RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA750)
Migration of Contaminated Groundwater Under Control

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
Interim Final 2/5/99

Facility Name: GENERAL ELECTRIC SILICONES
Facility Address: WATERFORD, SARATOGA COUNTY NEW YORK
Facility EPA ID #:No. NYD002080034

1. Has **all** available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

   ___X__ If yes - check here and continue with #2 below.

   _____ If no - re-evaluate existing data, or

   _____ if data are not available, skip to #8 and enter"IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA750)
Migration of Contaminated Groundwater Under Control

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

2. Is **groundwater** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective "levels" (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

_X___ If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

_____ If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

FACILITY DESCRIPTION

The General Electric Company owns and operates a silicone manufacturing facility on an approximately 800 acre site in the Town of Waterford, Saratoga County, New York. The facility is located approximately 2 miles north of the Village of Waterford along routes 4 and 32, (Figure 1). The facility manufactures and markets silicone products from basic raw materials to a wide variety of finished products. Hazardous and non-hazardous waste is generated at this site as a result of these manufacturing processes. The management of hazardous waste at this facility requires a New York State 6NYCRR Part 373 hazardous waste management permit. This permit was originally issued in 1989 and authorizes the facility to store hazardous waste in tanks and containers, operate two hazardous waste incinerators and operate a hazardous waste landfill. The facility is only permitted to manage hazardous waste which is generated at this site.

NEW YORK STATE REQUIREMENTS FOR CORRECTIVE ACTION AT THE GE SILICONES FACILITY

In 1977, New York State filed suit in Federal Court to require GE to investigate and remediate releases of hazardous wastes at the Waterford facility. Subsequently, under the auspices of a Federal Consent Decree, the company performed an extensive investigation of the facility including the installation of more than 600 wells, the collection of numerous soil and surface water samples and the collection of indoor air samples from residential buildings in the vicinity of an off-site plume of groundwater contamination. In July 1987, GE-SPD and the State of New York signed a Federal Consent Decree, Civil Action No. 83-CV-77, that required GE-SPD to implement a Remedial Plan designed to address contamination at the site. Subsequently, the Remedial Plan (December 1987) was incorporated as part of the Final Corrective Measures under the facility's RCRA Permit. *(See GW and Land Monitoring 1976; GW and Land Monitoring Feb. 20, 1979; SPDES Discharge Summary Volatile Organic Compounds June 1984,GW Monitoring Nov. 29, 198;, Hydrogeologic Report Vol.*

1 & 2 Nov. 1985; Remedial Feasibility Studies Vol. 1 & 2 Nov. 1985; Well Validation Nov. 29, 1985; Core Monitoring Plan Vol. 1 & 2, Nov. 1985; RCRA 1985 Annual Report Interim Status report GW Assessment Activities Feb. 28, 1986; APS Area Phase I Report June 1986; Landfill #1 and #3 Supplemental Monitoring Program Results, 1987; Remediation Plan Dec. 1, 1987; Solid Waste Management Unit Evaluation Report April 1990-Aug. 1991; Report of Landfill 2 Historical Development Aug..13, 1990; for background information.)

The Remedial Plan provides for GE-SPD to: (1) install systems of groundwater recovery wells in each of nine designated areas on the Waterford site and install additional groundwater monitoring wells; (2) operate each of the groundwater recovery systems to create a hydraulic barrier that meets specific hydraulic criteria and to attain specified cleanliness standards and guidelines (see Table 1 and Table 2); (3) treat and discharge the extracted groundwater into the Hudson River through existing outfalls 001 and 002 in compliance with the NYSPDES permit and (4) monitor the performance of the groundwater recovery systems. The Plan also requires GE to reduce the concentration of site specific hazardous constituents in the groundwater by 50 % in five years and by 75 % in ten years.

Table 1
Hydraulic Criteria

Internal (A) Well No. or River Gauge (RG)	External (A) Well No.	Remedial Area	Required Elevation Difference
445	316	APS Area (1)	0.01
444	446	APS Area (1)	0.01
444	312	APS Area (1)	0.01
242	282(CR)	WWTP	0.01
242	255	WWTP	0.01
214	240	WWTP	0.01
214	255	WWTP	0.01
321 (CR)	RG (CR)	WWTP	0.01
456	457	RBS	0.01
458	321(CR)	RBS	0.01
455	RG(CR)	RBS	0.01
252	RG(CR)	RBS of LF4	0.01
314	RG(CR)	RBN of LF4	0.01
478	480	RBN	0.01
482	387	RBN	0.01
483	484	RBN	0.01
477	RG(CR)	RBN	0.01
479	RG(CR)	RBN	0.01
481	387	RBN	0.01
470	291	N.E.MA. (4)	0.30
471	230	N.E.MA. (4)	0.30
472	232	N.E.MA. (4)	0.30
513	303	SOBO (1)	0,01
511	399	SOBO (1)	0.01
508	509	SOBO (1)	0.01
505	506	SOBO (1)	0.01
507	517	SOBO (1)	0.01
507	328	SOBO	0.01
505	504	SOBO (1)	0.01
143	228	LF4	0.50
362	141	LF4	0.50
365	309(CR)	LF4	0.50
465	189	LF4	0.50
163	125	LF2 (4)	0.50
347	494	LF2 (4)	050

