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DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

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RCRA Corrective Action
Environmental Indicator (EI) RCRAInfo code (CA725)

Current Human Exposures Under Control

Facility Name: **General Electric (GE) Plastics Division**
Facility Address: **Noryl Avenue, Selkirk, New York 12158**
Facility EPA ID #: **NYD066832023**

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 are not available skip to #6 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 "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 EI 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).

2. 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			See below
Air (indoors) [2]		X		No known associated air contamination
Surface Soil (e.g., <2 ft)	X			See below
Surface Water		X		No known associated surface water contamination
Sediment		X		No known associated sediment contamination
Subsurf. Soil (e.g., >2 ft)	X			See below
Air (outdoors)		X		No known non permitted discharge of contamination

____ 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:

Site Description
The General Electric (GE) Selkirk site (the site) is approximately 800 acres and has been in operation since 1967. The site is located in Albany County and is approximately one mile west of Feura Bush and three and one-half miles northwest of Selkirk. (Figure 1 - Site Location Map) The site is bordered by a fiberglass manufacturing facility, a rail yard, and a car carrier terminal. The site was built upon a layer of medium-dense brown clay and silt, approximately 2 – 16-feet thick. This brown clay and silt layer is underlain by a soft to very soft gray clay. The gray clay layer is reported to be between 59 and 166-feet thick.

The main manufactured product is Noryl Thermoplastic molding material, which has a variety of applications in the automotive, electronics and building industries. The five primary manufacturing operations at the site include:

- Manufacture of 2, 6-xylenol, cresols, mesitols, and cresylic acids from the alkylation of phenol with

[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) suggest 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.

methanol.

- Manufacture of PPO polymeric material from the oxidative polymerization of 2,6-xylenol.
- Manufacture of Noryl thermoplastic resin.
- Manufacture of GEH polystyrene from styrene monomer and polybutadiene.

General Physical Setting

Topography

GE Selkirk is located in a valley setting of the Hudson-Champlain Section of the Ridge and Valley Physiographic Province. The Hudson-Champlain Section extends from Newburgh, New York to Quebec City, Canada. Bedrock beneath the site consists of Ordovician-age shales, sandstones, gray wacke, and siltstones of the Schenectady Formation. Bedrock beneath the GE Selkirk site is overlain by deposits formed by glacial Lake Albany that were created by a retreating glacier in the Hudson River Valley. Fine-grained lacustrine silt and clay contains thin varves of fine to medium sand that were deposited in deep-water areas of the lake. Streams entering the lake formed deltas and deposited coarser sands and gravels. The deposits in the Hudson-Champlain Section have been reported to occur from a thin veneer to 300 feet (Law 1993). Beneath the topsoil horizon at the site, a layer of medium-dense brown clay and silt, approximately 2 to 16-feet thick exists. The brown silt and clay layer is underlain by a soft to very soft gray clay. This clay is reportedly between 59 and 166-feet thick beneath the Site (Law 1993).

Surface Water

The GE Selkirk site lies on the water shed divide of the Vloman Kill and Coeymans Creek and lies within a dendritic drainage basin that carries water southeast to the Hudson River about 5 miles from the site. Two unnamed tributaries border the site. The tributary on the northern border drains to Vloman Kill, the southern tributary drains to Coeymans Creek. Groundwater beneath the landfill likely has a component of flow toward the Vloman Kill (Law 1993). Flow in the Vloman Kill has a significantly reduced flow during dry-weather periods. Coeymans Creek has a better sustained flow due to its larger drainage area (Law 1993).

Hydrogeology

On-site, there is a groundwater divide causing gradients both to the north and south, towards the Vloman Kill and Coeymans Creek systems, respectively. The lacustrine sediments existing beneath the site have very low hydraulic conductivities and produce low yields. Groundwater levels in the vicinity of the landfill vary seasonally between two feet on the up gradient side of the landfill to as great as six feet down gradient of the landfill. Depth to water ranges from approximately 12 to 16 feet below ground surface (Summit 1994). The Schenectady Formation also produces low yields; median yields in this bedrock aquifer are approximately two gallons per minute (Law1993).

The site conceptual model developed during the RCRA Facility Investigation (RFI) indicates that there is no human exposure pathway for groundwater because there are no known users of the groundwater within one mile of the site. Therefore, the groundwater exposure pathway is limited to migration of impacted groundwater to local surface water. The model indicates that impacted groundwater will attenuate to below NYS Groundwater Quality Standards prior to discharge to any surface waters. This attenuation is a function of dilution, adsorption, dispersion, and an assumed biodegradation factor. Under these conditions, there are no receptors exposed to impacted groundwater from the site.

Soil Vapor Intrusion

There are no soil vapor intrusion issues on the site becaue there are no buildings overlying contaminated groundwater.

References: "Corrective Measures Study Work Plan, General Electric Plastics, Selkirk, New York;" Nittany Geoscience; February 1995

"Roadside Geology of New York State", Bradford B. Van Diver, September 1989

"Hydrogeologic Conditions General Electric Plastics Selkirk Operations, Selkirk, New York," Law Environmental, Inc., 1993

"Interim Corrective Measures Study Report for the On-site Landfill, General Electric Plastics, Selkirk, New York," Summit Environmental Group, Inc., 1994

Summary of Previous Investigations

As an operating plant, GE routinely performs Industrial Hygiene air quality assessments to evaluate worker exposure to VOCs and phenolics. These assessments are performed to evaluate both indoor and outdoor exposure pathways. Based on results of these assessments, there is no unacceptable risk to workers from airborne chemicals at the site. In addition, GE has procedures in place to evaluate and mitigate work exposures to impacted soil and groundwater.

A RCRA Facility Assessment Report, prepared by Nittany Geoscience, Inc. and completed 1995-1998 identified several SWMUs and an AOC. This RCRA Facility Assessment (RFA) Report prompted the Corrective Measures Study (CMS) Work Plan and subsequent CMS in September 1998. The RCRA Facility Investigation (RFI) Final Report summarizes the environmental work that has been performed at the site. The RFI Report characterized sediment, soils, and groundwater. A long-term groundwater monitoring program has been conducted at the site since 1996. The areas that continue to require action consists of: (1) Landfill (SWMU #9); (2) Resins Area (SWMU #36); (3) Filled Valley Area (SWMU #31); and (4) A/P Area (AOC #1). These areas are described in more detail below.

