DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

RCRA Corrective Action
Environmental Indicator (EI) RCRAInfo code (CA725)
Current Human Exposures Under Control

Facility Name:	**Safety-Kleen Corporation, North Amityville Service Center**
Facility Address:	**60 Seabro Avenue, North Amityville, New York**
Facility EPA ID #:	**NYD000708198**

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EIs) 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 EIs 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 "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "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 EIs are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

Duration / Applicability of EI Determinations

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

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, 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 is not available skip to #6 and enter "IN" (more information needed) status code.

   Background - The North Amityville Service center is an operating facility involved in the collection and storage of virgin and waste solvents. The facility contains above ground storage tanks, drum storage areas and fluid transfer facilities. During facility tank system upgrades in December 1995, impacted soils were discovered to be present beneath the then existing concrete containment to the two above ground waste mineral spirits tanks. Corrective action, consisting of limited soils excavation, was initiated. As part of a RCRA Facility investigation, groundwater contamination in the vicinity of the waste tanks was identified. Subsequent to the RFI passive remedial measures consisting of injection of oxygen releasing compounds into the subsurface were implemented. In February 2002, groundwater sampling results indicated a 100 fold increase on mineral spirits concentrations at well GT-1. This event triggered additional investigation and remedial efforts. Investigations determined the increase was related to spills at the facility. Additional investigations of the facility have been conducted as part of closure of the hazardous waste storage and handling areas. An additional area of contamination was identified in the vicinity of the waste loading dock. In response the facility corrective action system was modified and expanded in the fall of 2009.

Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

	YES	NO	?	Rationale/Key Contaminants
Groundwater	X			Mineral Spirits: 2 – 8 PPM Well GT-1 Area
Air (indoors)[2]		X		

[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 appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

[2] Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggests that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

	YES	NO	?	Rationale/Key Contaminants
Surface Soil (e.g., <2 ft)		X		
Surface Water		X		
Sediment		X		
Subsurface Soil (e.g., >2 ft)	X			Mineral Spirits: 2 – 8 PPM Well GT-1 Area
Air (outdoors)		X		

_____ If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

__X__ If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

_____ If unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale and Reference(s): See response to Question #1

Suburface Assessment Report, Safety-Kleen Service Center, North Amityville NY, 10/3/03
Groundwater Monitoring Report, 7/03/10

2. Are there **complete pathways** between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

	Potential **Human Receptors** (Under Current Conditions)						
"Contaminated" Media	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food[3]
Groundwater	NO	NO	NO	YES	---	---	NO
Air (indoors)	NO	NO	NO	NO	---	---	NO
Soil (surface, e.g., <2 ft)	NO	NO	NO	NO	NO	NO	NO
Surface Water	NO	NO	---	---	NO	NO	NO
Sediment	NO	NO	---	---	NO	NO	NO
Soil (subsurface e.g., >2 ft)	---	---	---	YES	---	---	NO
Air (outdoors)	NO	NO	NO	NO	NO	---	---

[3] Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated" as identified in #2 above.

2. enter "yes" or "no" for potential "completeness" under each "Contaminated" Media -- Human Receptor combination (Pathway).

_____ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

__X__ If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.

_____ If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code

Rationale and Reference(s):
Exposure to contaminated media pathway only exists to construction workers working in the subsurface. Exposures are controlled through the use of personal protective equipment as specified in the facility's health and safety plan, as required by RCRA permit.

Health and Safety Plan – Safety-Kleen Service Center, North Amityville, New York.