Table 2
Groundwater Protection Standards

Well No.	Benzene	Chloro-Benzene	Ethyl-Benzene	Toluene	!,2,Trans DCE	TCE	Vinyl Chloride	Total Xylenes	Total VIP
Groundwater Protection Standard μg/l	1	5	50	50	50	10	5	50	100

Considering organic compounds and metals concentrations and their potential for off-site migration, the areas selected for installation of the groundwater recovery systems were (Figure 2):

- APS Area
- Wastewater Treatment Plant Area
- River Boundary - Near Landfill 4
- River Boundary - South of Landfill 4
- Northeast Manufacturing Area
- River Boundary - North of Landfill 4
- Landfill 2 - Inward Gradient
- Landfill 4 - Inward Gradient
- Southern Boundary - Solid Waste Management Area

The remedial systems were designed to 1) intercept contaminated groundwater so as to prevent its discharge to the Hudson River, and 2) to control migration of groundwater contaminant flow from identified source areas in order to hasten clean-up of the facility.

The Remedial System went into full operation in May 1988. Since that time, GE-SPD has submitted to the State and to the USEPA, Quarterly Reports which describe the results of operational and monitoring activities required under the Remedial Plan. Periodically (3-4 times/year), representatives from the State have met with GE-SPD staff to discuss the Quarterly Reports and to evaluate the progress of the remedial program. The remedial program has effectively controlled contaminant discharge to the Hudson River.

Additional Corrective Measures

GE has been monitoring groundwater in the vicinity of Landfill 1 and Landfill 3 since 1978. In 1991, the State determined that corrective measures were needed at Landfill 1. Subsequently, GE began operation of two groundwater recovery wells at the downgradient boundary of Landfill 1. Because the capture zone associated with those wells was not extensive enough, a January 1993 Permit Modification required GE to install an additional recovery well at Landfill 1. That well began operation in 1994. At the present time, GE is pumping approximately 150 gpm from the Landfill 1 recovery system.

Although minor groundwater contamination has been observed downgradient of Landfill 3, the State determined that an enhancement of the existing site-wide remedial program was not necessary to address the contamination. As set forth in the January 1993 Permit Modification, GE is required to perform semi-annual monitoring of the groundwater quality in the vicinity of the landfill.

In addition, GE has been conducting periodic monitoring of Mudderkill Creek, a small stream located on the north side of the facility. It appears that the creek has been impacted by infiltration of contaminated groundwater from the vicinity of Landfill 3. Low level (2-20) ppb concentrations of VOCs have been observed in a small reach of the stream, but dissipate downstream. GE will continue to monitor the stream periodically. Corrective measures will be required if significant concentrations of VOCs are observed in the creek.

GE has also implemented source control measures by removing a substantial number of underground chemical storage tanks and excavating contaminated soils in their vicinity.

Contamination: The primary hazardous wastes currently generated at this facility are chlorinated hydrocarbons associated with the silicone manufacturing operations. Operations at the facility have contaminated both subsurface soil and groundwater. Representative constituents and groundwater concentrations from wells throughout the facility are listed in Table 3. See Figure 2 for the location of the wells in the vicinity of the Hudson River.

3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within "existing area of contaminated groundwater"[2] as defined by the monitoring locations designated at the time of this determination)?

__X__ If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the "existing area of groundwater contamination"[2]).

_____ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the "existing area of groundwater contamination"[2]) - skip to #8 and enter "NO" status code, after providing an explanation.

_____ If unknown - skip to #8 and enter "IN" status code.

[2] "existing area of contaminated groundwater" is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of "contamination" that can and will be sampled/tested in the future to physically verify that all "contaminated" groundwater remains within this area, and that the further migration of "contaminated" groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

Rationale and Reference(s):_

GE has been been performing chemical and hydraulic monitoring since implementing Final Corrective Measures at the facility in 1988. The monitoring data are submitted for New York State and EPA review on a quarterly basis. The monitoring data indicate that groundwater quality at the facility has improved considerably since the remedial system was installed. Contaminant concentrations have decreased by over 50 % when compared to pre-remedial conditions. Furthermore, 23 of the 26 wells used for long term trend analysis have achieved contaminant reductions in excess of 75% (Table 3). By 2001, the contaminant concentrations in the majority of the wells adjacent to the Hudson River were at or near drinking water quality (Figure3).

Hydraulic monitoring data also indicate that the contaminant plumes that discharge to the Hudson River have been stabilized. Although there are times when 100% capture of the flow to the Hudson is not achieved, adequate hydraulic capture is achieved most of the time. (See Figure 4 and Figure 5 and Table 4 for representative hydraulic information.) New York State and GE are currently in the process of reevaluating and reconfiguring the remedial system to further enhance the effectiveness of the hydraulic containment and to focus greater attention on the "source areas" of the facility where additional groundwater cleanup is needed.