Landfill (SWMU #9)

The landfill encompasses approximately five acres (Figure A-1) and contains six cells that historically received wastes from on-site operations. The landfill has not received waste since 1989. All landfill cells containing waste are capped with multi-layered capping systems. The soils existing at the base of the landfill have vertical permeabilities in the $1x10^{-7}$ to $1x10^{-8}$ cm/sec range. The landfill a has leachate collection system and landfill gas management program. Additionally, the landfill contains storm water management structures to control runoff. There are no soil vapor intrusion issues in the Landfill area because there are no buildings overlying contaminated groundwater. The landfill is enclosed by a fence that restricts access thereby limiting the threat to human health.

An Interim Corrective Measures Study (CMS) for the landfill was performed in 1994 and a Final CMS was performed in 1996. Based on the landfill CMS, GE has implemented the presumptive remedy of containment, utilizing several control measures to minimize leachate generation and to intercept and contain future groundwater contamination. The individual control measures include:

- Two groundwater interceptor trenches to reduce the amount of leachate generated for off-site disposal and to lower the groundwater elevation within the landfill cells.
- A leachate/groundwater interceptor trench to collect contaminated groundwater at the containment breach.
- A groundwater monitoring network to determine whether contaminated groundwater has migrated from the northwest perimeter of the landfill and to determine if there is a potential surface water pathway for exposure to landfill constituents.
- Naturally-occurring biodegradation and attenuation to reduce the concentration of residual groundwater contamination below New York State Groundwater Quality Standards over time.

Recent Monitoring Results:

- Metals such as copper, cadmium, and selenium were not detected above the New York State Groundwater Quality Standards (NYSGWQ) in any of the monitoring wells sampled.
- Methanol was not detected in any landfill area monitoring well samples during 2005
- Volatile Organic Compounds (VOCs) were not detected in any landfill area monitoring well samples during 2005.
- Historic toluene and phenolics levels for LFB-8A have decreased and remains within a predictable range for this location along the Northwest margin of the landfill.
- Sediment samples were collected from a tributary to Vloman Kill and tested for volatile organic

compounds, metals, and other parameters (phenolics and methanol). The results of the sediment data screening indicted that there are no observed impacts to the Vloman Kill tributary.

References: "Landfill Corrective Measures Study, Final Report;" Nittany Geosciences, Inc, May, 1996

"Third Quarter 2005 Groundwater Monitoring Report," Shaw Environmental; December 6, 2005

Resins Area (SWMU #36)
Groundwater impacts in the Resins Area (Figure B-1 / Figure B-5) are believed to have originated from historical spills in the area of the Decanter Tanks. The two constituents of concern in this area are toluene and methanol. Access to the Decanter Tank area is limited by structures and process lines used in ongoing operations.
The residual sources in the Resins Area include: 1) the vadose zone beneath the Decanter Tank and its containment dike and 2) a relatively smaller residual mass of non-aqueous phase product residing within sand seams between the Decanter Tank and the filled valley. The containment dike is asphalt covered, which minimizes infiltration volatilization, and human contact. There are no soil vapor intrusion issues in the Resins Area because there are no buildings overlying contaminated groundwater.

Toluene migration through the sand seams appears to have created an toluene groundwater plume migrating from the Decanter Tank. The lateral extent of this plume appears to have been limited by natural attenuation processes, so that the plume does not appear to extend very far into the filled valley area. The toluene concentrations in the center of this plume, however, have not shown any significant decrease over time.

The Corrective Measures Study for this area recommended monitored natural attenuation and site access restrictions to prevent potential exposure to contaminated media in site process areas. As an extra effort to try to increase the rate of degradation, GE has been working with NYSDEC and GE Global Research Center to develop alternate ways to enhance the natural degradation processes that are occurring at the site. The initial phase of this work had somewhat limited success using Permeox injections. More recently GE has initiated a second phase pilot test to identify other amendments that may be able to enhance the natural degradation.

Recent Monitoring Results:

- Toluene continues to be detected at four of the 18 sampled monitoring locations above the NYS Ground Water Quality Standard (MPR-1, MPR-6, RMW-14, and RMW-15) The concentration of toluene in the groundwater from these wells ranged from 1.1 microgram per liter (ug/L) at MPR-1 to 120,000 ug/L at RMW-5. These concentrations are generally within the historical range of concentrations seen in this area.
- Monitoring at the edge of the plume (LFB-18 and RMW-19) indicate toluene concentrations ranging from 3.8 ug/L to 12ug/L. In general these levels are consistent with the historical data and indicate limited migration from the source area.

The ongoing groundwater monitoring data in the Resins Area indicate stable conditions with no off-site migration. This data is consistent with natural attenuation processes that are occurring in the subsurface at the site.

References: "Corrective Measures Study"; Nittany Geoscience; September 1998

"Resins Area Biodegradation Enhancement Pilot Study Work Plan"; US Filter Groundwater Services; February 2000

"Second Quarter 2002 Groundwater Monitoring Report," URS Corporation; August 20, 2002

"Third Quarter 2005 Groundwater Monitoring Report," Shaw Environmental; December 6, 2005

Filled Valley Area (SWMU #31)
The valley was originally formed by a tributary to Vloman Kill. This valley was filled in 1983 with locally derived, soils, organic matter, and demolition debris to the level of the plant process areas. The fill has a total thickness of up to 25 feet. The filled valley continues to drain to a tributary of Vloman Kill. (Figure B-4)

Subsequent to completion of the 1998 CMS, approximately 55 empty and crushed, 55-gallon drums were identified during excavation activities at the site. Two of the drums were determined to contain a tar-like, viscous material. The disposal site is within a former valley, which was filled with excavated material from plant expansion projects over a period of eight to ten years. The portion of the valley which held the drums is believed to have been filled during early plant operations around 1967-1968. The laboratory analysis of soil samples collected near and around the drums did not show elevated concentrations of site related contaminants. Subsequent groundwater monitoring in the valley showed the presence of several organic constituents in excess of applicable NYSDEC groundwater standards including: benzene, chlorobenzene, 1,2-chlorobenzene, 1,3-chlorobenzene, 1,4-chlorobenzene and phenolics. There are no soil vapor intrusion issues in the Filled Valley because there are no buildings overlying contaminated groundwater.

