DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

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

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

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 are not available skip to #6 and enter "IN" (more information needed) status code.

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 included 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 (Figure 2)		
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
5	Waste Underground Storage Tank Area	Metals, Cyanide
6	Former 1,000 - gallon Fuel Oil Aboveground Storage Tanks	Metals, Cyanide

SWMU and AOC (Figure 2)		
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 considered 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, **see question 2**.

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			Metals, Cyanide, Oil
Air (indoors)[2]		X		
Surface Soil (e.g., <2 ft)	X			Metals, Cyanide, Oil
Surface Water		X		
Sediment		X		
Subsurface Soil (e.g., >2 ft)	X			Metals, Cyanide, Oil
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 known or reasonably expected to be 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):

Target Population/Pathway

For more than 25 years, Stimpson operated its hazardous waste management units, few releases have occurred from some of these units to the soil and groundwater. Stimpson has installed four monitoring wells to meet RCRA requirements, samples from these wells have revealed levels of

[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.

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.

Corrective Action Program.

Stimpson closed all metal fastener manufacturing and finishing Operation in early 2003. All closure activities were conducted in accordance with NYSDEC-approved Closure Plan. Under the approved Facility Closure Plan, Facility closure activities included the following:

- Decontamination and removal of non-permanent equipment and structures (e.g., tanks, filters, piping ducts, etc).

- Decontamination of permanent structures (e.g., building floors, containment structures, etc.) was accomplished using high-pressure steam and detergent. When stains or permanent structures could not be removed by pressure-steaming.

- Soil samples were collected inside the building, at the former settling tank, the sanitary system (leaching pools) and the recharge basins. They were analyzed for RCRA metals, PCBs, VOCs and SVOCs.

- Also, groundwater samples were collected as part of the closure.

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.

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 a 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.

Groundwater was quarterly monitoring 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 last round of groundwater samples indicated that there has not impacted groundwater local quality.

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
~~Air (indoors)~~	~~NO~~	~~NO~~	~~NO~~		~~---~~	~~---~~	
Surface Soil (e.g., <2 ft)	NO	NO	NO	NO	NO	NO	NO
~~Surface Water~~	~~NO~~	~~NO~~	~~---~~	~~---~~	~~NO~~	~~NO~~	~~NO~~
Sediment	NO	NO	---	---	NO	NO	NO
Subsurface Soil (e.g., >2 ft)	---	---	---	NO	---	---	NO
~~Air (outdoors)~~	~~NO~~	~~NO~~	~~NO~~	~~NO~~	~~NO~~	~~---~~	~~---~~

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).

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 Reference(s):

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

All contaminated media (groundwater, sediments and soil) were addressed by the approval remedial activities.

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 Reference(s):

N/A

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

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

Rationale and Reference(s):

N/A

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 E. B. Stimpson, EPA ID # NYD052780392, located at 900 Sylvan Avenue in Bayport, 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: 3/29/2010
Henry Wilkie, Environmental Engineer 1
Bureau of Hazardous Waste and Radiation Management
Division of Solid and Hazardous Materials

Supervisor: _____ Date: 3/29/10
Daniel Evans, P.E
Hazardous Waste Engineering Eastern Section
Bureau of Hazardous Waste and Radiation Management
Division of Solid and Hazardous Materials

Director: _____ Date: 3/29/10
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 9th Floor
Albany, New York 12233-7252

Contact telephone and e-mail numbers:

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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.