4. Does "contaminated" groundwater **discharge** into **surface water** bodies?

__X__ If yes - continue after identifying potentially affected surface water bodies.

_____ If no - skip to #7 (and enter a "YE" status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater "contamination" does not enter surface water bodies.

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):_ Prior to implementation of the remedial program, contaminated groundwater discharged to the Hudson River along the eastern boundary of the facility (Figure 2). The hydraulic containment system is designed to reverse the groundwater flow direction and eliminate contaminant discharge to the Hudson River.

5. Is the **discharge** of "contaminated" groundwater into surface water likely to be **"insignificant"** (i.e., the maximum concentration[3] of each contaminant discharging into surface water is less than 10 times their appropriate groundwater "level," and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

__X__ If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration[3] of <u>key</u> contaminants discharged above their groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

_____ If no - (the discharge of "contaminated" groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration[3] of <u>each</u> contaminant discharged above its groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations[3] greater than 100 times their appropriate groundwater "levels," the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s): **As discussed above, contaminant concentrations have decreased considerably since startup of the remedial system in 1988. As long as the remedial system is functioning properly, groundwater pumping creates inward hydraulic gradients which reverse groundwater flow (and contaminant discharge) to the river.**

[3] As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

6. Can the **discharge** of "contaminated" groundwater into surface water be shown to be "**currently acceptable**" (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented[4])?

_____ If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site's surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR
2) providing or referencing an interim-assessment,[5] appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment "levels," as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

_____ If no - (the discharge of "contaminated" groundwater can not be shown to be "**currently acceptable**") - skip to #8 and enter "NO" status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

_____ If unknown - skip to 8 and enter "IN" status code.

Rationale and Reference(s):__

[4] Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

[5] The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

7. Will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the "existing area of contaminated groundwater?"

__X__ If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the "existing area of groundwater contamination."

_____ If no - enter "NO" status code in #8.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):__ **As part of the Final Corrective Measures performance monitoring program for the facility, GE collects hydraulic and chemical monitoring information. Those data, as well as the operating performance of the remedial system is submitted to New York State and the USEPA on a quarterly basis. GE has just completed O & M upgrades to the groundwater recovery system that are designed to enhance the performance of the wells. In addition , the State and GE are in the process of installing additional recovery wells in certain source areas of the facility where monitoring data indicate that enhancements to the remedial program will be beneficial in restoring the aquifer more quickly.**

8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

__X__ YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the at the General Electric Facility, EPA ID #, located at, Waterford NY. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater" This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

_____ NO - Unacceptable migration of contaminated groundwater is observed or expected.

_____ IN - More information is needed to make a determination.

Completed by (signature) William E. Wertz Date: September 17, 2002
(print) William E. Wertz, Ph.D.
(title) Senior Engineering Geologist

Supervisor (signature) Edwin Dassatti Date 9/23/02
(print) Edwin Dassatti
(title) Director, Bureau of Solid Waste and Corrective Action

Locations where References may be found:

NYSDEC
Division of Solid and Hazardous Materials
625 Broadway
Albany NY 12233-7252

