ENGINEERING INVESTIGATIONS
AT
INACTIVE HAZARDOUS WASTE SITES
IN THE
STATE OF NEW YORK

PHASE I - PRELIMINARY INVESTIGATION

FINAL REPORT

PREFERRED PLATING SITE

CONTRACT NO. D000452
NYSDEC SITE NO. 152030

Submitted To:
Division of Solid Waste
New York State
Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-0001

Submitted By:
Woodward-Clyde Consultants, Inc.
1750 Broadway 15th Floor
New York, New York 10019

September 25, 1984
0764556

396927
000024
Woodward-Clyde Consultants, Inc.

September 25, 1984
82C4548

New York State Department of Environmental Conservation
Division of Solid Waste
Room 209
50 Wolf Road
Albany, New York 12233

Attention: Mr. Norman H. Nosenchuck
Director

Subject: Engineering Investigations at Inactive Hazardous Waste Sites in the State of New York
Phase I - Preliminary Investigation
Preferred Plating Site
NYSDEC No. 152030
EPA No. Not Available

Dear Sir:

This report presents the results of our Preliminary Investigation of the Preferred Plating site in Farmingdale, Suffolk County, New York. This preliminary investigation fulfills the requirements of Phase I of our Contract No. D000452 to perform engineering investigations at 40 inactive hazardous waste sites in the State of New York. Phase II involves field investigation services at the sites.

The objective of Phase I was to:

- collect and review data
- perform a site reconnaissance
- prepare a draft Hazard Ranking System (HRS) and Documentation
- develop a specific site work plan for Phase II
- develop Phase II site investigation costs
- identify known responsible parties
- prepare a summary report
This report contains six sections. Section 1.0 includes a description of the site. Section 2.0 presents the preliminary HRS work sheets, the HRS documentation records, and EPA site assessment forms (2070-12 and 2070-13). Section 3.0 provides a brief summary of the history of site activities. Section 4.0 includes a discussion of existing site data. Section 5.0 provides an assessment of the data adequacy identifying major data gaps. Lastly, Section 6.0 presents the recommended Phase II Site Investigation Work Plan and costs. The sampling and analysis plan and the health and safety plan are not included. These are to be supplied by NYSDEC.

Preferred Plating went out of business in 1976 and is no longer located at the site. The current owner of this site is unknown. Since 1976, several firms have occupied the site, none of which are conducting similar operations to Preferred Plating.

Preferred Plating operated for more than twenty years at the site. During this time, data indicated that heavy metals were discharged into the subsurface environment causing ground water contamination on site and at nearby Fort Totten, U.S. Army Base.

The WCC Site Survey showed that an automobile repair shop now occupies the site. There is no evidence of the Preferred Plating operations at present.

The HRS scores developed for the Preferred Plating site are as follows:

\[ S_M = 33.76 \ (S_{gw} = 58.41 \ S_{sw} = 0.0 \ S_a = 0.0) \]
\[ S_{FE} = N/A \]
\[ SDC = 0.0 \]
Existing data on the Preferred Plating site were generally not adequate to complete all HRS work sheets. Additional data are needed to determine the contents and number of drums buried and the extent of ground water contamination. Additionally, no estimate has been made of the amount of leachate released to the leaching pools. The proposed work plan has been designed to answer questions primarily concerning soil contamination, ground water flow and quality, surface water flow and quality, and air quality. Proximity to surface waters and the documented presence of aromatic and chlorinated hydrocarbons in the ground water and soil samples indicate that potential health hazards may exist. A detailed description of the work plan and estimated costs is provided in Section 6.0. The total estimated cost for Phase II investigations at the Preferred Plating site is $17,095.

If there are any questions or comments concerning the work plan or any other portion of the Phase I report, please do not hesitate to contact us.

Very truly yours,

Donald R. Ganser,
Project Manager

DRG:scp
C732/131
<table>
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<tr>
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<tr>
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<td>2-29</td>
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<td>4.0 SITE DATA</td>
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</tr>
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<td>5.0 DATA ADEQUACY</td>
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<td>6.2 Field Investigation Plan</td>
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<td>6.2.2.3 Aquifer Testing</td>
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<tr>
<td>6.2.3 Sampling and Analysis Plan</td>
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<td>6.2.3.1 General Plan</td>
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<tr>
<td>6.2.3.2 Sampling Parameters</td>
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<td>6.2.3.3 Sampling Locations</td>
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<tr>
<td>6.3 Health and Safety Plan</td>
<td>6-4</td>
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<td>6.4 Cost Estimate</td>
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### LIST OF TABLES

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<thead>
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<th>Table</th>
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<th>Page</th>
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<tr>
<td>6-1</td>
<td>PROPOSED CHEMICAL ANALYSES AT THE PREFERRED PLATING SITE</td>
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<td>6-2</td>
<td>GEOPHYSICAL STUDIES COSTS</td>
<td>6-6</td>
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<tr>
<td>6-3</td>
<td>DRILLING/WELL INSTALLATION COSTS</td>
<td>6-7</td>
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<td>6-4</td>
<td>SAMPLING AND ANALYSIS COSTS</td>
<td>6-8</td>
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<td>6-5</td>
<td>REPORT PREPARATION COSTS</td>
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<td>6-6</td>
<td>PROJECT MANAGEMENT COSTS</td>
<td>6-10</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

Figure

1  SITE LOCATION MAP - PREFERRED PLATING SITE
2  LOCATION PLAN FOR PROPOSED PHASE II INVESTIGATION
APPENDICES

Appendix

A  REFERENCES
B  PERTINENT INFORMATION
C  UPDATED NEW YORK STATE REGISTRY FORM
1.0
SITE DESCRIPTION

Preferred Plating is located in a light industrial area on Allen Boulevard in Farmingdale, Suffolk County, New York (Figure 1). The site is situated east of Route 110 south and is adjacent to the Long Island Railroad. The closest surface water body is approximately 6,000 feet east of the site and is an unnamed intermittent tributary to Massapequa Creek.

The site has changed ownership and use several times over the years and is currently being occupied by an auto repair shop. Preferred Plating was in existence at the site until 1976 when the firm filed for bankruptcy.

The site is located in an area where various light-industries also have operations. The site is nearly flat with a gentle slope toward the south. Over 90% of the immediate area is covered with impervious materials. Adjacent buildings surrounding the site and numerous underground utilities make subsurface investigations difficult.

At the time of the WCC Site Survey (August 16, 1983) the site was not being utilized by Preferred Plating and no evidence of hazardous materials (surface and subsurface) was observed.
2.0 U.S. Environmental Protection Agency Documentation

This section includes documentation records and work sheets required to develop Hazard Ranking System (HRS) scores. In addition, two EPA forms regarding site inspection and preliminary assessment have been completed and are included as required.

Documents included in this section are:

1. Preliminary Hazard Ranking System (HRS) Work Sheets
2. Documentation Records for HRS
3. EPA Form 2070-12 (Preliminary Assessment)
4. EPA Form 2070-13 (Site Inspection Report)

Forms were prepared as completely as possible using information available from county, state and federal agency files. The Suffolk County Department of Health files provided the most complete site-specific data. Information provided in the Documentation Records for HRS are referenced, and copies of most references are included in Appendix B. Analytical results are also included in the appendix.
2.1 Preliminary HRS Work Sheets
Facility Name: Preferred Plating Corp

Location: 32 Allen Blvd., Farmingdale, NY (Suffolk County)

EPA Region: II

Person(s) in Charge of the Facility: Unknown

Name of Reviewer: C. Mancini Date: 6 Sept. 1983

General Description of the Facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

Preferred Plating formerly treated metal parts to increase corrosion resistance and provide base for paint. Several discharges to ground water have occurred. The company went out of business in 1976. The route of major concern is ground water.

Scores: $S_M = 33.76$ ($S_{GW} = 58.41 S_{GW} = 0.0 S_i = 0.0$ )

$S_{YE} = N/A$

$S_{DC} = 0.0$
# Ground Water Route Work Sheet

<table>
<thead>
<tr>
<th>Rating Factor</th>
<th>Assigned Value (Circle One)</th>
<th>Multiplier</th>
<th>Score</th>
<th>Max. Score</th>
<th>Ref. (Section)</th>
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</thead>
<tbody>
<tr>
<td>Observed Release</td>
<td>0</td>
<td>45</td>
<td>1</td>
<td>0</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td>Route Characteristics</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Depth to Aquifer of Concern</td>
<td>0 1  2  3</td>
<td>2</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Net Precipitation</td>
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<td>2</td>
<td>3</td>
<td></td>
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<td>Permeability of the Unsaturated Zone</td>
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<tr>
<td>Physical State</td>
<td>0 1  2  3</td>
<td>1</td>
<td>3</td>
<td>3</td>
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<td></td>
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<tr>
<td>Total Route Characteristics Score</td>
<td></td>
<td></td>
<td>14</td>
<td>15</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containment</td>
<td>0 1  2  3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Waste Characteristics</td>
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<td>26</td>
<td></td>
</tr>
<tr>
<td>Toxicty/Persistence</td>
<td>0 3  6  9  12  15  18</td>
<td>1</td>
<td>18</td>
<td>18</td>
<td></td>
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<tr>
<td>Hazardous Waste</td>
<td>0 1  2  3  4  5  6  7  8</td>
<td>1</td>
<td>8</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Targets</td>
<td></td>
<td></td>
<td>46</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>Ground Water Use</td>
<td>0 1  2  3</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Distance to Nearest Well/Population Served</td>
<td>0 4  5  6  7  8  10</td>
<td>1</td>
<td>40</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12 16 18 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 30 32 35 40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Total Targets Score</td>
<td></td>
<td></td>
<td>46</td>
<td>49</td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>If line 1 is 45, multiply 5 x 4 x 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If line 1 is 0, multiply 2 x 3 x 4 x 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>33,488</td>
<td>57,330</td>
<td></td>
</tr>
<tr>
<td>Dividing line 6 by 57,330 and multiply by 100 S_gw = 58.41</td>
<td></td>
<td></td>
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000037
# SURFACE WATER ROUTE WORK SHEET

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<tr>
<td>Observed Release</td>
<td>0</td>
<td>45</td>
<td>1</td>
<td>0</td>
<td>45</td>
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<tr>
<td>Route Characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Facility Slope and Intervening Terrain</td>
<td>0 1 2 3</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td></td>
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<tr>
<td>1-yr. 24-hr. Rainfall</td>
<td>0 1 2 3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Distance to Nearest Surface Water</td>
<td>0 1 2 3</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Physical State</td>
<td>0 1 2 3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td></td>
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<tr>
<td>Total Route Characteristics Score</td>
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<td></td>
<td>7</td>
<td>15</td>
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</tr>
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<td>Containment</td>
<td>0 1 2 3</td>
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<td>3</td>
<td>4.3</td>
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<td>Waste Characteristics</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toxicity/Persistence</td>
<td>0 3 6 9 12 15 18</td>
<td>1</td>
<td>18</td>
<td>18</td>
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<tr>
<td>Hazardous Waste</td>
<td>0 1 2 3 4 5 6 7 8</td>
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<td>6</td>
<td>8</td>
<td></td>
</tr>
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<td></td>
<td>26</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Targets</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Surface Water Use</td>
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<td>0</td>
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<td>Distance to a Sensitive Environment</td>
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<td>Population Served/Distance to Water Intake</td>
<td>0 4 6 8 10</td>
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<td>0</td>
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<td>55</td>
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If line 1 is 45, multiply 1 x 4 x 5
If line 1 is 0, multiply 2 x 3 x 4 x 5

Divide line 6 by 64.350 and multiply by 100

S_{sw} = 0.0

000038
## Air Route Work Sheet

<table>
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<th>Rating Factor</th>
<th>Assigned Value (Circle One)</th>
<th>Multiplier</th>
<th>Score</th>
<th>Max. Score</th>
<th>Ref. (Section)</th>
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<tr>
<td>1. Observed Release</td>
<td>0</td>
<td>45</td>
<td>1</td>
<td>0</td>
<td>45</td>
</tr>
</tbody>
</table>

**Date and Location:**

**Sampling Protocol:**

- If line 1 is 0, then S = 0. Enter on line 3.
- If line 1 is 45, then proceed to line 2.

### Waste Characteristics

| Reactivity and Incompatibility | 0 | 1 | 2 | 3 | 1 | 3 |
| Toxicity                      | 0 | 1 | 2 | 3 | 3 | 9 |
| Hazardous Waste Quantity      | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 8 |

**Total Waste Characteristics Score:**

| 20 |

### Targets

| Population Within | 0 | 9 | 12 | 15 | 18 | 1 | 30 |
| 4-Mile Radius     | 21 | 24 | 27 | 30 |
| Distance to Sensitive Environment | 0 | 1 | 2 | 3 | 2 | 6 |
| Land Use          | 0 | 1 | 2 | 3 | 1 | 3 |

**Total Targets Score:**

| 30 |

1. Multiply 1 x 2 x 3

| 0.0 |

5. Divide line 4 by 35.100 and multiply by 100 $S_a = 0.0$

---

000039

2-6
<table>
<thead>
<tr>
<th></th>
<th>S</th>
<th>$s^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groundwater Route Score ($S_{gw}$)</td>
<td>58.41</td>
<td>3411.73</td>
</tr>
<tr>
<td>Surface Water Route Score ($S_{sw}$)</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Air Route Score ($S_a$)</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>$s_{gw}^2 + s_{sw}^2 + s_a^2$</td>
<td></td>
<td>3411.73</td>
</tr>
<tr>
<td>$\sqrt{s_{gw}^2 + s_{sw}^2 + s_a^2}$</td>
<td></td>
<td>58.41</td>
</tr>
<tr>
<td>$\sqrt{s_{gw}^2 + s_{sw}^2 + s_a^2} / 1.73$</td>
<td>$S_M = 33.76$</td>
<td></td>
</tr>
</tbody>
</table>

**Worksheet for computing $S_M$**
<table>
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<th>Rating Factor</th>
<th>Assigned Value (Circle One)</th>
<th>Multiplier</th>
<th>Score</th>
<th>Max. Score</th>
<th>Ref. (Section)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Containment</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>7.1</td>
</tr>
<tr>
<td>Waste Characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.2</td>
</tr>
<tr>
<td>Direct Evidence</td>
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<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Ignitability</td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Reactivity</td>
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<td></td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Incompatibility</td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Hazardous Waste</td>
<td></td>
<td></td>
<td>1</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste Characteristics Score</td>
<td></td>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Targets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.3</td>
</tr>
<tr>
<td>Distance to Nearest Population</td>
<td></td>
<td>0 1 2 3 4 5</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Distance to Nearest Building</td>
<td></td>
<td>0 1 2 3</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Distance to Sensitive Environment</td>
<td></td>
<td>0 1 2 3</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Land Use</td>
<td></td>
<td>0 1 2 3</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Population Within</td>
<td></td>
<td>0 1 2 3 4 5</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2-Mile Radius</td>
<td></td>
<td>0 1 2 3 4 5</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Buildings Within</td>
<td></td>
<td>0 1 2 3 4 5</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Total Targets Score</td>
<td></td>
<td>24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiply 1 x 2 x 3</td>
<td></td>
<td>1,440</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Divide line 5 by 1,440 and multiply by 100</td>
<td></td>
<td>SFE = N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**DIRECT CONTACT WORK SHEET**

<table>
<thead>
<tr>
<th>Rating Factor</th>
<th>Assigned Value (Circle One)</th>
<th>Multiplier</th>
<th>Score</th>
<th>Max. Score</th>
<th>Ref. (Section)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Observed Incident</td>
<td>0</td>
<td>45</td>
<td>1</td>
<td>0</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>If line 1 is 45, proceed to line 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>If line 1 is 0, proceed to line 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Accessibility</td>
<td>0 1 2 (3)</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>8.2</td>
</tr>
<tr>
<td>3 Containment</td>
<td>0 15</td>
<td>1</td>
<td>0</td>
<td>15</td>
<td>8.3</td>
</tr>
<tr>
<td>4 Waste Characteristics</td>
<td>0 1 2 (3)</td>
<td>5</td>
<td>15</td>
<td>15</td>
<td>8.4</td>
</tr>
<tr>
<td>Toxicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8.5</td>
</tr>
<tr>
<td>5 Targets</td>
<td>0 1 2 3 (4 5)</td>
<td>4</td>
<td>16</td>
<td>20</td>
<td>8.5</td>
</tr>
<tr>
<td>Population Within a 1-Mile Radius</td>
<td></td>
<td>0 1 2 3</td>
<td>4</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Distance to a Critical Habitat</td>
<td></td>
<td>0 1 2 3</td>
<td>4</td>
<td>0</td>
<td>12</td>
</tr>
</tbody>
</table>

**Total Targets Score**

<table>
<thead>
<tr>
<th>Total Targets Score</th>
<th>110</th>
<th>32</th>
</tr>
</thead>
</table>

5 If line 1 is 45, multiply 3 x 4 x 5
If line 1 is 0, multiply 2 x 3 x 4 x 5

7 Divide line 6 by 21,500 and multiply by 100 50C = 0.0
2.2 Documentation Records for HRS
INSTRUCTIONS: The purpose of these records is to provide a convenient way to prepare an auditable record of the data and documentation used to apply the Hazard Ranking System to a given facility. As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference that will make the document used for a given data point easier to find. Include the location of the document and consider appending a copy of the relevant page(s) for ease in review.

FACILITY NAME: Preferred Plating Corporation

LOCATION: 32 Allen Boulevard., Farmingdale, NY
WOODWARD-CLYDE CONSULTANTS, INC.

GROUND WATER ROUTE

1. OBSERVED RELEASE

Contaminants detected (5 maximum):

Copper, total chromium, cadmium, hexavalent chrome, cyanide. (Suffolk County, DEC) Jan. 2, 1975.

Well at Army Niki Site NY24C 6 ppm hexavalent chromium E. Farmingdale, N.Y. (Suffolk County DOH, Nov. 10, 1960).

Rationale for attributing the contaminants to the facility:

Facility used these contaminants to their processing. (Donnelly Engineering Corp., 1974).

* * *

2. ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) of concern:

Upper glacial aquifer (approximately 15 feet)
Magothy Aquifer (Isbister, 1966; Kilburn, 1982).