A follow-up investigation was conducted in August of 2001 to investigate the vertical and lateral extent of organic contaminants in the valley fill materials. Monitoring conducted, as part of this investigation did not find any further migration of the contaminant plume beyond the previously defined area. A sentinel well (SBD-4) was added to the site's groundwater monitoring program as the presumptive remedy for this area. At the request of the Department, the Southwest Interceptor Trench Outlet was also added to the site monitoring program. These "sentinel" monitoring points have not detected contaminants migrating from their original location within the filled valley. In addition, historical analytical data of total VOCs, metals (Cd, Cu, Se) and phenolics indicate that the concentrations show a general decreasing trend. This pattern continues to suggest that contaminants are not readily migrating in the filled valley area and no further actions appear warranted.

References: "Plume Delineation Work plan for the Valley Fill Area;" Memo From: Dan Ombalksi, and Bob Warren To: Tom Wrobleski and Steve Urschel; June 14, 2000

"Subsurface Investigation Results, Filled Valley Area;" URS Corporation; October 8, 2001

"First Quarter 2002 Groundwater Monitoring Report," URS Corporation; June 6, 2002

"Second Quarter 2002 Groundwater Monitoring Report," URS Corporation; August 20, 2002

"Third Quarter 2005 Groundwater Monitoring Report; Shaw Environmental; December 6, 2005

A/P Area (AOC #1)
Groundwater monitoring was initiated in the A/P Area (Figure B-2) to evaluate the impact of a variety of small spills, and leaks from tanks and the process sewer including Spill site S-3, Xylenol tank MF-204, and Phenol tank MF-149A. The source of contamination has been removed in all these circumstances. There are no soil vapor intrusion issues in the A/P Area because there are no buildings overlying contaminated groundwater.

The groundwater flow direction in the A/P Area is towards Coeymans Creek. Contaminant migration in groundwater occurs in discrete lenses of fine-grained sand and is limited to a depth of approximately 15 feet below ground surface. Contaminants may move within the backfill zones around structural foundations and underground utility line ballast, but transport off-site remains limited by the horizontal hydraulic conductivity of the native soils. The three primary constituents of interest in the A/P Area are phenol, 2,6-xylenol (2,6-dimethylphenol), and o-cresol. Soil contamination has been detected at concentrations up to 460 mg/kg of phenol beneath Tank MF-149A and 32 mg/kg of phenolics at a depth of 1.5 feet beneath the 2,6-xylenol tank MF-204. The soils beneath the phenol tank were removed to a depth of four feet, with no detected phenol remaining in the confirmation samples.

The one potential contaminant exposure pathway identified in the CMS is exposure at Coeymans Creek on the

southern boundary of the GE Selkirk site. Due to distance from the A/P Area, however, significant exposure in this area is considered highly unlikely. This was confirmed by groundwater monitoring in the site RFI.

The Corrective Measures Study for this area recommended monitored natural attenuation and institutional controls to prevent potential exposure to contaminated media in site process areas.

Recent Monitoring Results:

- Quarterly monitoring results in the area show that the phenol concentrations are generally decreasing in the source area and are not detected in the down gradient "sentinel" wells; southwest of the area. The most recent monitoring event has shown phenol concentrations in two wells on the western edge of the area at concentrations slightly above NYS Water Quality Standards. However, the distance to the nearest receptor makes any public health impacts highly unlikely.
- VOCs are also sampled via EPA Method 8260B in monitoring points MPA-1, MPA-2, MPA-3 and PZ-9. No VOCs have been detected above the NYS Water Quality Standards in the groundwater collected, presently meeting the primary objective of protecting human health and the environment.

References: "RFI Final Report, General Electric Plastics, Selkirk, New York;" Nittany Geoscience; September 1998

"Corrective Measures Study, General Electric Plastics, Selkirk, New York;" Nittany Geoscience; September 1998

"Second Quarter 2002 Groundwater Monitoring Report," URS Corporation; August 20, 2002

"Second Quarter 2005 Groundwater Monitoring Report," Shaw Environmental; August 31, 2005

3. 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	No	No	No	No
~~Air (indoors)~~							
Soil (surface, e.g., <2 ft)	No	No	No	No	No	No	No
~~Surface Water~~							
~~Sediment~~							
Soil (subsurface e.g., >2 ft)	No	No	No	No	No	No	No
~~Air (outdoors)~~							

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.

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

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

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) do not have check spaces ("___"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

__X__ 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).

_____ 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 References:

See site specific discussions in Section 2 above.

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)?

_____ 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."

_____ 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 References:

N/A

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[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.

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

____ 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 References:

N/A

6. Check the appropriate RCRAInfo 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 **General Electric (GE) Plastics Division** facility, EPA ID # **NYD066832023**, located in **Selkirk, New York 12158** under current and reasonably expected conditions. This determination represents the best understanding of conditions at the afore-mentioned facility by the State, given the most current data. This determination will be re-evaluated when the 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: 8/30/06
Larry A. Rosenmann
Engineering Geologist II
NYSDEC

Supervisor: Denise M. Radtke Date: 9/12/06
Denise Radtke
Chief, Engineering Geology Section
NYSDEC

Director: _____ Date: 9/12/06

Edwin Dassatti, P.E.
Bureau of Hazardous Waste & Radiation Management
Division of Solid & Hazardous Materials

Locations where References may be found:

NYSDEC
Division of Solid and Hazardous Materials
625 Broadway
Albany, NY 12233-7258

Contact telephone and e-mail:

Larry Rosenmann
(518) 402-8594
E-mail: larosenm@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.

References:

Nittany Geoscience, Inc., 1996. Landfill Corrective Measures Study Final Report. General Electric Plastics, Selkirk, New York.

Nittany Geoscience, Inc., 1998a. Second Quarter 1998 Groundwater Monitoring Report GE Plastics, Selkirk, New York.

Nittany Geoscience, Inc., 1998b. RFI Final Report. General Electric Plastics, Selkirk, New York.

Nittany Geoscience, Inc., 1998. Corrective Measures Study, General Electric, Selkirk, New York.