Contact telephone and e-mail numbers

William E. Wertz, Ph.D.
(518) 402-8594
wewertz@gw.dec.state.ny.us

Table 3: Indicator Parameter Concentration Trends

AREA/WELL	TOTAL INDICATOR (1) CONC. (ug/L)	DATE	3Q98	1Q00	2Q00	3Q00	4Q00	1Q01	2Q01	5 YR 50% (2) REDUCTION GOAL	MEETING 5 YR 50% GOALS	10 YR 75% (2) REDUCTION GOAL	MEETING 10 YR 75% GOALS
NEMA/234	2829	8/87	---	—	2987	---	---	—	910	1414	YES	707	NO
NEMA/291	6697	2/86-2/87	---	---	36	---	---	---	24.4	3348	YES	1674	YES
NEMA/226	24	8/87	---	---	ND	---	---	---	5.6	50	YES	25	YES
NEMA/230	7092	2/87	---	---	2075	---	---	---	3090	3546	YES	1773	NO
NEMA/232	146915	8/87	---	---	2364	---	---	---	3470	73458	YES	36729	YES
RBN-LF4/387	21022	2/86-2/87	---	---	ND	---	7.5	---	ND	10511	YES	5256	YES
RBN-LF4/486	32	2/88	6 (7)	2	---	54	18 (9)	24	---	50	YES	25	YES
RBN-LF4/484	17600	2/88	---	---	ND	---	3	---	6.6	8800	YES	4400	YES
RBN-LF4/381	5	8/87	---	---	ND	---	3	---	ND	50	YES	25	YES
SB/328 (3)	100	2/86-2/87	---	---	2	---	---	---	ND	50	YES	25	YES
SB/509 (3)	15	2/89	---	---	ND	---	---	---	ND	50	YES	25	YES
SB/513 (3)	ND	2/89	---	---	ND	---	---	---	ND	ND	YES	ND	YES
SB/518 (3)	6	2/89	---	---	ND	---	---	---	ND	50	YES	25	YES
APS/446	76	11/87	---	---	4	---	4	---	ND	50	YES	25	YES
APS/447	3	8/87	---	---	5	---	---	---	ND	50	YES	25	YES
APS/448	3	2/87	---	---	ND	---	---	---	ND	50	YES	25	YES
APS/449	1	2/88	---	---	ND	---	---	---	ND	50	YES	25	YES
NEAR LF4/314	265800	2/86-2/87	---	---	67	---	85	---	66	132900	YES	66450	YES
RBS-LF4/455	40120	8/87	---	---	117	---	128	---	7	20060	YES	10030	YES
RBS-LF4/457	8515	11/86	---	---	19	---	17	---	6.5	4258	YES	2129	YES
WWTP/240	7600	4/86	---	---	ND	---	---	---	ND	3800	YES (2)	1900 (2)	YES (2)
WWTP/242	8000	4/86	---	---	1	---	---	---	ND	4000	YES (2)	2000 (2)	YES (2)
VELLS IN CLEAN-OUT AREAS													
APS/312 (4)	539	2/86-2/87	---	---	122	---	162	---	ND	270	YES	135	NO (2)
LF4/141 (5)	69	11/87	NS(6)	---	---	291	---	---	---	(4)	(4)	(4)	(4)
RBS/LF4/309(4)	130040	2/86-2/87	533	351 (10)	410	297	379	518 (11)	652	65020	YES	32510	YES
WWTP/282 (4)	825	2/86-2/87	23	2	22	24	14	13 (12)	14	412	YES (2)	206 (2)	YES (2)
WWTP/321 (4)	3419	2/86-2/87	---	---	1200	---	1273	---	1200	1710	YES (2)	855 (2)	NO (2)

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA750)
Migration of Contaminated Groundwater Under Control

NOTES:		Key: ---	No sample required
(1)	For existing wells, highest total VIP concentration for one year prior to system startup will be used as baseline concentration.	ND	Not Detected
(2)	For WWTP 50% reduction goal is 8 years, 75% reduction goal is 15 years.	NS	No sample collected
			Below Method Detection
(3)	Alternate POE Well conceptually accepted by the State, April 18, 1990.	BMDL	Limit
(4)	Wells subject to cleanliness standards (Table IIIA Remedial Plan) 30 months after equilibrium.		
	RBN well 141- 30 month period ended 8/93		
	APS/WWTP wells 282,312, and 321 are not subject to cleanliness standards at this time based on agreement with the State		
	in 2Q93.		
	RBS well 309 is no longer designated a cleanout well based on a State letter dated April 24, 1992		
(5)	Not in Table IIG of Remedial Plan - included here for completeness		
(6)	Well was dry and not sampled.		
(7)	Well 486 is one of eight wells for which duplicate ground-water samples were obtained by diffusion bag sampling method.		
	Well 321 was also sampled by GES/LAW on December 12, 1998 as part of an assessment study of the 321 area. The result		
(8)	for total VIP was 1500 ug/L.		
(9)	Well 486 was resampled during the 4Q99 and 4Q00 due to suspect data from the 3Q99 and 3Q00 sampling.		
(10)	Data from split sample analyses performed by Scilab.		
(11)	Data from split sample analyses for 3Q00, 1Q01 performed by Adirondack Laboratory.		
(12)	Data from duplicate sample analyses for 1Q01 performed by GES Laboratory.		

Footnotes:

[1]"Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate "levels" (appropriate for the protection of the groundwater resource and its beneficial uses).

Table 4

GE Silicones

Ground-Water Elevation Difference in River Boundary Gradient Criteria Well Pairs 8/29/02

Internal Well No.	External Well No. or River Gauge (RG)	Remedial Area	Internal Ground-Water Elevation (ft.-MSL)	External Ground-Water Elevation (ft.-MSL)	Elevation Difference (ft.) (External - Internal)	Required Elevation Difference
456	457	RBS	16.00	15.89	-0.11	0.01
455	RG	RBS	15.80	15.48	-0.32	0.01
252	RG	RBS of LF4	15.02	15.48	0.46	0.01
314	RG	RBN of LF4	13.60	15.48	1.88	0.01
478	480	RBN	12.24	13.13	0.89	0.01
482	387	RBN	12.21	13.36	1.15	0.01
483	484	RBN	12.26	12.52	0.26	0.01
477	RG	RBN	12.23	15.48	3.25	0.01
479	RG	RBN	12.32	15.48	3.16	0.01
481	387	RBN	11.97	13.36	1.39	0.01

