

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

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

Facility Name: STIMPSON CO., INC
Facility Address: Sylvan Avenue, Bayport, NY
Facility EPA ID #: EPA ID No. NYD052780392

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.

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).

**Migration of Contamination Groundwater Under Control
Environmental Indicator (EI) RCRAInfo code (CA750)**

Page 2

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?

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

Facility Location

Stimpson Co., Inc is located at 900 Sylvan Avenue in Bayport, New York. The Stimpson property, which is approximately 21 acres in area, is bounded by undeveloped industrial-zone land to the west and the South, commercial and industrial property to the north, and Sylvan Avenue to the east (Figure 1).

Facility Description

Up until June 2003, Stimpson Co., Inc. was engaged in the manufacture of metal fastening products such as eyelets, grommets, washers, rivets, and snap fasteners, and the machines used to install the fasteners. In June 2003, all remaining operation associated with the manufacture and finishing of metal fasteners were discontinued. All of Stimpson's manufacturing operations were conducted in their 200,000 square foot facility including machining, tumbling, metal finishing, painting and electroplating. In addition to manufacturing operations, Stimpson also operated a waste water treatment system (WWTS) for their tumbling rinse water.

Review of the facility and its history identified the following solid waste management units (SWMUs) and areas of concern (AOCs):

SWMU and AOC		
SWMU	Waste Description	Analytical Parameters
1	Drum Storage Area	Metals, Acid, Cyanide
2	Tumbling Treatment System, Final Neutralization and Former Plating Treatment System	Metals, Acid, Cyanide
3	Former 10,000-gallon Sludge Holding Underground Storage Tank	Metals, Cyanide
4	Spent Acid Storage Tank	Acid

**Migration of Contamination Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)**

Page 3

SWMU and AOC		
5	Waste Underground Storage Tank Area	Metals, Cyanide
6	Former 1,000 - gallon Fuel Oil Aboveground Storage Tanks	Metals, Cyanide
7	Sludge Filter Cake Storage Area	Metals, Cyanide
8	Petroleum Naphtha degreasing Units	Metals, Cyanide, Waste Machine Oils, Waste Minerals Spirits
AOC		
AOC 1	Recharge Basins	Metals, Cyanide

The process wastewater treatment system consisted of three sub-systems, namely, plating treatment, tumbling treatment and neutralization. The plating treatment system treated first rinse waters from the electroplating operations and recycled the treated effluent back to the electroplating operations for reuse as rinse water. Plating wastewater treatment consisted of alkaline chlorination and chemical precipitation. The tumbling treatment system treated second rinse waters from the electroplating operations and rinse waters from the non-electroplating metal finishing operations. The tumbling treatment system consisted of chemical (lime and sodium sulfide) precipitation. The final neutralization system treated dilute rinse water from both electroplating and metal finishing operations, and treated effluent from the tumbling treatment system. Treated effluent from the tumbling treatment system was combined with dilute rinse waters in the final neutralization system, where the combined wastewaters were neutralized, passed through a final settling tank and discharged to one of two recharge basins. In 1984, cadmium plating and aluminum chromating operations were discontinued.

Wastes that were generated by Stimpson included waste machine oils, waste mineral spirits, spent metal finishing baths, waste acids, aqueous paint residues and wastewater treatment sludge. There had been evidence release of hazardous waste or hazardous waste constituents from the wastewater treatment system and from the former settling underground tanks in the soil and groundwater.

For more than 25 years Stimpson operated its hazardous waste management units. Few releases were found to have occurred from these units to the soil and groundwater. Stimpson installed four monitoring wells to meet RCRA requirements. Samples from these wells revealed levels of cadmium, lead, nitrate and silver above the groundwater standards. This contamination may have been caused by the wastewater treatment system exceeding its groundwater discharge permit levels. In the early part of 1985, EPA and NYSDEC began requesting information regarding Stimpson's hazardous waste management activities and wastewater treatment system. In April 1985, EPA requested that the soil to be tested for heavy metals and organics, sampling areas included the recharge basins, the leaching fields and the former settling underground tank.

In May 1986, NYSDEC indicated that soil samples around the recharge basins had demonstrated an unacceptable level of soil contamination and the contaminated soil should be removed. During 1996 through 1997, 1,000 cubic yards of impacted soils were removed from the recharge basin.

Migration of Contamination Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)
Page 4

Based on the soil sampling conducted as part of the RCRA closure, four areas were identified as warranting remedial actions: The metal finishing area, the former underground settling tanks, the two recharge basins and the sanitary system (leaching pools).

