 4-inch diameter, slotted, vertical vapor extraction wells, underground piping connecting the blower to the extraction wells, a vapor treatment system, and required system controls. Treatment of the extracted air from the SVE wells would be performed by vapor phase carbon. A remedial equipment shed would be located adjacent to source area and would house the blower, air treatment system, and system controls. Though exact number of, radius of influence, and depth of the extraction wells will be determined by a pilot study the approximate location of two extraction wells are shown on Figure 7.

After an evaluation of the SVE treatment phase a second phase of treatment would include oxygen releasing compounds (ORC) and hydrogen releasing compounds (HRC). It would be decided after evaluation of the SVE phase if this second phase would be implemented. ORC/HRC would be delivered to the contaminated soils and groundwater as appropriate. These compounds would enhance the aerobic or anaerobic conditions respectively and aid the biochemical breakdown of contaminants into innocuous compounds to approximately 15 feet below grade.

The volume and chemical composition of individual treatments are based on the contaminant types, concentration and mass; subsurface characteristics, and pre-application laboratory test results. The chemicals would be injected through a well directly into the subsurface source area.

Alternative 3: Groundwater Extraction and Treatment

Present Worth:	$450,000
Capital Cost:	$ 50,000
Annual O&M:	$21,500
Time to Implement	3-6 months

Alternative 3 would involve the use of two recently installed bedrock wells at approximately 100 feet as extraction wells. The deep well farthest downgradient of the source area would be used as a recovery well. The discharge fi-om the well would be run through an air stripping treatment system. Spent carbon and wastes generated during the groundwater treatment process would require off-site disposal. Treated groundwater would be re-injected into the aquifer or other permitted discharge location. A pilot aquifer test would be performed to determine the hydraulic properties of the capture zone. This alternative would involve semi-annual monitoring of down-gradient wells. The number of wells to be used, the depth of the wells, and the extraction rate would all be determined on-site with a pilot study. Groundwater exists at 13-15 feet below grade on site.

Alternative 4: Source Removal bv Excavation

Present Worth:	$ 525,000
Capital Cost:	$ 385,000
Annual O&M:	$ 15,000
Time to Implement	3-9 months

This alternative would address the removal of all impacted soils exceeding SCGs (approximately 500 tons) on site including soils that may be impacted adjacent to the existing building. The bulk of the remaining contaminated soils are located near the northwest corner of the foundation of the main building. Substantial pre-removal construction measures must be taken in order to avoid permanent structural damage. All soils exceeding SCGs would be removed and replaced with clean fill. This alternative would rely on natural attenuation to address groundwater.

7.2 Evaluation of Remedial Alternatives

The criteria used to compare the potential remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6 NYCRR Part 375). For each of the criteria, a brief description is provided, followed by an evaluation of the alternatives against that criterion. A detailed discussion of the evaluation criteria and comparative analysis is included in the Feasibility Study.

The first two evaluation criteria are termed threshold criteria and must be satisfied in order for an alternative to be considered for selection.

1. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether or not a remedy will meet applicable environmental laws, regulations, standards, and guidance.

All alternatives would provide immediate compliance with the SCGs at the point-of-use by supplying carbon filters to the impacted drinking water wells. Alternative 2 would treat source areas and so makes SCG soil compliance likely and would speed compliance with groundwater standards since both SVE and ORCMRC would be used. Alternative 1 would take the longest period of time to move the site toward SCG compliance since it would rely solely on natural attenuation of contaminants. Alternative **3** would help to move groundwater towards compliance quicker than Alternative 1 but not as fast as Alternative 2. Alternative **3** would rely solely on natural attenuation of contaminants in soil. Alternative 4 would immediately provide compliance with SCGs for soil, but would not move groundwater towards compliance as fast as Alternative 2.

2. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

All alternatives would provide immediate compliance with the SCGs at the point-of-use and therefore provide public health protection. Alternative 1 would not provide protection of the environment as the soil and groundwater would not be addressed. Alternatives 2, **3,** and 4 would include some exposure to the contaminated soil and groundwater by construction workers on the site. However, these exposures would be minimal, since protection would be provided to the workers by following guidelines established in the Health and Safety Plan for the site. Alternative 2 would provide protection to the environment by removing the contamination source in the soil and therefore allow the groundwater levels to attenuate towards SCGs. Alternative **3** would not provide protection to the environment as it would allow the groundwater levels to attenuate towards SCGs but would not address the soil contamination/source. Alternative 4 would remove the source area soils to SCGs but would not address the groundwater contamination on site.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

All the alternatives would protect against short-term impacts associated with groundwater at the point-of-use by providing carbon filters. Short-term groundwater and soil exposure could occur for workers at the site under Alternatives 2, **3,** and 4. Workers would be protected by following guidelines established in the Health and Safety Plan for the site. No short-term exposure would be encountered for Alternative 1 as it is a No Further Action.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on site after the

selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the controls intended to limit the risk, and 3) the reliability of these controls.

Alternative 1 would not be permanent or effective in the long-term since it would not address soil or groundwater contamination on-site. Alternative 2 would include treatment of the soils which would be both permanent and effective in the long-term. Alternative 2 would also include partial treatment of the groundwater by the use of ORC/HRC. Alternative 3 would involve containment of the contaminated groundwater, contaminated soils would remain, and long-term monitoring for effectiveness would be conducted. Alternative 4 would involve removal of the majority of the soil contaminant mass from the site, which would be effective in the long-term. Alternative 4 would not address groundwater, nor provide long-term monitoring.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and sjgnificantly reduce the toxicity, mobility or volume of the wastes at the site.

Alternative 1 would not reduce toxicity, mobility or the volume of the wastes at the site. Alternative ***2*** would reduce the toxicity and volume of the on-site soils, eventually reducing mobility. Alternative 3 would reduce the toxicity and mobility of the on-site groundwaters. Alternative 4 would reduce the toxicity, mobility and volume of soil contamination, therefore removing the groundwater contaminant source, but would not address on-site groundwater.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedy. For administrative feasibility, the availability of the necessary personnel and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc.

Alternative 1 would be most easily implemented since it would involve no further action. Alternatives 2 and 3 would be relatively easy to implement using conventional, readily available technologies, (SVE and groundwater pumping and treatment, respectively). Alternative 4 would be difficult to implement due to the existing structure on the property.

7. Cost. Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Although cost is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the remaining criteria, cost effectiveness can be used as the basis for the final decision. The costs for each alternative are presented in Table 5.

Alternative 1, providing no further action would be the lest expensive alternative. Alternative 4 would be the most expensive alternative as structural support would need to be provided for the existing building before site soils could be removed. Alternatives 2 and 3 would cost approximately the same but Alternative ***2*** would remove the groundwater contaminant source, therefore moving groundwater to SCGs faster than Alternative **3.**

This final criterion is considered a modifying criterion and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

8. Community Acceptance - Concerns of the community regarding the RI/FS reports and the Proposed Remedial Action Plan have been evaluated. The "Responsiveness Summary" included as Appendix A presents the public comments received and the Department's response to the concerns raised.

No significant public comments were received.

SECTION 8: SUMMARY OF THE SELECTED REMEDY

Based on the results of the RI/FS, and the evaluation presented in Section 7, the NYSDEC is selecting Alternative 2 as the remedy for this site. This selection will include two phases of source remediation via soil vapor extraction (SVE) and enhanced bioremediation. The selected remedy will include: engineering controls (site paving) and operation, maintenance and monitoring of carbon filtration units on private drinking water wells.

This remedy will address contaminated soils at the site as well as eliminate exposure risks by providing filter systems at the point-of-use to bring impacted wells to SCGs.

This selection is based on the evaluation of the four alternatives developed for this site. The only major differences between these alternatives are cost and length of time to reach compliance. Though Alternative 1 would be expected to eventually reach compliance with SCGs it would be solely by natural attenuation and would take the longest of all alternatives. Alternative 3 would be expected to reach compliance for groundwater SCGs through use of the extraction and treatment system, but soils would have to naturally attenuate before the groundwater was expected to meet SCGs. Alternative 2 will address the source area soils and groundwater. With the source area soils addressed, the groundwater will naturally attenuate at a much faster rate. During this natural attenuation, Greer Toyota will continue to maintain existing filters on the impacted wells. The lowest cost and easiest to implement would be Alternative 1, requiring no further work. Alternative 3 would be about the same level of difficulty to implement as Alternative 2 but would not remove the soil contaminants at the source. Alternative 4 would be the most difficult to implement and be the most costly. Alternative 2 will not immediately bring the site to SCG compliance but, both soil and groundwater will be improved by the use of an SVE system and HRC/ORC treatment. Addressing the source area will be the fastest way (though not immediate) to bring the site contaminants into compliance with both soil and groundwater SCGs.

The estimated present worth cost to implement the remedy is $450,000. The capital cost to construct the remedy is estimated to be $75,000 and the estimated average annual operation, maintenance and monitoring cost per year is $22,500. These costs have been estimated based on Alternatives 2 as well as costs associated with site control and maintaining carbon filters.

The elements of the selected remedy are as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program. Any uncertainties identified during the RI/FS will be resolved.

2. Installation of a soil vapor extraction (SVE) system including a positive displacement type blower, two vertical vapor extraction wells, underground piping connecting the blower to the extraction well, a vapor treatment system, and required system controls. The effectiveness of the system will be monitored.

3. Delivery of hydrogen release compounds (HRC) and oxygen release compounds (ORC) to contaminated soil and groundwater to destroy the contaminants through rapid biological degradation. If after evaluation of the SVE phase it is deemed necessary HRC/ORC will be introduced to the soil and groundwater in the source area through existing wells and piping on the site. A soil and groundwater monitoring plan including site reviews will be completed.

4. Maintenance and monitoring of existing treatment (carbon filters) on impacted private supply wells until one half of the drinking water standards are met for four consecutive quarterly sampling events.

5. A private well sampling survey near the site to confirm that all private wells have been identified by the NYSDEC and NYSDOH. If wells are found to be impacted by site related contaminants carbon filters will be installed and maintained on a quarterly basis.

6. Paving of the site to reduce infiltration into the source region.

7. Annual review of the effectiveness of the remedy against a set of year-by-year goals to be established by the NYSDEC.

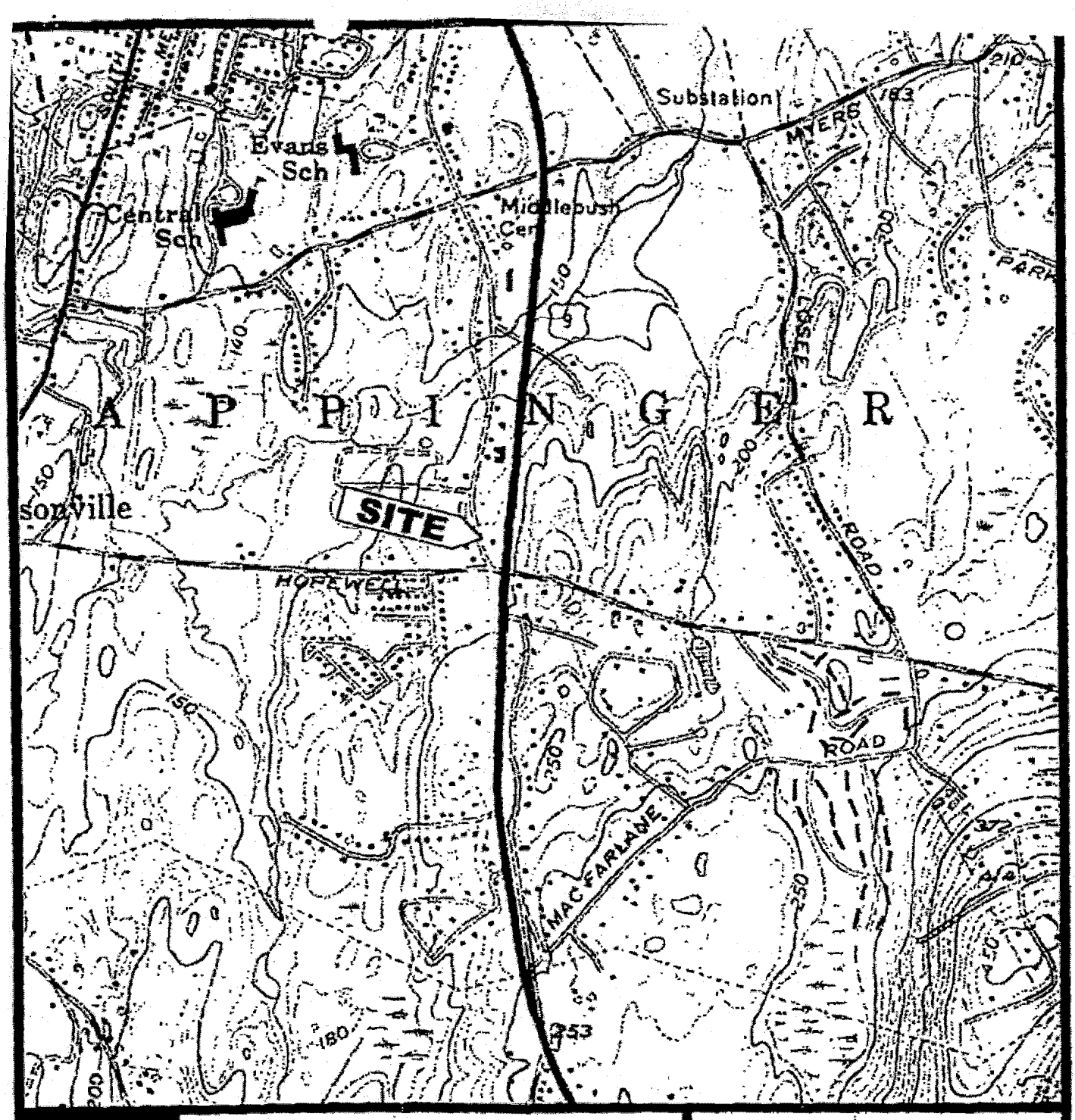
8. Annual certification by property owner to the NYSDEC that the site is in compliance with engineering controls outlined in the ROD.

A long term monitoring program will be instituted in order to track the progress of the remedy selected. Soil borings will be conducted to determine the effectiveness of soil treatment. Groundwater monitoring will occur quarterly in a minimum of three on-site wells to ensure the continued decrease of contaminant concentrations. This program will allow the effectiveness of the SVE system and HRC/ORC injection to be monitored and will be a component of the operation and maintenance for the site.

SECTION 9: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation activities were undertaken in an effort to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

- **A** repository for documents pertaining to the site was established.
- **A** site mailing list was established which included nearby property owners, local political officials, local media and other interested parties.
- In February 2002, a Fact Sheet and Notice of Public Meeting was mailed to the public. The Fact Sheet described past activities, summarized the RI/FS, and summarized the proposed remedy. The Notice of Public Meeting informed the public of the date, time and place of the public meeting presenting the PRAP.
- On March 19, 2002 NYSDEC held the PRAP Public Meeting. The PRAP was presented to the public.
- In March 2002 a Responsiveness Summary was prepared and made available to the public, to address the comments received during the public comment period for the PRAP.