Prepared by: SAB 8/29/02

Checked by: JRS 9/3/02

Modified by WEW

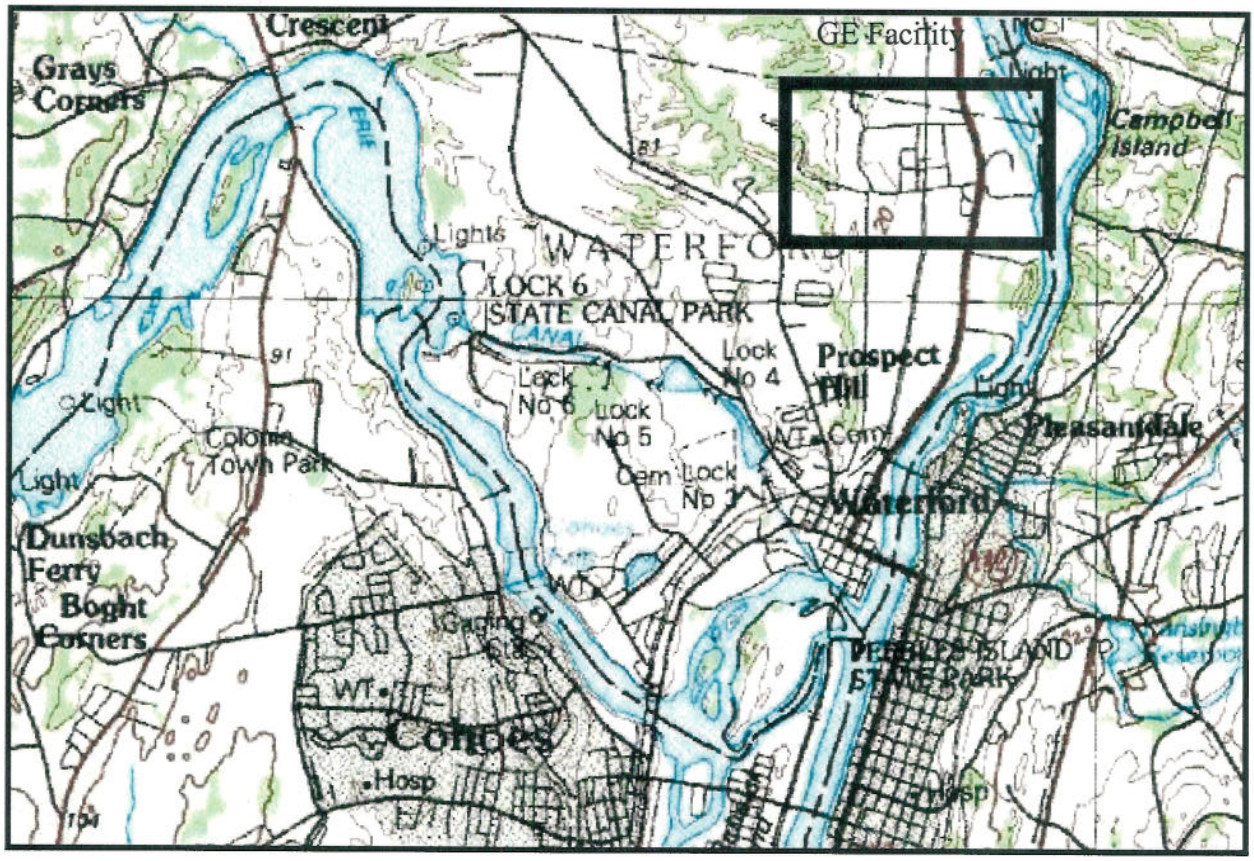


Figure 1 Site Location

(See Troy North Quadrangle for more detail)