Earth Tech, August 1994, Draft – Construction work plan for Leachate collection system lift station no. 2 removal, 3 sections, 3 appendices, 1 plate. Document 8537-490/hax/gesmp.

Dunn Geoscience Corporation, June, 1988, Sludge bed Removal Construction Monitoring Report, 25p., 4 plates.

Dunn Geoscience Corporation, April, 1986, An analysis of the monitoring well network at the GE Noryl Products Plant secure landfill using an areal and cross-sectional groundwater flow and solute transport model, 96 p., 5 plates. Prepared by Paul Wm. Hare.

Dunn Geoscience Corporation, July 30, 1985, Exposure information for the secure landfill unit, 19 p., 5 plates. Prepared by James Narkunas.

Dunn Geoscience Corporation, July 1987, Draft Report – Installation of monitoring wells LB-4 and LB-5 and permeability testing of the diked areas, General Electric Plastics Selkirk
Operation, Selkirk, NY 18.p., 1 plate. Prepared by Rodney Sutch.

Nittany Geoscience, Inc., 1995. RCRA Facility Investigation General Electric Plastics, Selkirk, New York.

Dames & Moore, Hydrogeologic Investigation Chemical Landfill, General Electric Company, Selkirk, New York, 1987

Law Environmental, Inc., January 1996, Draft Report of Hydrogeologic Conditions, General Electric Plastics, Selkirk, New York.

Nittany Geoscience, Inc., 1998a. Corrective Action Compliance RCRA Facility Investigation Landfill Corrective Measure Implementation Monthly Progress Report, December 1997. General Electric Plastics, Selkirk, New York.

Nittany Geoscience, Inc., 1998b. 1997 Annual Groundwater Monitoring Report. General Electric Plastics, Selkirk, New York.

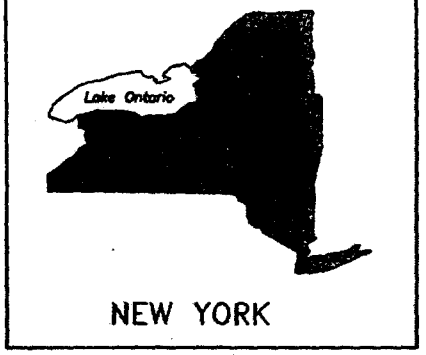
Nittany Geoscience, Inc., 1998c. Corrective Action Compliance RCRA Facility Investigation Landfill Corrective Measure Implementation Bimonthly Progress Report, February 1998. General Electric Plastics, Selkirk, New York.

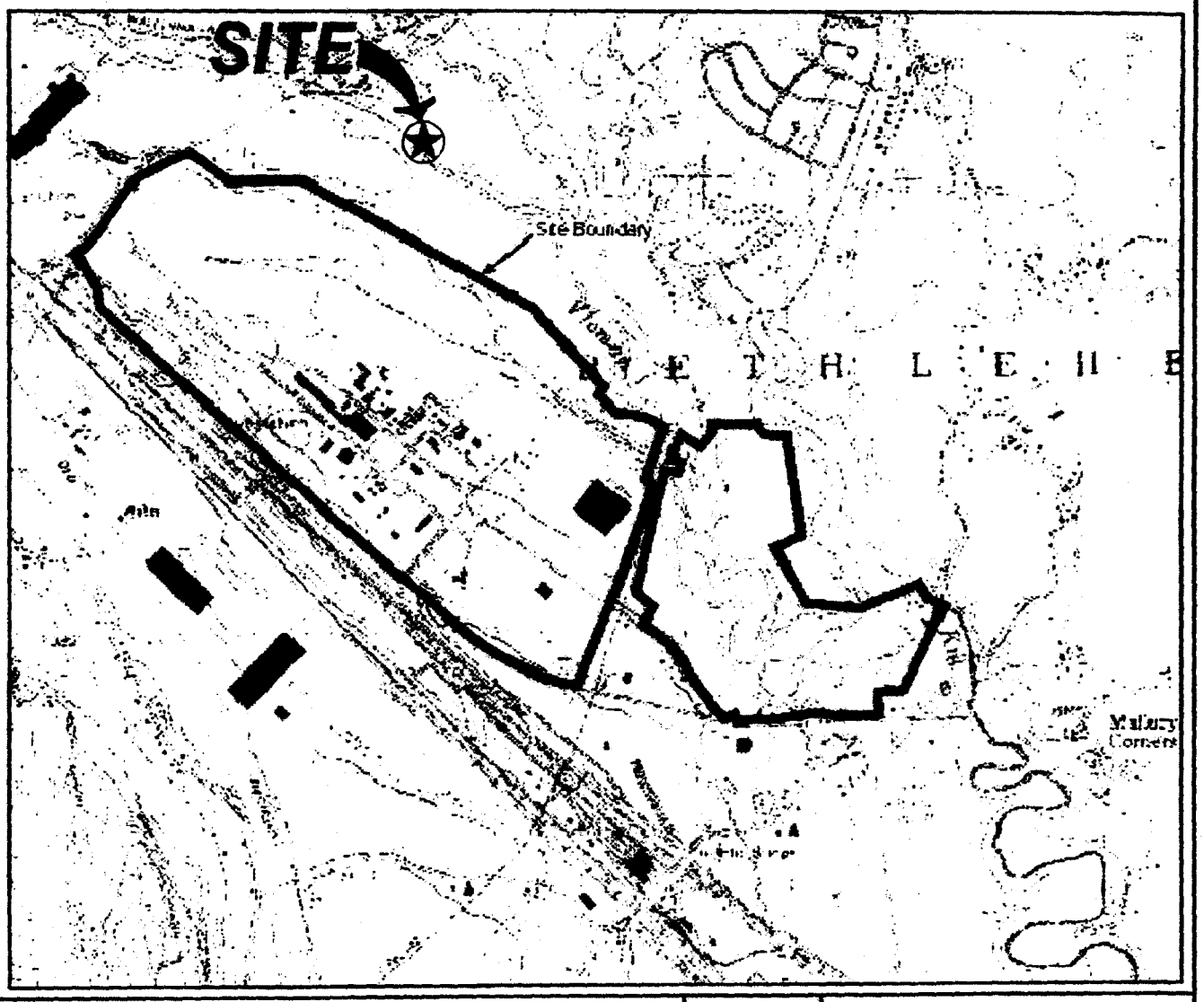
Nittany Geoscience, Inc., 1998d. Corrective Action Compliance RCRA Facility Investigation Landfill Corrective Measure Implementation Bimonthly Progress Report, April 1998. General Electric Plastics, Selkirk, New York.