Aquifers are hydraulically connected (Franke and McClymonds, 1972)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone (water table(s)) of the aquifer of concern:

Approximately 15 feet (Ground Water Control Map, Suffolk County DEC).

Depth from the ground surface to the lowest point of waste disposal/storage:

Approximately 8 feet (Photographs, Suffolk Co. DEC, 6-10-75).
Woodward-Clyde Consultants, Inc.

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

Mean annual lake or seasonal evaporation (list months for seasonal):

Net precipitation (subtract the above figures):
15 inches

Permeability of Unsaturated Zone

Soil type in unsaturated zone:
Sand & Gravel (Soil Survey, Suffolk Co.).

Permeability associated with soil type:

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):
Liquids & Sludges (Suffolk Co. DEC 1971-1976).
3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Lined Surface Impoundment severely cracked and leaking (Donnelly Engineering, 1974).
Cesspool (Suffolk County DEC, 1975 Inspection).

Method with highest score:
Surface Impoundment (2)

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

<table>
<thead>
<tr>
<th>Compound</th>
<th>Toxicity</th>
<th>Persistence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitric Acid</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Sulfuric Acid</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Hydrochloride Acid</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Cadmium</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Chromium</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Compound with highest score:
Chromium (18).

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

About 2,000 gallons per month x 25 years (300 months) = 600,000 gallons of Wastes (Liquid). (Donnelly Engineering, 1974).

Basis of estimating and/or computing waste quantity:
Based on water usage (Donnelly Engineers, 1974).
5. TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Municipal water Supplies, industrial, irrigation (Kilburn, 1982).

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Well on site used for processing water (Donnelly Engineering, 1974). No longer in use.

Distance to above well or building:

On site.

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

Republic Aviation Corp. (10 wells), (1,100 employees).
SCWA Babylon Water District (16 wells), Population 900,000.
Industrial wells (6).

E. Farmingdale Water District, Population 7,850.
(NYS DOH, NYS Community Water System Sources, 1982).

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

None reported.

Total population served by ground water within a 3-mile radius:

+ 10,000 (Rand McNally, 1983).
SURFACE WATER ROUTE

1. OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

None detected.

Rationale for attributing the contaminants to the facility:

N/A.

2. ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Less than 3 percent (USGS Quadrangle, Amityville; WCC Site Survey, 1983).

Name/description of nearest downslope surface water:

Unnamed tributary to Massapequa Creek (Amityville, USGS, Quad.).
Approximately 6,000 feet.

Average slope of terrain between facility and above-cited surface water body in percent:

Less than 1 percent (USGS Quad. Amityville).

Is the facility located either totally or partially in surface water?

No. (WCC Site Survey, 1983).
**Is the facility completely surrounded by areas of higher elevation?**

No (WCC Site Survey, 1983).

**1-Year 24-Hour Rainfall in Inches**

2.7 (Figure 8, User's Manual).

**Distance to Nearest Downslope Surface Water**

Approximately 7,000 feet (USGS Amityville Quad.).

**Physical State of Waste**

Liquid/Sludge (Suffolk Co. DEC).

***

3. **CONTAINMENT**

**Containment**

Method(s) of waste or leachate containment evaluated:


Method with highest score:

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

See: Ground Water.

Compound with highest score:

Cadmium (3)
Chromium

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

See: Containment Section.

Basis of estimating and/or computing waste quantity:

See: Containment Section.

* * *

5. TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

None known (Suffolk County DEC).
Is there tidal influence?
No.

Distance to a Sensitive Environment
Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:
More than 2 miles (NYS DEC 1975a).

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:
More than one mile (NYSDEC, 1975b).

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:
More than one mile (USF & WS, 1983; NYSDEC, 1983).

Population Served by Surface Water
Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

None (Suffolk Co., DEC).
Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):
None.

Total population served:
None.

Name/description of nearest of above water bodies:
N/A.

Distance to above-cited intakes, measured in stream miles:
N/A.
AIR ROUTE

1. OBSERVED RELEASE

Contaminants detected:
N/A.

Date and location of detection of contaminants:
N/A.

Methods used to detect the contaminants:
N/a.

Rationale for attributing the contaminants to the site:
N/A.

* * *

2. WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:
N/A.

Most incompatible pair of compounds:
N/A.
Toxicity

Most toxic compound:
N/A.

Hazardous Waste Quantity

Total quantity of hazardous waste:
See: Ground Water.

Basis of estimating and/or computing waste quantity:
See: Ground Water.

***

3. TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

<table>
<thead>
<tr>
<th>Radius</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 4 mi</td>
<td>0 to 1 mi</td>
</tr>
<tr>
<td>+10,000</td>
<td>0 to 1/2 mi</td>
</tr>
</tbody>
</table>

(Donnelly Marketing).

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:
More than 2 miles (NYSDEC, 1975a).

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:
More than 1 mile (NYSDEC, 1975b).
Distance to critical habitat of an endangered species, if 1 mile or less:
More than one mile (NYSDEC, 1983).

**Land Use**

Distance to commercial/industrial area, if 1 mile or less:
Immediately adjacent to site (WCC Site Survey, 1983).

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:
Approximately 2 miles WSW to the Massapequa Reserve, (USGS Quadrangle, Amityville).

Distance to residential area, if 2 miles or less:
Less than 1,000 feet (WCC Site Survey, 1983).

Distance to agricultural land in production within past 5 years, if 1 mile or less:
None (NYS DA&M, 1983).

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:
None (NYS DA&M, 1983).

Is a historic or landmark site (National Register of Historical Places and National Natural Landmarks) within the view of the site?
None. (NYSP&R, 1983).
2.3 EPA Form 2070-12

(Preliminary Assessment)
POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE: NY

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site):
PREFERRED PLATING CORPORATION

02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER:
32 ALLEN BOULEVARD

03 CITY:
FARMINGDALE

04 STATE: NY

05 ZIP CODE: 11735

06 COUNTY:
SUFFOLK

07 COUNTY CODE: 21

08 CONG DIST:

09 COORDINATES

LATITUDE: 40° 42' 57.0"
LONGITUDE: 73° 25' 26.0"

10 DIRECTIONS TO SITE (Starting from nearest public road):
TAKE LONG ISLAND EXPRESS EAST TO ROUTE 110 SOUTH.
MAKE A LEFT ON ALLEN BLVD. SITE IS IN FIRST BLOCK.

III. RESPONSIBLE PARTIES

01 OWNER (as known):
OUT OF BUSINESS

02 STREET (Business, mailing, residence):

03 CITY:

04 STATE: NY

05 ZIP CODE: 11735

06 TELEPHONE NUMBER:

07 OPERATOR (if known and differs from owner):

08 STREET (Business, mailing, residence):

09 CITY:

10 STATE: NY

11 ZIP CODE: 11735

12 TELEPHONE NUMBER:

13 TYPE OF OWNERSHIP (check one):

A. PRIVATE
B. FEDERAL (Agency)
F. OTHER:

C. STATE
D. COUNTY
E. MUNICIPAL

14 OWNER-OPERATOR NOTIFICATION ON FILE (check only):

A. RCRA 3001 DATE RECEIVED: 11/1/1983

B. UNCONTROLLED WASTE SITE DATE RECEIVED: 11/1/1983

C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

02 SITE STATUS (check one):

A. ACTIVE
B. INACTIVE
C. UNKNOWN

03 YEARS OF OPERATION:
1951 - 1978

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

HEAVY METALS & ACIDS
NICKEL
CHROMIC ACIDS
ACIDIC NITRIC ACID
PHOSPHATE
ACIDIC EMISSIONS
HYDROCHLORIC ACID
ALKALINE CLEARER BLACK DYE
DICROMATE
CALCIUM
CHLORIDES

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
GROUND WATER SUPPLIES ARE THREATENED

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (check one)
A. HIGH
B. MEDIUM
C. LOW
D. NONE

02 CONTACT:

JAMES P. HURST
SUFFOLK COUNTY, DEPT. OF HEALTH

03 TELEPHONE NUMBER:

04 PERSON RESPONSIBLE FOR ASSESSMENT:

WALTER L. SAWYER

05 AGENCY:

06 ORGANIZATION:

07 TELEPHONE NUMBER:

08 DATE:

EPA FORM 2070-12(7-61)
### I. Identification

- **State:** NY
- **Site Number:** MA

### II. Waste States, Quantities, and Characteristics

#### Physical States
- A. Solid
- B. Powder, Fines
- C. Sludge
- C. Liquid
- D. Other

#### Waste Quantity at Site
- Tons
- Cubic Yards

#### Waste Characteristics
- T. Toxic
- B. Corrosive
- C. Reactive
- R. Flammable
- O. Ignitable
- P. Persistent
- S. Soluble
- E. Infectious
- J. Explosive
- M. Not Applicable

### III. Waste Type

<table>
<thead>
<tr>
<th>Category</th>
<th>Substance Name</th>
<th>01 Gross Amount</th>
<th>02 Unit of Measure</th>
<th>03 Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLU</td>
<td>Sludge</td>
<td></td>
<td></td>
<td>Possible waste loads</td>
</tr>
<tr>
<td>OILW</td>
<td>Oily Waste</td>
<td></td>
<td></td>
<td>Of 600,000 gallons</td>
</tr>
<tr>
<td>SOL</td>
<td>Solvents</td>
<td></td>
<td></td>
<td>Disposed of over</td>
</tr>
<tr>
<td>PSD</td>
<td>Pesticides</td>
<td></td>
<td></td>
<td>A 25 year period</td>
</tr>
</tbody>
</table>

### IV. Hazardous Substances

<table>
<thead>
<tr>
<th>Category</th>
<th>Substance Name</th>
<th>03 CAS Number</th>
<th>04 Storage Disposal Method</th>
<th>05 Concentration</th>
<th>06 Measure of Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC3</td>
<td>AOIFINE</td>
<td></td>
<td>Discharge</td>
<td>3235</td>
<td>mg/l</td>
</tr>
<tr>
<td>ACD</td>
<td>NITRIC</td>
<td></td>
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<td>513,000</td>
<td></td>
</tr>
<tr>
<td>ACD</td>
<td>NON-ETCH</td>
<td></td>
<td></td>
<td>60,000</td>
<td></td>
</tr>
<tr>
<td>ACD</td>
<td>SULFURIC</td>
<td></td>
<td></td>
<td>219,000</td>
<td></td>
</tr>
<tr>
<td>ACD</td>
<td>CHROMIC</td>
<td></td>
<td></td>
<td>43,000</td>
<td></td>
</tr>
<tr>
<td>SLU</td>
<td>Composition</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>MES</td>
<td>CADMIMIUM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MES</td>
<td>CHROMIUM</td>
<td></td>
<td></td>
<td>132,000</td>
<td></td>
</tr>
<tr>
<td>MES</td>
<td>TITANIUM</td>
<td></td>
<td></td>
<td>1,640</td>
<td></td>
</tr>
</tbody>
</table>

### V. Feedstocks

<table>
<thead>
<tr>
<th>Category</th>
<th>01 Feedstock Name</th>
<th>02 CAS Number</th>
<th>03 Feedstock Name</th>
<th>04 CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FDS</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>FDS</td>
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</tr>
<tr>
<td>FDS</td>
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</tr>
</tbody>
</table>

### VI. Sources of Information

- Suffolk Co. DEC
**II. HAZARDOUS CONDITIONS AND INCIDENTS**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Potential</th>
<th>Alleged</th>
<th>Date</th>
<th>Narrative Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 A</td>
<td>Groundwater contamination</td>
<td>x</td>
<td></td>
<td>1951-1976</td>
<td>Groundwater contamination has been detected in down gradient wells at a US Army Base</td>
</tr>
<tr>
<td>02 D</td>
<td>Surface water contamination</td>
<td>0</td>
<td></td>
<td></td>
<td>No information available (N/A)</td>
</tr>
<tr>
<td>02 E</td>
<td>Contamination of air</td>
<td>0</td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>03 C</td>
<td>Contamination of soil</td>
<td>0</td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>04 F</td>
<td>Drinking water contamination</td>
<td>0</td>
<td></td>
<td></td>
<td>Public supply wells are located down gradient of the site</td>
</tr>
<tr>
<td>01 G</td>
<td>Worker exposure/injury</td>
<td>0</td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>02 H</td>
<td>Population exposure/injury</td>
<td>0</td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>
### I. HAZARDOUS CONDITIONS AND INCIDENTS

<table>
<thead>
<tr>
<th>01</th>
<th>02</th>
<th>04</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. DAMAGE TO FLORA</td>
<td>OBSERVED (DATE: __________)</td>
<td>POTENTIAL</td>
</tr>
<tr>
<td>K. DAMAGE TO FAUNA</td>
<td>OBSERVED (DATE: __________)</td>
<td>POTENTIAL</td>
</tr>
<tr>
<td>L. CONTAMINATION OF FOOD CHAIN</td>
<td>OBSERVED (DATE: __________)</td>
<td>POTENTIAL</td>
</tr>
<tr>
<td>M. UNSTABLE CONTAINMENT OF WASTES</td>
<td>OBSERVED (DATE: __________)</td>
<td>POTENTIAL</td>
</tr>
<tr>
<td>N. DAMAGE TO OFFSITE PROPERTY</td>
<td>OBSERVED (DATE: __________)</td>
<td>POTENTIAL</td>
</tr>
<tr>
<td>O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs</td>
<td>OBSERVED (DATE: __________)</td>
<td>POTENTIAL</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>05</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS</td>
</tr>
</tbody>
</table>

### III. TOTAL POPULATION POTENTIALLY AFFECTED: 10,000

### IV. COMMENTS

The firm is no longer in business and current operations on site (auto repair) are unrelated to the problem.

### V. SOURCES OF INFORMATION

SUFFOLK CO. DEC
2.4 EPA Form 2070-13

(Site Inspection Report)
### PART 1 - SITE LOCATION AND INSPECTION INFORMATION

#### I. SITE NAME AND LOCATION
- **01 SITE NAME:** Corporation A
- **02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER:** 32 Allen Blvd
- **03 CITY:** Farmingdale
- **04 STATE:** NY
- **05 ZIP CODE:** 11738
- **06 COUNTY:** Suffolk

#### II. COORDINATES
- **09 LATITUDE:** 40° 42' 59"
- **10 LONGITUDE:** 73° 45' 52"

#### III. 10 TYPE OF OWNERSHIP
- **E. PRIVATE**
- **F. FEDERAL**
- **C. STATE**
- **D. COUNTY**
- **G. MUNICIPAL**

#### IV. INSPECTION INFORMATION
- **01 DATE OF INSPECTION:** 08/10/83
- **02 SITE STATUS:** ACTIVE
- **03 YEARS OF OPERATION:** 1951 - 1976
  - **BEGINNING YEAR:** 1951
  - **ENDING YEAR:** 1976
- **04 AGENCY PERFORMING INSPECTION:** EPA
- **05 CHIEF INSPECTOR:** Wayne R. Saunders
- **06 TITLE:** Project Geologist
- **07 ORGANIZATION:** Clyde Co.
- **08 TELEPHONE NO.:** (516) 785-0700

#### V. OTHER INSPECTORS
- **09 OTHER INSPECTORS:** N/A

#### VI. SITE REPRESENTATIVES INTERVIEWED
- **13 SITE REPRESENTATIVES INTERVIEWED:** None interviewed
- **14 TITLE:** N/A
- **15 ADDRESS:** N/A
- **16 TELEPHONE NO.:** N/A

#### VII. ACCESS TO SITE
- **17 ACCESS OBTAINED:** By permission
- **18 TIME OF INSPECTION:** 1100
- **19 WEATHER CONDITIONS:** Sunny/Clear/90°F

#### VIII. INFORMATION AVAILABLE FROM
- **01 CONTACT:** James Pima
- **02 OF AGENCY/DEPARTMENT:** Suffolk County DEC
- **03 TELEPHONE NO.:** (1) 1-13

---

**EPA FORM 2070-13 (7-81)**

---

000083

---

2-30
### II. WASTE TYPE

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>SUBSTANCE NAME</th>
<th>01 GROSS AMOUNT</th>
<th>02 UNIT OF MEASURE</th>
<th>03 COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLU</td>
<td>SLUDGE</td>
<td></td>
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</tr>
<tr>
<td>OLW</td>
<td>OILY WASTE</td>
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<tr>
<td>OCR</td>
<td>SOLVENTS</td>
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<tr>
<td>PSD</td>
<td>PESTICIDES</td>
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<tr>
<td>Occ</td>
<td>OTHER ORGANIC CHEMICALS</td>
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<td>IOC</td>
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<td>BAS</td>
<td>BASES</td>
<td></td>
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<tr>
<td>MES</td>
<td>HEAVY METALS</td>
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### IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

<table>
<thead>
<tr>
<th>01 CATEGORY</th>
<th>02 SUBSTANCE NAME</th>
<th>03 CAS NUMBER</th>
<th>04 STORAGE/DISPOSAL METHOD</th>
<th>05 CONCENTRATION</th>
<th>06 MEASURE OF CONCENTRATION</th>
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<tr>
<td>SOL</td>
<td>ACETONE</td>
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<td>DISCHARGE</td>
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<tr>
<td>ACD</td>
<td>NITRIC</td>
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<td>513,000</td>
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<tr>
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<td>ETOH-ETCH</td>
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<td>ACD</td>
<td>SULPHURIC</td>
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<td>43,000</td>
<td>mg/L</td>
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<tr>
<td>ACD</td>
<td>CHROMIC</td>
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<td></td>
<td>mg/L</td>
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<tr>
<td>MES</td>
<td>CHROMIUM</td>
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<tr>
<td>MES</td>
<td>TITANIUM</td>
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<td></td>
<td>1640</td>
<td>mg/L</td>
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### V. FEEDSTOCKS (See Appendix for CAS Numbers)

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<th>CATEGORY</th>
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<th>02 CAS NUMBER</th>
<th>CATEGORY</th>
<th>01 FEEDSTOCK NAME</th>
<th>02 CAS NUMBER</th>
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</thead>
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<td>FDS</td>
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</tr>
</tbody>
</table>

### VI. SOURCES OF INFORMATION (Cite specific references, e.g., state law, sample analysis, reports)

SUFFOLK COUNTY DEC
## 1. Hazardous Conditions and Incidents

### 1. A. Groundwater Contamination
- Population Potentially Affected: 10,000
- Observed (Date): 11/11
- Potential: yes
- Alleged: no
- Groundwater contamination has been detected in deep-gradient wells at a US Army base, Ft. Totten.