Source
USGS Quadrangle; Wappingers Falls

Scale in Feet
0 1000 2000 3000

North

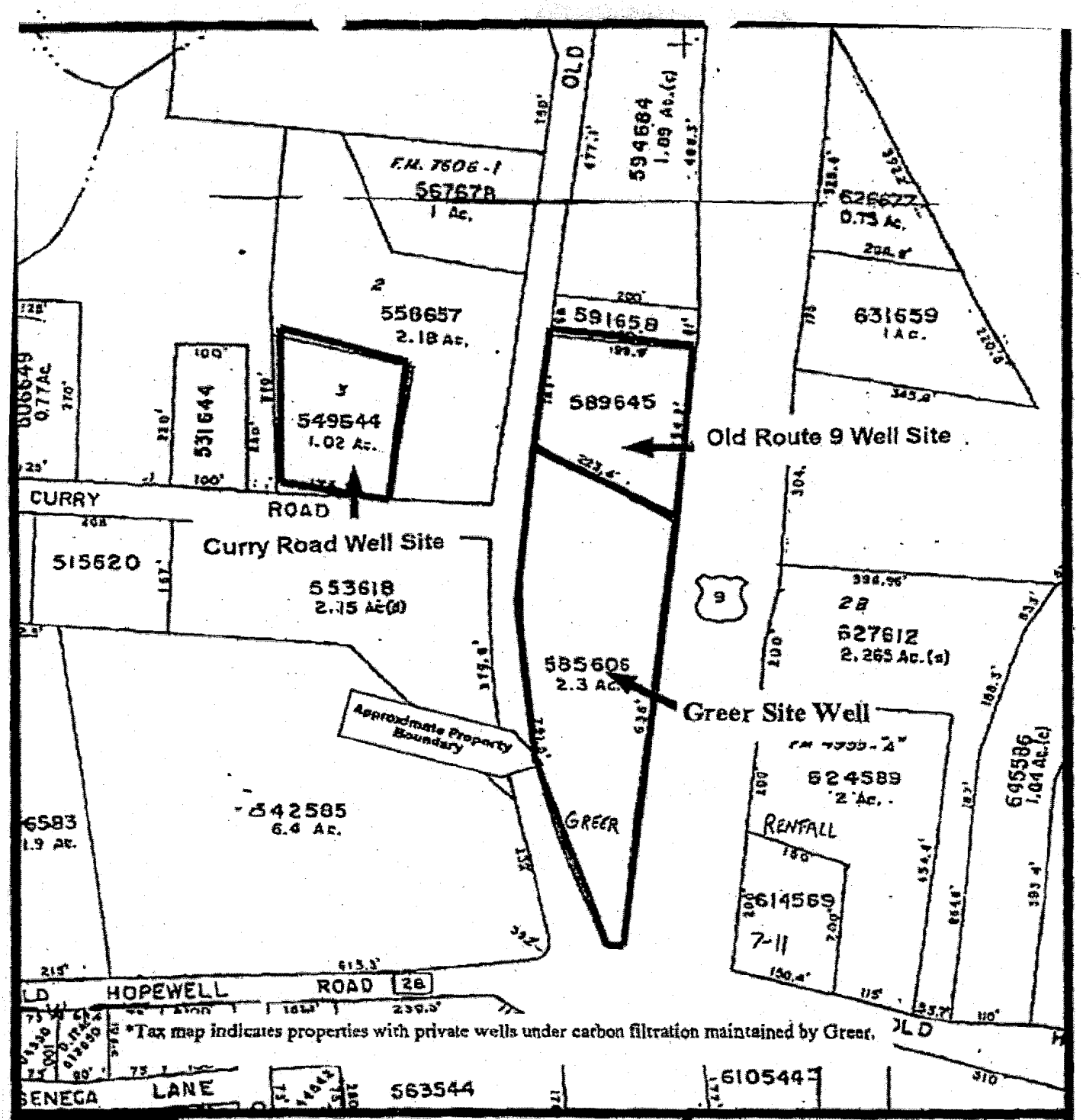
January 2002

THE Chazen COMPANIES

Figure 1

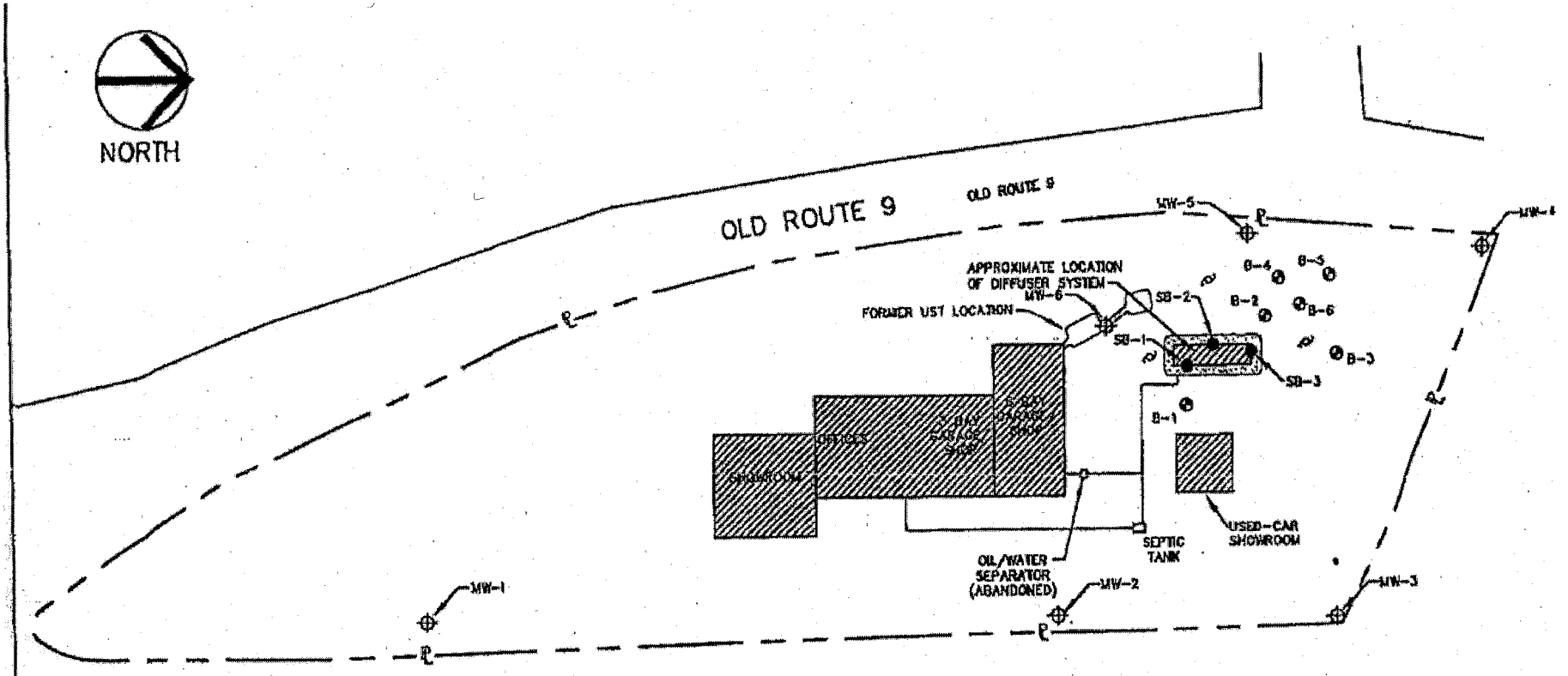
Site Location Map

Greer Site
Route 9
Wappingers Falls, New York



*Tax map indicates properties with private wells under carbon filtration maintained by Greer.

	Source County Real Property Tax Map	Figure 2
	Scale Scale not available	Wells On Carbon Filtration
North	THE Chazen COMPANIES	Greer Site Route 9 Wappingers Falls, New York
January 2002		



- MONITORING WELL LOCATIONS- 6/2001
- PROPERTY LINE
- SOIL BORING LOCATIONS- 6/25/1999
- BORING LOCATIONS- 4/1 & 4/2/1998
- LIGHT POLE AND FOOTINGS

NOTE:
THIS DRAWING WAS DIGITIZED FROM FIGURE 1, GREER TOYOTA, WAPPINGERS FALLS, NEW YORK, PREPARED BY MEHRAN, ENCON, NORTHEAST, DATED 6/25/99

7/12/99 - ADD SEPTIC
7/8/99 - ADD SOIL BORIN

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Planners
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Clifton Park, NY 12065
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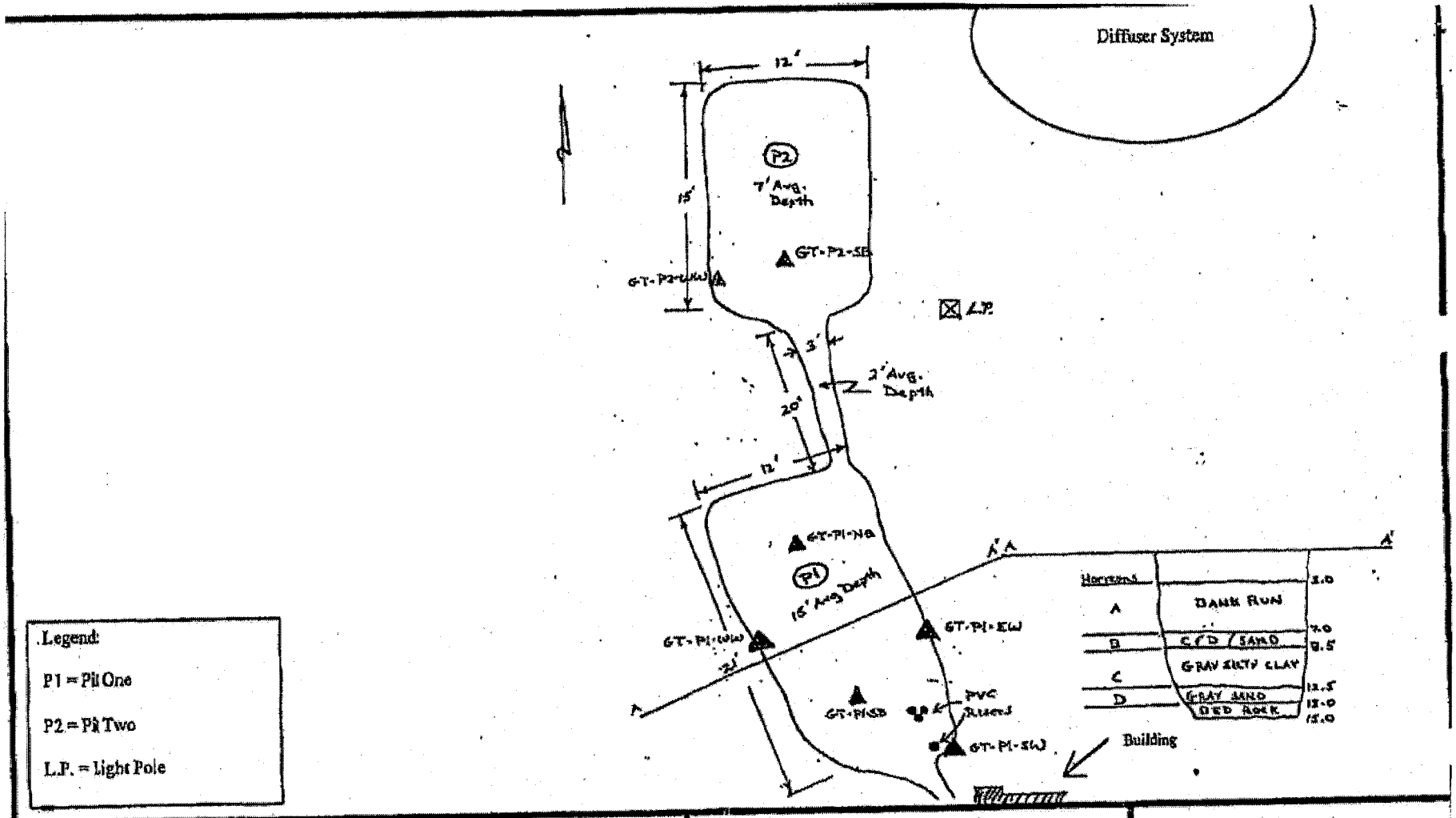
GREER TOYOTA

SITE MAP

TOWN OF WAPPINGER, DUTCHESS COUNTY, N.Y.

drawn	check
JAS	A.N.M.
date	scale
1/8/02	NTS
project no.	
49799.24	
sheet no.	
Figure 3	



THE Chazen COMPANIES

April, 2001

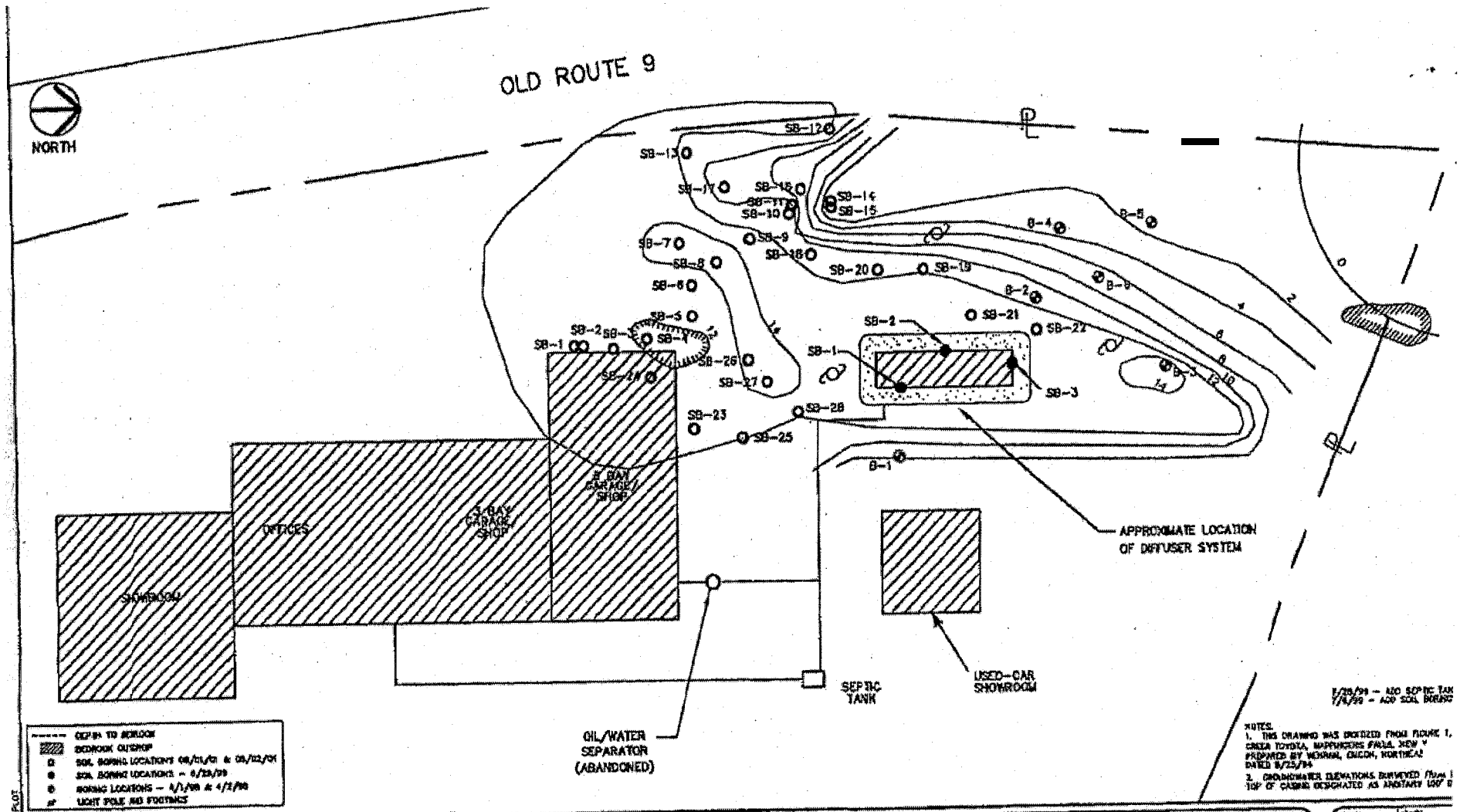
Scale
Scale not available

Source
Provided by The Chazen Companies

Greer Toyota Property
Route 9 and Old Hopewell Road
Wappingers Falls, New York

Figure 4

Boundaries of the Tank Excavations and Sample Locations



NOTES:
1. THIS DRAWING WAS DIGITIZED FROM FIGURE 1, GREER TOYOTA, WAPPINGERS FALLS, NEW Y PREPARED BY WEXMAN, GIUDON, NORTHEAS DATED 8/25/94
3. GROUNDWATER ELEVATIONS SURVEYED (from TOP OF CASING DESIGNATED AS ARBITRARY DAT

6/25/99 - ADD SEPTIC TAN
7/6/99 - ADD SOIL BORING

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Glens Falls, NY 12801
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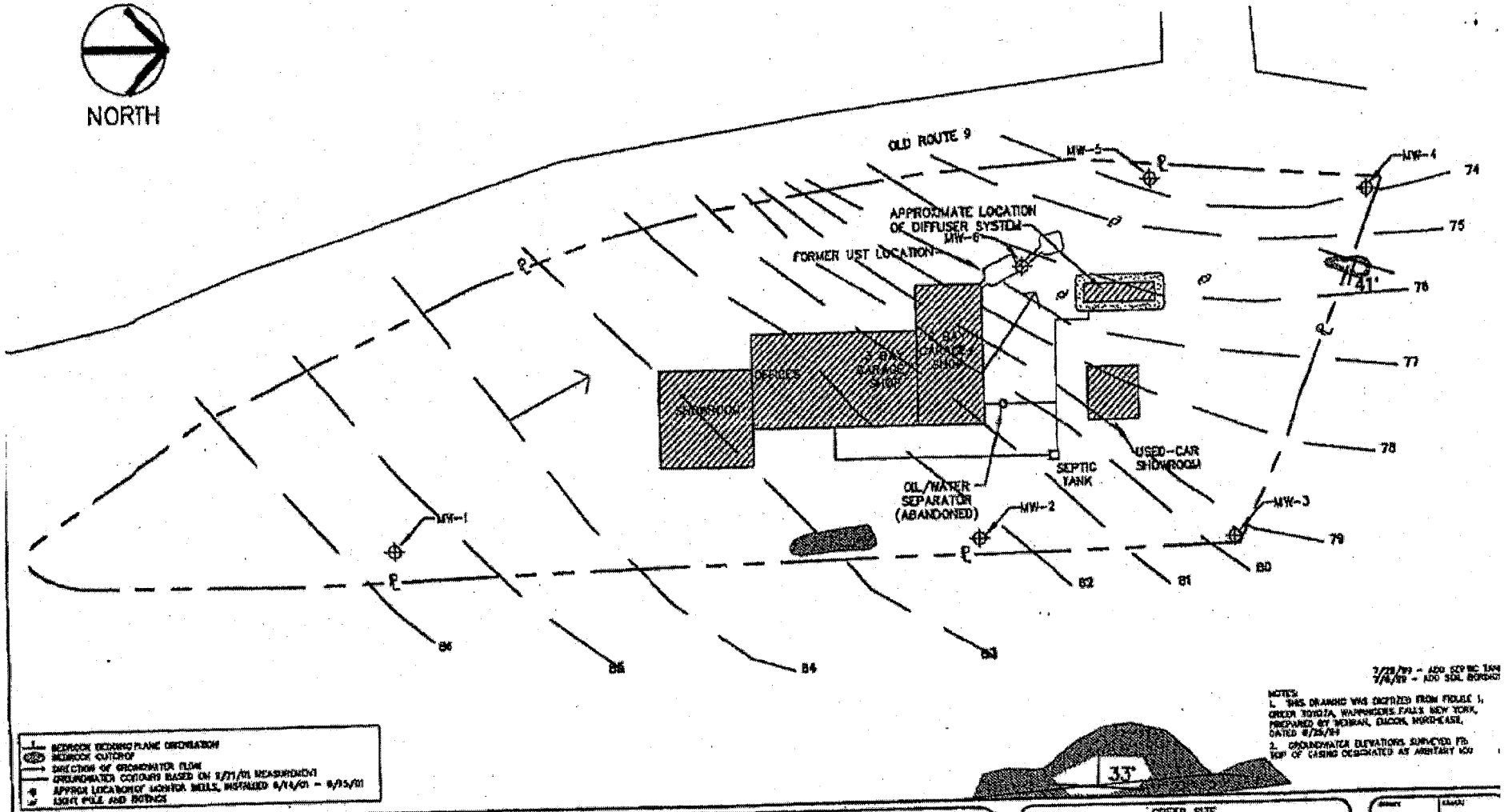
GREER AUTO

2001 BORINGS

TOWN OF WAPPINGER, DUTCHESS COUNTY, N.Y.

drawn: SLG	check:
date: 1/8/02	scale: NTS
project no.: 49799.24	
sheet no.: Figure 5	



7/28/89 - ADD SEPTIC TANK
7/8/89 - ADD SEAL BORING

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GREER SITE

MONITORING WELL LOCATIONS

TOWN OF WAPPINGER, DUTCHESS COUNTY, N.Y.