4 Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **"significant"**[4] (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

__X__ If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) - skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

[4] If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

_____ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) - continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

_____ If unknown (for any complete pathway) - skip to #6 and enter "IN" status code

Rationale and Reference(s):

See Response to Question #4

5 Can the "significant" **exposures** (identified in #4) be shown to be within **acceptable** limits?

_____ If yes (all "significant" exposures have been shown to be within acceptable limits) - continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

_____ If no (there are current exposures that can be reasonably expected to be "unacceptable")- continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

_____ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

Rationale and Reference(s):

6. Check the appropriate RCRA Info status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

__X__ YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the Safety-Kleen Service Center EPA ID# NYD000708198, Located at 60 Seabro Avenue, North Amityville New York under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

_____ NO - "Current Human Exposures" are NOT "Under Control."

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

Completed by: _____ Date: 9-15-2010
Kent D. Johnson
Engineering Geologist 2

Supervisor: _____ Date: 9-16-2010
Denise Radtke
Engineering Geologist 3

Director: _____ Date: 9-16-2010
Robert J. Phaneuf, P.E. - Acting Director
Bureau of Hazardous Waste and Radiation Management
Division of Solid and Hazardous Materials

Locations where References may be found:

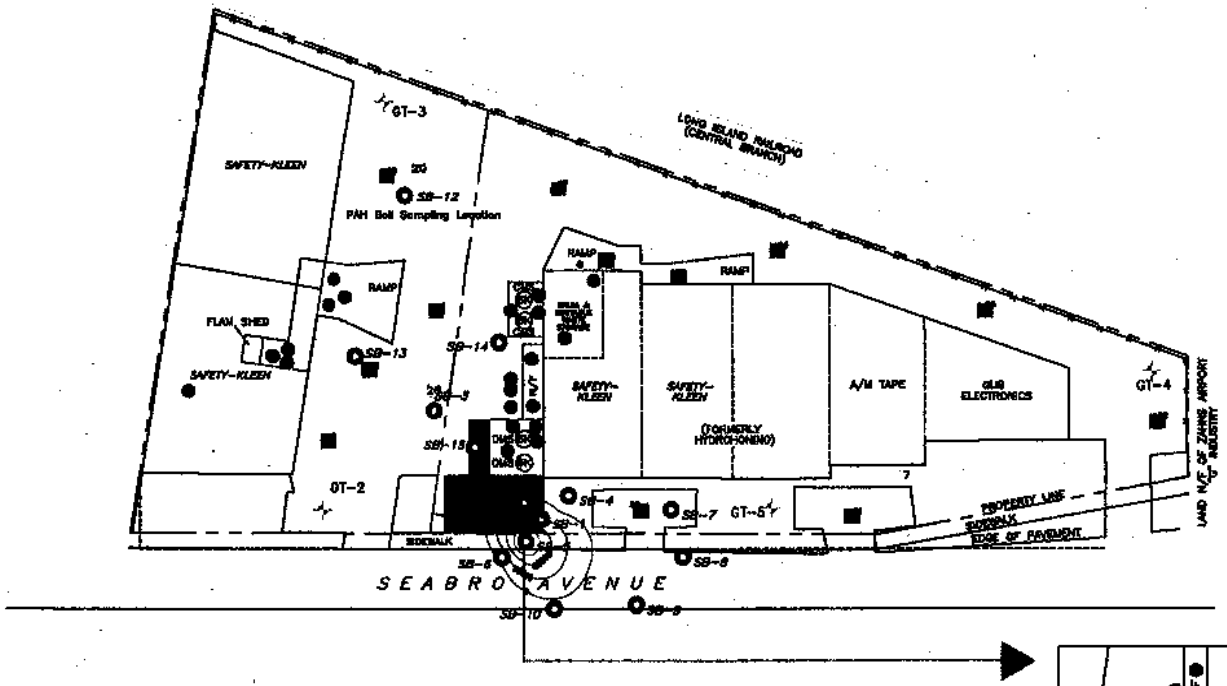
New York State Department of Environmental Conservation, Central Office
Division of Solid and Hazardous Materials
625 Broadway 9^{h} Floor
Albany, New York 12233-7252

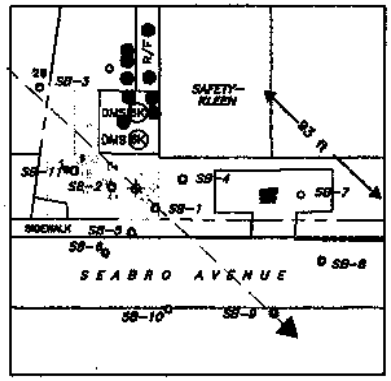
Contact telephone and e-mail numbers:

Kent Johnson
(518) 402-8594
kdjohnso@gw.dec.state.ny.us

FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.