### 1. B. Surface Water Contamination
- Population Potentially Affected: 
- Observed (Date): 
- Potential: no
- Alleged: no

### 1. C. Contamination of Air
- Population Potentially Affected: 
- Observed (Date): 
- Potential: no
- Alleged: no

### 1. D. Fire Explosive Conditions
- Population Potentially Affected: 
- Observed (Date): 
- Potential: no
- Alleged: no

### 1. E. Direct Contact
- Population Potentially Affected: 
- Observed (Date): 
- Potential: no
- Alleged: no

### 1. F. Contamination of Soil
- Area Potentially Affected: 0.5 acres
- Observed (Date): 11/11
- Potential: yes
- Alleged: no
- Soil has been contaminated over the years via leaching procedures.

### 1. G. Drinking Water Contamination
- Population Potentially Affected: 10,000 people
- Observed (Date): 
- Potential: yes
- Alleged: no
- Public supply well bore degradation is at risk.

### 1. H. Worker Exposure/Injury
- Population Potentially Affected: 
- Observed (Date): 
- Potential: no
- Alleged: no

### 1. I. Population Exposure/Injury
- Population Potentially Affected: 
- Observed (Date): 
- Potential: no
- Alleged: no
<table>
<thead>
<tr>
<th>1. HAZARDOUS CONDITIONS AND INCIDENTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 DAMAGE TO FLORA</td>
<td></td>
</tr>
<tr>
<td>02 OBSERVED (DATE)</td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

| 1.2 DAMAGE TO FAUNA |  |
| 02 OBSERVED (DATE) | | ○ POTENTIAL | ○ ALLEGED |
| N/A |  |

| 1.3 CONTAMINATION OF FOOD CHAIN |  |
| 02 OBSERVED (DATE) | | ○ POTENTIAL | ○ ALLEGED |
| N/A |  |

| 1.4 UNSTABLE CONTAINMENT OF WASTES |  |
| 02 OBSERVED (DATE) | | ○ POTENTIAL | ○ ALLEGED |
| 03 POPULATION POTENTIALLY AFFECTED |  |
| N/A |  |

| 1.5 DAMAGE TO OFFSITE PROPERTY |  |
| 02 OBSERVED (DATE) | | ○ POTENTIAL | ○ ALLEGED |
| N/A |  |

| 1.6 CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs |  |
| 02 OBSERVED (DATE) | | ○ POTENTIAL | ○ ALLEGED |
| N/A |  |

| 1.7 ILLEGAL/UNAUTHORIZED DUMPING |  |
| 02 OBSERVED (DATE) | | ○ POTENTIAL | ○ ALLEGED |
| 04 NARRATIVE DESCRIPTION |  |
| **Dumps** of on-site materials have taken place over the years. |  |

| 05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS |  |
| N/A |  |

| II. TOTAL POPULATION POTENTIALLY AFFECTED: |  |
| +10,000 |  |

| IV. COMMENTS |  |
| The firm [Pretend-Peaky] is no longer in business and new operators at the site (Auto Repair) are unrelated to the project. |  |
| SOURCES OF INFORMATION: See specific references, e.g., site, field samples, analysis, reports. |  |

Suffolk County DEC
**I. IDENTIFICATION**

- **STATE**: [State Name]
- **STTE**: [State Number]

**II. PERMIT INFORMATION**

<table>
<thead>
<tr>
<th>01 TYPE OF PBW</th>
<th>02 PERMIT NUMBER</th>
<th>03 DATE ISSUED</th>
<th>04 EXPIRATION DATE</th>
<th>05 COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. NPDES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. URC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. AIR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. RCRA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. RCRA INTERIM STATUS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. SPCB PLAN</td>
<td></td>
<td></td>
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</tbody>
</table>

**III. SITE DESCRIPTION**

<table>
<thead>
<tr>
<th>01 STORAGE/DISPOSAL</th>
<th>02 AMOUNT</th>
<th>03 UNIT OF MEASURE</th>
<th>04 TREATMENT</th>
<th>05 OTHER</th>
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</thead>
<tbody>
<tr>
<td>A. SURFACE IMPOUNDMENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. PILES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. DRUMS, ABOVE GROUND</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. TANK, ABOVE GROUND</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. TANK, BELOW GROUND</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. LANDFILL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. LANDFARM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. OPEN DUMP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. OTHER</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**IV. CONTAINMENT**

- A. Adequate, Secure
- B. Moderate
- C. Inadequate, Poor
- D. Insecure, Unsound, Dangerous

**02 DESCRIPTION OF DRUMS, DUMPING, LINERS, BARRIERS, ETC.**

The layout of the site had field lines and some containers were probably disposed of improperly.

**V. ACCESSIBILITY**

- 01 WASTE EASILY ACCESSIBLE: NO
- 02 COMMENTS: Since has changed considerably since firm was in business. Various new sheds have been erected.

**VI. SOURCES OF INFORMATION**

- Site inspection by DEC, DEC inspection.
POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY
(Choose one altitude)
- SURFACE
- WELL

02 STATUS
ENDANGERED
AFFlicted
MONITORED

COMMUNITY
A. D. B. C. D.
NON-COMMUNITY
C. D.

03 DISTANCE TO SITE
A. 0.25 (mi)
B. __________________ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Choose one)
- A. ONLY SOURCE FOR DRINKING
- B. COMMERCIAL, INDUSTRIAL IRRIGATION
- C. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER
- A. 10,000
- B. ______________

03 DISTANCE TO NEAREST DRINKING WATERT WELL
- A. 0.25 (mi)
- B. ______________ (mi)

04 DEPTH TO GROUNDWATER
- A. 15 (ft)

05 DIRECTION OF GROUNDWATER FLOW
- SSE

06 DEPTH TO AQUIFER OF CONCERN
- A. 10 (ft)

07 POTENTIAL YIELD OF AQUIFER
- A. ______________ (gpd)

08 SOLE SOURCE AQUIFER
- A. YES
- B. NO

09 DESCRIPTION OF WELLS (Including survey, depth, and location relative to population and buildings)

Varies Municipal supply well was located at distances between 0.25 and 3 mi, from the site.

10 RECHARGE AREA
- A. YES
- B. NO

11 DISCHARGE AREA
- A. YES
- B. NO

IV. SURFACE WATER

01 SURFACE WATER USE (Choose one)
- A. RESERVOIR, RECREATION DRINKING WATER SOURCE
- B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES
- C. COMMERCIAL, INDUSTRIAL
- D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME: _______________________

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE
A. __________
- B. __________
- C. __________

TWO (2) MILES OF SITE
A. __________
- B. __________
- C. __________

THREE (3) MILES OF SITE
A. __________
- B. __________
- C. __________

02 DISTANCE TO NEAREST POPULATION
A. 0.25 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE
A. __________

04 DISTANCE TO NEAREST OFF-SITE BUILDING
A. 2.00 (mi)

06 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, heavily populated urban area)

Adjacent area is high light industry and
residences.
### VI. ENVIRONMENTAL INFORMATION

<table>
<thead>
<tr>
<th>Column</th>
<th>Value/Option</th>
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</tr>
<tr>
<td>(Check one)</td>
<td></td>
</tr>
<tr>
<td>□ A. 10^-5 - 10^-4 cm/sec</td>
<td></td>
</tr>
<tr>
<td>□ B. 10^-4 - 10^-3 cm/sec</td>
<td></td>
</tr>
<tr>
<td>□ C. 10^-3 - 10^-2 cm/sec</td>
<td></td>
</tr>
<tr>
<td>□ D. GREATER THAN 10^-2 cm/sec</td>
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<tr>
<td>02 PERMEABILITY OF BEDROCK</td>
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<td>(Check one)</td>
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<tr>
<td>□ A. IMPERMEABLE</td>
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<td>□ B. RELATIVELY IMPERMEABLE</td>
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<td>□ C. RELATIVELY PERMEABLE</td>
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</tr>
<tr>
<td>□ D. VERY PERMEABLE</td>
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<td>03 DEPTH TO BEDROCK</td>
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<tr>
<td>(in)</td>
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<tr>
<td>04 DEPTH OF CONTAMINATED SOIL ZONE</td>
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</tr>
<tr>
<td>(in)</td>
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</tr>
<tr>
<td>05 SOIL PH</td>
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</tr>
<tr>
<td>06 NET PRECIPITATION</td>
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</tr>
<tr>
<td>(in)</td>
<td></td>
</tr>
<tr>
<td>07 ONE YEAR 24 HOUR RAINFALL</td>
<td></td>
</tr>
<tr>
<td>(in)</td>
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<tr>
<td>08 SLOPE</td>
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<tr>
<td>SITE SLOPE</td>
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</tr>
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<td>DIRECTION OF SLOPE TERRAIN AVERAGE SLOPE</td>
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<tr>
<td>09 FLOOD POTENTIAL</td>
<td></td>
</tr>
<tr>
<td>SITE IS IN</td>
<td></td>
</tr>
<tr>
<td>10 YEAR FLOODPLAIN</td>
<td></td>
</tr>
<tr>
<td>□ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY</td>
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<tr>
<td>11 DISTANCE TO WETLANDS (5 acre minimum)</td>
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<tr>
<td>ESTUARINE A &gt; 2.0 (mi)</td>
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<tr>
<td>OTHER</td>
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<tr>
<td>ENDANGERED SPECIES</td>
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<td>12 DISTANCE TO CRITICAL HABIT (or endangered species)</td>
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<td>13 LAND USE IN VICINITY</td>
<td></td>
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<tr>
<td>DISTANCE TO:</td>
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<tr>
<td>COMMERCIAL/INDUSTRIAL</td>
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<td>RESIDENTIAL AREAS, NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES</td>
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<td>AGRICULTURAL LANDS</td>
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<td>PRIME AG LAND</td>
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</tr>
<tr>
<td>A 20.1 (mi)</td>
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</tr>
<tr>
<td>B 1025 (mi)</td>
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<tr>
<td>C (mi)</td>
<td></td>
</tr>
<tr>
<td>D (mi)</td>
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</tr>
<tr>
<td>14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY</td>
<td></td>
</tr>
<tr>
<td>Site is generally flat</td>
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</tbody>
</table>

### VII. SOURCES OF INFORMATION

- WCE Inspected, USGS Amityville Grid
- WCE Files, USGS Reports
# Potential Hazardous Waste Site
## Site Inspection Report
### Part I - Sample and Field Information

<table>
<thead>
<tr>
<th>Sample Type</th>
<th>01 Number of Samples Taken</th>
<th>02 Samples Sent To</th>
<th>03 Estimated Date Results Available</th>
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<tbody>
<tr>
<td>Groundwater</td>
<td>&gt;20</td>
<td>S. Hilk Co.</td>
<td>DEC 51-76</td>
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<tr>
<td>Surface Water</td>
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</tr>
<tr>
<td>Waste</td>
<td>&gt;20</td>
<td>S. Hilk Co.</td>
<td>DEC 51-76</td>
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<tr>
<td>Air</td>
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</tr>
<tr>
<td>Runoff</td>
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<td></td>
</tr>
<tr>
<td>Spill</td>
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</tr>
<tr>
<td>Soil</td>
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</tr>
<tr>
<td>Vegetation</td>
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</tr>
<tr>
<td>Other</td>
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### Field Measurements Taken

<table>
<thead>
<tr>
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<th>02 Comments</th>
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<td></td>
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### Photographs and Maps

<table>
<thead>
<tr>
<th>01 Type</th>
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Suffolk County DEC
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(Cite specific references, e.g., state files, sample analysis reports)
## IL PAST RESPONSE ACTIVITIES

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- **02 DATE**: 
- **03 AGENCY**: 
- **04 DESCRIPTION**: 

### 01: B. TEMPORARY WATER SUPPLY PROVIDED
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### 01: C. PERMANENT WATER SUPPLY PROVIDED
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### 01: D. SPILLED MATERIAL REMOVED
- **02 DATE**: 
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### 01: E. CONTAMINATED SOIL REMOVED
- **02 DATE**: 
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### 01: F. WASTE REPACKAGED
- **02 DATE**: 
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### 01: G. WASTE DISPOSED ELSEWHERE
- **02 DATE**: 
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### 01: H. ON SITE BURIAL
- **02 DATE**: 
- **03 AGENCY**: 
- **04 DESCRIPTION**: 

### 01: I. IN SITU CHEMICAL TREATMENT
- **02 DATE**: 14-74
- **03 AGENCY**: SPRING TO DEC
- **04 DESCRIPTION**: VARIOUS CHEMICAL TREATMENT

### 01: J. IN SITU BIOLOGICAL TREATMENT
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### 01: K. IN SITU PHYSICAL TREATMENT
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### 01: N. CUTOFF WALLS
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### 01: O. EMERGENCY DIKING/SURFACE WATER DIVERSION
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EPA FORM 2070-13(7-91)
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### III. SOURCES OF INFORMATION

(Include references, e.g., data files, sample analyses, reports)
Suffolk County DEC Files have various regulatory actions over various years.

Suffolk County DEC Files
Preferred Plating Corporation was operated at the Allen Boulevard site from 1951 to 1976 when the firm filed for bankruptcy. The firm was owned by Mr. J. Young of the same address. A SPDES permit was filed for by Preferred Plating in June, 1975 but never was in compliance fully with the terms and conditions of the permit.

Preferred Plating Corporation previously (prior to filing for bankruptcy) treated metal parts to increase corrosion resistance and provide a cohesive base for painting to improve appearance. Since 1953 various discharges of waste materials through surface impoundments and leaching pits to the ground water environment have been documented. In addition, some surface discharges of hazardous wastes were also documented.

Various court actions through the years have been instituted by the Suffolk County Department of Health dealing with the upgrading of on site treatment facilities. None of the court mandated compliances regarding the treatment facilities were accomplished. In the year 1976 the company filed for bankruptcy.

The following products were utilized at the site during its operations:

- Alodine
- Alkaline Cleaner
- Nitric Acid
- Black Dye
- Phosphate
- Dichromate
- Non-Etch Acids
- Cadmium
- Hydrochloric Acid
- Caustics
- Chromic Acids
- Nickel
Analysis performed by the Suffolk County Department of Health and the U.S. Army (Ft. Totten) revealed that ground water contamination was attributed to the site.
4.0
SITE DATA

4.1 Site Area Surface Features
The former Preferred Plating site is located approximately 6,000 feet east of an unnamed (intermittent) tributary of Massapequa Creek (Figure 1). The elevation at this site is approximately 55 feet above sealevel, with a slope of less than 3% to the south. There is no designated NY State Significant Habitat (NYSDEC, Division of Fish and Wildlife, 1983), agricultural land (NYS, Division of Agriculture and Markets, 1983), nor historic or landmark sales (NYS Parks and Recreation, 1983) affected or potentially affected by the former site.

The predominate land use in the immediate vicinity is light industrial, with the closest building located within 15 feet of the site. Mill Lane Junior High School is located approximately 2,000 feet west of the site but the site does not appear to have any impact upon it. The nearest residential area is approximately 300 to 500 feet south of the site. It is estimated that 250 to 500 dwellings occur within a ¼ mile radius of the site.

4.2 Site Hydrogeology
4.2.1 Ground Water Occurrence. Ground water below the site occurs in unconsolidated sediments of Recent, Pleistocene, and Cretaceous age. An engineering report by Donnelly Engineering, (1974) reveals that the site is underlain by permeable sands and gravels. The depth to the unconfined ground water table is approximately 15 feet (Ground Water Contour Map, Suffolk County Department of Health).
These materials are believed to include recent shoreline deposits, alluvium, and fill, overlying a complex sequence of Pleistocene outwash deposits of sand and gravel and ground moraine deposits of sandy gravelly clay and silt. (Upson, 1955). Together they form one of two major water-bearing units in the site area. This "principal aquifer" as defined by Isbister (1966) includes all beds overlying the Upper Cretaceous clay member of the Raritan Formation. In the site area, this includes only the upper glacial deposits. The Magothy Formation, which underlies much of Long Island, has been eroded, and the glacial deposits are believed to fill a buried channel. (Isbister, 1966; Kilburn, 1979). The glacial deposits are believed to be hydraulically connected to the Magothy aquifer to the south and east.

The upper glacial deposits at the site overlie the clay member of the Raritan Formation at an estimated depth of 150 feet (Isbister, 1966). This contact is erosional and is irregular in the site area. The clay overlies and confines the Lloyd Sand Member of the Raritan Formation, which constitutes the deep confined aquifer in the site region. The Lloyd Sand consists of stratified beds of sand, gravel, sandy clay, silt, and clay (Franke and McClymonds, 1972; Isbister, 1966). It is a productive aquifer in Nassau and Suffolk Counties. The Lloyd Sand overlies Precambrian rock at the site at an estimated depth of 400 feet (Franke and McClymonds, 1971; Kilburn, 1979). The bedrock surface dips approximately 60 feet per mile to the southeast, as do the overlying Cretaceous sediments.

Ground water in the upper glacial aquifer underlying the site is under water table conditions at higher elevations but becomes confined with depth due to interbedded clay and silt layers. Flow between the upper glacial aquifer and the deep confined aquifer is retarded by the intervening clay member of the Raritan Formation. Recharge to the deep aquifer is by slow leakage down through overlying materials (Kilburn, 1979).
Ground water at the site was encountered in most borings at depths of 25 to 30 feet. However, some borings were dry to 60 feet (Slacke, 1981), suggesting a perched water table. Perched water tables are common in this area of Suffolk County, but because of the area's variable stratigraphy, the elevation of the ground water table may also show significant variation over short distances (Isbister, 1966).

Regional ground water flow in both the principal aquifer and the deep confined aquifer is to the northwest (Franke and McClymonds, 1972). Local ground water flow is probably south-southeast and is reflective of regional topography.