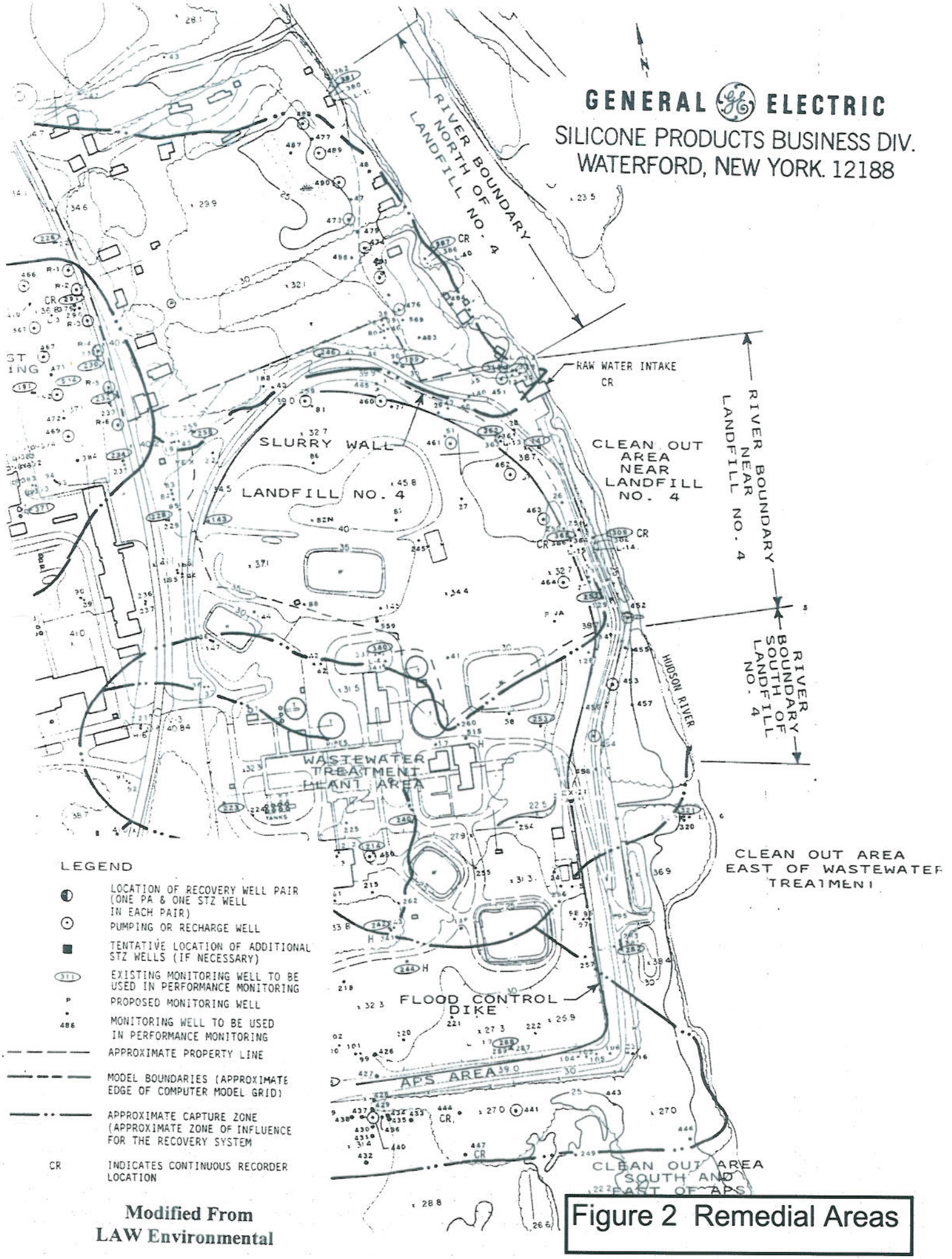
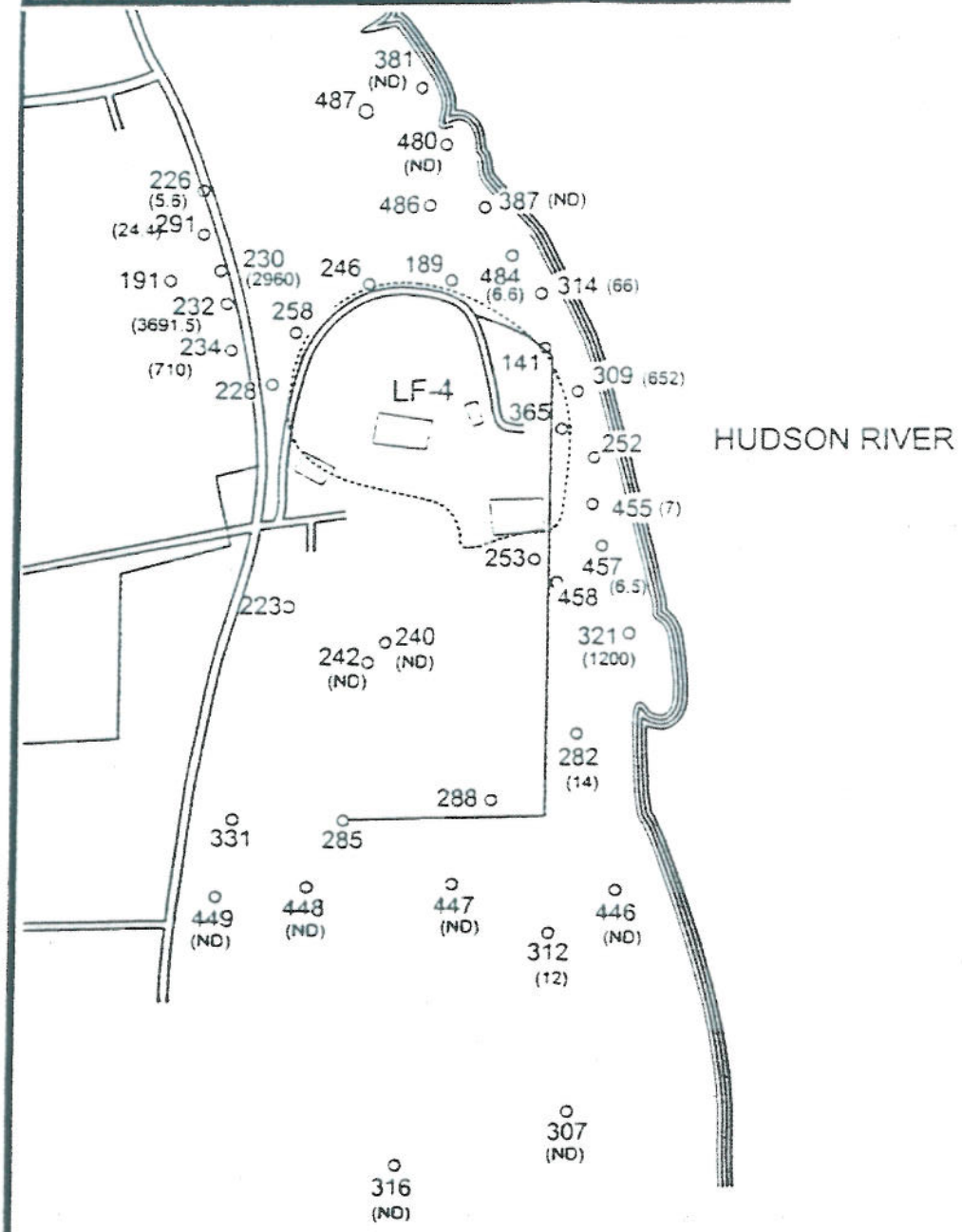