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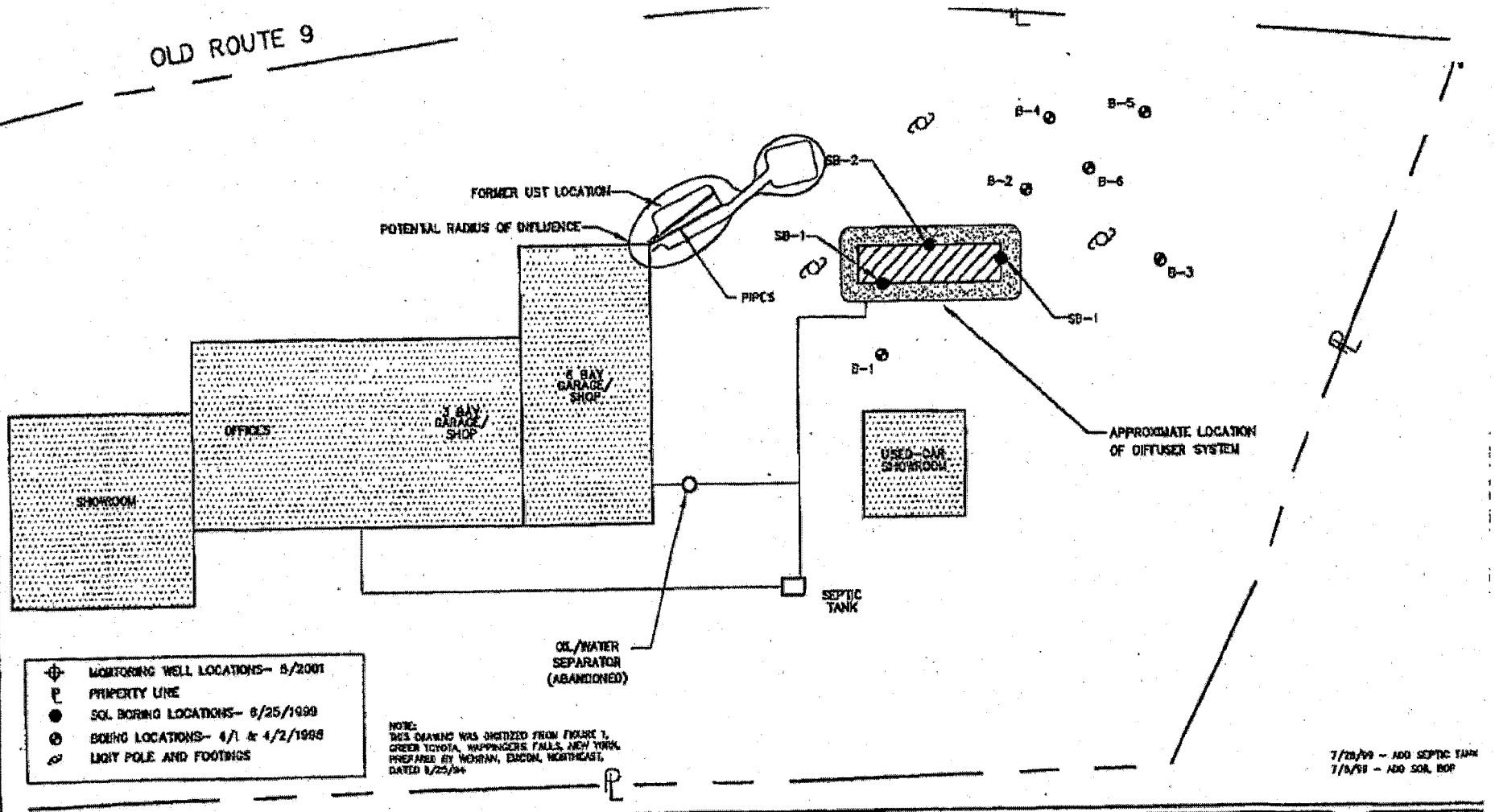
Figure 6	



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GREER TOYOTA

SVE LOCATIONS

TOWN OF WAPPINGER, DUTCHESS COUNTY, N.Y.

drawn	check
JAS	A.M.M.
date	scale
2/05/02	1"=30'
project no.	
49799.21	
sheet no.	
Figure 7	

Table 1
Nature and Extent of Contamination
(1992 - 2001)

MEDIUM		CONTAMINANT OFCONCERN	CONCENTRATION RANGE (ppb)	FREQUENCY of EXCEEDING SCGs/Background	SCGI Bkgd. (ppb)
Groundwater	Volatile Organic Compounds (VOCs)	benzene	ND to 3.7	1 of 6	1
		1,1-dichloroethane	ND to 33	2 of 6	5
		cis-1,2-dichloroethene	ND to 4.4	0 of 6	5
		trichloroethene	ND to 1.9	0 of 6	5 '
		1,1,1-trichloroethane	ND to 5.6	2 of 6	5
		tetrachloroethene	ND to 2.8	0 of 6	5
		vinyl chloride	**ND** to 2.3	1 of 6	2
		methyl-tert-butyl-ether	ND to 86	3 of 6	10
	Semivolatile Organic Compounds (SVOCs)	di-n-butylphthtalate	ND to 9.6	1 of 6	50
		bis(2-ethylhexyl) phthalate	ND to 7	1 of 6	5

MEDIUM	CATEGORY	CONTAMINANT OF CONCERN	CONCENTRATION	FREQUENCY of EXCEEDING SCGs/Background	SCG/ Bkgd. (ppm)
Soils	Volatile Organic Compounds (VOCs)	benzene	**ND** to 240	6 of 68	0.06
		toluene	ND to 1,800	7 of 68	1.5
		m&p-xylene	ND to 11,711	11 of 68	1.2
		o-xylene	ND to 590	14 of 68	1.2
		1,1,1-trichloroethane	ND to 0.170	0 of 68	**0.8**
		1,1-dichloroethane	ND to 0.057	0 of 68	0.2
		cis-1,2-dichloroethene	ND to 0.250	0 of 68	0.3
		trichloroethene	ND to 0.935	1 of68	0.7
		tetrachloroethene	**ND** to 63	4 of 68	1.4

Table 1

MEDIUM	CATEGORY	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppm)	FREQUENCY of EXCEEDING SCGs/Background	SCG/ Bkgd. (ppm)
Soils	Volatile Organic Compounds (VOCs)	2-butanone	**ND** to 0.017	0 of 68	0.3
		chlorobenzene	**ND** to 0.280	0 of 68	1.7
		ethylbenzene	**ND** to 380	3 of 68	5.5
		methyl-tert-butyl-ether	ND to 38	3 of 68	0.12
	Semivolatile Organic Compounds (SVOCs)	di-n-butylphthtalate	ND to 0.120	0 of 68	8.1
		fluorene	ND to 0.089	0 of 68	50
		phenanthrene	ND to 0.780	0 of 68	50
		pyrene	**ND** to 0.800	0 of 68	50
		bis(2-ethylhexyl)phthalate	**ND** to 83	2 of 68	50
		2,6-dinitrotoluene	**ND** to 9.5	1 of 68	1
		2-methylnaphthalene	ND to 5.3	0 of 68	36.4
		anthracene	**ND** to 0.7	0 of 68	50
		benzo(a)anthracene	**ND** to 2.8	1 of 68	0.224
		benzo(a)pyrene	**ND** to2.6	1 of68	0.061
		benzo(b)fluoranthene	**ND** to 2.2	1 of 68	1.1
		benzo(g,h,l)perylene	**ND** to 1.9	0 of 68	50
		benzo(k)fluoranthene	ND to 2.4	1 of 68	1.1
		indeno(1,2,3-cd)pyrene	**ND** to 1.9	0 of 68	3.2
		chrysene	ND to 2.7	1 of 68	0.4
		dibenzo(a,h)anthracene	**ND** to 0.72	1 of 68	0.014
		fluoranthene	NDto4.4	0 of 68	50
		4-methyl-2-pentanone	**ND** to 0.01 1	0 of 68	1

Table 2
Dutchess County Health Department
1992 Oil/Water Separator Sampling Results

Parameter	9/2/92 results (µg/l)	5/14/92 results (µg/l)	SCG ppb
Bromobenzene	7.5	500	5
n-Butylbenzene	37.0	--	5
sec-Butylbenzene	--	850	5
1,1-Dichloroethane	13.0	1200	5
cis-1,2-Dichloroethene	8.2	--	5
Freon TF	1.0	--	5
Ethylbenzene	72.0	6000	5
Isopropylbenzene	--	5200	5
Methylene chloride	1.2	--	5
Napthalene	--	950	10
Styrene	33.0	1900	930
Tetrachloroethene	77.0	7900	5
Toluene	130.0	4200	5
1,1,1-Trichloroethene	9.8	--	5
Trichloroethene	2.1	--	5
Trichlorofluoromethane	2.1	--	5
1,2,4-Trimethylbenzene	36.0	1700	5
1,3,5-Trimethylbenzene	30.0	1500	5
O-xylene	33.0	1900	5
m-xylene	130.0	7700	5
p-xylene	130.0	7700	5
1,2,4-Trichlorobenzene	--	2400	5
1,1,1-Trichlorobenzene	--	3300	5

Table 3
Summary of Contaminants in Well at Curry Road Residence
(data from Dutchess County Health Department)

Parameter	GW Std (ppb)	Range of Results from 1994-Present (ppb)	Most Recent Concentration Detected 4/24/01 (ppb)
1,1-Dichloroethane	5	0-1.8	--
1,2-Dichloropropane	1	0-3.0	--
1,2-Dichloroethane	0.6	0-1.1	--
1,1-Dichloroethene	5	0-0.64	--
1,2-Dichloroethene	5	0-5.7	--
cis-1,2-Dichloroethene	5	0-10	5.4
1,1,1-Trichloroethane	5	0-2.6	0.7
Trichloroethene	5	0-24	17
Tetrachloroethene	5	0-11	8.1
Methylene Chloride	5	0-1.8	--
Vinyl Chloride	2	0-0.7	--

Table 4
Off-site Properties
Contaminants Detected During
Most Recent Sampling Round
*(**oes not include those sites** on **filte** from spill)*

Property Name	GW Std (ppb)	Curry Road* Residence	Old Route 9 Residence	Route 9 Auto	Greenbaum & Gilhooley's
Date of Sample		April01	Dec.99	Dec.99	Dec.99
1,1-Dichloroethane	5	--	3.4		0.9
cis-1,2-Dichloroethene	5	5.4	--	--	--
1,1,1-Trichloroethane	5	0.7	1.5	--	*0.5*
Trichloroethene	5	17	--	--	--
Tetrachloroethene	7 (G)	8.1	--	--	--
MTBE	lo	--	47	14.0	5.8

* Curry Road data fr

Table 5
Remedial Alternative Costs

Remedial Alternative	Capital cost	Annual O&M	Total Present Worth
No Action	$0	$15,000	$230,580
Source Removal via Soil Vapor Extraction **(SVE)** and In-Situ Bioremediation	$75,000	$22,500	$450,000
Groundwater Pump and Treat	$50,000	$21,500	$450,000
Source Removal via Excavation	$340,000 - $385,000	$15,000	$340,000 - $525,000

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Greer Toyota
Record of Decision
Town of Wappinger, Dutchess County
Site No. 3-14-088

The Proposed Remedial Action Plan (PRAP) for the Greer Toyota site, was prepared by the New York State Department of Environmental Conservation (NYSDEC) and issued to the local document repository on February 26,2002. This Plan outlined the preferred remedial measure proposed for the remediation of the contaminated soil and sediment at the Greer Toyota site. The preferred remedy is source removal by soil vapor extraction (SVE) and enhanced bioremediation. The release of the PRAP was announced via a notice to the mailing list, informing the public of the PRAP's availability.

A public meeting was held on March 19, 2002 which included a presentation of the Remedial Investigation (RI) and the Feasibility Study (FS) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 27,2002.

This Responsiveness Summary responds to all questions and comments raised at the March 19,2002 public meeting.

The following are the comments received at the public meeting, with the NYSDEC's responses:

COMMENT 1: What started the investigation of the site?

RESPONSE 1: In 1991 the Dutchess County Health Department conducted a drinking water well survey along Route 9 and discovered three wells contaminated with chlorinated solvents. Inspections were conducted of area businesses that may have contributed to the contamination of groundwater with chlorinated solvents. During the inspection of the Greer Toyota dealership, the floor drain system was sampled and results indicated chlorinated solvents were present. This finding initiated further investigations at the Greer facility.

COMMENT 2: Adjoining property owners were not informed that something was going on for a long time, especially with relation to the spill issues.

RESPONSE 2: Although both the Hazardous Waste Remediation program and the Spill Prevention and Response program are part of the NYSDEC

Division of Environmental Remediation, the notification procedures are somewhat different. **A** component of the Inactive Hazardous Waste Remediation program is citizen participation. **As** part of this process appropriate municipal authorities and adjoining property owners are to be notified of significant milestone events, such as a change in the classification of the site, notice of a public meeting, release of a fact sheet, etc. However, the notice regarding listing of the Site as a Class 2, although sent to adjoining property owners, was erroneously sent to the Village of Wappingers Falls Clerk and the County Clerk. The contact information has been corrected and changed to the Town of Wappinger. Both the Town Clerk and the abutting property owners will be properly notified by the NYSDEC.
Under the Spill Prevention and Response program notification to adjacent property owners is not as formal. Most of the notification to adjacent homeowners associated with Spill sites occurs during perimeter sampling to determine the extent of the contaminant plume. The homes that are included in this sampling survey receive the water test results from NYSDEC.

COMMENT 3: Why were only the wells with exceedances of standards provided with carbon filters?

RESPONSE 3: Carbon filters have been provided for wells that are contaminated above drinking water standards. Only those wells found above standards are eligible for filters using *NYS* Superfund monies.

COMMENT 4: How much would it cost for a homeowner with a private well to install a filter system?

RESPONSE 4: The installation of a carbon filter system would cost between $3,000 and $6,000. This estimate does not include yearly maintenance costs.

COMMENT 5: Who should we call to get our water tested?

RESPONSE 5: If you have concerns about possible contamination in your well, you should contact the Dutchess County Health Department.

COMMENT 6: Has there been any change in the groundwater contamination concentrations since the IRM?

RESPONSE 6: The on-site monitoring wells were installed after the IRM had occurred, and therefore, data is not available in those exact locations for comparison. The wells will be sampled on a quarterly basis and

that data will be used to determine if the groundwater contamination is decreasing.

COMMENT 7: Why not combine Alternatives 2 and 3 to expedite the clean up?

RESPONSE 7: It is the Department's position that the implementation of Alternative 2 will adequately address the soil and groundwater contamination related to the site. Alternative 2 addresses remediation of the on-site soils which will, in turn, remove the groundwater contaminant source. Using Alternative 3, groundwater extraction and treatment, in addition to the implementation of Alternative 2 would interfere with the use of HRC/ORC treatment of the saturated soil at the source. Groundwater extraction and treatment is not a cost-effective remedy for contaminant removal at this site.

COMMENT 8: Why should the O&M be terminated if the concentrations do not exceed half the standards for four quarterly sampling periods?

RESPONSE 8: This is consistent with guidance issues in NYSDOH's technical guidance memorandum regarding carbon filters. However, consideration is also given to all available environmental data, particularly a review of current and historical groundwater data, prior to removal of filters.

COMMENT 9: Who gets the sampling results from the carbon filter units that Greer Toyota is sampling and maintaining on wells?

RESPONSE 9: The results are sent to the Dutchess County Health Department.

COMMENT 10: What wells are being monitored by Greer Toyota?

RESPONSE 10: The two private wells on the Greer Toyota property, a private drinking water well on Curry Road and a private drinking water well on Old Route 9.

COMMENT 11: What does the term "inactive" in the title of the registry mean?

RESPONSE 11: The word "inactive" means the waste management practices that resulted in the disposal of waste have ceased.

COMMENT 12: Describe the HRC/ORC process.

RESPONSE 12: Hydrogen Releasing Compounds (HRC) or Oxygen Releasing Compounds (ORC) would be injected into the soils and shallow groundwater at the site to accelerate the biochemical breakdown of

contaminants found on the Greer property. Micro-organisms occurring in the soil naturally breakdown the chemicals of concern into innocuous compounds. The addition of HRC/ORC would enhance the subsurface environment to encourage the rapid growth of the micro-organisms that degrade both chlorinated compounds and petroleum products. HRC would be used to accelerate the anaerobic (oxygen free) biochemical breakdown of chlorinated solvents. ORC would be used to accelerate the aerobic (containing oxygen) biochemical breakdown of petroleum products.

COMMENT 13: Has a geophysical study of the shallow bedrock been conducted?

RESPONSE 13: Yes. Details of that study can be found in the Remedial Investigation/Feasibility Study Report.

COMMENT 14: Was the presence of LNAPL detected?

RESPONSE 14: Yes, light non-aqueous phase liquid (LNAPL) was detected but only adjacent to one of the underground storage tanks. That material was removed with the contaminated soils during the IRM.

COMMENT 15: Was post excavation sampling done during the IRM?

RESPONSE 15: Yes, post excavation sampling was conducted during the IRM.

COMMENT 16: What was done to check the north side of Greer?

RESPONSE 16: A monitoring well was installed on the upgradient side of the on-site source area. Results indicate trace levels of methyl-tert-butyl-ether and bis(2-ethylhexyl) phthalate. It is believed the source is located at the north west corner of the main showroom building.

COMMENT 17: Which wells are being monitored?

RESPONSE 17: For the drinking water wells that are being monitored see Response 10 above. On-site monitoring wells are being sampled on a quarterly basis. The location of these wells can be found in the RI/FS Report.

COMMENT 18: Can other wells on Curry Road be impacted?

RESPONSE 18: Yes, it is possible that additional wells on Curry Road can be impacted by the site. A well survey was completed in the past to assess impacts from the Greer site and another is currently being conducted by the Dutchess County Health Department to make sure no other homes are impacted.

COMMENT 19: How much was released from the waste oil *tank* and over what period?

RESPONSE 19: It is unknown how much waste oil was leaked from the underground storage tanks or over what period of time.

COMMENT 20: **I** maintain my own filter at Greenbaum and Gilhooley's.

RESPONSE 20: The Department has reviewed the results of the January sampling event from the well at the Greenbaum and Gilhooley's restaurant. Those results indicate that the contaminants found in the water supply (methyl-tert-butyl-ether, 1,1-dichloroethane, and 1,1,1-trichloroethane) were detected at levels that do not exceed the NYS drinking water standards. Therefore, the NYSDEC will not be requiring Greer Toyota to maintain the carbon filter on the Greenbaum and Gilhooley's well. The Dutchess County Health Department (DCHD) will continue to monitor sample results from this well.

COMMENT 21: The Town has extended the sewer line onto Old Route **9** and it will be available for hook up as of May 15,2002. It should be mandated that Greer Toyota hooks up to the sewer.

RESPONSE 21: Though it is not the responsibility of the Department to mandate Greer Toyota hook up to Town sewer, the Department believes it would be beneficial to the facility. This issue will be explored during the development of the remedial design.

COMMENT 22: Once remediation is complete at the site, what will be done for the homes with filters?

RESPONSE 22: The carbon filter units will be maintained until such time that half of the standards are met for four consecutive quarterly sampling periods regardless of the construction or operation of the remedial system.

COMMENT 23: The report should address the possibility of discharging water from recovery wells into the Town sewer.

RESPONSE 23: This comment is related to the implementation of Alternative 3 of the PRAP. If Alternative 3 were chosen as a remedy, the discharge of the extracted and treated water recovery water into the sewer would be explored. NYSDEC's position is that Alternative 2, source removal, is more beneficial to both public health and the environment as it addresses removal of the source area which in turn will help meet groundwater standards at a much faster rate than Alternative 3.

COMMENT 24: The old Witchey's building (Old Route 9 Auto) has been considered for years a possible source of contamination in the area.

RESPONSE 24: An investigation is being conducted under the NYSDEC Spills unit to determine if underground storage tanks exist on the property.

COMMENT 25: Can the Town be notified of the findings of the investigation at the Old Route 9 Auto?

RESPONSE 25: Your request has been noted, and the NYSDEC will notify the Town of the findings of that investigation.

COMMENT 26: The Town would like to be notified when a filter is needed for a private drinking water well regardless of if it's a Remediation or Spills site.

RESPONSE 26: NYSDEC will notify the Town when a filter is needed for a private drinking water well.

COMMENT 27: Explain the SVE system.

RESPONSE 27: A soil vapor extraction system uses a vacuum to extract organic vapors and air from soil voids that exist above the groundwater table. The air and vapors in the soil voids is pulled out by a vacuum and the contaminants (semi-volatile and volatile organic compounds) that normally adhere to soil particles are pulled out in this air stream. This air stream is passed through activated carbon filters and the contaminants are captured.

COMMENT 28: Will there be harmful byproducts or odors from the ORC/HRC?

RESPONSE 28: No, there will not.

COMMENT 29: The soil data numbers are high in the RI/FS.

RESPONSE 29: Those numbers are waste characterization samples that were taken during the IRM to identify what contaminants existed around the underground storage tanks. Most of that material was removed with the contaminated soils during the IRM.

COMMENT 30: What would be included in the engineering controls?