Nittany Geoscience, Inc., 1998e. Groundwater Monitoring Report, First Quarter 1998. General Electric Plastics, Selkirk, New York.

Nittany Geoscience, Inc., 1998f. Corrective Action Compliance RCRA Facility Investigation Landfill Corrective Measure Implementation Bimonthly Progress Report, June 1998. General Electric Plastics, Selkirk, New York.

Nittany Geoscience, Inc., 1998g. Groundwater Monitoring Program Landfill Corrective Measure Implementation Bimonthly Progress Report, February 1998. General Electric Plastics, Selkirk, New York.





SCALE

0 2000 4000 FEET

REFERENCE:

NYSDOT 7.5' QUADRANGLE, DELMAR, NY (1993).

Shaw Environmental, Inc.

GENERAL ELECTRIC
ADVANCED MATERIALS

FIGURE 1
SITE LOCATION MAP

SELKIRK, NEW YORK

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
ALBANY, NY	S. SHKOLNIK 07-22-03			844650A1

L:\project\8446.
Plot Date/Time: Apr 18, 2006 - 11:38am
Format Revised: 12/15/99
Image: L:\project\812236\f07-5814-02-01.jpg
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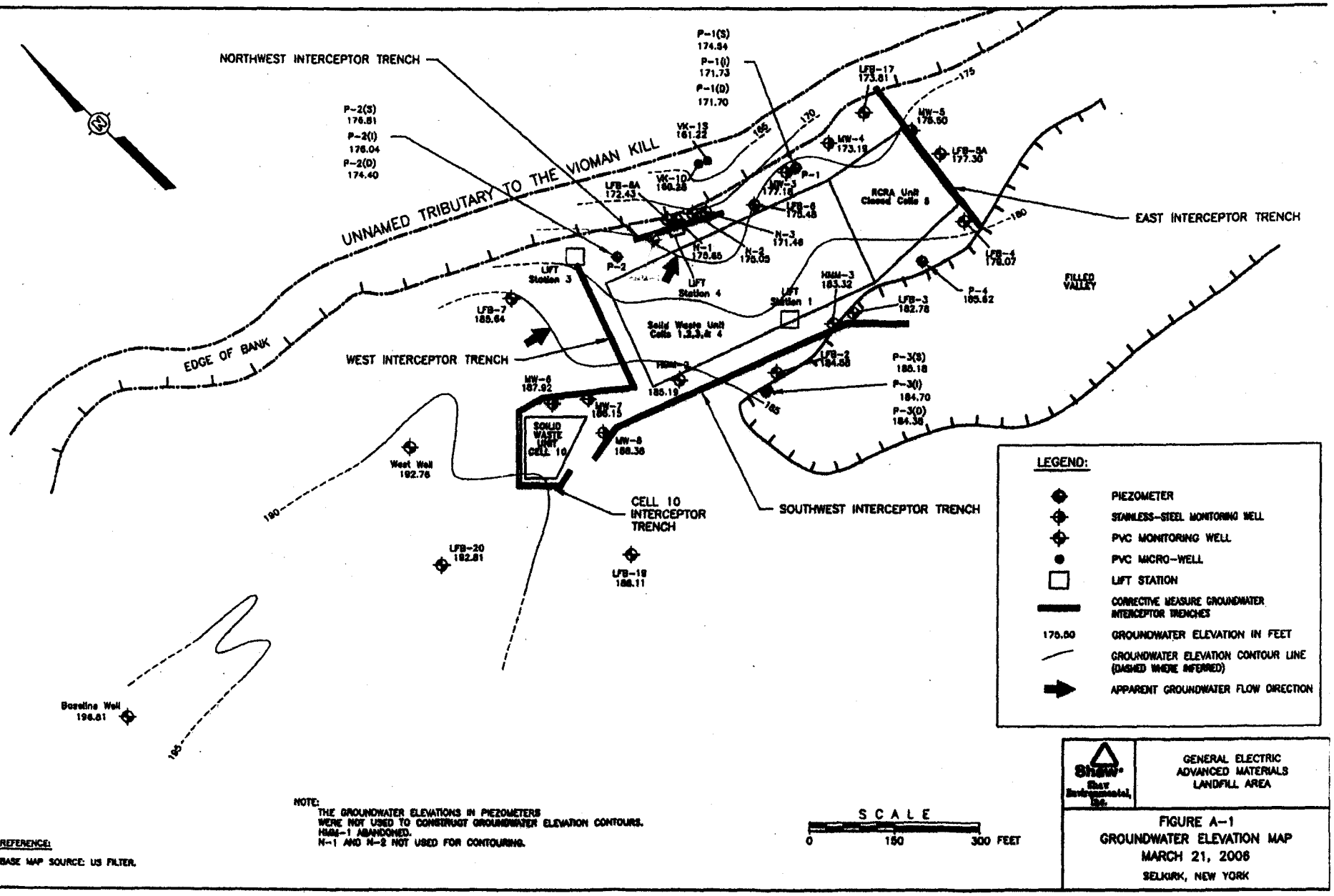


LEGEND:

- PIEZOMETER
- STAINLESS-STEEL MONITORING WELL
- PVC MONITORING WELL
- PVC MICRO-WELL
- LIFT STATION
- CORRECTIVE MEASURE GROUNDWATER INTERCEPTOR TRENCHES
- 175.50 GROUNDWATER ELEVATION IN FEET
- GROUNDWATER ELEVATION CONTOUR LINE (DASHED WHERE INFERRED)
- APPARENT GROUNDWATER FLOW DIRECTION

NOTE:
THE GROUNDWATER ELEVATIONS IN PIEZOMETERS WERE NOT USED TO CONSTRUCT GROUNDWATER ELEVATION CONTOURS.
HMW-1 ABANDONED.
N-1 AND N-2 NOT USED FOR CONTOURING.

REFERENCE:
BASE MAP SOURCE: US FILTER.

SCALE
0 150 300 FEET

Shaw Environmental, Inc.