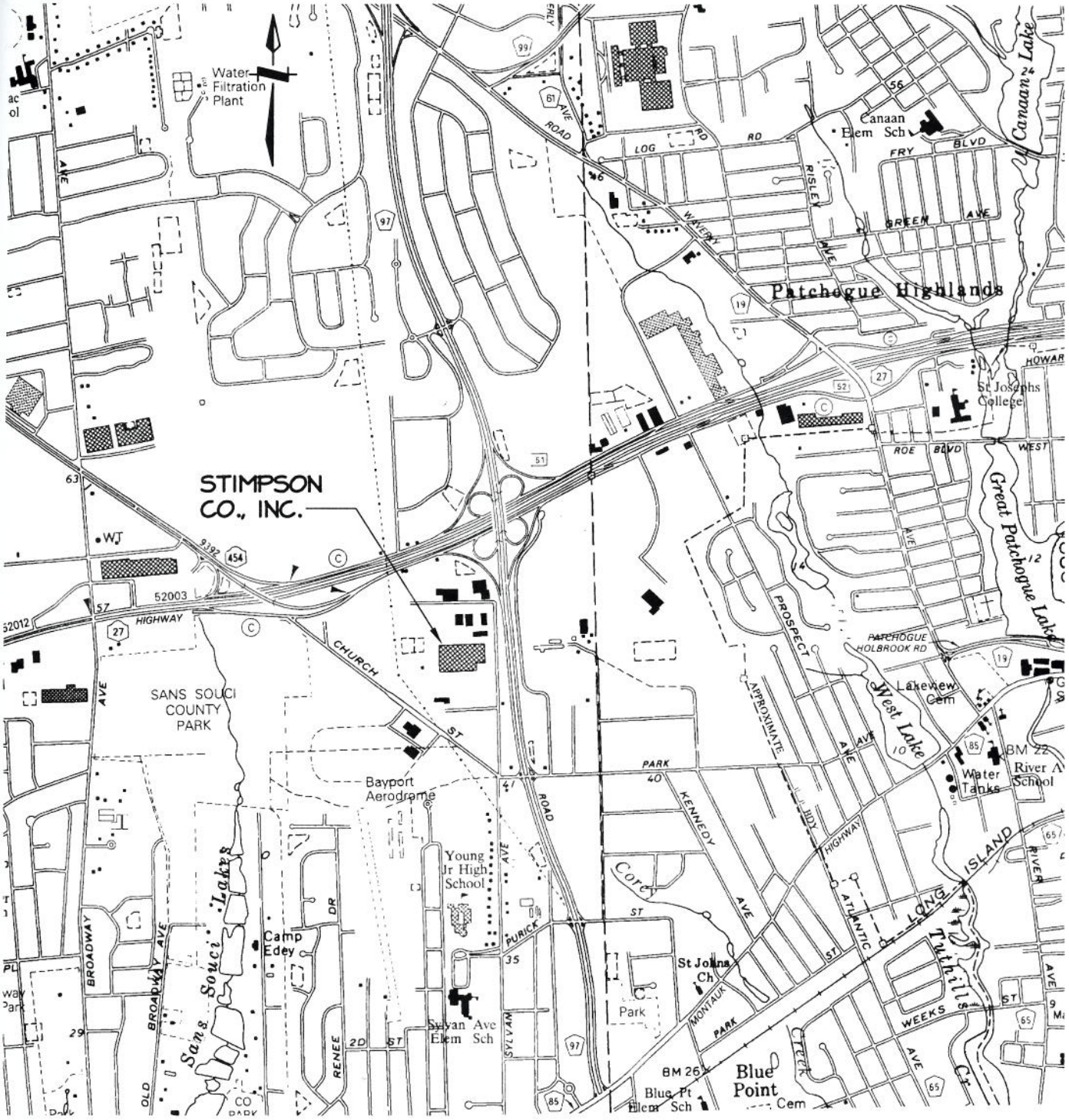

FIGURE 1
LOCATION MAP
STIMPSON CO., INC.
BAYPORT, NEW YORK

JULY 2004 SCALE: 1" = 2,000'

EH.DWG 9-19-97 12:50:07 pm

SYLAN AVENUE

MW-7

NEW WASTEWATER DISCHARGE LINE

FORMER WASREWATER DISCHARGE LINE

FINAL NEUTRALIZATION AND FORMER PLATING TREATMENT SYSTEM (SWMU 2)

DRUM STORAGE AREA (SWMU 1)

METAL FINISHING AND FORMER PLATING AREA

WASTE ACID STORAGE TANK (SWMU 4)

FORMER SETTLING TANK (SWMU 2)

SLUDGE FILTER CAKE STORAGE AREA (SWMU 7)

LOCATION OF FORMER WASTE OIL STORAGE TANK (SWMU 6)

TUMBLING TREATMENT SYSTEM (SWMU 2)

LOCATION OF FORMER SLUDGE HOLDING TANK (SWMU 3)

MW-5

MW-6

EAST RECHARGE BASIN

WEST RECHARGE BASIN

OUT OF SERVICE SLUDGE HOLDING TANKS (SMWU 5)

MW-1

MW-2

PARKING

MW-3

MW-4

LEGEND:

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

FIGURE 2 - SITE PLAN

STIMPSON CO., INC.

SCALE: 1" = 100'

FIGURE 3 - GROUNDWATER