Figure 1
Site Location Map
Safety-Kleen Service Center
N. Amityville, NY





CREMOSA CORP.

GRAY ELECTRIC

PHOENIX COPRORATION

N

Legend

- MONITORING WELL
- ACCESSIBLE DRY WELL
- INACCESSIBLE DRY WELL
- STORMWATER RUNOFF DRY WELL
- STORM DRAINS
- HISTORIC SPILL - in containment
- HISTORIC SPILL - outside of containment
- ORC INJECTION SITES (6-06-02) - installation order number
- ORC INJECTION LOCATION - see detail (1.11 X base scale)
- ABOVEGROUND STORAGE TANK
- TYPICAL HISTORIC GROUNDWATER FLOW DIRECTION
- SB-15 SOIL BORING LOCATION (see detail)
- SURROUNDING OFFSITE BUILDINGS
- SUBSURFACE PROFILES

INFORMATIONAL SOURCES

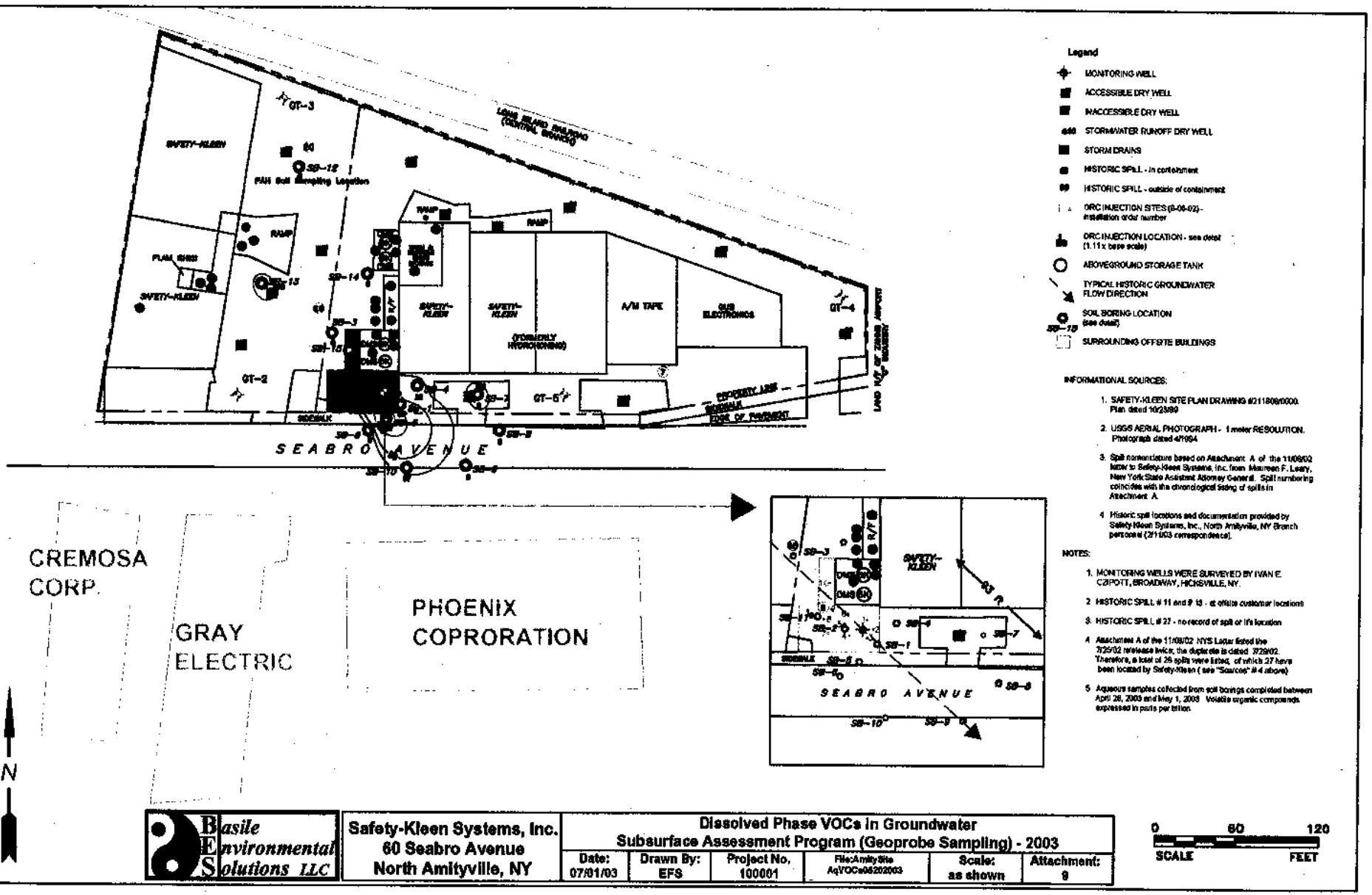
1. SAFETY-KLEEN SITE PLAN DRAWING #2118060000. Plan dated 10/29/96.
2. USGS AERIAL PHOTOGRAPH - 1 meter RESOLUTION. Photograph dated 4/1994.
3. Spill nomenclature based on Attachment A of the 11/08/02 letter to Safety-Kleen Systems, Inc. from Meredith F. Leary, New York State Assistant Attorney General. Spill numbering coincides with the chronological listing of spills in Attachment A.
4. Historic spill locations and documentation provided by Safety-Kleen Systems, Inc., North Amityville, NY Branch personnel (2/11/03 correspondence).