RESPONSE 30: The engineering controls will include site paving and drainage improvements that will help reduce the infiltration of surface water into the source area.

COMMENT 31: **A** hit of MTBE below standards was detected in the Town water supply.

RESPONSE 31: The Town supply wells are located to the south of Old Hopewell Road. From the data available, they are not downgradient of the Greer site and should not be affected by the contamination at Greer. Since there are numerous petroleum spill sites in that area, your comment will be forwarded to the NYSDEC Spills unit. The Town water supply wells will continue to be monitored.

COMMENT 32: Could the contamination at Greer Toyota be the source of chloride contamination in the Town supply wells?

RESPONSE 32: For reasons stated in RESPONSE **3 1,** Greer Toyota is not a source for chloride contamination of the supply wells.

COMMENT 33: There should be a regional groundwater study to get an overall picture of the contamination in the area, what are the funding sources for such a study?

RESPONSE 33: Though a regional groundwater study would be beneficial to assess the surrounding area, the NYSDEC does not believe it is needed to assess the contamination at the Greer site. The RI/FS data has identified the Greer property source area. The off-site impacts related to the Greer contamination have been investigated by well surveys. The NYSDEC is not aware of funding sources for such a study.

COMMENT 34: A waterline extension should be considered up Old Hopewell Road to Route 9 for the homes impacted.

RESPONSE 34: This was not considered as one of the remedial alternatives, because only two off-site wells have been impacted by Greer Toyota contamination. With implementation of the remedy, the concentrations of contaminants are likely to drop further. To access the two off-site properties impacted by the Greer Toyota contamination, the waterline would need to be extended along Old Route 9 and Curry Road. The cost of the extension would be inordinately high. It must be remembered that Greer Toyota would be required to implement the treatment remedy even if the waterline were to be expanded.

COMMENT 35: Any possibility of the State funding a waterline extension?

RESPONSE 35: **If** the Town were to extend the waterline, NYSDEC Spills would

review the potential of contributing funds towards the waterline extension costs equal in amount to what NYSDEC Spills is now paying and will pay in the future to maintain carbon filter units along the extended section of the waterline.

The State Drinking Water Revolving Fund provide low interest loans for the development of water systems. To get more information on the program, please contact Dave Philips of the New York State Department of Health at (518) 402-7650.

COMMENT 36: Are funds available to assist the Town in extending the waterline?

RESPONSE 36: See response 35.

COMMENT 37: The State assisted with the Hyde Park waterline extension.

RESPONSE 37: The Hyde Park issue referred to is being handled by the NYSDEC Spills program. This program has the ability to provide filter systems to potable wells that have been impacted with petroleum products through a fund that has been set up by the State of New York. When the source of the contamination has been determined and a responsible party has been identified, the Attorney General takes legal actions against the responsible party to recover all costs expended by the Spill program. In the case of Hyde Park, the Spill program has installed over 90 filter systems in one neighborhood. The Town of Hyde Park is proceeding with a plan to expand an existing waterline to serve this area and has requested funding from the Spill program. Depending on the outcome of several legal issues regarding the Hyde Park site, the Spill program may be contributing funds toward the waterline extension project that are equal to the amount of money the program will have to spend to operate and maintain the filter systems already installed.

COMMENT 38: Why weren't residents along Old Hopewell Road informed about spills at the Route 9/Old Hopewell Road gas stations?

RESPONSE 38: See response 2.

COMMENT 39: How can the Town find out where Spills are?
RESPONSE 39: A search for spill sites can be performed on the website *http://www.dec.state.ny.us/website/der/derfoil/.*

COMMENT 40: What is going on with the gas stations at the intersection of Route 9 and Old Hopewell Road?

RESPONSE 40: The 7-11 station had spills in the past. The former Sunoco station has an open spill number. The NYSDEC Spills Program is monitoring the former Sunoco station as well as maintaining carbon filtration units on impacted wells.

APPENDIX B

Administrative Record

Administrative Record

GREER TOYOTA
Record of Greer Toyota
Town of Wappinger, Dutchess County
Site No. 3-14-088

1. Order on Consent Index #W3-0660-93-10: In the Matter of the Development and Implementation of a Remedial Investigation/Feasibility Study for an Inactive Hazardous Waste Disposal Site, New York State Department of Environmental Conservation, September 1997

2. Remedial Investigation/Feasibility Study Report, The Chazen Companies, November 2001

3. Proposed Remedial Action Plan, New York State Department of Environmental Conservation, February 2002

Wayne

New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Technical Support, 11th Floor
625 Broadway, Albany, New York 12233-7020
Phone: (518)402-9543 • **FAX:** (518)402-9595
Website: www.dec.state.ny.us

Denise M. Sheehan
Acting
Commissioner

April 29, 2005

FIELD(1)
FIELD(2)
FIELD(3)
Wappingers Falls, NY 12590

Re: Reclassification of Greer Toyota Site
Site No. 314088

Dear FIELD(4):

The New York State Department of Environmental Conservation (Department) maintains a Registry of sites where hazardous waste disposal has occurred. Property located at 1420 Route 9 in the City of Wappingers Falls within Dutchess County, and designated as Tax Map Section 6157, Block 02, Lot 585606, was recently reclassified as a Class 4 in the Registry. The name and site I.D. number of this property as listed in the Registry is Greer Toyota Site, Site No. 314088.

The Classification Code has been changed from Class 2 to Class 4.

We are sending this letter to you and others who own property near the site listed above, as well as the county and town clerks. We are notifying you about these activities at this site because we believe it is important to keep you informed.

If you currently are renting or leasing your property to someone else, please share this information with them. If you no longer own the property to which this letter was sent, please provide this information to the new owner and provide this office with the name and address of the new owner so that we can correct our records.

The reason for this recent classification decision is as follows:

- The remedy agreed to in the Record of Decision has been implemented. The long-term operation, maintenance, and monitoring of the SVE system and existing groundwater systems in the impacted private well supply wells in ongoing.

If you have any questions or seek additional information, please contact me at (518) 402-9553, or in writing using the address given above.

Sincerely,

Kelly Lewandowski

Kelly A. Lewandowski, P.E.
Chief
Site Control Section

WB/ca

Electronic copies:
D. Desnoyers
K. Lewandowski
R. Schick, Remedial Bureau Director
R. Pergadia, RHWRE
M. Duke, Regional Permit Administrator
Regional CPS
G. Litwin
L. Ennist
W. Bayer

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
Inactive Hazardous Waste Disposal Report

Site Name	Greer Toyota	City	WAPPINGERS FALLS	Zip	12590
Classification	04 Longitude	County	Dutchess	Town	Wappinger
Region	3				
Lattitude	41:34:47:0	73:54:35:0			
Site Type	Structure			Estimated Size	2.3

Site Description

Site Description
This 3.2 acre site is an automobile dealership located off Route 9 in Wappingers Falls, NY. The site is bounded by Route 9 to the east and Old Route 9 (a.k.a. Hopewell Road)to the west. Approximately 1300 feet to the north/northwest of the site and downgradient of it is a stream

Site Features
The site has a large building that houses a new- car show room, a servicing facility, and offices. A smaller building to the north houses the used car show room. The remaining area of the site is asphalted.

Current Use
The site is still used as an automobile dealership and service facility.

Surrounding Uses
The surroundig area has a mix of commercial and residential properties.

Historical Sources of Contamination.
Waste solvents and oils from the servicing facility found their ways into the oil-water separator and then into the diffuser system that acted as a leach field

Investigations/Actions Completed to Date.
In 1992, Dutchess County Health Dept. discovered contamination in 3 private wells near the site. Investigation of the oil-water separator disclosed Petrachloroethylene (PCE) at 7900 ppb, and 1,1,1-trichloroethane (TCA) at 3300 ppb. Filters were installed at the 3 impacted private wells by Greer Toyota. In October 2000, two UST's (waste oil) were removed from the site. Contaminated soils around these tanks were not fully removed due to structural constraints. Additional investigation to further characterize soil and groundwater contamination was conducted in August 2001. An RI/FS was completed in November 2001 and a Record of Decision was issued in March 2002. Pursuant to the ROD, a soil-vapor extraction system was installed in February 2004.
Current Status
The O&M of the SVE system is ongoing. Greer Toyota is continuing to monitor the operation and maintenance of the filters on the private wells.

Materials Disposed at Site

TETRACHLOROETHYLENE (F001,D001 WASTE)	UNKNOWN
1,1,1-TRICHLOROETHANE (F001 WASTE)	UNKNOWN

Analytical Data Available for: Groundwater

Applicable Standards Exceeded for: Groundwater, Drinking Water

Assessment of Environmental Problems

Confirmed groundwater contamination above drinking water standards by tetrachloroethylene, 1,1,1-trichloroethane and trichloroethylene has been documented. The area surrounding the garage is asphalted. The groundwater on the premises are inaccessible. There is no visible population of wildlife and fish at or near the site.

Assessment of Health Problems

Area drinking water wells are contaminated with chlorinated organic compounds. Carbon filters were installed on wells that were contaminated at levels above drinking water standards. The responsible party is monitoring and maintaining the filter units. Soil vapor intrusion does not appear to be an exposure pathway for structures overlying the historically contaminated groundwater since the levels of VOCs have dropped to below groundwater standards. On-site soil contamination is present in the subsurface and covered with pavement. Therefore, direct contact with contaminated soils is not an exposure pathway. On-site soil vapor intrusion does not appear to be a potential pathway at this site due the operation of a soil vapor extraction system.

Owners

Current Owner(s)

Greer Toyota
1420 Route 9
Wappingers Falls NY 12590

Greer Toyota
1420 Route 9
Wappingers Falls NY 12590

Disposal Owner(s)

GREER 9 REALTY CORPO

ZZ

Operators

Greer Toyota
1420 Route 9
Wappingers Falls NY 12590

Greer Toyota
1420 Route 9
Wappingers Falls NY 12590

Greer Toyota
1420 Route 9
Wappingers Falls NY 12590

Greer Toyota
1420 Route 9
Wappingers Falls NY 12590

GREER 9 REALTY CORPORA

ZZ

New York State Department of Environmental Conservation
Division of Environmental Remediation, 12th Floor
5 Broadway, Albany, New York 12233-7011
none: (518) 402-9706 • FAX: (518) 402-9020
Website: www.dec.state.ny.us

Erin M Crotty
Commissioner

DEC 30 2004

Mr. William G. Olsen
Geologist
Chazen Environmental Services, Inc.
21 Fox Street
Poughkeepsie, New York 12601

Re: Petition to Reclassify
Creer Toyota Inactive Hazardous Waste Disposal Site
Site ID 314088

Dear Mr. Olsen:

This is **in** response to your petition letter of September 22, 2004 requesting that the subject site be reclassified from a Class 2 to a Class 4 in the Registry of Inactive Hazardous Wasle Disposal Sites **in** New York State.

The Department has determined that your petition may be granted. This letter will serve as notice of the reclassification.

If you have any questions or problems concerning this determination, please contact Ms. Kelly Lewandowski of the Bureau of Technical Support at (518) 402-9553.

Sincerely,

Dale A. Desnoyers
Director
Division of Environmental Remediation

bcc: CCU#200405202

bec: D. Desnoyers
S. Ervolina
A. English
A. Grant
G. Litwin
R. Schick
R. Pergadia, Region 3
K. Lewandowski
A. Sylvester
W. Bayer

WB/srh

New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Technical Support, 11th Floor
625 Broadway, Albany, New York 12233-7020
Phone: (518) 402-9543 • **FAX: (518)** 402-9595
Website: www.dec.state.ny.us

Denise M. Sheehan
Acting
Commissioner

APR 7 - 2005

Mr. Walter G. Olsen
Chazen Environmental Services
21 Fox Street
Poughkeepsie, **NY 12601**

Dear Mr. Olsen:

As mandated by Section **27-1305** of the Environmental Conservation Law (ECL), the New York State Department of Environmental Conservation (Department) must maintain a Registry of all inactive disposal sites suspected or known to contain hazardous waste. The ECL also mandates that this Department notify the owner of all or any part of each site or area included in the Registry of Inactive Hazardous Waste Disposal Sites as to changes in site classification.

Our records indicate that you are the owner or part owner of the site listed below. Therefore, this letter constitutes notification of change in the classification of such site in the Registry of Inactive Hazardous Waste Disposal Sites in New York State.

DEC Site No. **314088**
Site Name: Greer Toyota Site
Site Address: **1420** Route **9**
Wappingers Falls, ***NY*** 12590

Classification change from **2** to **4.**

The reason for the change is as follows:

The remedy agreed to in the Record of Decision has been implemented. The long-term operation, maintenance, and monitoring of the **SUE** system and existing groundwater systems in the impacted private well supply wells is ongoing.

Enclosed is a copy of the New York State Department of Environmental Conservation, Division of Environmental Remediation, Inactive Hazardous Waste Disposal Site Report form **as**

it appears in the Registry and Annual Report, and an explanation of the site classifications. The Law allows the owner and/or operator of a site listed in the Registry to petition the Commissioner of the New York State Department of Environmental Conservation for deletion of such site, modification of site classification, or modification of any information regarding such site, by submitting a written statement setting forth the grounds of the petition. Such petition may be addressed to:

Denise M. Sheehan
Acting Commissioner
New York State Department of Environmental Conservation
625 Broadway
Albany, New York **12233-1010**

For additional information, please contact me at **(518) 402-9553.**

Sincerely,

Kelly A. Lewandowski, P.E.
Chief
Site Control Section

Enclosures
WB/ca

Copy: Andy Greer

Electronic copy: D. Desnoyers
D. Weigel
A. English
K. Lewandowski

Electronic copy w/enclosure (copy of Site Report form only):
R. Dana
G. Litwin, NYSDOH
R. Schick, Remedial Bureau Chief
Regional Attorney
Regional Permit Administrator
R. Pergadia, RHWRE
W. Bayer

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
Inactive Hazardous Waste Disposal Report

Site Code	314088	Address	1420 ROUTE 9
Site Name	Greer Toyota	City	WAPPINGERS FALLS Zip 12590
Classification	04 Longitude	County	Dutchess Town Wappinger
Region	3		
Lattitude	41:34:47:0 73:54:35:0		
Site Type	Structure	Estimated Size	2.3

Site Description

Site Description
This 3.2 acre site is an automobile dealership located off Route 9 in Wappingers Falls, NY. The site is bounded by Route 9 to the east and Old Route 9 (a.k.a. Hopewell Road)to the west. Approximately 1300 feet to the north/northwest of the site and downgradient of it is a stream

Site Features
The site has a large building that houses a new- car show room, a servicing facility, and offices. A smaller building to the north houses the used car show room. The remaining area of the site is asphalted.

Current Use
The site is still used as an automobile dealership and service facility.

Surrounding Uses
The surroundig area has a mix of commercial and residential properties.

Historical Sources of Contamination.
Waste solvents and oils from the servicing facility found their ways into the oil-water separator and then into the diffiser system that acted as a leach field.

Investigations/Actions Completed to Date.
In 1992, Dutchess County Health Dept. discovered contamination in 3 private wells near the site. Investigation of the oil-water separator disclosed Petrachloroethylene (PCE) at 7900 ppb, and 1,1,1-trichloroethane (TCA) at 3300 ppb. Filters were installed at the 3 impacted private wells by Greer Toyota. In October 2000, two UST's (waste oil) were removed from the site. Contaminated soils around these tanks were not fully removed due to structural constraints. Additional investigation to further characterize soil and groundwater contamination was conducted in August 2001. An RI/FS was completed in November 2001 and a Record of Decision was issued in March 2002. Pursuant to the ROD, a soil-vapor extraction system was installed in February 2004.
Current Status
The O&M of the SVE system is ongoing. Greer Toyota is continuing to monitor the operation and maintenance of the filters on the private wells.

Materials Disposed at Site

TETRACHLOROETHYLENE (F001,D001 WASTE)	UNKNOWN
1,1,1-TRICHLOROETHANE (F001 WASTE)	UNKNOWN

Analytical Data Available for : Groundwater

Applicable Standards Exceeded for: Groundwater, Drinking Water

Assessment of Environmental Problems

Confirmed groundwater contamination above drinking water standards by tetrachloroethylene, 1,1,1-trichloroethane and trichloroethylene has been documented. The area surrounding the garage is asphalted. The groundwater on the premises are inaccessible. There is no visible population of wildlife and fish at or near the site.

Assessment of Health Problems

Area drinking water wells are contaminated with chlorinated organic compounds. Carbon filters were installed on wells that were contaminated at levels above drinking water standards. The responsible party is monitoring and maintaining the filter units. Soil vapor intrusion does not appear to be an exposure pathway for structures overlying the historically contaminated groundwater since the levels of VOCs have dropped to below groundwater standards. On-site soil contamination is present in the subsurface and covered with pavement. Therefore, direct contact with contaminated soils is not an exposure pathway. On-site soil vapor intrusion does not appear to be a potential pathway at this site due the operation of a soil vapor extraction system.

Owners

Current Owner(s)

Greer Toyota
1420 Route 9
Wappingers Falls NY 12590

Greer Toyota
1420 Route 9
Wappingers Falls NY 12590

Disposal Owner(s)

GREER 9 FEALTY CORPO

ZZ

Operators

Greer Toyota
1420 Route 9
Wappingers Falls NY 12590

Greer Toyota
1420 Route 9
Wappingers Falls NY 12590

Greer Toyota
1420 Route 9
Wappingers Falls NY 12590

Greer Toyota
1420 Route 9
Wappingers Falls NY 12590

GREER 9 REALTY CORPORA

ZZ

New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Technical Support, 11th Floor
625 Broadway. Albany, New York 12233-7020
Phone: (518) 402-9553 • FAX: (518) 402-9577
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

M E M O R A N D U M

TO: Ram Pergadia, Regional Hazardous Waste Remediation Engineer, Region 3
FROM: Kelly A. Lewandowski, Chief, Site Control Section, Bureau of Technical Support
SUBJECT: Petition to Reclassify Greer Toyota, Site ID **314088**
DATE: OCT 19 2004

We have received a petition from Mr. William G. Olsen of Chazen Environmental Services dated September **22,2004** to reclassify the subject site in the Registry of Inactive Hazardous Waste Disposal Sites in New York State.

Please have this petition reviewed for technical sufficiency and submit your comments/recommendations to me no later than November **17,2004.**

If you have any questions, please contact me or Wayne Bayer of my staff at **(518) 402-9553.**

Attachment

CHAZEN ENVIRONMENTAL SERVICES, INC.

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Phone: (518) 235-8050

Orange County Office
Phone: (845) 567-1133

21 Fox Street, Poughkeepsie, New York 12601
Phone: (545) 454-3980 Far: *(845) 454-4026*
Email: poughkeepsie@chazencompanies.com
Web: www chazencompanies.com

North Country Office
Phone: (518) 812-0513

September 22, 2004

Ms. Erin Crotty, Commissioner
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-1010

Re: Greer Toyota Inactive Hazardous Waste Disposal Site
Wappingers Falls, New York
Petition for Site Reclassification
Site ID #3-14-088

Dear Commissioner Crotty:

On behalf of our client, Greer Toyota, Ltd., The Chazen Companies (TCC) submits this petition to the New York State Department of Environmental Conservation (NYSDEC) to reclassify the Greer Toyota site from a Class 2 to Class 4 Inactive Hazardous Waste Disposal Site. Remedial measures to protect human health and the environment have been successfully implemented, as specified in a Record of Decision (ROD) issued by the NYSDEC in March of 2002. Requirements of the ROD which have been fulfilled are as follows:

- A conceptual design and details necessary for the construction, .operation and maintenance, and monitoring of a two phase remedial program inclnding soil vapor extraction (SVE) and enhanced bioremediation treatment.