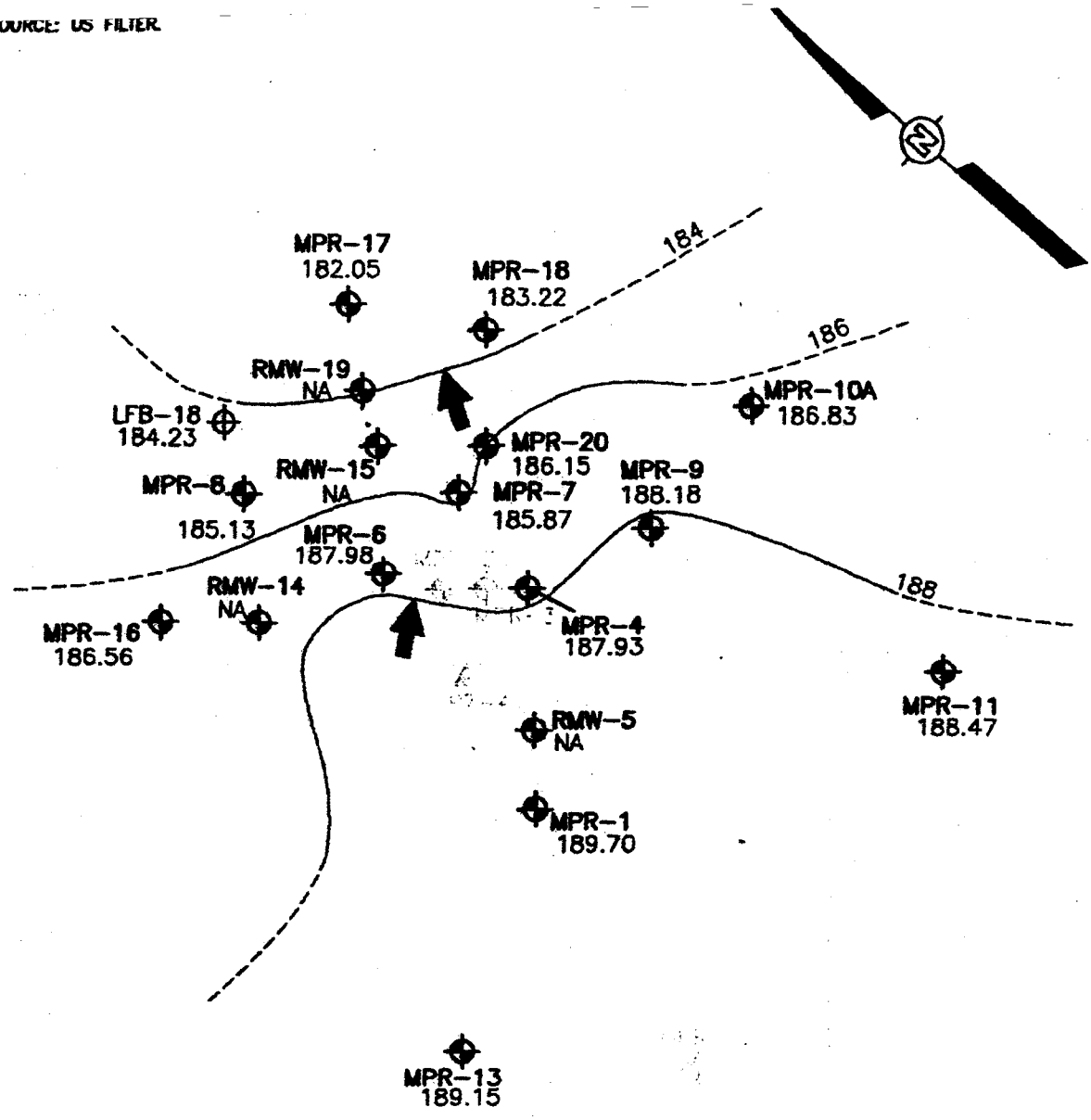
GENERAL ELECTRIC
ADVANCED MATERIALS
LANDFILL AREA

FIGURE A-1
GROUNDWATER ELEVATION MAP
MARCH 21, 2006
SELKIRK, NEW YORK

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
ALBANY, NY	S. SHOUDAKY	04-17-06		844650B29

L:\project\844650\844650B29.dwg
Plot Date/Time: Apr 17, 2006 - 4:51pm
Format Revised: 7/18/00
Image Xref:

BASE MAP SOURCE: US FILTER



LEGEND:

⊕	PVC MONITORING WELL
⊕	EXISTING MONITORING WELL
	FORMER RFI PIEZOMETER
186.83	GROUNDWATER ELEVATION IN FEET
	GROUNDWATER ELEVATION CONTOUR LINE
	APPARENT GROUNDWATER FLOW DIRECTION (DASHED WHERE INFERRED)
NA	NOT AVAILABLE

APPROXIMATE SCALE

0 150 300 FEET

Shaw Environmental, Inc.

GENERAL ELECTRIC
ADVANCED MATERIALS
RESINS AREA

FIGURE B-1
GROUNDWATER ELEVATION MAP
MARCH 22, 2006

SELKIRK, NEW YORK

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
ALBANY, NY	S. SHKOLNIK 04-17-06			844650A39