Metal Finishing Area Remediation: Soil samples collected from beneath the metal finishing area floor, four locations showed elevated levels of copper and zinc. 28 cubic yards of soil were removed from these locations, copper and zinc levels were detected below the NYSDEC Recommend Soil Cleanup Objectives in all the end point samples data. NYSDEC recommended no further action for this remedial action.

The Former Underground Settling Tank Remediation: Soil samples collected from beneath the reinforced concrete base of the former underground settling tank contained elevated levels of copper and zinc. Approximately 11 cubic yards of soil were excavated from beneath the settling tank. The tank's manhole cover and frames were removed and the settling tank was backfilled with clean soil. NYSDEC recommended no further action for this remedial action.

Recharge Basin Remediation: Approximately 200 cubic yards of soil impacted by elevated level of copper and zinc, the discharge lines from the wastewater system to the recharge basins were permanently sealed and abandoned in place. Soil and groundwater samples warranted no further remedial action in the recharge basins.

Sanitary system (leaching pools) Remediation: elevated levels of total petroleum hydrocarbons (TPH) and metals were detected in the sludge and /or bottom sediments. Every leaching pool was pumped out and excavated. NYSDEC recommended no further action for this remedial action.

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?

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

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

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

Rationale:

Wastewaters from Stimpson the facility were discharged to the groundwater via four (4) on-site

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).

**Migration of Contamination Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)**

Page 5

disposal systems. Sanitary wastewaters were discharged to leaching pool systems located on the east and west side of the plant building. Stormwater from the plant roof and paved parking area were directed to stormwater dry wells surrounding the plant building. Process wastewater were treated and discharged to two (2) recharge basins located on the northwest side of the plant building. The location and arrangement of each disposal system is shown in Figure 2, Site Plan.

Groundwater was monitored quarterly since 1982 and investigated as part of RCRA Closure. The groundwater is encountered at approximately 25 below ground surface and flows locally in a southeasterly direction. The facility had experienced periodic exceedances with its SPDES permit, which could explained slightly levels of cadmium, chromium, lead and copper above their NY State groundwater standards. The last round of groundwater samples, after all soils were removed (see question 1), indicated that there has not been an impact to groundwater local quality. A Suffolk County well field is located approximately 5500 ft. northwest (downgradient) of Stimpson. Contaminants of concern have not been detected at any of the Suffolk County wells.

References:

Closure Certification Report August 2004.

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)?

_____ 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 Aexisting area of groundwater contamination²) - 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.

Migration of Contamination Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)

Page 6

Rationale:

Not Applicable

References:

Closure Certification Report August 2004.

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

_____ 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:

N/A

References:

Closure Certification Report August 2004

5. Is the **discharge** of "contaminated" groundwater into surface water likely to be "**insignificant**" (i.e., the maximum concentration³ 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)?

_____ If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration³ of key 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

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

**Migration of Contamination Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)**

Page 7

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 concentration³ of each 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 concentrations³ 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:

Not Applicable

References:

Closure Certification Report August 2004

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 implemented⁴)?

_____ 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

⁴Note, 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.

⁵The 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.

**Migration of Contamination Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)**

Page 8

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:

Not Applicable

References:

Closure Certification Report August 2004

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?@

_____ 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:

**Migration of Contamination Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)**

Page 9

N/A

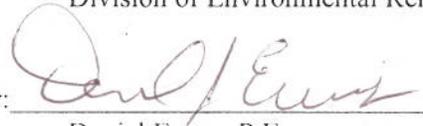
8. Check the appropriate RCRAInfo status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

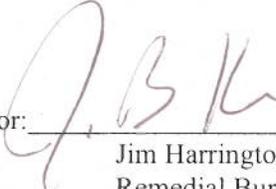
YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the Migration of Contaminated Groundwater is Under Control at the E. B. Stimpson, EPA ID # NYD052780392, located at 900 Sylvan Avenue in Bayport, New York. Specifically, this determination indicates that the migration of contaminated groundwater is under control. 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:  Date: 3/10/2011
Henry Wilkie, Environmental Engineer 1
Remedial Section B
Remedial Bureau A
Division of Environmental Remediation

Supervisor:  Date: 3/10/11
Daniel Evans, P.E.
Remedial Section B
Remedial Bureau A
Division of Environmental Remediation

