PROPOSED REMEDIAL ACTION PLAN

NASSAU TOOL WORKS
Town of Babylon, Nassau County, New York
Site No. 1-52-142
July 1998

SECTION 1: PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) is proposing no further action for the Nassau Tool Works site beyond the Interim Remedial Measure (IRM) completed in 1997 (see Section 4.2 of this document for details). The findings of the investigation of this site indicate that the site, after the IRM, does not pose a threat to human health or the environment. Therefore, the Department proposes to delist the site from the New York State Registry of Inactive Hazardous Waste Disposal Sites.

This Proposed Remedial Action Plan (PRAP) identifies the preferred remedy and discusses the rationale for this preference. The NYSDEC will select a final remedy for the site only after careful consideration of all comments submitted during the public comment period.

The NYSDEC has issued this PRAP as a component of the citizen participation plan developed pursuant to the New York State Environmental Conservation Law (ECL) and 6 NYCRR Part 375. This document summarizes the information that can be found in greater detail in the Remedial Investigation/ Interim Remedial Measures (RI/IRM) Report available at the document repositories.

The NYSDEC may modify the preferred remedial action or select another action based on new information or public comments. Therefore, the public is encouraged to review and comment on the remedy proposed here.

1.1: Citizen Participation Activities

To better understand the site, and the remedial action evaluated, the public is encouraged to review the project documents which are available at the following repositories:

West Babylon Public Library
211 Route 109
West Babylon, NY
(516)669-5445
Hours: Mon-Thu 10-9, Fri, Sat 10-5

NYSDEC Region 1
Bldg. 40, SUNY
Stony Brook, NY 11794
Hours: By Appointment - contact Joshua Epstein at (516) 444-0249

NYSDEC
50 Wolf Road Room 242
Albany, NY 12233-7010
Hours: by appointment - contact Kathleen McCue, Project Manager, at (518) 457-7924

Written comments on the PRAP and delisting can be submitted to Ms. McCue at the above address.

DATES TO REMEMBER:

July 15 - August 17: Public comment period on RI/ IRM Report, PRAP, and removal of the site from the NYS Registry of Inactive Hazardous Waste Sites (Delisting).

July 30, 1998 at 7:30 pm: Public meeting at Gleason Hall, SUNY Ag & Tech College, Route 110, Farmingdale

---

The NYSDEC solicits input from the community for all of its proposals for remedial action. A public comment period has been set for July 15, 1998 through August 17, 1998, during which the public is encouraged to participate in the remedy selection process for this site. A public meeting is set for July 30, 1998 at 7:30 p.m. at Gleason Hall at State University College at Farmingdale. At that meeting the NYSDEC will present the proposed remedy for the site.

Comments and questions will be summarized and responses provided in the Responsiveness Summary section of the Record of Decision (ROD). The ROD is the document in which the NYSDEC's final selected remedy will be presented. Written comments should be sent to Ms. Kathleen McCue at the above-mentioned address. To obtain further information, contact Ms. McCue at (518) 457-7924.

Please note that comments are also welcome during this period concerning delisting, i.e., removal of the site from the New York State Registry of Inactive Hazardous Waste Sites. Written comments concerning delisting should be addressed to Ms. McCue.

These Citizen Participation (CP) activities are part of the NYSDEC's on-going efforts to ensure full two-way communication with the public on the identification, investigation and remediation of inactive hazardous waste disposal sites. Previous activities for this site included the development of a site-specific CP Plan, creation and maintenance of information repositories and the public contact list, and a public informational meeting. The first public meeting for the Nassau Tool Works site was held in September 1997 to discuss the Remedial Investigation Work Plan.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Nassau Tool Works site is located in the Town of Babylon, Suffolk County. It is listed on the NYS Registry of Inactive Hazardous Waste Sites (the "Registry") as Site No. 1-52-142. The site is located in the 300-acre Pinelawn Industrial Area in West Babylon, a series of streets zoned for light industry and the Town of Babylon Landfill. Figure 1 shows the location of the site in the Town of Babylon. A large one-story building, housing Nassau Tool Works, Inc., manufacturing activities, and a paved parking lot and receiving area, occupy most of the four-acre site at 34 Lamar Street, between Kean and Lamar Streets (see Figure 2 for a plan of the site). To the north of the building lies a small undeveloped field. Other manufacturing and service industries, including additional Registry sites, surround Nassau Tool Works. Pride Solvents, north of the site on Lamar Street, is a Class 2 Registry site; Diamond Roller Corporation and New Ross Electical Contractors, immediately north of the site, while not on the Registry, are under investigation by the Suffolk County Department of Health Services (SCDHS) for contaminant releases.