4.2.2. Ground Water Quality. Ground water quality in Suffolk County is generally good, typically containing less than 100 ppm dissolved solids. Local salt water encroachment has been reported in the shallow aquifer near the north shore (Isbister, 1966) but has not been confirmed in the site area. The salt water front in the deep confined aquifer is believed to have stabilized 1 to 1.5 miles off shore. Locally high nitrate concentrations have also been reported in both the shallow aquifer and the deep confined aquifer in Suffolk County. The primary source for this nitrate contamination is believed to be septic systems, particularly cesspools, with some contribution from chemical fertilizers (Myott, 1980). Glenn Cove is one of the few sewered communities in Suffolk County (Isbister, 1966).

4.2.3 Ground Water Use.
Numerous wells are located both up and downgradient of the site, including an on site well. North of the site, Republic Aviation Corporation has 10 wells, the Suffolk County Water Authority District has 6 wells, and 6 industrial wells are reported in the area. All of the aforementioned wells are within 3 miles of the site.

The majority of these wells are completed in, and drawing water from the upper glacial aquifer or the Magothy aquifer (Kilburn, 1982).
The on site well and a well at the U.S. Army installation downgradient has been allegedly contaminated with the site activities of Preferred Plating.

4.3 Past Sampling Activities
From 1955 to 1976 the Suffolk County Department of Health has completed numerous analytical tests both on waste materials and ground water both on and off site. Five (5) major contaminants were identified by the Suffolk County Department of Health, January 2, 1975 these were copper, chromium cadmium, hexavalent chromium and cyanide. All of these products were also detected in discharges by Preferred Plating. Available analytical results are included in Appendix B.

The on site well approximately 80 feet deep had become contaminated by wastes generated at the site and disposed via leaching beds. The on site well was taken out of service and bottled water was utilized for employees.

The samples taken on site have revealed that subsurface soils and ground water have been contaminated above acceptable county, state, and federal standards.

There has been no reported testing of air quality at this site.
Existing available data were adequate for HRS scoring of the Preferred Plating Corp. site. The Suffolk County DEC files provided much useful site specific information. The WCC site survey was also very helpful in providing data on the site vicinity.

With a score of 58.41, the Ground Water route is the route of major concern. Documented data on an observed release to ground water from the Suffolk County DEC (1975) serves to elevate this route score. Although existing data for the Surface Water route is adequate and complete, this route achieved a score of only 0.0.
6.0
WORK PLAN

6.1 Objective

The objectives of this proposed work plan are to collect additional field information required to adequately define the extent of contamination and to prepare conceptual remedial action plans. This work plan will primarily address questions concerning soil contamination, ground water flow and quality. The analysis of wastes and ground water samples previously indicate that a potential health hazard exists (downgradient) and at the site.

6.2 Field Investigation Plan

6.2.1 Geophysical Studies. As part of the on site field investigation to characterize the hydrologic regime and waste location, a geophysical survey utilizing the Geonics EM 31 Terrain Conductivity Meter will be conducted. This technique has been utilized successfully to locate similar contaminant plumes and waste locations. Since the site is in a highly urbanized environment and surface site conditions (new buildings) have changed since Preferred Plating stopped operating, the scope of the survey would be limited.

Measurement should be attempted both north and south of the site along open unobstructed areas. Subsurface utility lines would have to be mapped or reviewed to insure proper interpretation of data.

It is anticipated that a two person team would conduct the survey in one day. Readings would be taken with the coils in the vertical mode yielding an effective depth of exploration of 6 meters (19.7 feet). It is anticipated that measurement stations would be on a maximum of 20 feet centers with the
recorded data plotted on maps and interpreted. The maps will be useful in locating the ground water monitoring wells.

6.2.2 Monitoring Wells

6.2.2.1 Installation. Monitoring wells will be installed to provide data pertinent to both water chemistry and characterization of the stratigraphy and ground water regime at the site. It is recommended that a minimum of five monitoring wells be installed at the site, at the approximate locations indicated on Figure 2. The depth of the wells will be 20 feet into the saturated zone of the upper aquifer. The total approximate depth will be 35-45 feet. The screened length of the casing will be a minimum of 5 feet above and 10 feet below the static ground water level yielding a total of 15 feet screened interval.

The installation of the wells will be advanced through the overburden by 6-inch I.D. hollow stem augers or driven casing, with continuous split spoon sampling in the upper 10 feet and at 5 foot intervals thereafter. Soil samples will be classified in the field by a geologist or soil scientist.

Slotted 3-inch I.D. PVC well screen will be installed over 15 foot intervals in each well. Wells will be installed flush with the existing ground surface for logistical concerns (access by vehicles). A gravel pack will be completed to approximately 2 feet above the top of the screen, where a 1 foot bentonite seal will be installed. To further assure that water samples will be representative of the screened interval, the remaining annular space will be grouted, and protective steel casing will be installed. After installation the wells will be developed by pumping, to remove any fine grained material.

It is estimated that six days will be required to drill and develop the monitoring wells.
6.2.2.2 Water Elevation. Ground water depths will be measured at the time of well development and again at the time of pumping. Water elevations, measured relative to a datum established at the site, will be plotted and used to develop contours of the ground water table. Based on this map, the direction(s) of ground water flow will be estimated. Flow and gradient data will be fundamental input in quantifying site conditions and will be compared to plume geometries inferred from geophysical survey data.

It is anticipated that a two person crew will require one day to survey ground elevations at the site.

6.2.2.3 Aquifer Testing. "Slug"-type permeability tests will be conducted in each newly installed well to evaluate the permeability of materials spanning the screened interval. The method is a rapid means by which the in-situ permeability in the immediate vicinity of a monitoring well can be approximated. The test does not involve pumping of potentially contaminated water, and results generally suffice for ground water flow analysis.

6.2.3 Sampling and Analysis Plan

6.2.3.1 General Plan. To be provided by NYDEC.

6.2.3.2 Sample Parameters. Previous analysis of waste materials and ground water at the site indicate contamination with heavy metals (i.e. chromium, copper, nickel, cadmium). Laboratory analysis will be limited to those metals previously identified by the Suffolk County Health Department. Samples will be collected from ground water and soils. Sample types and parameters are summarized in Table 6-1.

6.2.3.3 Sampling Locations. One water sample and one soil sample from each of the ground water monitoring wells will be analyzed. Results of each pair of analyses will be compared to evaluate downward migration of contaminants through soil. Ground water analyses will be evaluated in terms of other
hydrogeologic data to evaluate the presence, distribution and migration directions of any ground water contamination plumes.

6.3 Health and Safety Plan.
   To be supplied by NYSDEC.

6.4 Cost Estimate.

   Costs for Phase II work were developed based on assumptions, rates, and charges described in WCC's cost proposal submitted to NYSDEC on 29 October 1982. These costs may be impacted by the sampling and analysis plan or health and safety plan to be supplied by NYSDEC. Costs have been grouped by task, and estimated cost for Phase II investigations on the Preferred Plating site is $17,095.
Table 6-1. PROPOSED CHEMICAL ANALYSES AT THE PREFERRED PLATING SITE.

<table>
<thead>
<tr>
<th>Sample Type</th>
<th>Metal Scan by JCP</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground Water</td>
<td>X</td>
<td>One sample at each well.</td>
</tr>
<tr>
<td>Soil</td>
<td>X</td>
<td>One sample from unsaturated zone.</td>
</tr>
</tbody>
</table>
TABLE 6-2. GEOPHYSICAL STUDIES COSTS.

<table>
<thead>
<tr>
<th>Estimated Cost</th>
<th>Total Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Direct Material</td>
<td></td>
</tr>
<tr>
<td>a. Purchased Parts</td>
<td>$140</td>
</tr>
<tr>
<td>b. Subcontract Items</td>
<td></td>
</tr>
<tr>
<td>c. Other</td>
<td></td>
</tr>
<tr>
<td>2. Material Overhead</td>
<td></td>
</tr>
<tr>
<td>3. Direct Labor</td>
<td>$303</td>
</tr>
<tr>
<td>Senior Staff Engineer/Geologist/Scientist</td>
<td>24 12.62 303</td>
</tr>
<tr>
<td>4. Labor Overhead</td>
<td>$363</td>
</tr>
<tr>
<td>Labor Overhead</td>
<td>120% 303 363</td>
</tr>
<tr>
<td>5. Special Testing</td>
<td></td>
</tr>
<tr>
<td>6. Special Equipment - Terrain Conductivity Equipment</td>
<td>$140</td>
</tr>
<tr>
<td>7. Travel</td>
<td>$30</td>
</tr>
<tr>
<td>a. Transportation</td>
<td></td>
</tr>
<tr>
<td>8. Consultants</td>
<td></td>
</tr>
<tr>
<td>9. Other Direct Costs</td>
<td></td>
</tr>
<tr>
<td>10. Total Direct Costs and Overhead</td>
<td>$836</td>
</tr>
<tr>
<td>11. General and Administrative Expense</td>
<td>$104</td>
</tr>
<tr>
<td>(rate 15% of Cost Element No's. 1, 3, 4, 7, 9)</td>
<td></td>
</tr>
<tr>
<td>12. Royalties</td>
<td>-</td>
</tr>
<tr>
<td>13. Sub Total</td>
<td>$940</td>
</tr>
<tr>
<td>14. Fee</td>
<td>$85</td>
</tr>
<tr>
<td>15. Total Estimated Cost</td>
<td>$1,025</td>
</tr>
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</table>

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### TABLE 6-3. DRILLING/WELL INSTALLATION COSTS.

<table>
<thead>
<tr>
<th>Description</th>
<th>Estimated Cost</th>
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</thead>
<tbody>
<tr>
<td>1. Direct Material</td>
<td></td>
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</tr>
<tr>
<td>a. Purchased Parts</td>
<td>$ 4,880</td>
<td></td>
</tr>
<tr>
<td>b. Subcontract Items</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Direct Material</strong></td>
<td></td>
<td><strong>$ 4,880</strong></td>
</tr>
<tr>
<td>2. Material Overhead</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Material</strong></td>
<td></td>
<td><strong>$ 4,880</strong></td>
</tr>
<tr>
<td>3. Direct Labor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior Staff Engineer/Geologist/Scientist</td>
<td>60 12.62 752</td>
<td></td>
</tr>
<tr>
<td><strong>Total Direct Labor</strong></td>
<td></td>
<td><strong>$ 752</strong></td>
</tr>
<tr>
<td>4. Labor Overhead</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor Overhead</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Labor Overhead</strong></td>
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<td><strong>$ 909</strong></td>
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<tr>
<td>5. Special Testing</td>
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<td></td>
</tr>
<tr>
<td><strong>Total Special Equipment</strong></td>
<td></td>
<td><strong>$ 200</strong></td>
</tr>
<tr>
<td>6. Special Equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slug Test Equipment</td>
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<tr>
<td><strong>Total Travel</strong></td>
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<td><strong>$ 390</strong></td>
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<tr>
<td>7. Travel</td>
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</tr>
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<td>a. Transportation</td>
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<tr>
<td>b. Subsistence</td>
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<tr>
<td><strong>Total Travel</strong></td>
<td></td>
<td><strong>$ 390</strong></td>
</tr>
<tr>
<td>8. Consultants</td>
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</tr>
<tr>
<td>9. Other Direct Costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Direct Costs and Overhead</strong></td>
<td></td>
<td><strong>$ 7,131</strong></td>
</tr>
<tr>
<td>11. General and Administrative Expense</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(rate 15% of Cost Element No's. 1, 3, 4, 7, 9)</td>
<td>$1,040</td>
<td></td>
</tr>
<tr>
<td>12. Royalties</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sub Total</strong></td>
<td></td>
<td><strong>$ 8,171</strong></td>
</tr>
<tr>
<td>14. Fee</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Estimated Cost</strong></td>
<td>$ 735</td>
<td><strong>$ 8,906</strong></td>
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TABLE 6-4. SAMPLING AND ANALYSIS COSTS.

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<tr>
<th>Item</th>
<th>Estimated Cost</th>
<th>Total Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Direct Material</td>
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<td></td>
</tr>
<tr>
<td>a. Purchased Parts</td>
<td>$900</td>
<td>$900</td>
</tr>
<tr>
<td>b. Subcontract Items</td>
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<td></td>
</tr>
<tr>
<td>c. Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Material Overhead</td>
<td>Estimated Hours Rate/ Hour</td>
<td></td>
</tr>
<tr>
<td>3. Direct Labor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff Engineer/Geologist/Scientist</td>
<td>12 12.62 151</td>
<td>$151</td>
</tr>
<tr>
<td>4. Labor Overhead</td>
<td>Estimated Hours Rate/ Hour</td>
<td></td>
</tr>
<tr>
<td>Labor Overhead</td>
<td>120% 151 181</td>
<td>$181</td>
</tr>
<tr>
<td>5. Special Testing</td>
<td></td>
<td>$1,456</td>
</tr>
<tr>
<td>6. Special Equipment - Pumps, Bailers</td>
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<td>$100</td>
</tr>
<tr>
<td>7. Travel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Transportation</td>
<td>30</td>
<td>$90</td>
</tr>
<tr>
<td>b. Subsistence</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>8. Consultants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Other Direct Costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample Shipment</td>
<td>250</td>
<td>$250</td>
</tr>
<tr>
<td>10. Total Direct Costs and Overhead</td>
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<td></td>
</tr>
<tr>
<td>11. General and Administrative Expense</td>
<td>236</td>
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</tr>
<tr>
<td>(rate 15% of Cost Element No's. 1, 3, 4, 7, 9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Royalties</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Sub Total</td>
<td>$3,364</td>
<td></td>
</tr>
<tr>
<td>14. Fee</td>
<td>303</td>
<td>$3,667</td>
</tr>
<tr>
<td>15. Total Estimated Cost</td>
<td></td>
<td>$3,667</td>
</tr>
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</table>

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TABLE 6-5. REPORT PREPARATION COSTS.

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Estimated Cost</th>
<th>Total Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Direct Material</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Purchased Parts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Subcontract Items</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2. Material Overhead</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3. Direct Labor</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior Staff Engineer/Geologist/Scientist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Draftsperson</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typist</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>4. Labor Overhead</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O H Rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>5. Special Testing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>6. Special Equipment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>7. Travel</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Transportation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Subsistence</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>8. Consultants</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>9. Other Direct Costs</strong></td>
<td>$ 150</td>
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</tr>
<tr>
<td><strong>10. Total Direct Costs and Overhead</strong></td>
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<tr>
<td><strong>11. General and Administrative Expense</strong></td>
<td>$ 189</td>
<td></td>
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<tr>
<td>(rate 15% of Cost Element No's. 1, 3, 4, 7, 9)</td>
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</tr>
<tr>
<td><strong>12. Royalties</strong></td>
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</tr>
<tr>
<td><strong>13. Sub Total</strong></td>
<td>$ 1,452</td>
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</tr>
<tr>
<td><strong>14. Fee</strong></td>
<td>131</td>
<td></td>
</tr>
<tr>
<td><strong>15. Total Estimated Cost</strong></td>
<td>$ 1,583</td>
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</tr>
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</table>
TABLE 6-6. PROJECT MANAGEMENT COSTS.

<table>
<thead>
<tr>
<th>Estimated</th>
<th>Total Estimated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>Cost</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------------</td>
</tr>
<tr>
<td>1. Direct Material</td>
<td></td>
</tr>
<tr>
<td>a. Purchased Parts</td>
<td></td>
</tr>
<tr>
<td>b. Subcontract Items</td>
<td></td>
</tr>
<tr>
<td>c. Other</td>
<td></td>
</tr>
<tr>
<td>2. Material Overhead</td>
<td></td>
</tr>
<tr>
<td>3. Direct Labor</td>
<td></td>
</tr>
<tr>
<td>Principal In Charge</td>
<td>2</td>
</tr>
<tr>
<td>Activity Leader</td>
<td>10</td>
</tr>
<tr>
<td>Project Manager</td>
<td>10</td>
</tr>
<tr>
<td>Asst. Proj. Engr/Geol/Sci.</td>
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</tr>
<tr>
<td>Typist</td>
<td>4</td>
</tr>
<tr>
<td>Total Direct Labor</td>
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<tr>
<td>O H Rate</td>
<td></td>
</tr>
<tr>
<td>Labor Overhead</td>
<td>120%</td>
</tr>
<tr>
<td>Total Labor Overhead</td>
<td>$803</td>
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<tr>
<td>5. Special Testing</td>
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<tr>
<td>6. Special Equipment</td>
<td></td>
</tr>
<tr>
<td>7. Travel</td>
<td></td>
</tr>
<tr>
<td>a. Transportation</td>
<td></td>
</tr>
<tr>
<td>b. Subsistence</td>
<td></td>
</tr>
<tr>
<td>Total Travel</td>
<td>$55</td>
</tr>
<tr>
<td>8. Consultants</td>
<td></td>
</tr>
<tr>
<td>9. Other Direct Costs</td>
<td></td>
</tr>
<tr>
<td>10. Total Direct Costs and Overhead</td>
<td>$1,527</td>
</tr>
<tr>
<td>11. General and Administrative Expense</td>
<td>(rate 15% of Cost Element No's. 1, 3, 4, 7, 9)</td>
</tr>
<tr>
<td>12. Royalties</td>
<td></td>
</tr>
<tr>
<td>13. Sub Total</td>
<td>$1,756</td>
</tr>
<tr>
<td>14. Fee</td>
<td>158</td>
</tr>
<tr>
<td>15. Total Estimated Cost</td>
<td>$1,914</td>
</tr>
</tbody>
</table>

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Suffolk County Environmental Control, (LOCATION: Suffolk County DOH 
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(LOCATION: WCC Files).

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(LOCATION: WCC Files).

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Geologist, on April 21, (LOCATION: WCC Files).
APPENDIX B
July 22, 1953

Nassau County Dept. of Health
Riverhead, Long Island

Gentlemen:

Recently we have had an analysis made of our water supply which is from a new well. The analysis is a chemical examination which requires the talents of a Sanitary Engineer for scrutiny as to whether the properties are balanced for drinking water.

Therefore, we are asking your assistance at this time to review the enclosed physical and chemical examination made by the Lindsay Laboratories and notify us if it is approved.