- A soil and ground water monitoring program for each phase of the remedial program.

- Maintenance and monitoring of existing treatment (carbon filters) on impacted private supply wells until one half the drinking water standards are met for four consecutive quarterly sampling events.

- Paving of site and continued maintenance that will reduce infiltration in to the source region. Annual certification by property owner to the

NYSDEC that the site is in compliance with engineering controls outlined in the ROD.

The information presented below supports this reclassification request.

General Site Information

The Greer Toyota site is located at 1420 US Route 9 in the Town of Wappingers Falls, Dutchess County, New York. The site consists of approximately 2.3 acres and is surrounded by commercial and residential properties (Figures 1 and 2). During Greer's operation of the property, there were two main buildings on-site: the main showroom/car repair facility and the used car showroom. The site generally does not vary from its previous configuration but there-have been minor upgrades to the site structures and parking areas.

The site is located between the west side of US Route 9 and the east side of Old Hopewell Road. The Greer site is situated in an area designated for industrial, commercial, and residential uses. According to the Town of Wappinger Zoning Ordinance, the site is zoned HB- Highway Business. The property is bounded by commercial facilities to the north, a State highway (Route 9) to the east, a former gasoline station on the east side of Route 9, an unnamed tributary of the Wappingers Creek to the north and west, and commercial and residential properties to the south and southwest (Figure 1). The property located immediately to the west of the site was previously used as a gas station and is currently being used as an auto service station. No water bodies are located on the property. Additionally the property is not located within a 100 or 500 year flood zone and no federally or NYSDEC mapped wetlands are present on the property. A small stream flowing in a southwesterly direction is located approximately 1,000 feet north of the property. This stream eventually joins with two other unnamed streams, which extend northwest towards the Wappingers Creek located approximately 6,000 feet northwest of the Greer Toyota Site. The Surficial Geologic Map of New York suggests that the unconsolidated deposits- are glacial till and that the bedrock surface is within one to three meters of the surface. Bedrock outcrops are found to the east and west of the property. According to the Geologic Map of New York, Lower Hudson Sheet, bedrock below the site consists of the Ordovician Austin Glen formation. The Austin Glen formation consists of graywacke and sandstone interbedded with dark, occasionally massive deep-water shales (Fisher & Warthin, 1976).

The property boundaries also define the boundaries of the inactive hazardous waste site. Existing site conditions are detailed in Figure 5.

Greer 9 Realty Corporation currently owns the property, but the responsible party is listed as Greer Automotive, Ltd. (Greer Toyota). The site is currently leased to DCH, known as Wappingers Falls Toyota-Subaru.

Nature of Past Activities

The Greer Toyota site operated as an automobile dealership and service garage at the time of the original spill. The garage used various cleaning products to clean automobile parts, some of which contained chlorinated solvents. The service garage utilized a series of floor drains to allow washing of the garage floors and the collection of spilt liquids. The floor drains connected to an oil-water separator, allowing the water portion to discharge to the site's septic system. The septic system utilized a diffuser for water infiltration to the ground (Figure 5). Two waste oil underground storage tanks (USTs) were also used by the facility during this time (Figure 5).

In 1991, a drinking water survey in the vicinity of the Greer site conducted by the Dutchess County Health Department (DCHD) revealed three wells were contaminated with chlorinated solvents. This information was forwarded to the NYSDEC and New York State Department of Health (NYSDOH). In 1992, the NYSDEC and DCHD made inspections of local businesses that were suspected of contaminating ground water with chlorinated solvents. The Greer Toyota site was included in these inspections, and samples were collected from the floor drain system, which was suspected by the NYSDEC to be discharging contaminants to the diffuser and eventually ground water. Chlorinated solvents and petroleum contaminants were found in the oil-water separator tank sample, which resulted in the abandonment of the oil-water separator and the floor drains in 1992.

In soils immediately surrounding the diffuser, subsequent soil borings and test pits during the Remedial Investigation/Feasibility Study (RI/FS) identified no chlorinated solvents or petroleum contaminants above NYSDEC soil clean-up guidelines (SCGs). The chlorinated solvents tetrachloroethylene (PCE), 1,1,1-trichloroethane (TCA), and trichloroethylene (TCE), which were identified in area wells during the 1991 DCDH survey, were detected above SGCs in soils surrounding the waste oil USTs.

Remedial Investigations

In 1997, a Consent Order was executed between Greer Toyota and NYSDEC, requiring Greer Toyota to conduct a focused Remedial Investigation/Feasibility Study (RI/FS) to evaluate contamination present at the site. TCC conducted a series of soil boring investigations at the site between 1998 and 2001 to delineate the nature and extent of contamination. The findings of the investigations

indicated that chlorinated solvents and petroleum range compounds above NYSDEC Soil Cleanup Objectives (SCGs) listed in TAGM #4046 were present in the vicinity of the waste oil underground storage tanks (USTs), located off the northwest corner of the main building. No impacts above *SCGs* were detected in the vicinity of the diffuser.

Interim Remedial Measures

Following the RI, Interim Remedial Measures (IRMs) were implemented to address those areas that exceeded the NYSDEC soil cleanup guidance values and to limit the possibility of contaminated groundwater migrating off-site. IRMs were implemented to remove the two waste oil tanks at the facility. The soils surrounding the tanks were impacted with petroleum hydrocarbons and PCE. The impacted soils were excavated to the extent physically possible. Confirmatory samples were taken from the sidewalls of the excavations to verify the effectiveness of the cleanup. The data indicate that the bulk of the problem has been removed but elevated levels of contaminants remain in an obviously stained area under the corner of the building. Perforated piping was installed in each of the tank excavations to facilitate chemical injection and/or soil vapor extraction.

An additional investigation of soils surrounding the tank excavations was conducted in June 2001. Petroleum hydrocarbons and chlorinated solvents were all detected at concentrations below SCGs listed in TAGM #4046, indicating that the bulk of the source had been removed during the IRMs.

The installation of six bedrock monitoring wells in August 2001 yielded. information regarding the hydraulic gradients and groundwater quality across the site. It was determined from data collected from these wells in September 2001 that groundwater in the bedrock aquifer generally flows in a northwestern direction across the site. Groundwater was not encountered in appreciable quantities in the unconsolidated formation. Water levels were below the bedrock/overburden interface in all wells. Furthermore, water chemistry sampling has revealed petroleum hydrocarbons and MTBE in several of the upgradient wells, indicating an off-site source for these compounds. Chlorinated compounds were detected in the downgradient site monitoring wells.

Active Soil **Vapor** Extraction (SVE) and Enhanced Bioremediation

In February 2004, the SVE system became operational to accelerate the attenuation of vadose zone volatile organic compounds (VOCs) remaining in the former source area (Figures **3** and **4,** attached). The system consists of four lines {A, B, C, and D) constructed of **4** inch diameter perforated PVC pipe. Line **A** exists below ground water and therefore has been isolated from the rest of the system.

Pressure and PID (photo-ionization detector) measurements taken from the system are summarized in Table 1. Detectable amounts of VOCs in the system exhaust stack were observed in February and May, and may be related to seasonal. influences. All other sampling events showed VOC concentrations of less than 0.1 parts per million (ppm). The system was initially monitored on a monthly basis, but has resumed to a quarterly basis to coincide with site groundwater sampling. Continued monitoring will help evaluate the remedial effectiveness of this system.

Enhanced bioremediation using products such as Oxygen Release Compound® (ORC) or Hydrogen Release Compound® (HRC) has been deemed unnecessary, considering the bulk of contaminated soils has been removed and improvements in ground water quality downgradient of the site have already been documented.

On-Site Ground Water Monitoring

A quarterly sampling program to monitor bedrock ground water quality beneath the site commenced in August 2001, which consisted of six wells named MW-1 through MW-6. In March 2003 and June 2004, the NYSDEC approved petitions to reduce well sampling to only two wells. The current program consists of analyzing MW-4 for VOCs and SVOCs (semi-volatile organic compounds) by EPA methods 8260 (Target Compound List) and 8270, respectively, while MW-5 is monitored for VOCs. During each sampling event, a water level is taken from all monitoring wells to maintain an updated ground water flow map (Figure 5). .

Monitoring well sampling results from the past four quarters are summarized in Table 2. All monitoring well results since 2001 have previously been submitted to the NYSDEC in quarterly or progress report format. In August 2004, improvements in groundwater quality were noted at MW-4 and MW-5 compared to previous quarters. In MW-4, 1,1-dichloroethene was detected at 6 ppb (parts per billion) while no VOCs were detected in MW-5. No SVOCs were detected in MW-4. Monitoring wells MW-2 and MW-6 were last sampled during May 2004. At this time, all VOCs and SVOCs analyzed were below the applicable ground waters standard, with the exception of 1,1-dichloroethene, which was detected in MW-6 at 6 ppb, which slightly exceeds the State's ground water standard (5ppb).

The private supply well that serves the buildings currently leased by Wappingers Falls Toyota Subaru is treated by carbon filtration and is maintained and sampled on a quarterly basis by the lessee. System performance sampling results from the past four quarters are presented in Table 3. No VOCs were detected in any sample above New York State Department of Health drinking water standards. As per the Dutchess County Health Department (DCHD), pre-treatment samples were collected on a semi-annual basis.

Off-Site Ground Water Monitoring

Two off-site private supply wells with carbon filtration systems continue to be monitored and maintained by Greer Automotive, Ltd. The two wells serve the Halpin Residence and Optimum Window, which are located downgradient of the Greer site to the northwest and north, respectively (Figure 2). System performance sampling results from the past four quarters are presented in Table **3.** No VOCs were detected in any sample above New York State Department of Health drinking water standards. Within the next year, these properties, including the Greer Toyota site, will be served by a new municipal water line, at which point a petition to abandon operation and maintenance of the carbon filtration systems will be filed with the NYSDEC and DCHD. These wells and filtration systems will continue to be maintained and sampled on a quarterly basis until that time.

Private Well Sampling Survey

A private well sampling survey near the Greer site was conducted by DCHD in 2002. The purpose of this survey was to confirm that no other wells in the area were impacted by site related contaminants. To our knowledge, only the Halpin residence, Optimum Window, and former Greer Toyota wells were impacted by contaminants found at the Greer site.

Source Area Infiltration

The contaminant source areas delineated during the Remedial Investigations were capped with asphalt pavement to reduce infiltration.

Operation and Maintenance

The Operation and Maintenance manual for the site was approved by the NYSDEC on September 15,2004. The manual outlines all information regarding the continued operation, maintenance, and monitoring of the site remedial program.

Annual Certification

The SVE system was put on line during February of this year. Beginning this year, an annual report will be submitted to the NYSDEC to certify that the Greer site is in compliance with the engineering controls outlined in the ROD. The report will also summarize SVE air monitoring and groundwater sampling data for the year.

Closing

As described above, hazardous wastes at the Greer Toyota site have been fully investigated in conjunction with the NYSDEC and remedies have appropriately been applied to the areas of concern addressed in the ROD. The on-site soil vapor extraction system proceeds to operate on a continual basis to remove source area contaminants in soil. The source area is currently covered by asphalt pavement, which eliminates or significantly reduces infiltration and leaching of contaminants to ground water. The quarterly sampling program in place continues to monitor improvements in ground water quality beneath the site and the historically impacted supply wells. For these reasons, TCC requests that the Greer Toyota site be reclassified from a Class 2 to Class **4** Inactive Hazardous Waste Disposal Site.

Should you have any questions regarding this matter, please feel free to contact either Dan Michaud or me at (845) **454-3980.**

Sincerely,

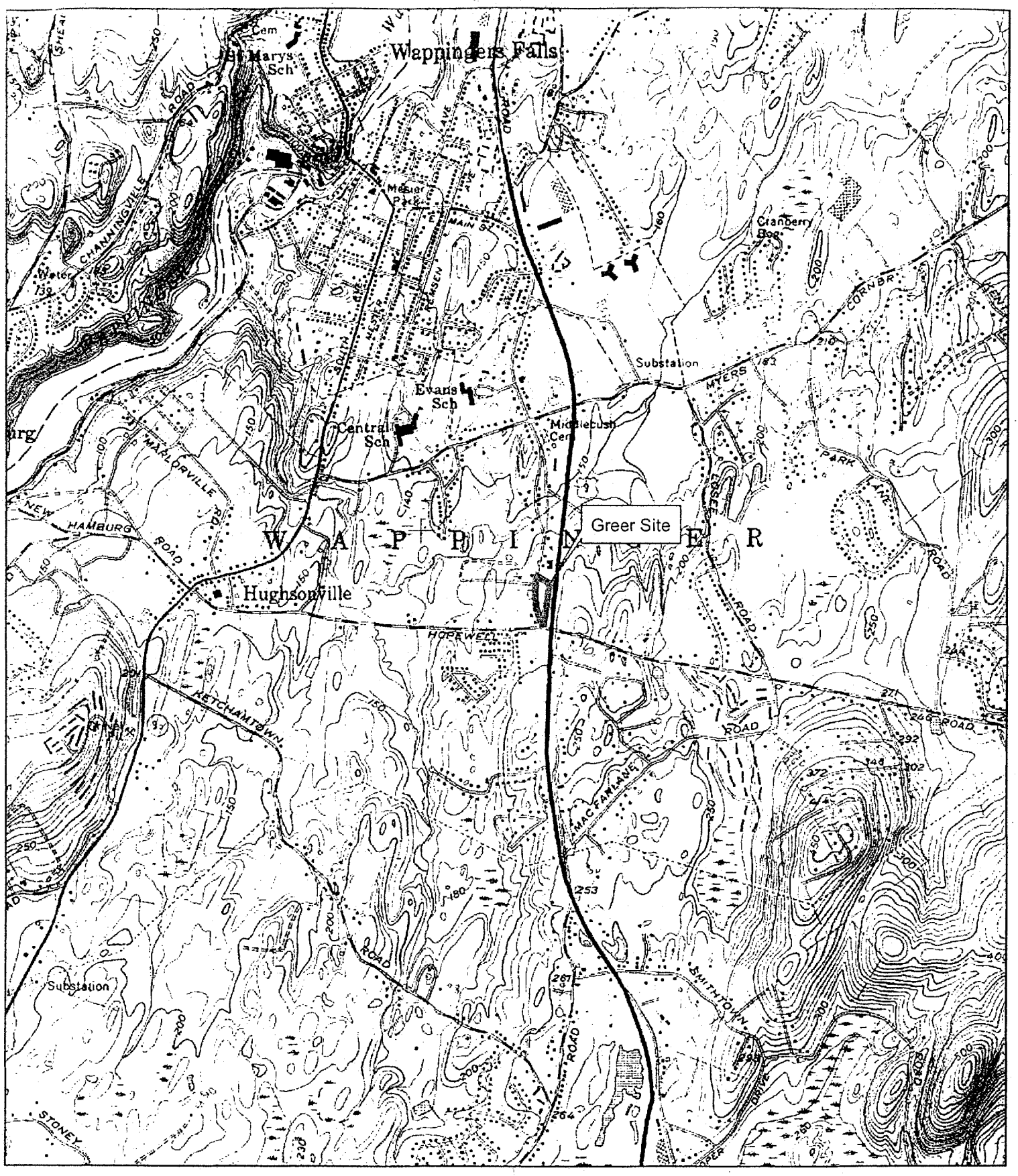
William G. Olsen
Geologist

STATE OF NEW YORK
DANIEL W. STONE
LICENSED PROFESSIONAL ENGINEER
052135

P.E. Certification

WGO/figures, tables

cc: Cindy Greer, Greer Automotive, Ltd.
Endra Mahamooth, NYSDEC, Region **3**
Bridget Callaghan, NYSDOH
Dan Stone, P.E., TCC
Doug McClure, P.E., TCC
Chuck Alongi, TCC
Dan Michaud, TCC



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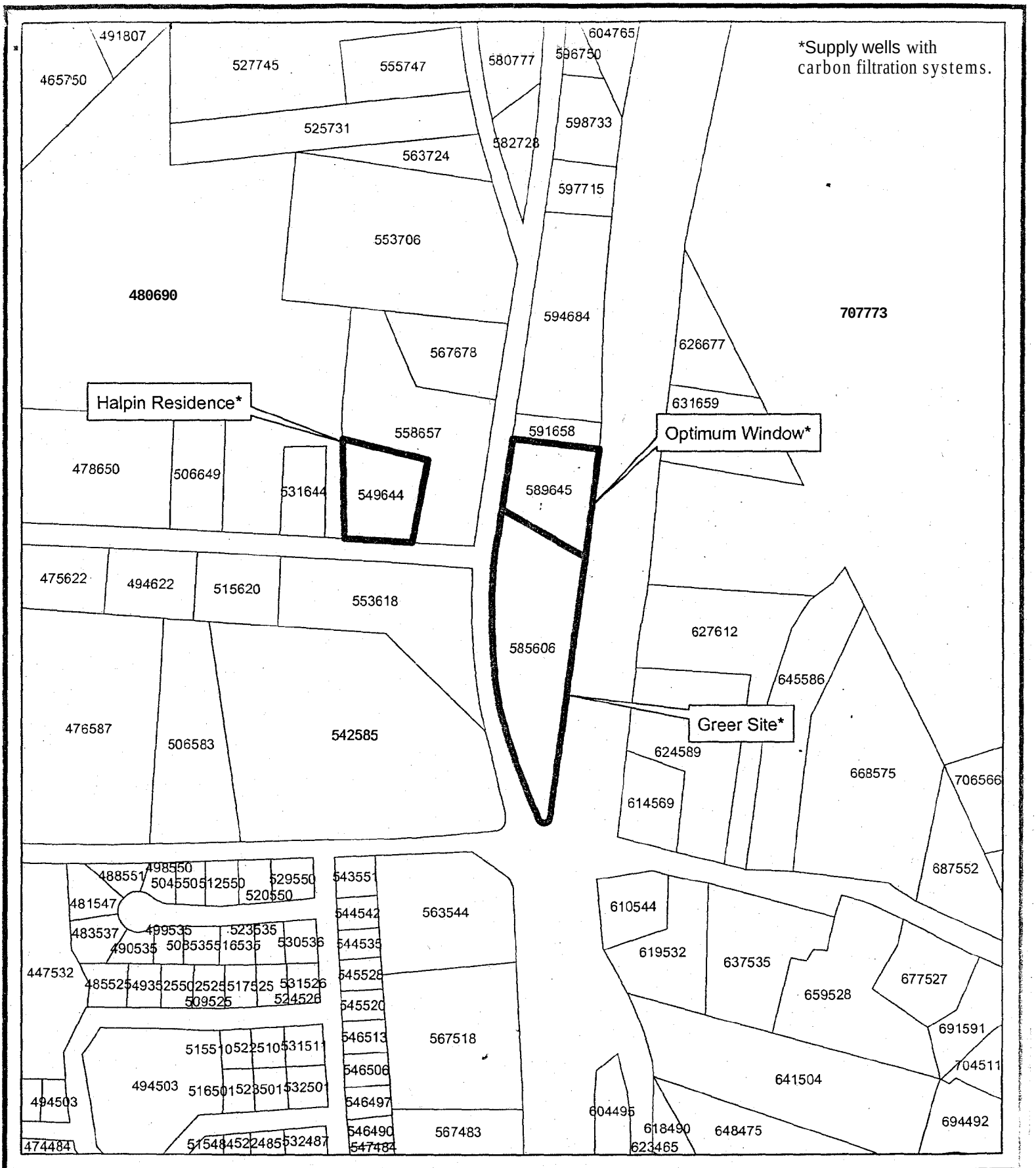
Phone (518) 812-0513

Chazen Companies
Engineers/Surveyors
Planners
Environmental Scientists
GIS Consultants

Figure 1: Site Location Map

Greer Site # 3-14-088
Wappingers Falls, NY

Created by:	STF
Date:	September 2004
Scale:	1 in = 2000 ft
Project #:	49799.25



THE Chazen COMPANIES

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Planners
Environmental Scientists
GIS Consultants

CHAZEN ENGINEERING & LAND SURVEYING CO., P.C.