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Plot Date/Time: Apr 17, 2006 - 3:20pm
Format Revised: 7/18/00
Image:
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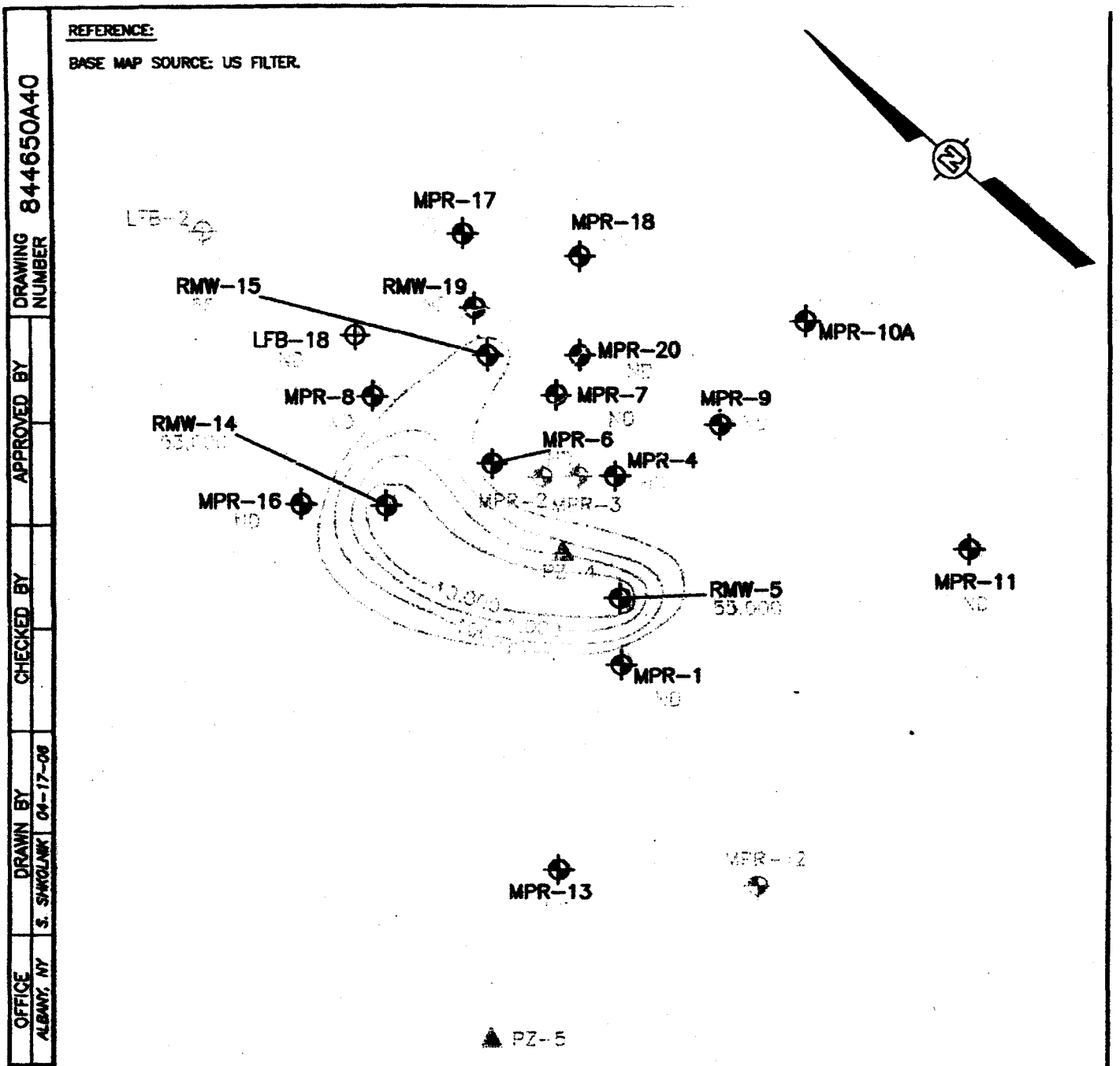


LEGEND:

- PVC MONITORING WELL
- EXISTING MONITORING WELL
- FORMER RFI PIEZOMETER
- 38 TOLUENE CONCENTRATION (ug/L)
- TOLUENE CONCENTRATION LINE
- ND NOT DETECTED
- GROUNDWATER ELEVATION CONTOUR LINE (GROUNDWATER ELEVATION DATA IN FIGURE B-1)

APPROXIMATE SCALE

0 150 300 FEET

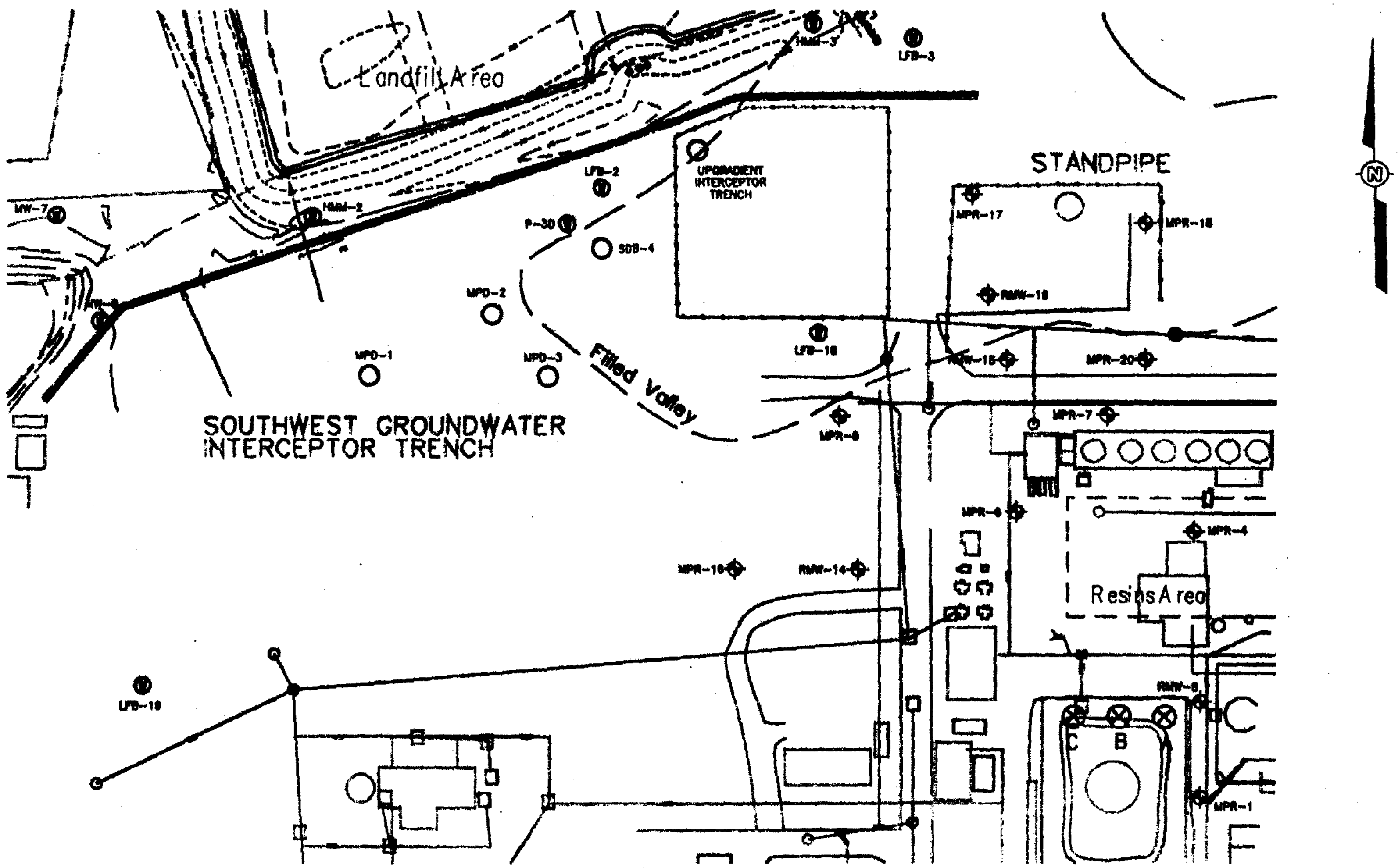
Shaw Environmental, Inc.