Very truly yours,

[Signature]

George D. Barnett
Plant Manager

Encl. (1 Report)
WATER ANALYSIS

LAB. NO. 759

DATE June 30, 1953

RECEIVED 6/28/53

SAMPLE MARKED "EXTON WATER"

PHYSICAL AND CHEMICAL EXAMINATIONS

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Turbid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sediment</td>
<td>Slight Brownish precipitate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Odor—Cold</th>
<th>Slight Brownish precipitate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color—Hot</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hydrogen Ion Concentration (pH)</th>
<th>5.80</th>
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</thead>
<tbody>
<tr>
<td>Color (Kazen Scale)</td>
<td>0</td>
</tr>
<tr>
<td>Turbidity (Silica Standard)</td>
<td>15.0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Chlorine as Chlorides</th>
<th>0.17</th>
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</thead>
<tbody>
<tr>
<td>Nitrogen as Nitrates</td>
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<tr>
<td>Nitrogen as Nitrites</td>
<td>0.75</td>
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<tr>
<td>Nitrogen as Free Ammonia</td>
<td>0.13</td>
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<tr>
<td>Nitrogen as Aluminoid Ammonia</td>
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</table>

<table>
<thead>
<tr>
<th>Total Hardness (Expressed as CaCO3)</th>
<th>32.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductivity (Expressed as CaCO3)</td>
<td>7.8</td>
</tr>
<tr>
<td>Organic and Volatile (Loss on Ignition)</td>
<td>12.0</td>
</tr>
<tr>
<td>Mineral Matter (Non-Volatile)</td>
<td>55.0</td>
</tr>
<tr>
<td>Total Solids (Dried at 110°C)</td>
<td>6.8</td>
</tr>
</tbody>
</table>

Note: Analyses run on filtered sample.

Lindsay Labs.
101 Ashland Place, Brooklyn 17, N.Y.

F. Nevin, Manager; N. H. Evans, Office Manager.

000103
<table>
<thead>
<tr>
<th>Element</th>
<th>Parts per Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>&lt;0.02</td>
</tr>
<tr>
<td>Cadmium</td>
<td>&lt;0.12</td>
</tr>
<tr>
<td>Chromium</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Copper</td>
<td></td>
</tr>
<tr>
<td>Iron</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td></td>
</tr>
<tr>
<td>Nickel</td>
<td></td>
</tr>
<tr>
<td>Zinc</td>
<td></td>
</tr>
<tr>
<td>Renewable Cesium</td>
<td></td>
</tr>
<tr>
<td>Cesium</td>
<td></td>
</tr>
<tr>
<td>Fluorine</td>
<td></td>
</tr>
<tr>
<td>Phosphorus</td>
<td></td>
</tr>
</tbody>
</table>

**Date Collected:** 7/16/53

**No.:** 57-331

**Source:** Outside tap - well

**Weather:**

* Water color: Clear
* Odor: None
* Turbidity: None
* Suspended matter: None

**Table:**

<table>
<thead>
<tr>
<th>Type</th>
<th>Fixed</th>
<th>Volatile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suspended solids</td>
<td>Fixed</td>
<td>Volatile</td>
</tr>
<tr>
<td>Fixed solids</td>
<td>Fixed</td>
<td>Fixed</td>
</tr>
<tr>
<td>Suspended solids</td>
<td>Fixed</td>
<td>Volatile</td>
</tr>
<tr>
<td>Volatile solids</td>
<td>Fixed</td>
<td>Fixed</td>
</tr>
</tbody>
</table>

**Examination of samples from estuaries area—Long Island
Sub-watershed: Project: Hargen Steel Prefab Co. - V. Partridge, Suffolk Co.**

**Date reported:** 7/31/53
Examination of samples from catchment area - Long Island Sub-watershed

Project: Casey Jones School - V. Farmingdale, Suffolk Co. Date reported:

<table>
<thead>
<tr>
<th>Ion</th>
<th>Time</th>
<th>Sample: drinking fountain tap - well</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected: 7/20/53</td>
<td></td>
<td>Water:</td>
</tr>
<tr>
<td>pH</td>
<td></td>
<td>Appearance of stream</td>
</tr>
<tr>
<td>Color</td>
<td></td>
<td>Color</td>
</tr>
<tr>
<td>Odor</td>
<td></td>
<td>Odor</td>
</tr>
<tr>
<td>Turbidity</td>
<td></td>
<td>Turbidity</td>
</tr>
<tr>
<td>Suspended matter</td>
<td></td>
<td>Suspended matter</td>
</tr>
<tr>
<td>Flavor</td>
<td></td>
<td>Flavor</td>
</tr>
<tr>
<td>Taste</td>
<td></td>
<td>Taste</td>
</tr>
<tr>
<td>Solids</td>
<td></td>
<td>Solids</td>
</tr>
<tr>
<td>Volatile</td>
<td></td>
<td>Volatile</td>
</tr>
<tr>
<td>Fixed</td>
<td></td>
<td>Fixed</td>
</tr>
<tr>
<td>Decomposed solids</td>
<td></td>
<td>Decomposed solids</td>
</tr>
<tr>
<td>Volatile</td>
<td></td>
<td>Volatile</td>
</tr>
<tr>
<td>Fixed</td>
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</tr>
<tr>
<td>Non-decomposable solids</td>
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<td>Non-decomposable solids</td>
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<tr>
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<td>Volatile</td>
</tr>
<tr>
<td>Fixed</td>
<td></td>
<td>Fixed</td>
</tr>
<tr>
<td>Saturated solids</td>
<td></td>
<td>Saturated solids</td>
</tr>
<tr>
<td>Volatile</td>
<td></td>
<td>Volatile</td>
</tr>
<tr>
<td>Fixed</td>
<td></td>
<td>Fixed</td>
</tr>
<tr>
<td>Suspended solids</td>
<td></td>
<td>Suspended solids</td>
</tr>
<tr>
<td>Volatile</td>
<td></td>
<td>Volatile</td>
</tr>
<tr>
<td>Fixed</td>
<td></td>
<td>Fixed</td>
</tr>
<tr>
<td>Alkalinity</td>
<td></td>
<td>Alkalinity</td>
</tr>
<tr>
<td>Carbonate</td>
<td></td>
<td>Carbonate</td>
</tr>
<tr>
<td>Bicarbonate</td>
<td></td>
<td>Bicarbonate</td>
</tr>
<tr>
<td>Total</td>
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<td>Total</td>
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<td>Bicarbonate</td>
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<tr>
<td>Total</td>
<td></td>
<td>Total</td>
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<table>
<thead>
<tr>
<th>Analysis</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>&lt;0.02</td>
</tr>
<tr>
<td>Cadmium</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Chromium</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Copper</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Iron</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Lead</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Nickel</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Zinc</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Equivalent Chromium</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Cyanide</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Thiocyanate</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Nitrate</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Phosphate</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Total solids</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Volatile</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Fixed</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Suspended solids</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Volatile</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Fixed</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Decomposed solids</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Volatile</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Fixed</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Non-decomposable solids</td>
<td>&lt;0.01</td>
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<tr>
<td>Volatile</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Fixed</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Saturated solids</td>
<td>&lt;0.01</td>
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<tr>
<td>Volatile</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Fixed</td>
<td>&lt;0.01</td>
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</tbody>
</table>

000105
Examination of samples from catchment area— Long Island Sub-watershed
Project: Barnes Precision Tool Farmingdale, Suffolk Co.

<table>
<thead>
<tr>
<th>Date Collected: 7/21/53</th>
<th>Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.: SW-364</td>
<td></td>
</tr>
<tr>
<td>Source: Tap - well</td>
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</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Turbidity</td>
<td></td>
</tr>
<tr>
<td>Suspended matter</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td></td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td></td>
</tr>
<tr>
<td>Dissolved oxygen</td>
<td></td>
</tr>
<tr>
<td>B.O.D., 5 day</td>
<td></td>
</tr>
<tr>
<td>Ammonia</td>
<td></td>
</tr>
<tr>
<td>Nitrites</td>
<td></td>
</tr>
<tr>
<td>Total solids</td>
<td></td>
</tr>
<tr>
<td>Volatile</td>
<td></td>
</tr>
<tr>
<td>Fixed</td>
<td></td>
</tr>
<tr>
<td>Suspended solids</td>
<td></td>
</tr>
<tr>
<td>Volatile</td>
<td></td>
</tr>
<tr>
<td>Fixed</td>
<td></td>
</tr>
<tr>
<td>Dissolved solids</td>
<td></td>
</tr>
<tr>
<td>Volatile</td>
<td></td>
</tr>
<tr>
<td>Fixed</td>
<td></td>
</tr>
<tr>
<td>Non settleable solids</td>
<td></td>
</tr>
<tr>
<td>Volatile</td>
<td></td>
</tr>
<tr>
<td>Fixed</td>
<td></td>
</tr>
<tr>
<td>Soluble solids</td>
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</tr>
<tr>
<td>Volatile</td>
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</tr>
<tr>
<td>Fixed</td>
<td></td>
</tr>
<tr>
<td>Salts</td>
<td></td>
</tr>
<tr>
<td>Magnesium</td>
<td></td>
</tr>
<tr>
<td>Sodium</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Salt</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>

Sample not preserved and 11 days old when received.

<table>
<thead>
<tr>
<th>Element</th>
<th>Max.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al</td>
<td>3.21</td>
<td></td>
</tr>
<tr>
<td>Cd</td>
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<tr>
<td>Cr</td>
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<tr>
<td>Cu</td>
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<tr>
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<td></td>
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<tr>
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<tr>
<td>Ni</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyanide</td>
<td></td>
<td>Not determined</td>
</tr>
<tr>
<td>Thyrite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phenol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phosphate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Date reported: 7/21/53
Examination of samples from catchment area—Long Island Sub-watershed

Date reported: 8/21/53

Sample: Catch, composite

<table>
<thead>
<tr>
<th>Date collected: 7/24/53</th>
<th>Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.: SM-566</td>
<td></td>
</tr>
<tr>
<td>Location: Top - well</td>
<td></td>
</tr>
</tbody>
</table>

Other:
- None of stream
- Odor
- Taste
- Suspended matter
- pH
- and deposits

Type of sample:
- Water
- Sediment
- Temperature: °C
- 'H value
- Carbon dioxide
- Dissolved oxygen
- Carbon reduction
- pH, 9-day
- Oxides
- Reduction potential
- Turbidity
- Hardness
- Hydrosoluble
- Total
- Volatile
- Fixed

<table>
<thead>
<tr>
<th>Component</th>
<th>Parts per million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td></td>
</tr>
<tr>
<td>Iron</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td></td>
</tr>
<tr>
<td>Nickel</td>
<td></td>
</tr>
<tr>
<td>Zinc</td>
<td></td>
</tr>
<tr>
<td>Cyanide</td>
<td></td>
</tr>
<tr>
<td>Thiocyanate</td>
<td></td>
</tr>
<tr>
<td>Grease</td>
<td></td>
</tr>
<tr>
<td>Phenol</td>
<td></td>
</tr>
<tr>
<td>Phosphates</td>
<td></td>
</tr>
<tr>
<td>Total cyanide</td>
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</tr>
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<td>Volatile</td>
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<tr>
<td>Fixed</td>
<td></td>
</tr>
<tr>
<td>Suspended solids</td>
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<td>Fixed</td>
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<td>Dissolved solids</td>
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<td>Volatile</td>
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<tr>
<td>Non-settleable solids</td>
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</tr>
<tr>
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<tr>
<td>Fixed</td>
<td></td>
</tr>
<tr>
<td>Organic acids</td>
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<td>Volatile</td>
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<tr>
<td>Total solids</td>
<td></td>
</tr>
<tr>
<td>Volatile</td>
<td></td>
</tr>
<tr>
<td>Fixed</td>
<td></td>
</tr>
</tbody>
</table>

Not determined

Sample not preserved and 11 days old when received.
August 10, 1933

Evanston Mutual Benefit Company
Albany, N. Y.

Dear Mr. Smith,

The premium due on Policy No. 123456 was collected on May 20, 1933, but a copy of the policy was not sent. It is requested that a copy of the policy be sent to the subscriber at the office of the State Insurance Department in Albany.

Very truly yours,

[Signature]

Securities of Evanston Mutual

101 E. 63rd St.

000108
Examination of samples from catchment area— Long Island Sub-watershed

Project: Polani Metal Products

Farmingdale, Suffolk County

Date reported: 8/21/53

<table>
<thead>
<tr>
<th>Ion</th>
<th>Time</th>
<th>SW-363</th>
<th>Tap - well</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Collected</td>
<td>7/24/53</td>
</tr>
<tr>
<td>Ion</td>
<td>SW-363</td>
</tr>
<tr>
<td>Water</td>
<td>Tap - well</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>Units</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
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<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>Iron</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>Nickel</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>Zinc</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>Nitrates</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>ppm</td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>ppm</td>
<td></td>
</tr>
</tbody>
</table>

Levels of samples

- Volatile
- Fixed

- Suspended solids
  - Volatile
  - Fixed

- Dissolved solids
  - Volatile
  - Fixed

- Non-soluble solids
  - Volatile
  - Fixed

- Soluble solids
  - Volatile
  - Fixed

- Total solids
  - Volatile
  - Fixed

- Sulfate
  - Volatile
  - Fixed

- Nitrate
  - Volatile
  - Fixed

- Total N
  - Volatile
  - Fixed

- Total P
  - Volatile
  - Fixed

- Total K
  - Volatile
  - Fixed

- Total Na
  - Volatile
  - Fixed

- Total Mg
  - Volatile
  - Fixed

- Total Ca
  - Volatile
  - Fixed

- Total Mn
  - Volatile
  - Fixed

- Total Fe
  - Volatile
  - Fixed

- Total Cu
  - Volatile
  - Fixed

- Total Pb
  - Volatile
  - Fixed

- Total Zn
  - Volatile
  - Fixed
March 22, 1954

Mr. F. Wellington Gilmore  
Assistant Director  
Division of Laboratories and Research  
New York State  
Albany, N.Y.  

Re: Ground Water Pollution due to Discharge of untreated industrial wastes in ground water  
by the United States Company

Dear Mr. Gilmore:

Three technical sample bottles sent to you on March 17, 1954 are to be tested for industrial pollution. Previous samples taken from this point showed a high concentration of insoluble phosphates. Since then a new industrial process has developed from one of these industrial wastes.

I am interested in finding out the present degree of contamination in the United States and what is being done about it. The samples were taken from the wells of the Pullman, Illinois Company, the Seabright Tool Company, and the Hillsboro Coal Mining Co. All present, all three of which are using industrial waste. The Pullman Coal Company, whose Wales mines lie near the point in question, has extended the coal in the area, and is being taken over by washing this coal now. The industrial wastes are being disposed of in one of these industrial wastes.

Yours truly,

[Signature]

[Name]
County Engineer

[Signature]

[Name]
June 3, 1955

Mr. E. Wellington Gillman
Director
Division of Laboratories and Research
New Scotland Avenue
Albany, New York

Re: Ground Water Pollution
due to discharge of
untreated chromium acid
washings into unused
wells.

Dear Mr. Gillman:

The samples taken from the wells of the Preferred Mills Company and
Pittsburgh Plate Company are to be tested for the presence of chromic
acid. I refer to part communications on the ground water pollution
due to the industrial operations of the Preferred Mills Company for
background.

The present disposal system consists of a series of open wells into
which the acid is sold with water and pumped underground. These wells
have been sealed approximately 1 mile north of the location previously
used for disposal.

The wells have not been used up to the point where visible evidence of
acid addition is shown.

Very truly yours,

R.E. Deaver, M. D.,
Deputy Commissioner

By: John P. McNulty,
District Engineer

Sincerely,
October 24th, 1955

Suffolk County Department of Health
216 Griffing Avenue
Riverhead, New York

Re: Town of Babylon vs. Violators of
Building Zone Ord. causing pollu-
tion of underground waters - #6206

Attention: Mr. H. W. Davids, P.E.,
Director of Environmental Sanitation

Dear Mr. Davids:

I have been alerted by Mr. G. Lester Brown, Building
Inspector of the Town of Babylon, with respect to the fact that
Preferred Manufacturing Company at Allen Boulevard, North Saugus-
ville, New York, has failed to complete the installation of the
sanitary system which would eliminate the pollution of the under-
ground waters in the township.

This morning Mr. Brown and his assistant, Mr. Harry
McGowan, visited and discussed the matter with Mr. O'Connor who
promised to immediately enter upon the installation of the sani-
tary system, which plans he advised have been approved by your
office.

After a conference I was directed to serve notice upon
Preferred Manufacturing Company that unless they entered upon the
installation of the sanitary system within the next 48 hours and
unless they show proof by contracts that they have engaged other
companies to undertake such work within said 48 hours that we shall
be obliged to proceed against them immediately for violation of the
Town Ordinance.

Our notice to Preferred Manufacturing Company will
also indicate that not only must they immediately undertake the
installation of the sanitary system but the work must be completed
within 30 days.

I am giving you notice of these facts so that our
Town officials can work along with you in eliminating the pollution
problem in our township. I would appreciate your advising me
as to the type of system being installed by Preferred Manufacturing
and whether or not the same suits with your approval.

Thank you for your attention to this matter.

Sincerely yours,

[Signature]
Suffolk County Department of Health  

October 24th, 1955.

-2-

satisfactorily.

I trust you will give this matter your immediate attention and let me hear from you at the earliest possible time.

Very truly yours,

[Signature]

CC/ S. Lester Brown, Esq.

CC/ Hon. Donald P. Nancy, Supervisor
October 27, 1955

Mr. Wallace W. Pinkerton
Assistant Director
Division of Laboratories and Research
New York State Department of Health
New York State Institute
Albany, New York

Mr. T. A. Smith:

The chemical samples sent to the Laboratory on February 28, 1955 from the
Health and Safety Council is to be looked into for the purpose of independent
verification. It is due to start in the near future on the Federal project involving
to industrial operations of the Federal Water Pollution Control Act.

The operators under the direction of a chemical and as a boiling tank
operator are working very well, with the few breakdowns arising in the
general area.