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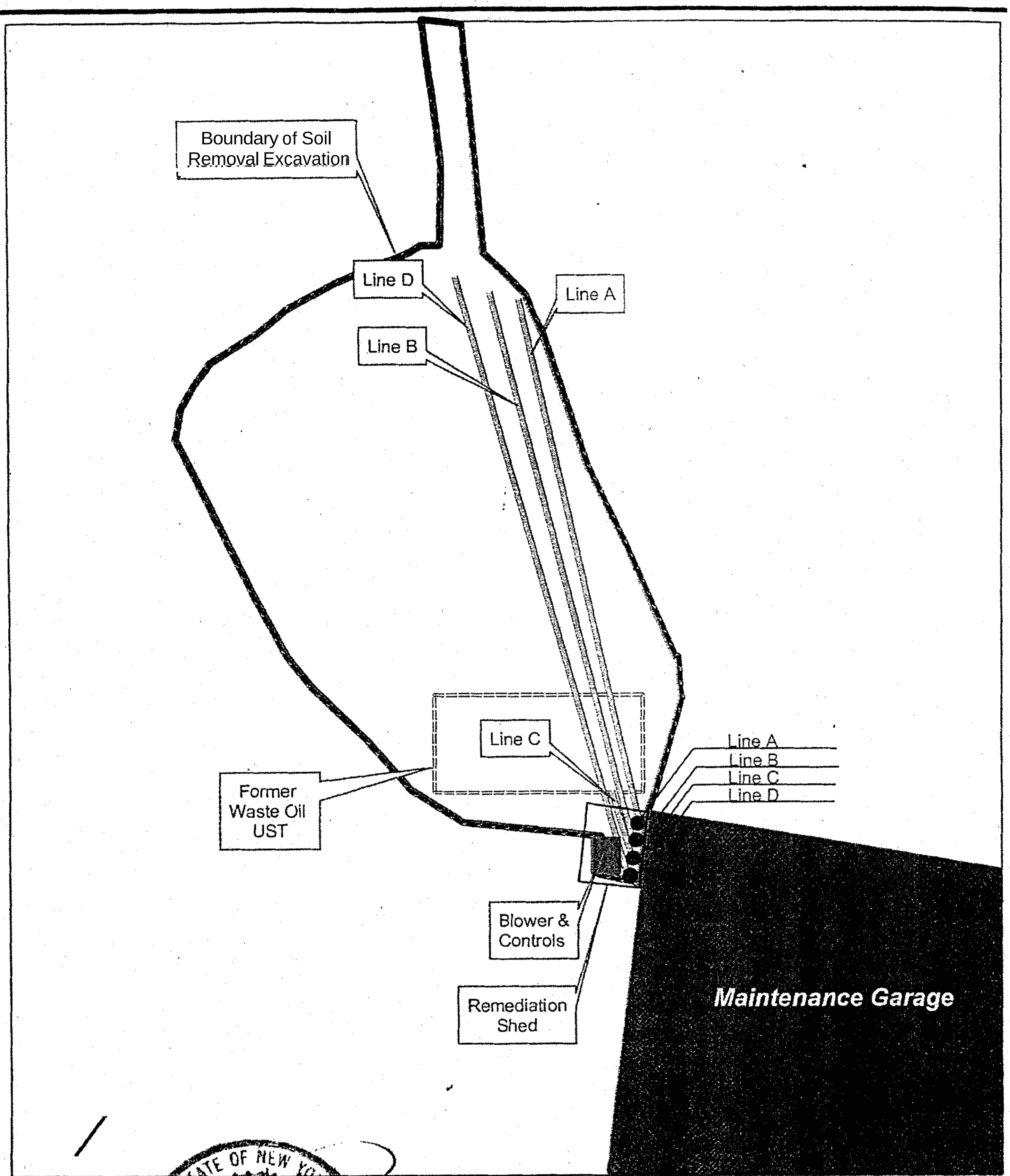
Capital District Office: 20 Gurley Avenue, Troy, New York 12182, Phone: (518) 235-8050
North Country Office: 110 Glen Street, Glens Falls, New York 12801, Phone: (518) 812-0513

Figure **2:** Tax Map

Greer Site # 3-14-088
Wappingers Falls, NY

Created by:	STF
Date:	September 2004
Scale:	1 in = 300 ft
Project #:	49799.25



THE Chazen COMPANIES

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Planners
Environmental Scientists
GIS Consultants

STATE OF NEW YORK
No. 52135
LICENSED PROFESSIONAL ENGINEER

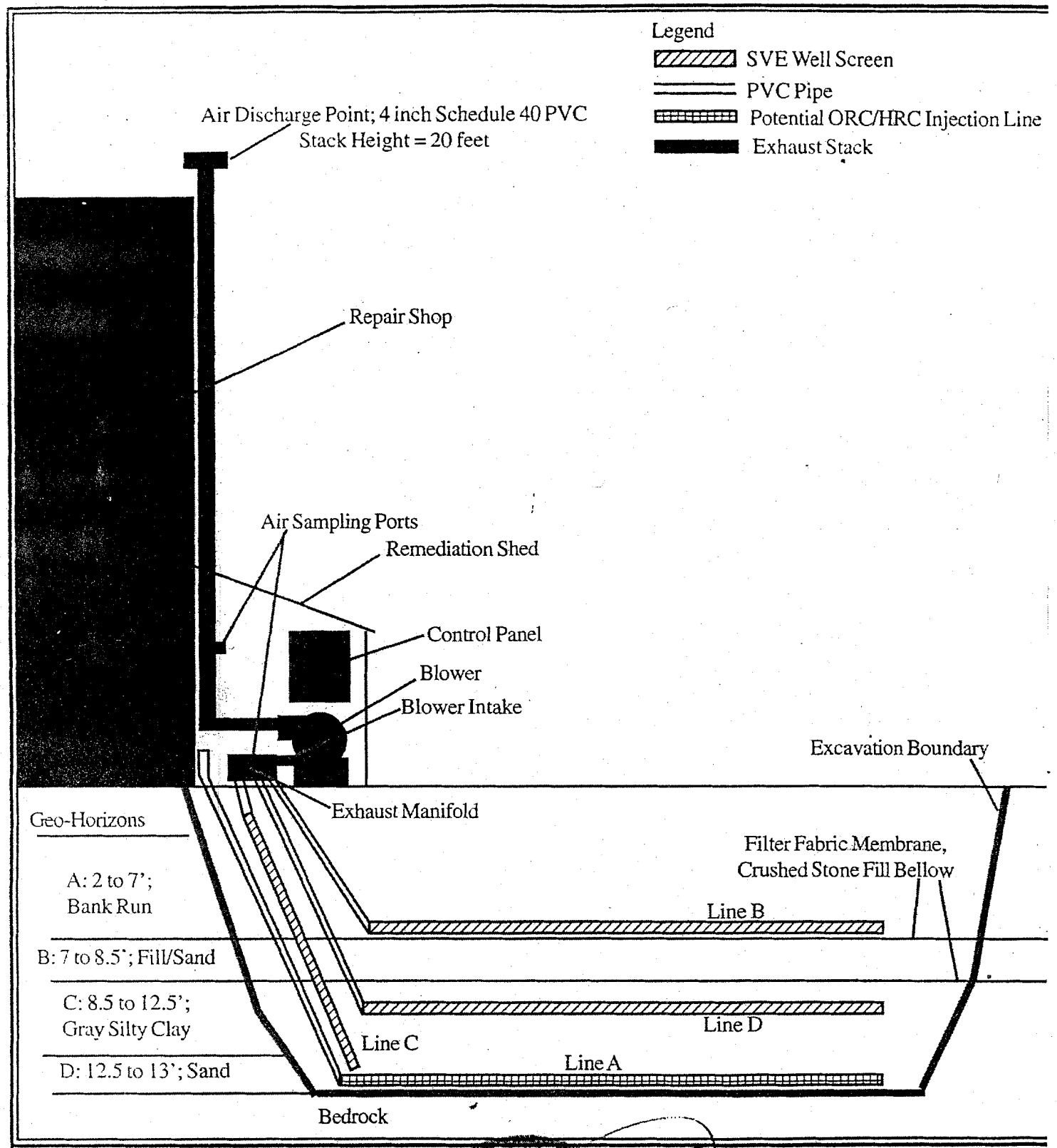
CHAZEN ENGINEERING & LAND SURVEYING CO., P.C.

This map is a product of The Chazen Companies. It should be used for reference purposes only. Reasonable efforts have been made to ensure the accuracy of this map. The Chazen Companies expressly disclaims any responsibilities or liabilities from the use of this map for any purpose other than its intended use.

Figure 3:
SVE System/Pipes

Greer Site # 3-14-088
Wappingers Falls, NY

Created by:	DPM/JM
Date:	March 2004
Scale:	~1 in = 5 ft
Project #:	49799.25



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STATE OF NEW YORK
DANIEL W. STONE
No. 52135
LICENSED PROFESSIONAL ENGINEER

FIGURE 4 - SVE System

Greer Site; # 3-14-088
Route 9
Town of Wappingers,
Dutchess County, New York

Date: March, 2004

Scale: Not to Scale

Project #: 49799.25

Greer *Toyota*

Table 1. Soil Vapor Extraction (SVE) System Monitoring

Sample Location	Individual Lines		All Lines Open (normal operation)			Mass Discharge Rate^
	maximum pressure. (inches of WC)	PID Readings (ppm)**	maximum pressure' (inches of WC)	Air Flow (cubic feet *per minute)*	PID Readings (ppm)**	(lbs/hour)
Exhaust (Post-Blower)			0.45	127	0.7	0.002
Combined Intake (Pre-Blower)			-1.2			
Line B	-4	1	-0.9	42.3		0.0004
Line C	-4.5	0.5	-1.2	42.3		0.0007
Line D	-15.2	0.7	-1.3	42.3		0.0008
Background PID (outside)		0.2			0.2	
DATE:	*3/16/04*					
Exhaust (Post-Blower)			0.9	127	0.0	0
Combined Intake (Pre-Blower)			-1.4			
Line B	nm	0.0	-1.2	42.3		0
Line C	nm	0.0	-1.3	42.3		0
Line D	nm	0.0	-1.4	42.3		0
Background PID (outside)		0.0			0.0	
DATE:	*4/20/04*					
Exhaust (Post-Blower)			0.8	127	0.0	0
Combined Intake (Pre-Blower)			-1.1			
Line B	nm	0.0	-0.9	42.3		0
Line C	nm	0.0	-0.9	42.3		0
Line D	nm	0.0	-0.9	42.3		0
Background PID (outside)		0.0			0.0	
DATE:	*5/19/04*					
Exhaust (Post-Blower)			0.4	127	16.9	0.0386
Combined Intake (Pre-Blower)			0.8			
Line B	0.9	0.0	<0.1	42.3		0
Line C	0.9	0.0	<0.1	42.3		0
Line D	0.3	0.0	0.3	42.3		0
Background PID (outside)		0.1			0.1	
DATE:	*6/16/04*					
Exhaust (Post-Blower)			0.6	127	0.0	0
Combined Intake (Pre-Blower)			0.1			
Line B	1	0.0	0.1	42.3		0
Line C	1	0.0	0.1	42.3		0
Line D	0.6	0.0	<0.1	42.3		0
Background PID (outside)		0.0			0.0	
DATE:	*8/24/04*					
Exhaust (Post-Blower)			nm	127	0.0	0
Combined Intake (Pre-Blower)			nm			
Line B	nm	0.0	nm	42.3		0
Line C	nm	0.0	nm	42.3		0
Line D	nm	0.0	nm	42.3		0
Background PID (outside)		0.0			0.0	

• all pressures measured with a digital manometer at the system sample ports; all pressures beginning in May 2004 were measured using a pido tube Negative pressures indicate suction at sample ports before blower

** PID Readings taken by manually inserting PID nozzle in to 1/4" sample port hole in PVC exhaust line

*Calculations assume molecular weight of Tnchloroethene (TCE)

Airflows are the theroretical maximums based on the blower performance curve for the particular model being used

nm - not measured

Greer Toyota

MW-2

Table 2. Quarterly Sampling Results - Bedrock Monitoring Wells

SAMPLE DATE:	11/18/2003	2/18/2004	5/19/2004	TOGS 1.1.1 Class GA Groundwater Standard (ppb)
Volatiles - EPA 8260 (TCL list) + MTBE (Results in ppb)				
Acetone	ND	ND	ND	50
Benzene	ND	ND	ND	1
Bromodichloromethane	ND	ND	ND	50
Bromoform	ND	ND	ND	50
Bromomethane	ND	ND	ND	5
2-Butanone	ND	ND	ND	50
Methyl-Tert-Butyl-Ether (MTBE)	2	1	3	10
Carbon Disulfide	ND	ND	ND	5
Carbon Tetrachloride	ND	ND	ND	5
Chlorobenzene	ND	ND	ND	5
Chloroethane	ND	ND	ND	5
Chloroform	ND	ND	ND	7
Chloromethane	ND	ND	ND	5
Dibromochloromethane	ND	ND	ND	50
1,1-Dichloroethane	ND	ND	ND	0.6
1,2-Dichloroethane	ND	ND	ND	0.6
1,1-Dichloroethene	ND	ND	ND	5
cis-1,2-Dichloroethene	ND	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	ND	5
1,2-Dichloropropane	ND	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	ND	5
Ethylbenzene	ND	ND	ND	5
2-Hexanone	ND	ND	ND	50
Methylene Chloride	ND	ND	ND	5
4-Methyl-2-Pentanone	ND	ND	ND	5
Styrene	ND	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	ND	5
Tetrachloroethene	ND	ND	ND	5
Toluene	ND	ND	ND	5
1,1,1-Trichloroethane	ND	ND	ND	5
1,1,2-Trichloroethane	ND	ND	ND	1
Trichloroethene	ND	ND	ND	5
Vinyl Chloride	ND	ND	ND	2
O-Xylene	ND	ND	ND	5
M+P-Xylene	ND	ND	ND	5
Semi-Volatiles - EPA 8270 List (Results in ppb)				
Acenaphthene	na	na	na	20
Acenaphthylene	na	na	na	5
Anthracene	na	na	na	50
Benzo(a)anthracene	na	na	na	0.002
Benzo(a)pyrene	na	na	na	MDL
Benzo(b)fluoranthene	na	na	na	0.002
Benzo(g,h,I)perylene	na	na	na	NA
Benzo(k)fluoranthene	na	na	na	0.002
Benzyl Alcohol	na	na	na	5
Butyl Benzyl Phthalate	na	na	na	50
DI-N-Butylphthalate	na	na	na	5
Carbazole	na	na	na	5
Indeno(1,2,3-cd)pyrene	na	na	na	0.002
4-Chloroaniline	na	na	na	5
Bis (-2-Chloroethoxy) Methane	na	na	na	5
Bis (2-Chloroethyl) ether	na	na	na	0.03
2-Chloronaphthalene	na	na	na	10

MW-2

Table 2. Quarterly Sampling Results - Bedrock Monitoring Wells

SAMPLE DATE:	11/18/2003	2/18/2004	5/19/2004	TOGS 1.1.1 Class GA Groundwater Standard (ppb)
2-Chlorophenol	na	na	na	1**
2,2' - Oxybis (1-Chloropropane)	na	na	na	5
Chyrsene	na	na	na	0.002
Dibenz(a,h)anthracene	na	na	na	5
Dibenzofuran	na	na	na	5
1,3-dichlorobenzene	na	na	na	3
1,2-dichlorobenzene	na	na	na	3
1,4-dichlorobenzene	na	na	na	3
3,3' -dichlorobenzidine	na	na	na	5
2,4-dichlorophenol	na	na	na	5
Diethylphthalate	na	na	na	50
Dimethyl Phthalate	na	na	na	50
2,4-dimethlyphenol	na	na	na	50
2,4-dinitrophenol	na	na	na	10
2,4-dinitrotoluene	na	na	na	5
2,6-dinitrotoluene	na	na	na	5
Bis (2-ethylhexyl) Phthalate	na	na	na	5
Fluoranthene	na	na	na	50
Fluorene	na	na	na	50
Hexachlorobenzene	na	na	na	0.04
Hexachlorobutadiene	na	na	na	0.5
Hexachlorocyclopentadiene	na	na	na	5
Hexachloroethane	na	na	na	5
Isophorone	na	na	na	50
2-methylnaphthalene	na	na	na	5
4,6-dinitro-2-methylphenol	na	na	na	1**
4-Chloro-3-Methylphenol	na	na	na	1**
2-Methylphenol	na	na	na	1**
3+4-Methylphenol	na	na	na	1**
Naphthalene	na	na	na	10
2-Nitroaniline	na	na	na	5
3-Nitroaniline	na	na	na	5
4-Nitroaniline	na	na	na	5
Nitrobenzene	na	na	na	0.4
2-Nitrophenol	na	na	na	1**
4-Nitrophenol	na	na	na	1**
N-Nitrosodimethylamine	na	na	na	5
N-Nitrosodiphenylamine	na	na	na	50
Di-N-Octyl Phthalate	na	na	na	5
Pentachlorophenol	na	na	na	1**
Phenanthrene	na	na	na	50
Phenol	na	na	na	1**
4-Bromophenyl-phenylether	na	na	na	5
4-Chlorophenyl-phenylether	na	na	na	5
N-Nitroso-Di-N-Propylamine	na	na	na	5
Pyrene	na	na	na	50
1,2,4-Trichlorobenzene	na	na	na	5
2,4,6-Trichlorophenol	na	na	na	1**
2,4,5-Trichlorophenol	na	na	na	1**
Laboratory	**York**	**York**	**York**	

As per **NYSDEC,** MW-2 was eliminated from the monitoring program as of 613012004.
"na" indicates sample was not analyzed for these parameters
"ns" indicates sample was not taken
Compounds detected in exceedence of TOGS 1.1.1 groundwater standards are shaded; **values** an attached **"J"** are estimates which indicate the compound is present, but at concentrations **be**
** the sum of all phenolic compounds without individual standards shall not exceed 10 ppb.