Director:  Date: 3/10/11
Jim Harrington, P.E. Director
Remedial Bureau A
Division of Environmental Remediation

Locations where References may be found:

**Migration of Contamination Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)**

Page 10

New York State Department of Environmental Conservation, Central Office
Division of Environmental Remediation
625 Broadway 11th Floor
Albany, New York 12233-7252

Contact telephone and e-mail numbers:

Henry Wilkie
(518) 402-9622
hjwilkie@gw.dec.state.ny.us

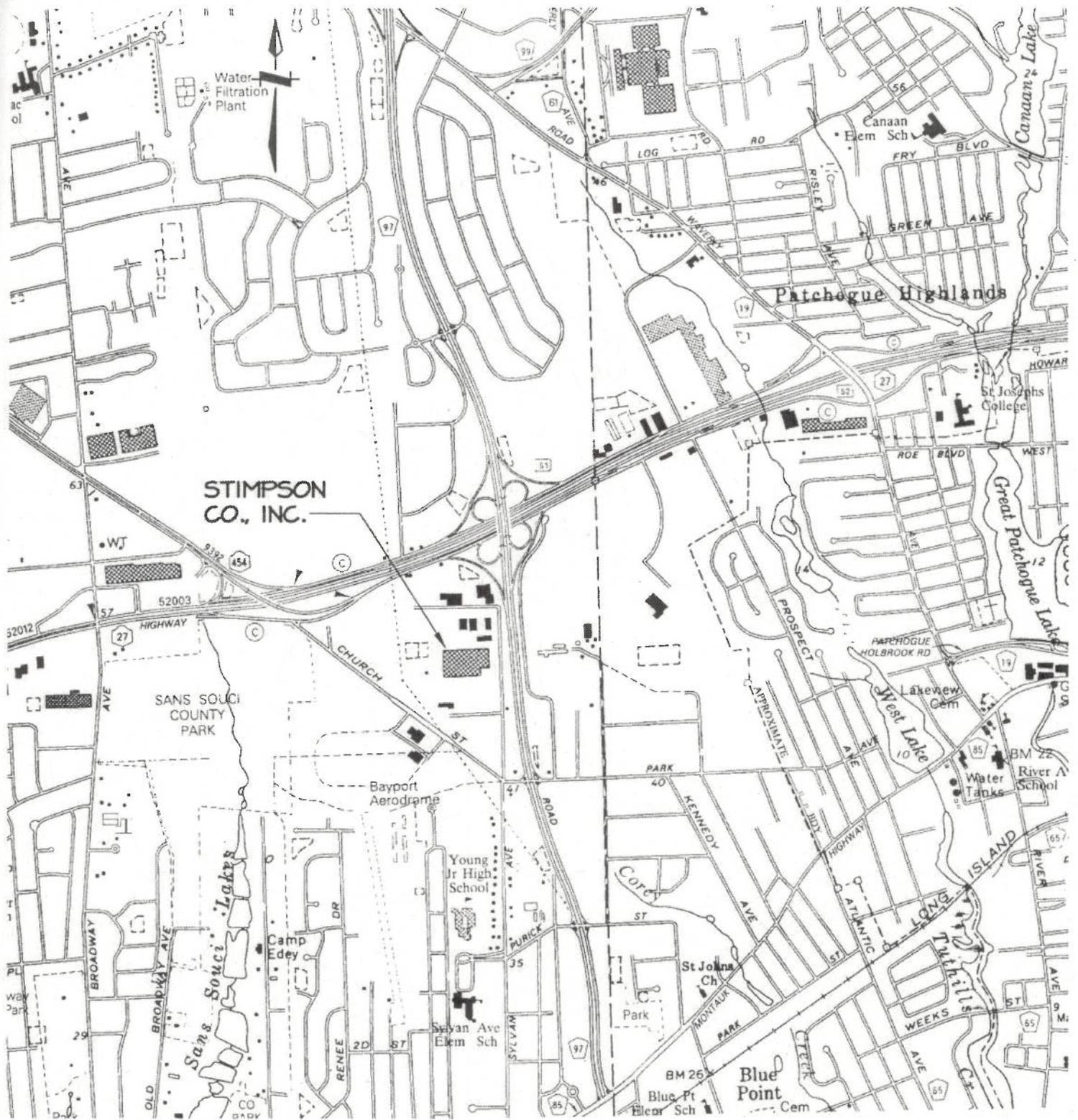
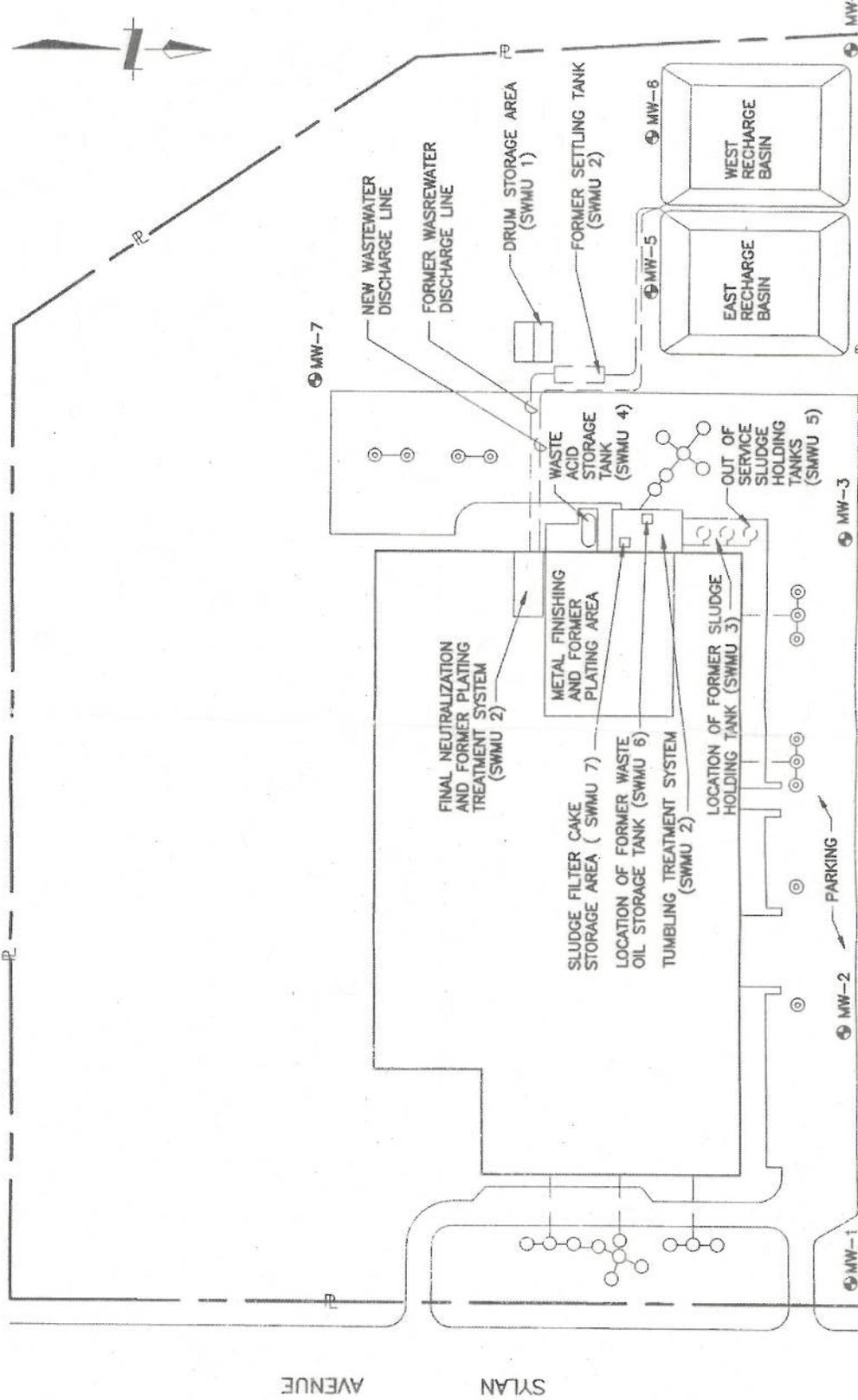


FIGURE 1
LOCATION MAP
STIMPSON CO., INC.
BAYPORT, NEW YORK
 JULY 2004 SCALE: 1" = 2,000'



LEGEND:

- SANITARY WASTEWATER LEACHING POOL
- ⊙ STORMWATER DRYWELL
- ⊕ GROUNDWATER MONITORING WELL

FIGURE 2 - SITE PLAN

STIMPSON CO., INC.

SCALE: 1" = 100'



S Y L V A N A V E N U E

FIGURE 3 - GROUNDWATER