We have received the equipment for the test of the meeting previously noted for the test
and findings are as follows. The test had been used for some time, and
shows very good results. A demonstration of the equipment is being conducted
with a dislocation of 1000, 1200, 1300, 1500, and 1600. The results of the
various systems of tests have cleared up well.

Currently the industrial waste of liquid is being treated in the conditioning
boiling tank equipment which is by the 1955 method. With the introduction of
various new methods, the present method may be modified as required to
keep in step with the progress of the industrial waste conditioning equipment.

Sincerely,

[Signature]
March 31, 1969

[Address]

[Name]

[Position]

To: [Recipient's Name]

Subject: [Brief subject line]

[Body of the letter]

[Signature]

[Date]
It was found that water and wastes were still being discharged into ground waters.

Analytical determinations in the tanks of leaching and receiving of the waste chro-
mium from the plant showed that leaching pit 11 contained cadmium, 5.5 ppm;
univalent chromium, 0.12 ppm; total chromium, 0.35 ppm; copper, 0.60 ppm; zinc, 2.2 ppm;
and a pH of 5.6. From leaching pit 12: cadmium, 0.38 ppm; bivalent chromium, 1.14
ppm; total chromium, 2.4 ppm; copper, 0.83 ppm; nickel, 0.19 ppm; zinc, 0.50 ppm; and
a pH of 10. From leaching pit 13: cadmium, 0.6 ppm; bivalent chromium, 0.81 ppm;
total chromium, 1.73 ppm; copper, 0.53 ppm; zinc, 3.9 ppm; cyanide, 2.2 ppm; and a pH
of 2.9.

On 3rd, 1953:

The test period was extended 30 days. In an effort to complete the necessary
work, the extension was made May 5, 1953.

On 31st, 1953:

Based on the results of the survey and the evaluation by the district attorney's
office, the consent decree was signed by the district attorney on June 1, 1953.

On 1st, 1954:

The consent decree was amended to include a schedule of the plant's activities
for the next 15 years. The schedule was to be reviewed annually and could be
amended as necessary. The amended consent decree was signed by the district
attorney on June 1, 1954.
I hope that the above information answers the questions you had and gives you an idea of the history of this problem.

If there is any other information we can supply, please feel free to contact this office.

Very truly yours,

Sirs A. Smith
Administrative Officer

Mr. [Name], [Position]
September 22, 1949

Colonel Robert J. O'Connor
Chief, Litigation Division
Office of The Judge Advocate General
Department of the Army
Washington 25, D.C.

To Colonel O'Connor:

I have referred the enclosures to you for your comments upon the following matter:

[Enclosures referenced]

There are in addition a number of others, some with additional information.

1. Preliminary Report of Investigation

This report of investigation dated August 27, 1949, as

[Additional information provided]
Department of Health. We thus deduce that the contaminated water had not made any of the personnel ill and that it was not aesthetically objectionable as to taste or color.

In Exhibit U, it is said in paragraph 1 that the United States Public Health Standards states that 0.05 ppm of chlorine is cause for rejection of a water supply. Will you give us the source and citation of this standard, or any other pertinent information about it and its basis. In the same paragraph, it is said that "no permissible limit has been established for a virus; however, it is considered to be toxic as in certain diseases." Will you also tell us specifically by what it is so considered.

We could be interested in obtaining an idea on the effects of the 0.05 ppm that might be used in the treatment of suspension of viruses so that we can establish a limit for rejection of supply of water. We could then determine if the concentration of the virus is sufficient to establish a standard for rejection of the water. For instance, it is said that "the suspending power of chlorine is obtained or (2) concentration of the virus.

2. **Public Health Code** (Exhibit R)

The survey on page 3 shows that the industrial wastes in the Township of __ in the county of __ due to the physical characteristics of the soil, climate, vegetation, and amount of the ground water.
November 10, 1960

Headquarters Fort Totten
Pl. Mdg 59, L.I.
New York

Re: Preferred Manufacturing Company
Town of Babylon - Suffolk County

ATTENTION: Emery B. Allmer, Jr.
1st Lt, C.O.
1st Platoon Officer

Gentlemen:

Your letter of October 19, 1960 has been received. We have investigated the matter of the complaints of Preferred Manufacturing Company, 370 East Great Neck Road, Great Neck, New York.

The information that you have furnished is not sufficient to warrant any action. We have not found any scientific evidence that your complaints are justified.

Regarding the water supply, the water from the well at the City Hall Station, and the well at the public park, does not contain any harmful substances. The water is safe for drinking.

We recommend that you continue to use the water as you have been doing. If you have any further complaints, please let us know.

Sincerely,

[Signature]

[Name]

[Title]
Mr. Young was notified on July 17, 1953 to appear before the Commissioner of Health of Suffolk County on July 22, 1953. At the meeting he was notified that samples collected by this Department analyzed by the New York State Department of Health from the well of Larkert Company, approximately 150' S/E of the industrial waste leaching pools of Preferred Manufacturing Company, and the well of the Preferred Manufacturing Company, approximately 70' S/W of their industrial leaching pits, showed the presence of 6.0 ppm. and 0.8 ppm. of hexavalent chromium respectively.

Mr. Young was asked that as a former Director of the Plating Department at Liberty Aircraft, Farmingdale, was he aware that pollution of ground water from the waste of the Plating Department is of the same type of waste as is now being discharged from his plant and that such waste can be treated?

The neighboring well, which was contaminated in 1953 was abandoned. A new well was drilled to a deeper strata which had not been contaminated in this area of Farmingdale. During the construction of a new well, bottled water was being used.

IV. The wells are five existing wells at Preferred Manufacturing Company, including one at the Former Larkert Corporation. The wells are located to the SE of Preferred Manufacturing Company, and to the NW of the proposed plating plant.

IV. The 5th well is located to the SE of Preferred Manufacturing Company's industrial leaching pools. In this area, the vadose zone is very thin and clayey in nature. Reference also made to "Survey of Industrial Waste, Farmingdale, Suffolk County Department of Health", prepared by John E. Barrett, page 2, paragraphs number 1, 2 and 3.

V. Proposed new wells on its property for "dissolving plants." In test, samples collected from this well showed the presence of 6.0 ppm. of hexavalent chromium in samples of the United States Public Health Service Standard. The well was closed at that time to an unconfined strata, known to the well to be contaminated and deepened a number of times since, due to the addition of industrial wastes.

VI.
Suffolk County Department of Social
Pay Role Office
6 East Main Street
Pay Shore, L. N., New York

October 12, 1939

[Text continues on the page]
OCTOBER 19, 1961

CUMBERLAND COUNTY DEPARTMENT OF HEALTH

The ground water system. Does this mean that these factors are unusual to the extent that Preferred, for one, would not have been reasonably expected to know that the water it discharged would contaminate the nearby well, at least initially? If so, at what time, specifically, was Preferred put on notice (about the direction of the movement of the ground water, for example) as to the likelihood of contamination?

In connection with this, is the movement of the underground water in the direction of the nearby well really significant? In other words, was Preferred advised of the underground conditions in time to have prevented the pollution?
It should be noted that of the two tanks, the lower one on the right in the picture that had been previously filled, is empty and the higher one was filled during the test run of the day. This tank has the same design and location as the tank on the left, but is a new construction and is not in service.

In relation to the other plant with a similar two tank system, this plant is located somewhat to the west of the Plant A with its two tank system of Preferred. This tank was found to be constructed by the firm in 1963 and was abandoned. A new, smaller, deeper well will be used instead. It is believed that the basic point here is that Preferred Manufacturing Co. knowingly and wantonly started discharging an industrial waste of chlorine into the ground waters of the State of New York without a valid permit from the State Commissioner of Health and the New York State Board of Pollution Control Board, as required by the Public Health Law of New York State. Whether or not he was aware of this or that he would contribute the well of the Army Hill Site, or any other wells in the vicinity, is considered immaterial since all the provisions of the Code or for that matter all of the State of New York are potential sources of water supply. Therefore, no discharge is permitted (legally) without a valid permit issued for such discharge.
3. In the recharge area, the flow of water into the ground will be in the northerly direction of the site. The ground water will adjoin the site on the northerly side, and will travel in a relatively unconfined area with the ground water as it moves horizontally at a velocity of a few feet per day. This results in a "ribbon" of contaminated ground water traveling in the direction of the ground water flow. In this area, generally north to south.

4. It is significant that the Mike Site well was located in a general northerly direction from the Preferred Manufacturing Company's cooling ponds receiving the industrial waste. The direction of the ground water flow in this general area of Long Island has been established to be in a north-south-easterly direction (almost due north).

5. The Preferred Manufacturing Co. does have a water supply well on its property. In 1953 samples collected from this well showed the presence of bacteria, turbidity in excess of 0.05 ppm. The well was apparently connected to an unconstructed underground sewer. This well had been used as a water source due to the presence of bacteria, turbidity in excess of 0.05 ppm.
6. It is physically possible that the contamination from the intake water supply could be removed by physical means such as filters; however, it is our opinion that this would not be an effective method. Also, the disadvantages of operating and maintaining such a treatment plant would be prohibitive. Similar water treatment facilities at other sites in the country have experienced many problems of providing a safe and adequate water supply at all times for every person. Furthermore, there are no public or private water supplies that can be relied on in the event these treatment plants are not in operation to provide safe drinking water.
**SUFFOLK COUNTY DEPARTMENT OF HEALTH**

**Bacteriological and Chemical Examination of**

Beaches, Streams and Sewage

---

**Location:**

- Beach
- Stream
- Sewage
- Other

- Routine
- Resample
- Special

---

### PEACH OR STREAM SAMPLE DATA

- Weather (circle): Fair cloudy rain
- Weather prev. 24 hrs.: Fair cloudy rain
- Depth of water at point of collection:
- Depth below surface: Bottle submerged:
- Date by X where along beach, sample taken:

### SEWAGE PLANT SAMPLE DATA

- Point of collection:
- Holding time before dechlorination:
- Chlorine resid. *OT: OT + A: A + OT:
- Explain action taken if residual below 0.5 mg/L
- Rate of flow: (MGD)

---

**Other remarks:**

- First Fer. Iron
- Hermetan Chrom
- Tris Chloro Cresyl pH. Urea Zn. Pr
- Ins & Joints

---

**BACTERIOLOGICAL EXAMINATION**

- Date Exam:
- Source No.:
- Vol. of Sample:
- Vol. of Inocul. Fluid:
- % of Dilution:
- Diluted Vol.:
- No. of Plate Count:
- No. of Colony Count:
- Total Colonies:
- Total Saucers:

---

000128
## Suffolk County Department of Health

**Chemical Examinations of Water, Sewage, Industrial Wastes**

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
<th>Test</th>
<th>Result</th>
<th>Test</th>
<th>Result</th>
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<tr>
<td>Free Ammonia (mg/l N)</td>
<td></td>
<td>Total Hardness (mg/l CaCO₃)</td>
<td></td>
<td>S.O.D. (mg/l)</td>
<td></td>
</tr>
<tr>
<td>Alkalinity (mg/l CaCO₃)</td>
<td></td>
<td>Phosphate (mg/l PO₄)</td>
<td></td>
<td>Zinc (mg/l Zn)</td>
<td></td>
</tr>
<tr>
<td>Chlorides (mg/l)</td>
<td>[1.5]</td>
<td>Silica (mg/l)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T.S.O.D. (mg/l)</td>
<td>[7.2]</td>
<td>Chloride (mg/l Cl⁻)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T.S. (mg/l)</td>
<td></td>
<td>Fluoride (mg/l F⁻)</td>
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<td></td>
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</tr>
<tr>
<td>Alkalinity (mg/l CaCO₃)</td>
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<td>Phosphate (mg/l PO₄)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrites (mg/l)</td>
<td></td>
<td>Silica (mg/l)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Waste Supply Data**

- Owner: [Redacted]
- District: [Redacted]
- Date: [Redacted]
- Water Supply Data: [Redacted]
APPLICATION FOR WASTE DISPOSAL PERMIT

PRELIMINARY ENGINEERING REPORT

PART I

SUBMITTED TO

THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONTROL

BY

PREFERRED PLATING CORPORATION

32 ALLEN BOULEVARD

FARMINGDALE, NEW YORK 11735

PREPARED BY

DONNELLY ENGINEERING COMPANY

425 NEW YORK AVENUE

HUNTINGTON, NEW YORK 11743

MAY 1974

CORPORATE OFFICER

John R. Leung

Lawrence A. Donnelly, P.E.
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A. Overall Project Summary

A1. General Description

Preferred Plating Corporation has the facilities to chemically treat metal parts for the purpose of increasing corrosion resistance, provide a cohesive base for painting and improve appearance. The plant is typical of a small metal surface finishing shop. Metal parts are received and immersed in various chemical solutions. Wastewater is produced by rinsing the parts between each treatment bath.

The factory employs 12 personnel on a single shift, 5 day week. Figure 2 shows the factory floor plan. It can be seen that the plant consists of materiel inspection and shipping, storage, metal finishing and office areas.

This report addresses itself to the reduction of wastewater quantity, which will be stored for later removal by an approved scavenger; and the disposal of an existing quantity of wastewater which had been stored in the past from processes no longer in use at Preferred Plating Corporation.
A2. Identification of Pollutants

The pollutants in the wastewater of Preferred Plating Corporation are typical of a metal surface finishing shop.

The following is a list of treatment baths used for metal parts.

- Alodine
- Phosphate
- Hydrochloric Acid
- Alkaline Cleaner
- Periodic Reverse Plating
- Dichromate
- Caustic
- Nitric Acid
- Non-Etch Cleaner
- Sulfuric Acid
- Chromic Acid
- Black Dye

Their concentrations can be found in Table 1, Section B2. The chosen method for wastewater disposal is storage and hauling. The nature and concentrations of the pollutants are therefore relevant only to carting costs.
A3. Classification of Receiving Waters

Preferred Plating Corporation is located 1800 feet North of the 42° 30' latitude line and 1200 feet West of the 73° 25' longitude line as shown on the Amityville, New York Quadrangle Map.

The surrounding area consists of industrial and commercial properties. Allen Boulevard passes on the Southern boundary, in front of the factory, which is about 300 feet East of Broad Hollow Road. Property elevation is 55 feet above sea level. Leaching pool disposal of raw sewage is customary in this area. The receiving ground waters are classified as GA. A portion of the USGS Topographical Quadrangle is presented in Figure 1.

Factory process water is pumped from a well on the factory site. The well depth is approximately 80 feet and has a pumping capacity of approximately 15 gpm. Bottled drinking water is used at the plant.
A4. Requirements for Waste Treatment

The domestic waste from this factory is from toilets, wash basins and drinking fountains. There is no cafeteria or other source of kitchen waste. The domestic sewage may pass directly to the sanitary leaching pools for subsurface sewage disposal.

The industrial waste consists of rinse water from the sulfuric acid running rinse, 12 stagnant rinses, and steam condensate line. It is proposed to store and haul all wastes except the steam condensate which can be sent directly to the leaching pool.
A5. General Plans for Pollution Abatement

Waste water flow is currently at a minimum for this installation. The overall plan for pollution abatement is to store all wastewater for subsequent removal by an approved scavenger.

All rinse water lines, running and stagnant, will be plumbed to the holding pits behind the factory, (see Figure 2), for later removal by a scavenger. The steam condensate line will be separated from the sulfuric acid rinse line and condensate will be drained to the leaching pools. All other drains will be located and closed to prevent accidental discharge of objectionable waste to the leaching pools.
The plan view of the metals surface finishing room is presented in Figure 3. This drawing shows the location of all process tanks. Also shown are the wastewater drains.

Figure 4 is the hydraulic profile of the wastewater drainage system from the sulfuric acid rinse tank. The layout of the water collection system is shown delivering wastewater to the pits located behind the factory building. As can be seen, the transfer of wastewater to the pits and leaching pools is accomplished by gravity flow. With the stagnant rinse tanks changed monthly, total water consumption will be 4025 gallons per month. With the incorporation of a double stagnant rinse system, the total can be cut to 2050 gallons per month.

Under the current rinsing system, the one running rinse produces 1300 gallons per month while the 9 stagnant rinses are producing 2725 gallons per month. Introduction of double stagnant rinses would reduce the 2725 figure to 779 gallons per month.
Figure 2 is a drawing of the Preferred Plating Corporation property. It shows the plant layout, leaching pool locations, and location of wastewater holding pits.
B2. Description of Factory Wet Process

Metal parts are received at the plant. They are degreased in a solvent degreaser and then chemically cleaned in one of 3 cleaning processes. The parts then receive the proper chemical finishing to provide increased corrosion protection, a base for paint or improved appearance. The following is a list of the factory wet processes and their tank sequences (Tank numbers refer to Table 1; see also Figure 3).

Cleaning
A) Etch cleaning
   15, 16, 17, 18

B) Non-Etch cleaning (for close tolerance material)
   21, 22

C) Alkaline Cleaner
   9, 8

Surface Finishing
D) Chromic Anodize
   A or B, 26, 27, 1

E) Sulfuric Anodize
   A or B, 23, 24, 1

F) Chromate Conversion (Alodine)
   A or B, 3, 2, 1

G) Black Dye
   29, 30, 1

H) Stainless Steel Passivate
   C, 10, 8, 7, 6, 11

I) Phosphate Coating
   C, 10, 8, 7, 6, 32, 5, 4
Metal parts entering the plant will go through any one of the following groups of processes.