Figure 2 Remedial Areas

G.E. SILICONES

WATERFORD, NEW YORK 12188



TOTAL CONCENTRATION OF VOLATILE INDICATOR PARAMETERS SECOND QUARTER 2001

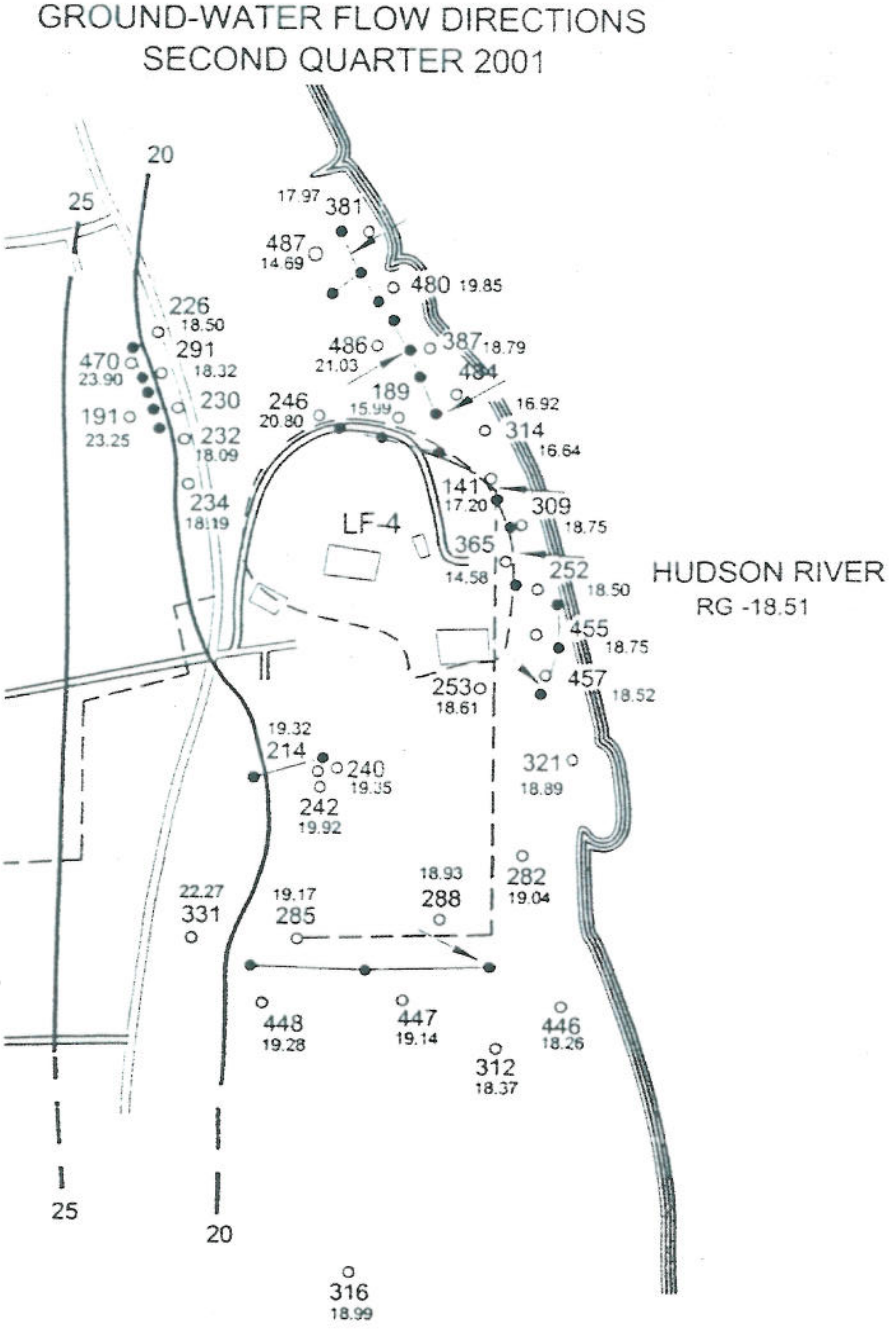
Modified From LAW Environmental

800' 0' 800'