GENERAL ELECTRIC
ADVANCED MATERIALS
RESINS AREA

FIGURE B-5

TOLUENE CONCENTRATION
GROUNDWATER FLOW DIRECTION
MARCH 22, 2006
SELKIRK, NEW YORK

L:\project\844650\844650A40.dwg
Plot Date/Time: 04/17/06 03:20pm
Plotted by: Samuil.Shkolnik
Xref: .
Image: .



LEGEND:

- VALLEY FILL AREA MONITORING POINTS
- PVC MONITORING WELL
- LAND FILL AREA MONITORING WELL
- RFI PIEZOMETER

APPROXIMATE SCALE

0 150 300 FEET

REFERENCE:

BASE MAP SOURCE: US FILTER.

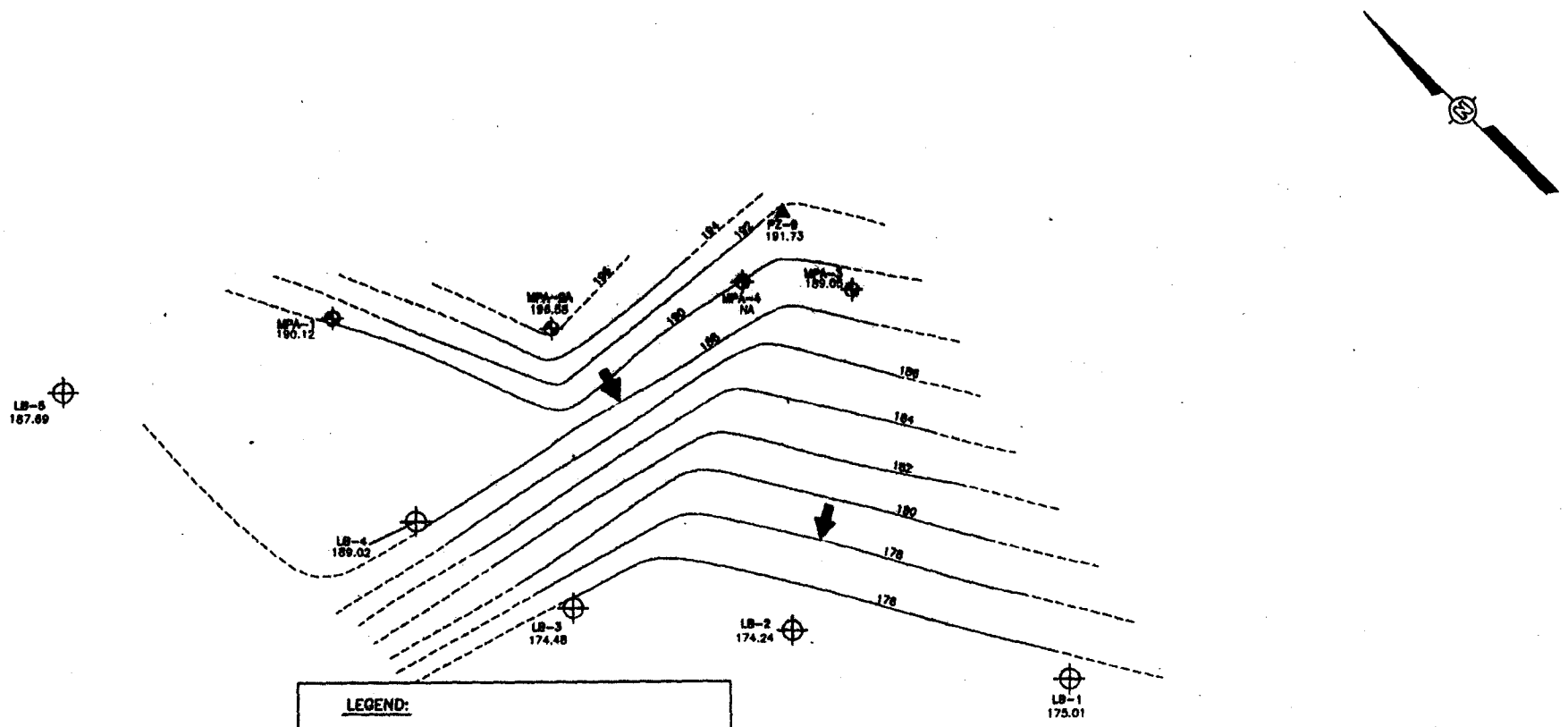
Shaw Environmental, Inc.

GENERAL ELECTRIC
ADVANCED MATERIALS
FILLED VALLEY AREA

FIGURE B-4
LOCATION OF
MONITORING POINTS

SELKIRK, NEW YORK

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
				844650B26



REFERENCE:
BASE MAP SOURCE: US FILTER.

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
ALBANY, NY	S. SHROUDY 04-18-06			844650830

L:\project\844650\844650830.dwg
Plot Date/Time: Apr 18, 2006 - 11:40am
Format Revised: 7/18/05
Image Xref:

Shaw Environmental, Inc.

GENERAL ELECTRIC
ADVANCED MATERIALS
ALKYLATED PRODUCTS AREA

FIGURE B-2
GROUNDWATER ELEVATION MAP
MARCH 21, 2006

SELKIRK, NEW YORK