Greer Toyota

MW-4

Table 2. Quarterly Sampling Results - Bedrock Monitoring Wells

SAMPLE DATE:	11/18/2003	2/18/2004	5/19/2004	8/24/2004	TOGS 1.1.1 Class GA Groundwater Standard (ppb)
Volatiles - EPA 8260 (TCL list) + MTBE (Results in ppb)					
Acetone	ND	ND	ND	ND	50
Benzene	ND	ND	ND	ND	1
Bromodichloromethane	ND	ND	ND	ND	50
Bromoform	ND	ND	ND	ND	50
Bromomethane	ND	ND	ND	ND	5
2-Butanone	ND	ND	ND	ND	50
Methyl-Tert-Butyl-Ether (MTBE)	ND	1	ND	ND	10
Carbon Disulfide	ND	ND	ND	ND	5
Carbon Tetrachloride	ND	ND	ND	ND	5
Chlorobenzene	ND	ND	ND	ND	5
Chloroethane	ND	ND	ND	ND	5
Chloroform	ND	ND	ND	ND	7
Chloromethane	ND	ND	ND	ND	5
Dibromochloromethane	ND	ND	ND	ND	50
1,1-Dichloroethane	ND	ND	ND	ND	0.6
1,2-Dichloroethane	ND	ND	ND	ND	0.6
1,1-Dichloroethene	3	4	4	ND	5
cis-1,2-Dichloroethene	ND	ND	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	ND	ND	5
1,2-Dichloropropane	ND	ND	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	ND	ND	5
Ethylbenzene	ND	ND	ND	ND	5
2-Hexanone	ND	ND	ND	ND	50
Methylene Chloride	ND	ND	ND	ND	5
4-Methyl-2-Pentanone	ND	ND	ND	ND	5
Styrene	ND	ND	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	5
Tetrachloroethene	ND	ND	ND	ND	5
Toluene	ND	ND	ND	ND	5
1,1,1-Trichloroethane	1	ND	1	ND	5
1,1,2-Trichloroethane	ND	ND	ND	ND	1
Trichloroethene	ND	ND	ND	ND	5
Vinyl Chloride	ND	ND	ND	ND	2
O-Xylene	ND	ND	ND	ND	5
M+P-Xylene	ND	ND	ND	ND	5
Semi-Volatiles - EPA 8270 List (Results in ppb)					
Acenaphthene	ND	ND	ND	ND	20
Acenaphthylene	ND	ND	ND	ND	5
Anthracene	ND	ND	ND	ND	50
Benzo(a)anthracene	ND	ND	ND	ND	0.002
Benzo(a)pyrene	ND	ND	ND	ND	MDL
Benzo(b)fluoranthene	ND	ND	ND	ND	0.002
Benzo(g,h,I)perylene	ND	ND	ND	ND	NA
Benzo(k)fluoranthene	ND	ND	ND	ND	0.002
Benzyl Alcohol	ND	ND	ND	ND	5
Butyl Benzyl Phthalate	ND	ND	ND	ND	50
DI-N-Butylphthalate	ND	ND	ND	ND	5
Carbazole	ND	ND	ND	ND	5
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	0.002
4-Chloroaniline	ND	ND	ND	ND	5
Bis (-2-Chloroethoxy) Methane	ND	ND	ND	ND	5
Bis (2-Chloroethyl) ether	ND	ND	ND	ND	0.03
2-Chloronaphthalene	ND	ND	ND	ND	10

Greer Toyota

Mw-4

Table 2. Quarterly Sampling Results - Bedrock Monitoring Wells

SAMPLE DATE:	11/18/2003	2/18/2004	5/19/2004	8/24/2004	TOGS 1.1.1 Class GA Groundwater Standard (ppb)
2-Chlorophenol	ND	ND	ND	ND	1**
2,2' - Oxybis (1-Chloropropane)	ND	ND	ND	ND	5
Chyrsene	ND	ND	ND	ND	0.002
Dibenz(a,h)anthracene	ND	ND	ND	ND	5
Dibenzofuran	ND	ND	ND	ND	5
1,3-dichlorobenzene	ND	ND	ND	ND	3
1,2-dichlorobenzene	ND	ND	ND	ND	3
1,4-dichlorobenzene	ND	ND	ND	ND	3
3,3' -dichlorobenzidine	ND	ND	ND	ND	5
2,4-dichlorophenol	ND	ND	ND	ND	5
Diethylphthalate	ND	ND	ND	ND	50
Dimethyl Phthalate	ND	ND	ND	ND	50
2,4-dimethlyphenol	ND	ND	ND	ND	50
2,4-dinitrophenol	ND	ND	ND	ND	10
2,4-dinitrotoluene	ND	ND	ND	ND	5
2,6-dinitrotoluene	ND	ND	ND	ND	5
Bis (2-ethylhexyl) Phthalate	ND	ND	ND	ND	5
Fluoranthene	ND	ND	ND	ND	50
Fluorene	ND	ND	ND	ND	50
Hexachlorobenzene	ND	ND	ND	ND	0.04
Hexachlorobutadiene	ND	ND	ND	ND	0.5
Hexachlorocyclopentadiene	ND	ND	ND	ND	5
Hexachloroethane	ND	ND	ND	ND	5
Isophorone	ND	ND	ND	ND	50
2-methylnaphthalene	ND	8	ND	ND	5
4,6-dinitro-2-methylphenol	ND	ND	ND	ND	1**
4-Chloro-3-Methylphenol	ND	ND	ND	ND	1**
2-Methylphenol	ND	ND	ND	ND	1**
3+4-Methylphenol	ND	ND	ND	ND	1**
Naphthalene	ND	ND	ND	ND	10
2-Nitroaniline	ND	ND	ND	ND	5
3-Nitroaniline	ND	ND	ND	ND	5
4-Nitroaniline	ND	ND	ND	ND	5
Nitrobenzene	ND	ND	ND	ND	0.4
2-Nitrophenol	ND	ND	ND	ND	1**
4-Nitrophenol	ND	ND	ND	ND	1**
N-Nitrosodimethylamine	ND	ND	ND	ND	5
N-Nitrosodiphenylamine	ND	ND	ND	ND	50
DI-N-Octyl Phthalate	ND	ND	ND	ND	5
Pentachlorophenol	ND	ND	ND	ND	1**
Phenanthrene	ND	ND	ND	ND	50
Phenol	ND	ND	ND	ND	1**
4-Bromophenyl-phenylether	ND	ND	ND	ND	5
4-Chlorophenyl-phenylether	ND	ND	ND	ND	5
N-Nitroso-Di-N-Propylamine	ND	ND	ND	ND	5
Pyrene	ND	ND	ND	ND	50
1,2,4-Trichlorobenzene	ND	ND	ND	ND	5
2,4,6-Trichlorophenol	ND	ND	ND	ND	1**
2,4,5-Trichlorophenol	ND	ND	ND	ND	1**
Laboratory	**York**	**York**	**York**	**York**	

"na" indicates sample was not analyzed for these parameters
"ns" indicates sample was not taken
Compounds detected in exceedence of TOGS 1.1.1 groundwater standards are shaded; values with an attached "J" are estimates which indicate the compound is present, but at concentrations below the MD
** the sum of all phenolic compounds without individual standards shall not exceed 1.0 ppb.

Greer Toyota

MW-5

Table 2. Quarterly Sampling Results - Bedrock Monitoring Wells

SAMPLE DATE:	11/18/2003	2/18/2004	5/19/2004	8/24/2004	TOGS 1.1.1 Class GA Groundwater Standard (ppb)
Volatiles - EPA 8260 (TCL list) + MTBE (Results in ppb)					
Acetone	ND	ND	ND	ND	50
Benzene	ND	1	2	ND	1
Bromodichloromethane	ND	ND	ND	ND	50
Bromoform	ND	ND	ND	ND	50
Bromomethane	ND	ND	ND	ND	5
2-Butanone	ND	ND	ND	ND	50
Methyl-Tert-Butyl-Ether (MTBE)	1	ND	2	ND	10
Carbon Disulfide	ND	ND	ND	ND	5
Carbon Tetrachloride	ND	ND	ND	ND	5
Chlorobenzene	ND	ND	ND	ND	5
Chloroethane	ND	ND	ND	ND	5
Chloroform	ND	ND	ND	ND	7
Chloromethane	ND	ND	ND	ND	5
Dibromochloromethane	ND	ND	ND	ND	50
1,1-Dichloroethane	ND	ND	ND	ND	0.6
1,2-Dichloroethane	ND	ND	ND	ND	0.6
1,1-Dichloroethene	19	22	23	6	5
cis-1,2-Dichloroethene	4	2	3	ND	5
trans-1,2-Dichloroethene	ND	ND	ND	ND	5
1,2-Dichloropropane	ND	ND	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	ND	ND	5
Ethylbenzene	ND	ND	ND	ND	5
2-Hexanone	ND	ND	ND	ND	50
Methylene Chloride	ND	ND	ND	ND	5
4-Methyl-2-Pentanone	ND	ND	ND	ND	5
Styrene	ND	ND	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	5
Tetrachloroethene	2	2	3	ND	5
Toluene	ND	ND	ND	ND	5
1,1,1-Trichloroethane	1	1	1	ND	5
1,1,2-Trichloroethane	ND	ND	ND	ND	1
Trichloroethene	1	ND	2	ND	5
Vinyl Chloride	ND	ND	ND	ND	2
O-Xylene	ND	ND	ND	ND	5
M+P-Xylene	ND	ND	ND	ND	5
Semi-Volatiles - EPA 8270 List (Results in ppb)					
Acenaphthene	ND	ND	ND	ns	20
Acenaphthylene	ND	ND	ND	ns	5
Anthracene	ND	ND	ND	ns	50
Benzo(a)anthracene	ND	ND	ND	ns	0.002
Benzo(a)pyrene	ND	ND	ND	ns	MDL
Benzo(b)fluoranthene	ND	ND	ND	ns	0.002
Benzo(g,h,I)perylene	ND	ND	ND	ns	NA
Benzo(k)fluoranthene	ND	ND	ND	ns	0.002
Benzyl Alcohol	ND	ND	ND	ns	5
Butyl Benzyl Phthalate	ND	ND	ND	ns	50
DI-N-Butylphthalate	ND	ND	ND	ns	5
Carbazole	ND	ND	ND	ns	5
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ns	0.002
4-Chloroaniline	ND	ND	ND	ns	5
Bis (-2-Chloroethoxy) Methane	ND	ND	ND	ns	5
Bis (2-Chloroethyl) ether	ND	ND	ND	ns	0.03
2-Chloronaphthalene	ND	ND	ND	ns	10

Greer Toyota

MW-5

Table 2. Quarterly Sampling Results - Bedrock Monitoring Wells

SAMPLE DATE:	11/18/2003	2/18/2004	5/19/2004	8/24/2004	TOGS 1.1.1 Class GA Groundwater Standard (ppb)
2-Chlorophenol	ND	ND	ND	ns	1**
2,2' - Oxybis (1-Chloropropane)	ND	ND	ND	ns	5
Chyrsene	ND	ND	ND	ns	0.002
Dibenz(a,h)anthracene	ND	ND	ND	ns	5
Dibenzofuran	ND	ND	ND	ns	5
1,3-dichlorobenzene	ND	ND	ND	ns	3
1,2-dichlorobenzene	ND	ND	ND	ns	3
1,4-dichlorobenzene	ND	ND	ND	ns	3
3,3' -dichlorobenzidine	ND	ND	ND	ns	5
2,4-dichlorophenol	ND	ND	ND	ns	5
Diethylphthalate	ND	ND	ND	ns	50
Dimethyl Phthalate	ND	ND	ND	ns	50
2,4-dimethlyphenol	ND	ND	ND	ns	50
2,4-dinitrophenol	ND	ND	ND	ns	10
2,4-dinitrotoluene	ND	ND	ND	ns	5
2,6-dinitrotoluene	ND	ND	ND	ns	5
Bis (2-ethylhexyl) Phthalate	ND	ND	ND	ns	5
Fluoranthene	ND	ND	ND	ns	50
Fluorene	ND	ND	ND	ns	50
Hexachlorobenzene	ND	ND	ND	ns	0.04
Hexachlorobutadiene	ND	ND	ND	ns	0.5
Hexachlorocyclopentadiene	ND	ND	ND	ns	5
Hexachloroethane	ND	ND	ND	ns	5
Isophorone	ND	ND	ND	ns	50
2-methylnaphthalene	ND	ND	ND	ns	5
4,6-dinitro-2-methylphenol	ND	ND	ND	ns	1**
4-Chloro-3-Methylphenol	ND	ND	ND	ns	1**
2-Methylphenol	ND	ND	ND	ns	1**
3+4-Methylphenol	ND	ND	ND	ns	1**
Naphthalene	ND	ND	ND	ns	10
2-Nitroaniline	ND	ND	ND	ns	5
3-Nitroaniline	ND	ND	ND	ns	5
4-Nitroaniline	ND	ND	ND	ns	5
Nitrobenzene	ND	ND	ND	ns	0.4
2-Nitrophenol	ND	ND	ND	ns	1**
4-Nitrophenol	ND	ND	ND	ns	1**
N-Nitrosodimethylamine	ND	ND	ND	ns	5
N-Nitrosodiphenylamine	ND	ND	ND	ns	50
Di-N-Octyl Phthalate	ND	ND	ND	ns	5
Pentachlorophenol	ND	ND	ND	ns	1**
Phenanthrene	ND	ND	ND	ns	50
Phenol	ND	ND	ND	ns	1**
4-Bromophenyl-phenylether	ND	ND	ND	ns	5
4-Chlorophenyl-phenylether	ND	ND	ND	ns	5
N-Nitroso-Di-N-Propylamine	ND	ND	ND	ns	5
Pyrene	ND	ND	ND	ns	50
1,2,4-Trichlorobenzene	ND	ND	ND	ns	5
2,4,6-Trichlorophenol	ND	ND	ND	ns	1**
2,4,5-Trichlorophenol	ND	ND	ND	ns	1**
Laboratory	**York**	**York**	**York**	**York**	

"na" indicates sample was not analyzed for these parameters
"ns" indicates sample was not taken
Compounds detected in exceedence of TOGS **1.1.1** groundwater standards are shaded; values with an attached "J" are estimates which indicate the compound is present, but at concentrations below the MD
** the sum of all phenolic compounds without individual standards shall not exceed 1.0 ppb.

Greer Toyota

MW-6

Table 2. Quarterly Sampling Results - Bedrock Monitoring Wells

SAMPLE DATE:	11/18/2003	2/18/2004	5/19/2004	TOGS 1.1.1 Class GA Groundwater Standard (ppb)
Volatiles - EPA 8260 (TCL list) + MTBE (Results in ppb)				
Acetone	ND	ND	ND	50
Benzene	ND	ND	ND	1
Bromodichloromethane	ND	ND	ND	50
Bromoform	ND	ND	ND	50
Bromomethane	ND	ND	ND	5
2-Butanone	ND	ND	ND	50
Methyl-Tert-Butyl-Ether (MTBE)	1	ND	2	10
Carbon Disulfide	ND	ND	ND	5
Carbon Tetrachloride	ND	ND	ND	5
Chlorobenzene	ND	ND	ND	5
Chloroethane	ND	ND	ND	5
Chloroform	ND	ND	ND	7
Chloromethane	ND	ND	ND	5
Dibromochloromethane	ND	ND	ND	50
1,1-Dichloroethane	1	ND	ND	0.6
1,2-Dichloroethane	ND	ND	ND	0.6
1,1-Dichloroethene	ND	5	6	5
cis-1,2-Dichloroethene	ND	2	2	5
trans-1,2-Dichloroethene	ND	ND	ND	5
1,2-Dichloropropane	ND	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	ND	5
Ethylbenzene	ND	ND	ND	5
2-Hexanone	ND	ND	ND	50
Methylene Chloride	ND	ND	ND	5
4-Methyl-2-Pentanone	ND	ND	ND	5
Styrene	ND	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	ND	5
Tetrachloroethene	ND	ND	1	5
Toluene	ND	ND	ND	5
1,1,1-Trichloroethane	1	2	2	5
1,1,2-Trichloroethane	ND	ND	ND	1
Trichloroethene	2	ND	2	5
Vinyl Chloride	ND	ND	ND	2
O-Xylene	ND	ND	ND	5
M+P-Xylene	ND	ND	ND	5
Semi-Volatiles - EPA 8270 List (Results in ppb)				
Acenaphthene	ND	ND	ND	20
Acenaphthylene	ND	ND	ND	5
Anthracene	ND	ND	ND	50
Benzo(a)anthracene	ND	ND	ND	0.002
Benzo(a)pyrene	ND	ND	ND	MDL
Benzo(b)fluoranthene	ND	ND	ND	0.002
Benzo(g,h,I)perylene	ND	ND	ND	NA
Benzo(k)fluoranthene	ND	ND	ND	0.002
Benzyl Alcohol	ND	ND	ND	5
Butyl Benzyl Phthalate	ND	ND	ND	50
DI-N-Butylphthalate	ND	ND	ND	5
Carbazole	ND	ND	ND	5
Indeno(1,2,3-cd)pyrene	ND	ND	ND	0.002
4-Chloroaniline	ND	ND	ND	5
Bis (-2-Chloroethoxy) Methane	ND	ND	ND	5
Bis (2-Chloroethyl) ether	ND	ND	ND	0.03
2-Chloronaphthalene	ND	ND	ND	10

MW-6

Table 2. Quarterly Sampling Results - Bedrock Monitoring Wells

SAMPLE DATE:	11/18/2003	2/18/2004	5/19/2004	TOGS 1.1.1 Class GA Groundwater Standard (ppb)
2-Chlorophenol	ND	ND	ND	1**
2,2' - Oxybis (1-Chloropropane)	ND	ND	ND	5
Chyrsene	ND	ND	ND	0.002
Dibenz(a,h)anthracene	ND	ND	ND	5
Dibenzofuran	ND	ND	ND	5
1,3-dichlorobenzene	ND	ND	ND	3
1,2-dichlorobenzene	ND	ND	ND	3
1,4-dichlorobenzene	ND	ND	ND	3
3,3' -dichlorobenzidine	ND	ND	ND	5
2,4-dichlorophenol	ND	ND	ND	5
Diethylphthalate	ND	ND	ND	50
Dimethyl Phthalate	ND	ND	ND	50
2,4-dimethlyphenol	ND	ND	ND	50
2,4-dinitrophenol	ND	ND	ND	10
2,4-dinitrotoluene	ND	ND	ND	5
2,6-dinitrotoluene	ND	ND	ND	5
Bis (2-ethylhexyl) Phthalate	ND	ND	ND	5
Fluoranthene	ND	ND	ND	50
Fluorene	ND	ND	ND	50
Hexachlorobenzene	ND	ND	ND	0.04
Hexachlorobutadiene	ND	ND	ND	0.5
Hexachlorocyclopentadiene	ND	ND	ND	5
Hexachloroethane	ND	ND	ND	5
Isophorone	ND	ND	ND	50
2-methylnaphthalene	ND	4	ND	5
4,6-dinitro-2-methylphenol	ND	ND	ND	1**
4-Chloro-3-Methylphenol	ND	ND	ND	1**
2-Methylphenol	ND	ND	ND	1**
3+4-Methylphenol	ND	ND	ND	1**
Naphthalene	ND	ND	ND	10
2-Nitroaniline	ND	ND	ND	5
3-Nitroaniline	ND	ND	ND	5
4-Nitroaniline	ND	ND	ND	5
Nitrobenzene	ND	ND	ND	0.4
2-Nitrophenol	ND	ND	ND	1**
4-Nitrophenol	ND	ND	ND	1**
N-Nitrosodimethylamine	ND	ND	ND	5
N-Nitrosodiphenylamine	ND	ND	ND	50
DI-N-Octyl Phthalate	ND	ND	ND	5
Pentachlorophenol	ND	ND	ND	1**
Phenanthrene	ND	ND	ND	50
Phenol	ND	ND	ND	1**
4-Bromophenyl-phenylether	ND	ND	ND	5
4-Chlorophenyl-phenylether	ND	ND	ND	5
N-Nitroso-Di-N-Propylamine	ND	ND	ND	5
Pyrene	ND	ND	ND	50
1,2,4-Trichlorobenzene	ND	ND	ND	5
2,4,6-Trichlorophenol	ND	ND	ND	1**
2,4,5-Trichlorophenol	ND	ND	ND	1**
Laboratory	**York**	**York**	**York**	

As per NYSDEC, MW-6 was eliminated from the monitoring program as of 6/30/2004.
"na" indicates sample was not analyzed for these parameters
"ns" indicates sample was not taken
Compounds detected in exceedence of TOGS 1.1.1 groundwater standards are shaded; values an attached "**J**" are estimates which indicate the compound is present. but at concentrations be
** the sum of all phenolic compounds without individual standards shall not exceed 1.0 ppb.