APPROXIMATE SCALE

Figure 3 Total VIPs (ppb)

POTENTIOMETRIC SURFACE MAP OF THE PRIMARY AQUIFER WITH GENERALIZED GROUND-WATER FLOW DIRECTIONS SECOND QUARTER 2001



G.E. SILICONES

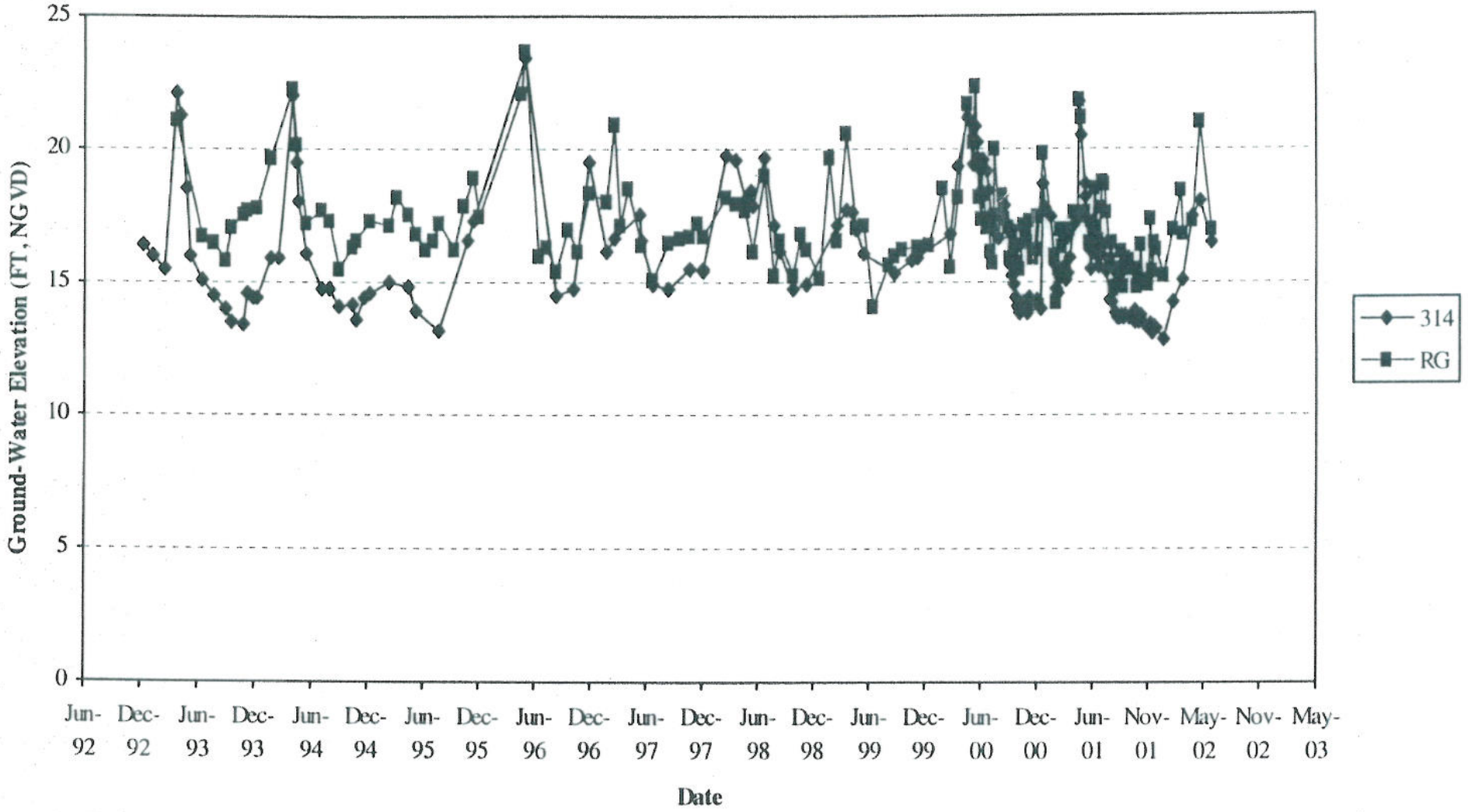
WATERFORD, NEW YORK 12188

800' 0' 800'

APPROXIMATE SCALE

Modified From
LAW Environmental

Figure 4 Groundwater Elev.



Prepared By/Date: SAB 7/26/02

Checked By/Date: JZ 7/28/02

G.E. Silicones

Waterford, New York 12188

LAW

Environmental Consultants Inc.

Comparison of Ground Water Elevations - RBN: Internal Well 314 and River Gauge

Job No. 20800-1-0025

Figure 5