**Aluminum**
1) D
2) E
3) F
4) D, F
5) E, F
6) E, G

**Steel**
1) H
2) I
### Table 1 - Tank Identification

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Concentration</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>Stagnant hot water rinse</td>
<td></td>
<td>243 gal</td>
</tr>
<tr>
<td>2)</td>
<td>Stagnant rinse (for Tank #3)</td>
<td></td>
<td>81 gal</td>
</tr>
<tr>
<td>3)</td>
<td>Chromate Conversion Coating</td>
<td><strong>CrO$_3$</strong> 2515 mg/liter, <strong>Fe(CN)$_3$</strong> 1440 mg/liter, <strong>Complex Fluoride Salts</strong> 3235 mg/liter</td>
<td>140 gal</td>
</tr>
<tr>
<td>4)</td>
<td>Stagnant rinse (for Tank #5)</td>
<td></td>
<td>382 gal</td>
</tr>
<tr>
<td>5)</td>
<td>Phosphate Coating</td>
<td><strong>Parco Compound</strong> (Hooker Chem. Parker Div.) 54,000 mg/liter</td>
<td>344 gal</td>
</tr>
<tr>
<td>6)</td>
<td>Stagnant rinse (for Tank #7)</td>
<td></td>
<td>155 gal</td>
</tr>
<tr>
<td>7)</td>
<td>HCl</td>
<td><strong>HCl</strong> 213,000 mg/liter</td>
<td>355 gal</td>
</tr>
<tr>
<td>8)</td>
<td>Stagnant rinse (for Tanks #9 and #10)</td>
<td></td>
<td>54 gal</td>
</tr>
<tr>
<td>9)</td>
<td>Alkaline Cleaner</td>
<td><strong>Udylite Oxy Prep</strong> (Hooker Chem.-Udylite Div.) 90,000 mg/liter</td>
<td>400 gal</td>
</tr>
<tr>
<td>10)</td>
<td>Periodic Reverse Plating</td>
<td><strong>Na$_2$Cr$_2$O$_7$</strong> 39,600 mg/liter</td>
<td>100 gal</td>
</tr>
<tr>
<td>11)</td>
<td>Passivate</td>
<td><strong>HNO$_3$</strong> 513,000 mg/liter</td>
<td>60 gal</td>
</tr>
<tr>
<td>12)</td>
<td>DiChromate (for Al metal)</td>
<td><strong>Na$_2$Cr$_2$O$_7$</strong> 39,600 mg/liter</td>
<td>45 gal</td>
</tr>
<tr>
<td>13)</td>
<td>DiChromate (for Mg metal)</td>
<td><strong>Na$_2$Cr$_2$O$_7$</strong> 132,000 mg/liter, <strong>CaF$_2$ or MgF$_2$</strong> 2,630 mg/liter</td>
<td>165 gal</td>
</tr>
<tr>
<td>14)</td>
<td>Stagnant Rinse</td>
<td></td>
<td>110 gal</td>
</tr>
<tr>
<td>15)</td>
<td>Caustic Etch</td>
<td><strong>Aluminux</strong> (Diversy Chem) 60,000 mg/liter</td>
<td>560 gal</td>
</tr>
</tbody>
</table>
B2. Description of Factory Wet Process (cont'd.)

Table 1 - Tank Identification (cont'd.)

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Quantity</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>16)</td>
<td>Stagnant rinse (for Tank #15)</td>
<td>573 gal</td>
<td></td>
</tr>
<tr>
<td>17)</td>
<td>HNO₃</td>
<td>260 gal</td>
<td>513,000 mg/liter</td>
</tr>
<tr>
<td>18)</td>
<td>Stagnant rinse (for Tank #17)</td>
<td>370 gal</td>
<td></td>
</tr>
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<td>19)</td>
<td>Chromate Conversion Coating</td>
<td>510 gal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alodine 1200 (Amchem Chem. Co.)</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>CrO₃</td>
<td>2,515 mg/liter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fe(CN)₃</td>
<td>1,440 mg/liter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Complex Fluoride Salts</td>
<td>3,235 mg/liter</td>
<td></td>
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<tr>
<td>20)</td>
<td>Stagnant rinse</td>
<td>450 gal</td>
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<tr>
<td>21)</td>
<td>Stagnant rinse (for Tank #22)</td>
<td>145 gal</td>
<td></td>
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<tr>
<td>22)</td>
<td>Non-Etch cleaner</td>
<td>80 gal</td>
<td></td>
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<tr>
<td></td>
<td>Alkalyte (State Chemical Co.)</td>
<td>60,000 mg/liter</td>
<td></td>
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<tr>
<td>23)</td>
<td>H₂SO₄</td>
<td>330 gal</td>
<td>219,000 mg/liter</td>
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<td>24)</td>
<td>Two tank counter-current rinse - Flow rate 1 gpm</td>
<td>150 gal</td>
<td></td>
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<td>25)</td>
<td>Chromate Conversion Coating</td>
<td>280 gal</td>
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<td></td>
<td>My Chrome Alchromate (Mitchel Briarford Co.)</td>
<td>11,250 mg/liter</td>
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<tr>
<td>26)</td>
<td>Chromic Acid</td>
<td>1675 gal</td>
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<td></td>
<td>CrO₃</td>
<td>43,000 mg/liter</td>
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<td>H₂SO₄</td>
<td>Negligible</td>
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<td>27)</td>
<td>Stagnant rinse (for Tank #26)</td>
<td>504 gal</td>
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<td>28)</td>
<td>Degreaser</td>
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<td>29)</td>
<td>Black Dye</td>
<td>280 gal</td>
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<td>30)</td>
<td>Stagnant rinse (for Tank #30)</td>
<td>306 gal</td>
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<td>31)</td>
<td>HCl</td>
<td>55 gal</td>
<td>213,000 mg/liter</td>
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<td>Titanium Solution</td>
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<td>Parkoline Z (Hooker Chem. Parker Div.)</td>
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<td>NaOH</td>
<td>490 mg/liter</td>
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<tr>
<td></td>
<td>H₃PO₄</td>
<td>490 mg/liter</td>
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<td></td>
<td>Na₂CO₃</td>
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<tr>
<td></td>
<td>Ti⁴⁺</td>
<td>170 mg/liter</td>
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B3. Water Conservation Techniques

Preferred Plating is currently employing a good water conservation program. The one running rinse in the rinsing system is a counter-current rinse. Water in this rinse flows only when objects are being rinsed. All other rinses are stagnant rinses. Further water savings can be realized through the implementation of a double stagnant rinse system. This will increase the life of the rinse by a factory of 3.5. The quantity of water consumed by the stagnant rinse will be 28.6% of its current level.
C. Factory Operations

Preferred Plating Corporation is a metals surface finishing plant which consists of an inspection and shipping department, a storage area, an office and a metal finishing area. The only industrial liquid waste source is the metal surface treatment shop. The factory employs 12 personnel on a single shift, 5 day week.

Metal parts are received in the shipping area. They are then sent through one or more of the processes explained in Section B2. Since all articles to be processed come from outside sources, parts received have no set size and shape. Therefore, the dragout of parts varies from job to job and cannot be estimated. The surface treatment of parts accounts for all industrial wastewater produced.

Domestic waste is only from wash basins, toilets and drinking fountain. This waste is passed directly to the sanitary leaching pools. All industrial waste is currently being held.
D. Development of Design Criteria

D1. Comprehensive Waste Survey

The sources of waste are best represented by the composition of the concentrated process baths (See Section B2). These materials will appear in the wastewater only through rinsing of parts or discarding of spent baths. Since all wastewater will be held and hauled by an approved scavenger, dragout calculations become unnecessary.

As already stated, all wastes will be "held and hauled". It is proposed to store the wastewater in the pits located behind the factory (See Figure 2).

To prepare the pits to be used as storage tanks, the following must be accomplished:
1) Wastewater currently in the tanks will be treated and removed as described below.
2) Repairs to the pits will be made by grouting in all cracks.
3) Pits will then be coated with a bituminous epoxy to insure against leakage to the ground.
4) A wooden deck will be placed over the pits to improve safety and keep out rain water.

The pits that will be used to store the wastewater currently contain water contaminated with cyanide and chrome. The following treatments for these waters are proposed.

1) Cyanide Destruction - Tanks 1A, 1B and 1C
Cyanide will be completely destroyed by alkaline chlorination. The overall reaction for this process is as follows:

\[ 2CN^- + 5OCl^- + 2OH^- \rightarrow 2CO_3^{2-} + 5Cl^- + \text{N}_2 \uparrow + \text{H}_2\text{O} \]

This reaction will take place in two steps. The first step occurs at a pH above 9 with a reaction time of 1/2 to 1 hour. The second takes place at a pH below 7.5 with a reaction time of 1/2 to 1 hour.
2) **Hexavalent Chrome - Tanks 1A, 1B, 1C, IIA, IIB and IIC**

Hexavalent Chrome will be reduced to its trivalent state using sodium bisulphite with sulfuric acid

\[
4\text{CrO}_3 + 6\text{NaHSO}_3 + 3\text{H}_2\text{SO}_4 \longrightarrow 3\text{Na}_2\text{SO}_4 + 2\text{Cr}_2(\text{SO}_4)_3 + 6\text{H}_2\text{O}
\]

This reaction will proceed rapidly at a pH below 2.5.

The pH of all tanks will then be raised to \(8 < \text{pH} < 9\) to precipitate all heavy metal hydroxides. After a prolonged settling period, the supernatant will be decanted and discharged to a nearby leaching pool. The remaining sludge will be hauled away by an approved scavenger.

**Procedure for Pit Treatment**

It is important to have good mixing of wastewater while treatment is taking place. This will be accomplished by discharging compressed air through a tee located near the bottom of the pit. The air bubbles will lift the water and start a rolling action in the pit, thereby promoting good mixing.

**Pit #1 - CN Destruction**

1) Raise pH above 9 by addition of 11.64 g NaOH for each 10 ft. of water depth.

2) Add 2.42 lbs. NaOCl and 1.3 lbs NaOH. Add NaOH slowly to maintain pH between 9 and 10.

3) Wait 1/2 to 1 hour for reaction to go to completion.

4) When reaction is complete, lower pH to 7.5 through addition of 27.7 g H\(_2\)SO\(_4\) and add 3.63 lbs NaOCl.

**Pit #1 - Cr\(^{+6}\) Reduction and Precipitation**

1) After CN\(^-\) is destroyed, lower pH to 2.5 through the addition of 19.9 lbs of H\(_2\)SO\(_4\).

2) Add 0.634 lbs of NaHSO\(_3\).

3) Wait 1/2 to 1 hour for reaction to go to completion.

4) Raise pH to 8 through addition of 16.2 lbs NaOH to precipitate metal hydroxides.
D1. Comprehensive Waste Survey (cont'd.)

**Pit #2 - Cr\(^{+6}\) Reduction and Precipitation**

1) Lower pH to 2.5 by the addition of 19.6 lbs H\(_2\)SO\(_4\)\(^{-}\).
2) Add 1.02 lbs of NaHSO\(_3\) and 0.480 lbs of H\(_2\)SO\(_4\)\(^{-}\).
3) Wait 1/2 to 1 hour for reaction to go to completion.
4) Raise pH to 8 through the addition of 16 lbs of NaOH to precipitate metal hydroxides.

**Pits #3 and #4 - Metals Precipitation**

The only contaminants in pits #3 and #4 may be heavy metals. The contents of the two pits will be mixed together and then treated to remove heavy metals.

**Procedure:**

1) Pump contents of pit #4 into pit #3.
2) Add 0.525 lbs NaOH to raise pH above 8.

Reaction times in all preceding reactions will increase with decreasing temperatures. Times stated are for reactions at 70°F.
D2. Economic Analysis

With the stagnant rinse water changed monthly, waste water accumulation at Preferred Plating is 4000 gal/month. Hauling costs are $0.12/gal.

Yearly cost for hauling = (4000 gal/month)(12 months/yr)(0.12/gal) = $5760/year

With the installation of a double stagnant rinse waste accumulation will be 2000/gal/month.

Cost for additional Tanks = $5200 + installation costs

Amortizing this over a 10 year period at 10% interest

Yearly cost for new tanks = \( P \frac{i(H_i)^n}{(1+i)^n-1} = \frac{($5200)(.163)}{1} = $846 \)

Yearly cost for hauling = (2000 gal/month)(12 months/yr)(0.12/gal) = $2880

Total Yearly Cost = $2880 + $846 + installation = $3726 + installation

Savings realized through use of double stagnant rinse system = $5760 - $3726 = $2034

Treatment of pit waste versus hauling waste.

Total volume of pit waste equals 46,500 gallons

Cost for hauling is $0.12/gal

Total cost for hauling waste = (46,500 gal)($0.12/gal) = $5560

Cost for treatment of pit wastes.

Cost of Chemicals = $20

Estimated cost for labor to treat waste = $1000

Cost for sludge hauling (estimated at 10% of original volume) = \( (.1)($5560) = $560 \)

Total cost for treating pit wastewater = $1580
FINISHING ROOM
TANK LAYOUT
SCHEMATIC

NOTE: TANKS NOT NUMBERED ARE NOT USED FOR ANY PROCESSING.
SEE SECTION 82 TABLE 1 FOR TANK 1D.

FOR:
PREFERRED PLATING INC.

BY:
DONNELLY ENGINEERING CO.

DATE: DEC. 13, 1973
DR BY: M. AVANZINI
SCALE: 1" = 10'
FIGURE # 3
HYDRAULIC PROFILE

FOR:
PREFERRED PLATING INC.

BY:
DONNELLY ENGINEERING CO.

DATE: 2/22/74
FIGURE #: 4
NOTIFICATION OF UNSATISFACTORY INDUSTRIAL WASTE SAMPLING

Date: Jan. 1, 1975

Gentlemen:

On Jan. 12, 1975, samples of your industrial waste were taken from your plant at [Address]. Upon analysis, the following parameters were found to be unsatisfactory:

1. Copper - 3.3 mg/l Cu 6.
2. Chromium - 20 mg/l Cr 7.
3. Nickel - 4.5 mg/l Ni 8.
4. 
5. 9.
6. 10.

The acceptable limits on each of these parameters according to New York State Industrial Water Standards are as follows:

Copper - 0.5 mg/l Cu 6.
Chromium - 1 mg/l Cr 7.
Nickel - 3.0 mg/l Ni 8.

Please see that these conditions are corrected as soon as possible. If you have any doubts or need any assistance, please do not hesitate to contact us.

[Signature]

[Stamp] 000154
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REMARKS/INSTRUCTIONS

N/E OR FIRM: Suffolk Soy Co
ADDRESS OR LOCATION: 32 Allen St., Farmingdale

SUFFOLK COUNTY ENVIRONMENTAL CONTROL LABORATORY
CHEMICAL EXAMINATION OF WATER, SEWAGE, INDUSTRIAL WASTE

TEST DATE COMPLETED: 12/24/84

000155
NOTIFICATION OF UNSATISFACTORY INDUSTRIAL WASTE SAMPLING

Date Oct. 30, 1975

Preferred Plating Corp.
32 Allen Blvd.
Farmingdale, N.Y. 11735

Gentlemen:

On Oct. 15, 1975, samples of your industrial waste were taken from your ____________. Upon analysis, the following parameters were found to be unsatisfactory:

1. Total Chrome - 6.6 mg/l
2. Cadmium - 0.04 mg/l
3. ___________
4. ___________
5. ___________
6. ___________
7. ___________
8. ___________
9. ___________
10. ___________

The acceptable limits on each of these parameters according to New York State Groundwater Standards are as follows:

1. Total Chrome - 1 mg/l
2. Cadmium - 0.02 mg/l
3. ___________
4. ___________
5. ___________
6. ___________
7. ___________
8. ___________
9. ___________
10. ___________

Please see that these conditions are corrected as soon as possible. If you have any questions or need any assistance, please do not hesitate to contact this office.

Very truly yours,

[Signature]

000158
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<th>RESULT</th>
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<th>RESULT mg/ liter</th>
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Company Name: Preferred Plating Corp
Permit No.: 47-0300
Location: 32 Allen Blvd., Westfield, N.Y.
Mailing Address: 32 Allen Blvd., Westfield, N.Y.

Date of Inspection: 10/16/75
Date(s) of Previous Inspection(s):
Previous Inspector(s):
Receiving Waters:
W.Q. Classification: 6A
Weather Condition: Clear

Company Representative(s), Title(s): John Young

Number of Discharges Reported: 0
Number of Discharges Observed: 1
Action Taken or Planned on Unreported Discharges: Complete Conference of Event and Report.

(1) PROCESS
(a) Industrial Process: Plating
(b) Reported Production:
(c) Current Production:
(d) Rated Production:
(e) Raw Materials Used:
(f) Process modification, expansions, etc. have been made that would either increase or decrease raw waste loads, water usage, etc. that have not been previously reported:
(g) Industrial process flow diagram indicating wastewater sources (attach copy if on file and verify with company):
(h) Continuity of Operation: Batch/Semi-Continuous

(2) EFFLUENT LIMITATIONS VIOLATIONS (Based upon Self-Monitoring Data)

<table>
<thead>
<tr>
<th>Discharge No.</th>
<th>Permitted Discharge</th>
<th>Permit Date</th>
<th>Reported Date</th>
<th>Discharge of Violation</th>
</tr>
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</table>

000158
COMPLIANCE

(a) Is company complying with schedule of compliance? [NC]

(b) What is the current projection of the company regarding compliance with future dates in Compliance Schedule?

(c) Is company complying with any additional compliance requirements such as a special report submittal to the proper regulatory agency? [NC]

(d) Has company notified the proper regulatory agency of any non-compliance with permit conditions?

(e) Has company requested modification of any permit conditions other than permit sampling schedules?

(f) Are any modifications appropriate?

SELF-MONITORING PROGRAM

(a) Does quantity of reported self-monitoring data and signing official comply with requirements of permit?

(b) What is the apparent quality of plant records that are required under the conditions of the permit?

(c) If net values are applicable, is the surface water intake sampled and analyzed?

(d) Is there any additional monitoring being performed by the plant that has not been reported? If yes, what parameters and frequency is involved and what conclusions can be drawn from data?

(e) Do sampling locations appear to be adequate to obtain representative samples?

(f) Is contamination or other problem anticipated for any point-of-use by providing sufficient information?
(h) In your judgement, do sampling procedures, frequency and type of sample typify plant's daily discharge (i.e. are maximum production periods, batch discharges, etc. reflected in monitoring data)? 

(i) Does plant perform its own analysis? If not, what laboratory is analysis contracted to? If yes, what is the appearance of plant's laboratory?

(j) Do all sampling and analytical methods conform to the guidelines published pursuant to Section 304(g) of 1972 FWPCA?

(k) Has plant requested modification to permit sampling schedules?

(l) Are modifications appropriate?

(3) MISCELLANEOUS

(a) Did the permit application truly represent conditions at the plant site?