Greer Toyota

Table 3. Monitoring of Water Supply Wells on Carbon Filtration.

Supply Well ID:	OPTIMUM WINDOW								*NYSDOH Drinking Water Standard (ppb)
Sample Date:	10/1/2003		12/19/2003		3/31/2004		6/29/2004		
Sample Location:	Pre-Carbon	Post-Carbon	Pre-Carbon	Post-Carbon	Pre-Carbon	Post-Carbon	Pre-Carbon	Post-Carbon	
EPA 502.2 Volatiles List									
Chlorobenzene	nd	nd	nd	nd	nd	nd	nd	nd	5
1,2-Dichlorobenzene	nd	nd	nd	nd	nd	nd	nd	nd	5
1,3-Dichlorobenzene	nd	nd	nd	nd	nd	nd	nd	nd	5
1,4-Dichlorobenzene	nd	nd	nd	nd	nd	nd	nd	nd	5
Chloromethane	nd	nd	nd	nd	nd	nd	nd	nd	5
Bromomethane	nd	nd	nd	nd	nd	nd	nd	nd	5
Dichlorodifluoromethane	nd	nd	nd	nd	nd	nd	nd	nd	5
Vinyl chloride	nd	nd	nd	nd	nd	nd	nd	nd	50
Chloroethane	nd	nd	nd	nd	nd	nd	nd	nd	5
Methylene chloride	nd	nd	0.80	nd	nd	nd	nd	nd	5
Trichlorofluoromethane	nd	nd	nd	nd	nd	nd	nd	nd	5
1,1-Dichlorothene	nd	nd	nd	nd	nd	nd	nd	nd	5
Bromochloromethane	nd	nd	nd	nd	nd	nd	nd	nd	5
1,1-Dichloroethane	0.68	nd	1.10	nd	1.60	nd	1.60	nd	5
trans-1,2-Dichloroethene	nd	nd	nd	nd	nd	nd	nd	nd	5
cis-1,2-Dichloroethene	nd	nd	nd	nd	nd	nd	nd	nd	5
Chloroform	nd	nd	nd	nd	nd	nd	nd	nd	50
1,2-Dichloroethane	nd	nd	nd	nd	nd	nd	nd	nd	5
2,2-Dichloropropane	nd	nd	nd	nd	nd	nd	nd	nd	5
1,2-Dibromoethane (EDB)	nd	nd	nd	nd	nd	nd	nd	nd	50
1,1,1-Trichloroethane	nd	nd	0.52	nd	0.92	nd	0.92	nd	5
Carbon tetrachloride	nd	nd	nd	nd	nd	nd	nd	nd	5
Bromodichloromethane	nd	nd	nd	nd	nd	nd	nd	nd	50
1,2-Dichloropropane	nd	nd	nd	nd	nd	nd	nd	nd	5
1,1-Dichloropropene	nd	nd	nd	nd	nd	nd	nd	nd	5
Trichloroethene	nd	nd	nd	nd	nd	nd	nd	nd	5
1,3-Dichloropropane	nd	nd	nd	nd	nd	nd	nd	nd	5
Dibromochloromethane	nd	nd	nd	nd	nd	nd	nd	nd	50
Dibromomethane	nd	nd	nd	nd	nd	nd	nd	nd	5
Bromoform	nd	nd	nd	nd	nd	nd	nd	nd	50
1,1,1,2-Tetrachloroethane	nd	nd	nd	nd	nd	nd	nd	nd	5
1,2,3-Trichloropropane	nd	nd	nd	nd	nd	nd	nd	nd	5
1,1,2,2-Tetrachloroethane	nd	nd	nd	nd	nd	nd	nd	nd	5
Tetrachloroethene	nd	nd	nd	nd	nd	nd	nd	nd	5
Bromobenzene	nd	nd	nd	nd	nd	nd	nd	nd	5
2-Chlorotoluene	nd	nd	nd	nd	nd	nd	nd	nd	5
4-Chlorotoluene	nd	nd	nd	nd	nd	nd	nd	nd	5
cis-1,3-Dichloropropene	nd	nd	nd	nd	nd	nd	nd	nd	5
trans-1,3-Dichloropropene	nd	nd	nd	nd	nd	nd	nd	nd	5
1,1,2-Trichloroethane	nd	nd	nd	nd	nd	nd	nd	nd	5

nd - parameter was not detected above the laboratory method detection limit.

Greer Toyota

Table 3. Monitoring of Water Supply Wells on Carbon Filtration.

Supply Well ID:	Halpin Residence								NYSDOH Drinking Water Standard (ppb)
Sample Date:	10/1/2003		12/19/2003		3/31/2004		6/29/2004		
Sample Location:	Pre-Carbon	Post-Carbon	Pre-Carbon	Post-Carbon	Pre-Carbon	Post-Carbon	Pre-Carbon	Post-Carbon	
EPA 502.2 Volatiles List									
Chlorobenzene	nd	nd	nd	nd	nd	nd	nd	nd	5
1,2-Dichlorobenzene	nd	nd	nd	nd	nd	nd	nd	nd	5
1,3-Dichlorobenzene	nd	nd	nd	nd	nd	nd	nd	nd	5
1,4-Dichlorobenzene	nd	nd	nd	nd	nd	nd	nd	nd	5
Chloromethane	nd	nd	nd	nd	nd	nd	nd	nd	5
Bromomethane	nd	nd	nd	nd	nd	nd	nd	nd	5
Dichlorodifluoromethane	nd	nd	nd	nd	nd	nd	nd	nd	5
Vinyl chloride	nd	nd	nd	nd	nd	nd	nd	nd	50
Chloroethane	nd	nd	nd	nd	nd	nd	nd	nd	5
Methylene chloride	nd	nd	nd	nd	nd	nd	nd	nd	5
Trichlorofluoromethane	nd	nd	nd	nd	nd	nd	nd	nd	5
1,1-Dichlorothene	nd	nd	nd	nd	nd	nd	nd	nd	5
Bromochloromethane	nd	nd	nd	nd	nd	nd	nd	nd	5
1,1-Dichloroethane	nd	nd	nd	nd	nd	nd	nd	nd	5
trans-1,2-Dichloroethene	nd	nd	nd	nd	nd	nd	nd	nd	5
cis-1,2-Dichloroethene	nd	nd	nd	nd	nd	nd	nd	nd	5
Chloroform	nd	nd	nd	nd	nd	nd	nd	nd	50
1,2-Dichloroethane	nd	nd	nd	nd	nd	nd	nd	nd	5
2,2-Dichloropropane	nd	nd	nd	nd	nd	nd	nd	nd	5
1,2-Dibromoethane (EDB)	nd	nd	nd	nd	nd	nd	nd	nd	50
1,1,1-Trichloroethane	nd	nd	nd	nd	nd	nd	nd	nd	5
Carbon tetrachloride	nd	nd	nd	nd	nd	nd	nd	nd	5
Bromodichloromethane	nd	nd	nd	nd	nd	nd	nd	nd	50
1,2-Dichloropropane	nd	nd	nd	nd	nd	nd	nd	nd	5
1,1-Dichloropropene	nd	nd	nd	nd	nd	nd	nd	nd	5
Trichloroethene	nd	nd	nd	nd	nd	nd	nd	nd	5
1,3-Dichloropropane	nd	nd	nd	nd	nd	nd	nd	nd	5
Dibromochloromethane	nd	nd	nd	nd	nd	nd	nd	nd	50
Dibromomethane	nd	nd	nd	nd	nd	nd	nd	nd	5
Bromoform	nd	nd	nd	nd	nd	nd	nd	nd	50
1,1,1,2-Tetrachloroethane	nd	nd	nd	nd	nd	nd	nd	nd	5
1,2,3-Trichloropropane	nd	nd	nd	nd	nd	nd	nd	nd	5
1,1,2,2-Tetrachloroethane	nd	nd	nd	nd	nd	nd	nd	nd	5
Tetrachloroethene	nd	nd	nd	nd	nd	nd	nd	nd	5
Bromobenzene	nd	nd	nd	nd	nd	nd	nd	nd	5
2-Chlorotoluene	nd	nd	nd	nd	nd	nd	nd	nd	5
4-Chlorotoluene	nd	nd	nd	nd	nd	nd	nd	nd	5
cis-1,3-Dichloropropene	nd	nd	nd	nd	nd	nd	nd	nd	5
trans-1,3-Dichloropropene	nd	nd	nd	nd	nd	nd	nd	nd	5
1,1,2-Trichloroethane	nd	nd	nd	nd	nd	nd	nd	nd	5

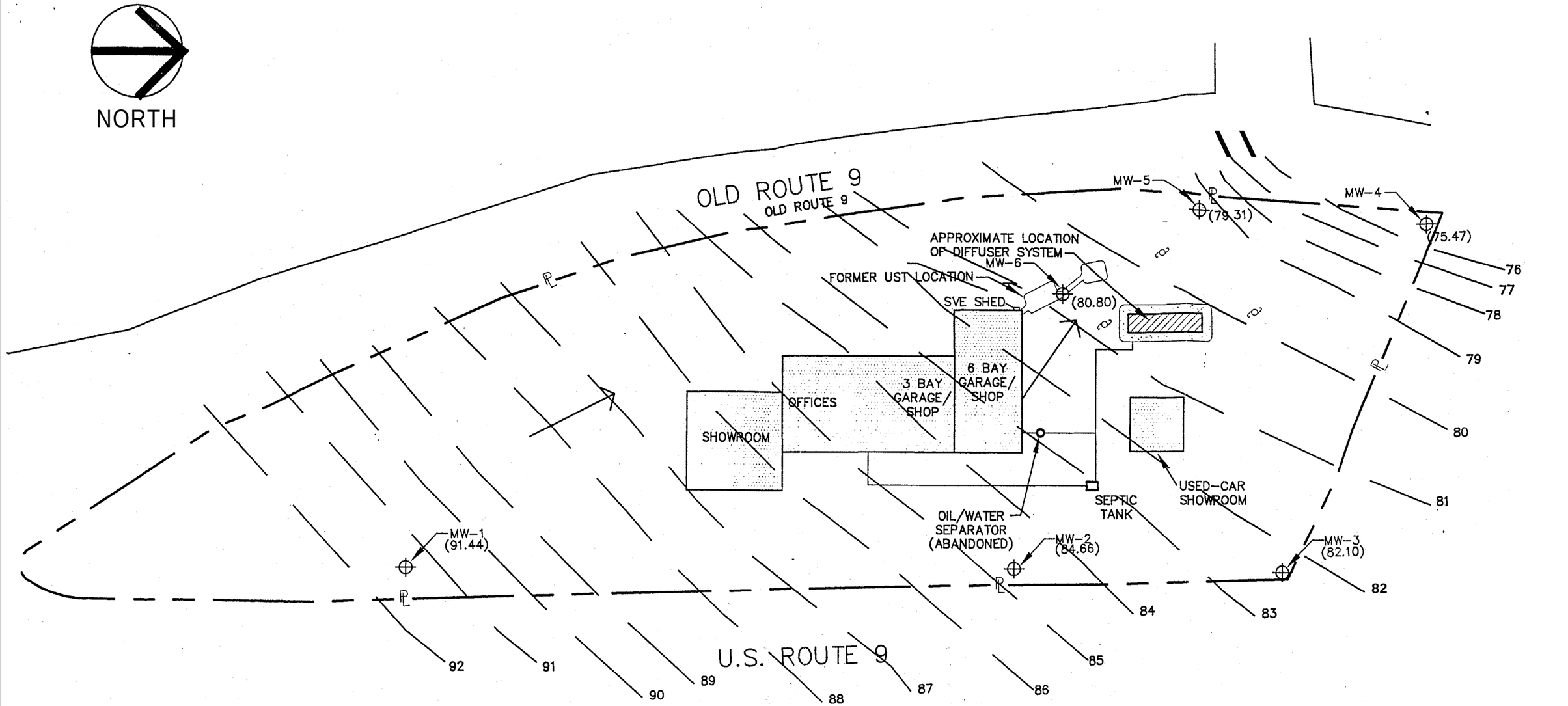
nd - parameter was not detected above the laboratory method detection limit.

Greer Toyota

Table 3. Monitoring of Water Supply Wells on Carbon Filtration.

Supply Well ID:	Greer Toyota								NYSDOH Drinking Water Standard (ppb)
Sample Date:	10/1/2003		12/19/2003		3/31/2004		6/29/2004		
Sample Location:	Pre-Carbon	Post-Carbon	Pre-Carbon	Post-Carbon	Pre-Carbon	Post-Carbon	Pre-Carbon	Post-Carbon	
EPA 502.2 Volatiles List+ MTBE									
Chlorobenzene	na	nd	nd	nd	na	nd	nd	nd	5
1,2-Dichlorobenzene	na	nd	nd	nd	na	nd	nd	nd	5
1,3-Dichlorobenzene	na	nd	nd	nd	na	nd	nd	nd	5
1,4-Dichlorobenzene	na	nd	nd	nd	na	nd	nd	nd	5
Chloromethane	na	nd	nd	nd	na	nd	nd	nd	5
Bromomethane	na	nd	nd	nd	na	nd	nd	nd	5
Dichlorodifluoromethane	na	nd	nd	nd	na	nd	nd	nd	5
Vinyl chloride	na	nd	nd	nd	na	nd	nd	nd	50
Chloroethane	na	nd	nd	nd	na	nd	nd	nd	5
Methylene chloride	na	nd	0.52	nd	na	nd	nd	nd	5
Trichlorofluoromethane	na	nd	nd	nd	na	nd	nd	nd	5
1,1-Dichlorothene	na	nd	nd	nd	na	nd	nd	nd	5
Bromochloromethane	na	nd	nd	nd	na	nd	nd	nd	5
1,1-Dichloroethane	na	nd	nd	nd	na	nd	nd	nd	5
trans-1,2-Dichloroethene	na	nd	nd	nd	na	nd	nd	nd	5
cis-1,2-Dichloroethene	na	nd	nd	nd	na	nd	nd	nd	5
Chloroform	na	nd	nd	nd	na	nd	nd	nd	50
1,2-Dichloroethane	na	nd	nd	nd	na	nd	nd	nd	5
2,2-Dichloropropane	na	nd	nd	nd	na	nd	nd	nd	5
1,2-Dibromoethane (EDB)	na	nd	nd	nd	na	nd	nd	nd	50
1,1,1-Trichloroethane	na	nd	nd	nd	na	nd	nd	nd	5
Carbon tetrachloride	na	nd	nd	nd	na	nd	nd	nd	5
Bromodichloromethane	na	nd	nd	nd	na	nd	nd	nd	50
1,2-Dichloropropane	na	nd	nd	nd	na	nd	nd	nd	5
1,1-Dichloropropene	na	nd	nd	nd	na	nd	nd	nd	5
Trichloroethene	na	nd	nd	nd	na	nd	nd	nd	5
1,3-Dichloropropane	na	nd	nd	nd	na	nd	nd	nd	5
Dibromochloromethane	na	nd	nd	1.80	na	nd	nd	nd	50
Dibromomethane	na	nd	nd	nd	na	nd	nd	nd	5
Bromoform	na	nd	nd	8.50	na	0.61	nd	1.20	50
1,1,1,2-Tetrachloroethane	na	nd	nd	nd	na	nd	nd	nd	5
1,2,3-Trichloropropane	na	nd	nd	nd	na	nd	nd	nd	5
1,1,2,2-Tetrachloroethane	na	nd	nd	nd	na	nd	nd	nd	5
Tetrachloroethene	na	nd	nd	nd	na	nd	nd	nd	5
Bromobenzene	na	nd	nd	nd	na	nd	nd	nd	5
2-Chlorotoluene	na	nd	nd	nd	na	nd	nd	nd	5
4-Chlorotoluene	na	nd	nd	nd	na	nd	nd	nd	5
cis-1,3-Dichloropropene	na	nd	nd	nd	na	nd	nd	nd	5
trans-1,3-Dichloropropene	na	nd	nd	nd	na	nd	nd	nd	5
1,1,2-Trichloroethane	na	nd	nd	nd	na	nd	nd	nd	5
MTBE	na	nd	nd	nd	na	nd	2.1	nd	10*

nd - parameter was not detected above the laboratory method detection limit.
na - data not available
* NYSDEC Class GA standard



DIRECTION OF GROUNDWATER FLOW
GROUNDWATER CONTOURS BASED ON 8/26/2004 MEASUREMENTS
APPROX LOCATION OF MONITOR WELLS, WITH (WATER ELEVATION IN FEET)
LIGHT POLE AND FOOTINGS

7/28/99 - ADD SEPTIC TANK
7/6/99 - ADD SOIL BORINGS

NOTES
1. THIS DRAWING WAS DIGITIZED FROM FIGURE 1, GREER TOYOTA, WAPPINGERS FALLS, NEW YORK. PREPARED BY WEHRAN, EMCON, NORTHEAST, DATED 8/25/94
2. GROUNDWATER ELEVATIONS SURVEYED FROM MW-1 TOP OF CASING DESIGNATED AS ARBITARY 100' DATUM
3. SVE SHED LOCATION IS APPROXIMATE

THE Chazen COMPANIES
Engineers/Surveyors
Planners
Environmental Scientists

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GREER SITE #3-14088

EXISTING SITE PLAN AND GROUND WATER FLOW MAP

drawn:	check:
SLG	
date:	scale:
09/16/04	1"=60'
project no	
49799.25	
no.	

x:\4\49799.25\X-BASE.dwg
PLOT SCALE: 1'
TOURS PLO
est