NOTES:

1. MONITORING WELLS WERE SURVEYED BY IVAN E OZIPOTT, BROADWAY, HICKSVILLE, NY.
2. HISTORIC SPILL # 11 and # 13 - at offsite customer locations
3. HISTORIC SPILL # 27 - no record of spill or its location.
4. Attachment A of the 11/08/02 NYS Letter listed the 7/25/02 release twice; the duplicate is dated 7/29/02. Therefore, a total of 28 spills were listed, of which 27 have been located by Safety-Kleen (see "Sources" # 4 above).
5. Soil samples collected from soil borings completed between April 28, 2003 and May 1, 2003 by a BES contractor. VOCs expressed in parts per billion.

Basile Environmental Solutions LLC	Safety-Kleen Systems, Inc. 60 Seabro Avenue North Amityville, NY	Adsorbed Phase Volatile Organic Compounds in Soils Subsurface Assessment Program - 2003				
		Date: 07/14/03	Drawn By: EFS	Project No. 100001	File:Figure 7 - SK Amity SA Report 07 14 03 EDIT	Scale: as shown	Attachment: 7

0 60 120
SCALE FEET


Legend
MONITORING WELL
ACCESSIBLE DRY WELL
INACCESSIBLE DRY WELL
STORMWATER RUNOFF DRY WELL
STORM DRAINS
HISTORIC SPILL - in containment
HISTORIC SPILL - outside of containment
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ORC INJECTION LOCATION - see detail (1.11x base scale)
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TYPICAL HISTORIC GROUNDWATER FLOW DIRECTION
SOIL BORING LOCATION (see detail)
SURROUNDING OFFSITE BUILDINGS
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SEABRO AVENUE
SAFETY-KLEEN
GT-1
GT-2
GT-3
GT-4
GT-5
A/M TAPE
OUR ELECTRONICS
(FORMERLY HYDROHONING)
RAMP
SIDEWALK
PROPERTY LINE
CREMOSA CORP.
GRAY ELECTRIC
PHOENIX COPRORATION
N
Basile Environmental Solutions LLC
Safety-Kleen Systems, Inc.
60 Seabro Avenue
North Amityville, NY
Dissolved Phase VOCs in Groundwater
Subsurface Assessment Program (Geoprobe Sampling) - 2003
Date: 07/01/03
Drawn By: EFS
Project No. 100001
File:AmitySite AqVOCs06202003
Scale: as shown
Attachment: 9
0 60 120
SCALE FEET