(b) Are any of the following toxic pollutants or compounds containing them, being discharged that would require modification of the permit: No ________ Yes ________ (Check those Applicable)

Aldrin DDE
Chlordane DDT
Endosulfan Endrin
Cadmium Mercury
Cyanide Polyaromatic Biphenyls
DDT (DOE) Tetrachlorethane

If yes, what modifications are necessary?

(c) Is sludge being generated at plant? No ________ 

If yes, is plant disposing of its disposal?

If yes, is plant disposing of its disposal?

If not, is it disposed of at plant site. If so, is any visual evidence or odor associated with any of pollutants into surface or ground waters?

If not, what steps are being taken to ensure compliance?
(e) Is there any discharge of unreported contaminated storm runoff?

Yes - Cemh reported by #000161.

(f) Is the treatment system maintained in good working order and operated efficiently?

(yes or no) - #000161.

(g) What alternate power supply provisions exist for waste treatment facilities? If none, what happens to the wastewater when there is a power failure?

(h) Have all bypasses of waste treatment facilities been eliminated?

If not, why? If not, is flow monitoring installed in bypass?

(i) Are there any obvious air emission, noise, radiation, pesticides, or solid wastes problems at the plant? What are they?

If yes, send copies of this report to the appropriate personnel.

(j) Does the plant require a Spill Prevention Control Countermeasure Plan?

NOTE: SPCC plan is required if the permitted stores more than:

1. 1,320 gallons of oil above ground;
2. 560 gallons of oil in a single container above ground;
3. 42,000 gallons of oil underground.

If so, is the plan approved by a licensed P.E.? 
**VIOLATIONS AND RECOMMENDATIONS**

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<th>Violations and/or Problems</th>
<th>Recommended Action</th>
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<tbody>
<tr>
<td>Illegal discharge of material waste emitted and the exclusion of waste handling facilities</td>
<td>Corrected immediately</td>
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</table>

_Inspection & Status Permit No._

**Signatures:**

- [Signature]
- [Signature]

**Date:**

000162
DISTRICT COURT

STATE OF NEW YORK
COUNTY OF SUFFOLK

The People of the State of New York

v.

James H. Rim

Complained of

of No. Suffolk County Department of Environmental Control

That on the dates set forth below the defendant(s) acted in the County of Suffolk, State of New York, and

Preferred Plating Corporation

32 Allen Blvd., Farmingdale, Town of Babylon

and John Young, acting on behalf of said defendant, at the same address

County of Suffolk, State of New York, the defendant(s)

willfully violating Section 2(a) of the Suffolk County

Sanitary Code.

WHEREFORE:

COUNT I

That on the fifteenth day of October, 1975, at the time and place above stated, the defendant(s) as owner, lessee, or tenant of any property, dwelling, building, place, or any other deleterious liquid or matter therefrom to the atmosphere or to the ground, or to the surface of the supply or to the atmosphere and further, said drain system composed of pits, which were cracked allowing a discharge of the deleterious liquid contained therein so as to endanger the source or supply of drinking water.

(SEE RIDER)

This complaint is based on (personal knowledge) or (information & belief) the source being the attached sworn deposition(s) of Louis Copertino dated 6/25/76 or the attached laboratory report of the Suffolk County Police Department.

Warrant Requested

2

000163
Count #2

That: at 2:30 p.m. on the eighteenth day of June, 1976, at the place above stated, the defendants as owner, lessee or tenant of any property, dwelling, building or place, constructed or maintained a private or individual sewage disposal system, pipe, or drain so as to expose or discharge the sewage contents or any other deleterious liquid or matter therefrom onto the surface of the ground, or exposed to the atmosphere so as to endanger any source or supply of drinking water, to wit, at the time and place above Preferred Plating Corp. tenant of the above premises and John Young acting on behalf of said corporate tenant, maintained said private drain so as to expose the contents therefrom to the atmosphere and further, said drain system composed of pits, which were cracked allowing a discharge of the deleterious liquid contained therein so as to endanger the source or supply of drinking water.
LOUIS COPERTINO, being duly sworn, deposes and says:

THAT I am employed by the Suffolk County Department of Environmental Control as an Environmentalist II.

THAT on the fifteenth day of October, 1975 at 9:30 a.m. during the course of my duties I visited the Preferred Plating Corporation at 32 Allen Boulevard, Farmingdale, N.Y.

THAT at the time and place above stated Preferred Plating Corp. as tenant of the above premises and John Young acting on behalf of said corporate tenant, maintained a private drain so as to expose the contents therefrom to the atmosphere and further, said drain system composed of pits which were cracked, allowing a discharge of the deleterious liquid contained therein so as to endanger the source or supply of drinking water.

Sworn to before me, this 15th day of June, 1976.

[Signature]
TO: FOR THE RECORD

FROM: Roy Gilbert

SUBJECT: Preferred Plating Corp.
32 Allen Blvd., Farmingdale

DATE: June 22, 1976

On Friday, June 18, 1976 James Pim and I visited Preferred Plating Corp. for the purpose of inspection and sampling.

On Feb. 18, 1976 a compliance conference was scheduled with Mr. Young of Preferred Plating. At that time he was told to take the necessary steps to leak-proof and seal the large pits at the rear of his plant, which at that time contained a few inches of contaminated water. Since this time, although all necessary approvals had been given, no action had been taken by Mr. Young and in fact, conditions have worsened.

During our inspection of June 13th, we noticed several feet of water in each of the pits. The water appeared greenish in nature. In addition, there was a massive oil spill in the back of the plant resulting from an accident during a recent oil delivery. The spill is conservatively estimated at a few hundred gallons. Several hundred square feet of earth were covered by standing oil puddles or were totally oil soaked. In addition, the southeast pit contained about 6" of oil on top of the water.

Since our last contact with Mr. Young prior to June 13, 1976, we learned that he sold the building and is renting now from the new owner. The new owner hauled a tank from the property containing industrial waste, which was supposed to be disposed of by an approved scavenger. The final disposal point of this waste is presently unknown.

All discharges from the plant empty into a pit, which leads to a trough. These holding facilities appear to be leaking occasionally into the large pits, which are cracked badly and allow the leaching of the industrial discharges into the groundwater.

According to Mr. Donnelly's engineering report, the minimum water production would be 700-800 gal/month. It would be very difficult to hide this volume of water over a year or more of collection, yet Mr. Young has done so. This leads to the conclusion that there must be some discharge via leaks in all holding facilities.
The conditions in the interior of the plant are abhorrent. Most of the piping is not exposed enough to be examined as to its conditions. The floor under the duck boards is perpetually wet and not exposed for inspection of its condition. It is likely there may be many leaking pipes in the plant and leaks through cracks in the floor.

Due to violation of the compliance schedule in the SPDES permit, disregard of recommendations at the compliance conference, improper control over the haulage of industrial wastes and the continuous permitting of groundwater discharge of industrial waste from the leaking structures at the rear of the property, I recommend further enforcement action resulting in substantial punitive fines and criminal action under the Suffolk County Sanitary Code, if possible.

Samples were taken at the time of our inspection.

Find attached a diagram of the holding pit situation at Preferred Plating.

Roy Gilbert
RG/rt
Att.

cc: A. Grensky, Reg. Att'y.,
NYSDEC - Region I
<table>
<thead>
<tr>
<th><strong>INDUSTRIES USING SCAVENGER DISPOSAL</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Records of pickups since last inspection (volumes, dates, type of material, name of scavenger)</td>
</tr>
<tr>
<td>(2) Amount of waste on hand at present (volume, type of material, type of containers)</td>
</tr>
<tr>
<td>(3) Equipment in satisfactory repair</td>
</tr>
<tr>
<td>(4) Proper storage conditions</td>
</tr>
<tr>
<td>(5) Backflow prevention</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>INDUSTRIES WITH ON SITE TREATMENT</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Permit to operate valid &amp; posted</td>
</tr>
<tr>
<td>(2) Proper sampling w/records of results up-to-date and readily accessible</td>
</tr>
<tr>
<td>(3) Light, Ventilation</td>
</tr>
<tr>
<td>(4) Treatment chem. on hand</td>
</tr>
<tr>
<td>(5) Qualified operator</td>
</tr>
<tr>
<td>(6) Backflow prevention</td>
</tr>
<tr>
<td>(7) Safety equipment</td>
</tr>
<tr>
<td>(8) Sludge holding and disposal</td>
</tr>
<tr>
<td>(9) Effluent disposal &amp; access for sampling</td>
</tr>
<tr>
<td>(10) Proposed changes</td>
</tr>
</tbody>
</table>

**Comments:**
PIPE DISCHARGING PLATING

EFFECT ON CONCRETE SUBS

* CONCRETE SUBS CONTINUES INTO CONCRETE THROUGH WHICH RUNS ALONG SIDE OF CONCRETE PITS.

SAME PICTURE AS ABOVE

DIFFERENT ANGLE
SIDE TROUGH CONTAINING PLATING EFFLUENT. NOTE OIL SCARRED GROUND ON SIDE OF TROUGH.

SAME PICTURE AS ABOVE DIFFERENT ANGLE.

*Also shown in both photographs is open concrete pits.
EASTERN VIEW

PICTURE OF SOUTHERN

MOST PIT SHOWING STRUCTURAL CRACKS IN THE WALLS.

* FARTHEST WALL IS SIDE OF TROUGH

WESTERN VIEW OF SOUTHERN MOST PIT

NOTE GREEN COLORED EFFLUENT IN ONE SECTION WHICH IS APPROX. 2' DEEP
PICTURE OF MIDDLE PIT

Showing structural crack in side wall of trough which contains plating effluent

PICTURE OF NORTHERN MOST PIT AGAIN SHOWING STRUCTURAL CRACKS IN THE WALL.
PICTURE OF SOUTHERN HUT PIT SHOWING GREEN COLORED EFFLUENT IN ONE COMPARTMENT AND OIL IN THE OTHER COMPARTMENT.
In figure picture, note oil as scoredrock + standing oil on round blocks. South side of pit area - rectangular mark on left, filled with oil.
The 2 south pits shown above - note water level approximately 4' from top - note left (east) pit containing oil - at least several inches deep.
Preferred Manufacturing Company
Farmingdale, New York

Industrial Waste Treatment Plant

The industrial waste treatment plant designed for Preferred Manufacturing Company at Farmingdale, New York will be set up to remove all undesirable wastes from the water before it is discharged to dry wells.

The waste treatment plant consists of three parts:

1. Chronic acid recovery - by ion exchange - 20 gpm (Max.)
2. Cynicide destruction - by alkaline chlorination - 15 gpm
3. Acid and alkali neutralization - by lime - 5 gpm

The ion exchange equipment will operate on a continuous basis; the alkaline chlorination and the alkali-acid neutralization will operate on a batch basis. It is expected that the ion exchange tank system offers a holding capacity for a minimum of 6 hours, thus permitting ample time for proper treatment.

For safety, the incoming well water lines will end with a positive air break to prevent any cross connection. Where such an air break is impossible a check valve, relief valve and vacuum breaker will be installed. The private well water system provides water for the manufacturing and plating operations only.

The well pumps each have a maximum capacity of 125 G.P.M. A recent field test indicated the pumps on the line operated approximately 72% of the time. The pump is rated at a 60 H.P.

The ion exchange unit, consisting of the cation exchange unit and the union exchange unit, will operate in series to treat the Atlantic saline well water. The cation exchange unit will pass the 10 cubic feet of water to the reverse type of cation exchange unit which will remove the 10 cubic feet of acid. This will effectively leave the salinity off all other salts from the chronic acid rinse. The union exchange unit will contain 10 cubic feet of a highly basic resin which will remove both strong and weak acids, leaving only the acidic group of chronic acid from solution. The union exchange has a capacity for holding 1.5 lbs. of NaOH per cubic foot from the water. The union resin is regenerated with a dilute sodium hydroxide. The effluent, mineral free, of the ion exchange system will be returned to the plating operation in a closed system.

000177
When the anion exchange unit is regenerated, sodium dichromate will result in the effluent of the unit. The sodium dichromate is retained for reuse in the plating room. Thus all chromic acid in the plating room will be retained for reuse with none discharged to waste.

The sulfuric acid and ion exchange rinse waters discharged to waste from the ion-exchange equipment will be blended with the acid and alkalis from rinsing operations in the plating room for treatment in the lime neutralization tanks.

The lime neutralization batch tanks will each contain a minimum volume of 5,000 gallons and will be filled alternately. Lime will be added from a lime slurry tank as required for neutralization. Leads and Northrup recording, indicating and controlling pH instruments will assure complete neutralization prior to discharge.

Cyanide solutions will be directed to either of two holding tanks. Each tank holds a minimum of 10,000 gallons which is 25% in excess of anticipated maximum total flow of cyanide solutions in an eight-hour day. When a tank is full, the flow from the plating room will be diverted to the alternate tank. The contents of the full tank will then be chlorinated chlorine treated to destroy the cyanide completely to carbon dioxide and nitrogen gases and alkaline precipitates. When tests show all cyanide destroyed and a chlorine residual is maintained, the contents will be pumped to dry wells. Precipitates retained in the settling basins will be transferred to the Babylon Town Dump. Air is available for supplemental aeration if found to be necessary.

Every tank, operated each 6 months as the precipitation volume warrants the settling basins will be manually cleaned with buckets and shovels.

There will be no drain connection in the plating room area which will lead to any point except the floor drainage tanks. Thus, spillage and other solutions which flow into the drainage tanks will be transferred to the complete treatment system by a portable type pump. Consequently, it will be impossible for any plating room wastes to bypass the treatment system without proper control.

A suitable log of daily operations will be kept on forms furnished by the Suffolk County Health Department. In addition samples of each tank at Babylon will be retained for 30 days, on the premises, ready to be sent in the time of obtaining a new, sampling point, and date of sampling.
Only at times when the cation exchange unit is regenerated.

It is estimated that this will be at a maximum frequency of once per
work, and will be in one 5,000 gallon batch from the lime neutraliza-
tion system. The remainder of the time it is estimated that the Cal-
cium sulfate concentration will be 75 ppm.

The past purchasing history indicates the following listed
average consumption of chemicals in the manufacturing and plating
operations:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromic Acid</td>
<td>630 Lbs./Mo.</td>
</tr>
<tr>
<td>Sodium Dichromate-</td>
<td>166 Lbs./Mo.</td>
</tr>
<tr>
<td>Sodium Cyanide</td>
<td>200 Lbs./Mo.</td>
</tr>
<tr>
<td>Potassium Cyanide-</td>
<td>17 Lbs./Mo.</td>
</tr>
<tr>
<td>Sulfuric Acid</td>
<td>133 Lbs./Mo.</td>
</tr>
<tr>
<td>60° Be' Sulfuric Acid</td>
<td>29 gals./Mo.</td>
</tr>
<tr>
<td>Caustic Soda</td>
<td>23 Lbs./Mo.</td>
</tr>
<tr>
<td>42° Be' Nitric Acid</td>
<td>25 gals./Mo.</td>
</tr>
<tr>
<td>Proprietary Alkaline Cleaner-</td>
<td>500 Lbs./Mo.</td>
</tr>
<tr>
<td>Sodium</td>
<td>50 Lbs./Mo.</td>
</tr>
<tr>
<td>Copper</td>
<td>17 Lbs./Mo.</td>
</tr>
<tr>
<td>Silver</td>
<td>153 Troy oz./Mo.</td>
</tr>
<tr>
<td>Zinc</td>
<td>17 Lbs./Mo.</td>
</tr>
<tr>
<td>Tin</td>
<td>50 Lbs./Mo.</td>
</tr>
<tr>
<td>Nickel</td>
<td>24 Lbs./Mo.</td>
</tr>
<tr>
<td>Nickel Sulfate</td>
<td>40 Lbs./Mo.</td>
</tr>
</tbody>
</table>

Attached and made a part of this report are drawings and
Manufacturers' Catalogs:

Catalogs: - Fisher & Porter - Colorization equipment
- Farr Company - Ion Exchange equipment

Drawings: - Sketch No. 101 - Flow diagram - waste
disposal system
- Sketch No. 102 - Source of waste solutions
- Sketch No. 103 - Equipment and piping for
  waste treatment
- Sketch No. 104 - Ion Exchange equipment piping
HAZARDOUS WASTE DISPOSAL SITES REPORT
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Code: ____________________________
Site Code: 152-030
Name of Site: Preferred Plating Corp. Region: I
County: Suffolk Town/City Farmingdale
Street Address: 32 Allen Blvd.

Status of Site Narrative:
Site is currently inactive. In 1976 the Preferred Plating Corp. went out of business. The site occupies approximately 0.50 acres, and now consists of an auto repair facility. Area is light industry park.

Type of Site: Open Dump □ Treatment Pond(s) □ Number of Ponds □
Landfill □ Lagoon(s) □ Number of Lagoons □
Structure □

Estimated Size: 0.05 Acres

Hazardous Wastes Disposed? Confirmed □ Suspected □

*Type and Quantity of Hazardous Wastes:

<table>
<thead>
<tr>
<th>TYPE</th>
<th>QUANTITY (Pounds, drums, tons, galions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvents, Acids, Heavy Metals</td>
<td>Possibly over 600,000 gallons.</td>
</tr>
</tbody>
</table>

* Use additional sheets if more space is needed.
Name of Current Owner of Site: Unknown
Address of Current Owner of Site: Unknown

Time Period Site Was Used for Hazardous Waste Disposal:

, 1951 To , 1976

Is site Active ❑ Inactive ❑
(Site is inactive if hazardous wastes were disposed of at this site and site was closed prior to August 25, 1979)

Types of Samples: Air ❑ Groundwater ❑ None ❑ Surface Water ❑ Soil ❑

Remedial Action: Proposed ❑ Under Design ❑ In Progress ❑ Completed ❑

Nature of Action:

Status of Legal Action: Case in 1976 State ❑ Federal ❑

Permits Issued: Federal ❑ Local Government ❑ SPDES ❑ Solid Waste ❑ Mined Land ❑ Wetlands ❑ Other ❑

Assessment of Environmental Problems:

The site may have disposed of large granites of waste materials via cesspools and leaking impoundments.

Assessment of Health Problems:

Ground water supplies may be threatened

Persons Completing this Form:

Wayne R. Sanders
WCC

New York State Department of Environmental Conservation

New York State Department of Health

Date

6/3/81

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