There are few residences in the Pinelawn Industrial Area. North and south of the

industrial area are large cemeteries. No private drinking water wells are known to exist in the industrial area. Approximately one-half mile to the south, however, are residential neighborhoods. The majority, but not all, of these residences receive public water. In October 1997, responding to concerns raised at the first public meeting for Nassau Tool Works, the SCDHS sampled a private well on Matthews Avenue. No chlorinated solvents (site-specific contaminants of concern, as further explained in this PRAP) were detected in this private well.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

Nassau Tool Works, Inc., has operated a manufacturing facility at the site since 1971, performing various precision drilling and grinding operations. Lubricating and cutting oils have been used in these processes. In addition, perchloroethene and 1,1,1-trichloroethane, materials which would be classified as hazardous waste if disposed of or released on site, have been used for degreasing and cleaning. Storage tanks were installed for these materials and a containment area constructed in 1987.

3.2: Remedial History

The Pinelawn Industrial Area has been of interest to NYSDEC and other regulatory agencies since groundwater contaminant plumes were discovered emanating from the area during the 1980s. Through records searches and area-wide investigations, NYSDEC and the SCDHS have identified several area industries as sources. The 1994 report "Preliminary Site Assessment: Pinelawn Industrial Area Site" by Engineering-Science, Inc., for NYSDEC, identified Nassau Tool Works as a potential contributing source to a plume of chlorinated solvents, such as perchloroethene, trichloroethene, and 1,1,1-trichloroethane, in the vicinity of southern Lamar Street. These chlorinated solvents are listed hazardous wastes under 6NYCRR Part 371.

Records indicated Nassau Tool Works' use of some of these solvents, with possible disposal or release through on-site drainage and sanitary facilities. Groundwater flow and the pattern of results from NYSDEC's preliminary groundwater sampling indicated further investigation and/or remedial action was warranted at the site. The recommendation of the 1994 report led to the site's "Class 2" designation on the Registry, indicating the State's determination that it posed a "significant threat to human health and/or the environment - action required."

SECTION 4: CURRENT STATUS

In response to a determination that the presence of hazardous waste at the Site presented a significant threat to human health and/or the environment, the potentially responsible party (PRP), Nassau Tool Works, has recently completed a Remedial Investigation (RI) and Interim Remedial Measure (IRM).

4.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site.

The RI was conducted in one phase between September 1997 and January 1998. A "Remedial Investigation/ Interim Remedial Measures Report" by P.W. Grosser Consulting Engineer, P.C., for Nassau Tool Works, Inc., has been prepared describing the field activities and findings of the RI in detail.

The RI included the following activities:

- *Soil borings to investigate physical properties of soil and hydrogeologic conditions, and installation of monitoring wells for analysis of groundwater. Two rounds of monitoring well samples were taken in November and December 1997.*

- *Excavation of test pits to locate and access underground drainage/leachfields.*

- *Sampling of sediment in dry wells and sanitary cesspools around the site.*

To determine which media (soil, groundwater, etc.) contain contamination at levels of concern, the RI analytical data were compared to environmental Standards, Criteria, and Guidance (SCGs). Groundwater, drinking water and surface water SCGs identified for the Nassau Tool Works site were based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part V of NYS Sanitary Code. NYSDEC TAGM 4046 soil cleanup guidelines (based on the protection of groundwater, background conditions, and risk-based remediation criteria) were used as SCGs for soil and dry well/ cesspool sediments.

Based upon the results of the remedial investigation in comparison to the SCGs and potential public health and environmental exposure routes, certain areas and media of the site required remediation. An IRM, as described in Section 4.2, was completed which the State believes has adequately addressed this contamination. Table 1 summarizes soil and drainage sediment contamination before and after the IRM. More complete information can be found in the RI/ IRM Report.

Chemical concentrations are reported in parts per billion (ppb) or parts per million (ppm). For comparison purposes, SCGs are given for each medium.

4.1.1 Nature of Contamination:

As described in the RI Report, many soil, drainage sediment, and groundwater samples were collected at the Site to characterize the nature and extent of contamination.

The majority of site-related contamination consisted of metals, particularly lead, iron, chromium, and zinc, found in soils and sediments at various locations (described further below). Volatile organic compounds (VOCs), both chlorinated and petroleum-derived, were occasionally detected in impacted soils and sediments.

As expected from previous investigation results, chlorinated VOCs were noted in groundwater, primarily 1,1,1-trichloroethane, 1,1-dichloroethane, and chloroethane. The pattern of these results is described in the following paragraphs and summarized on Table 2. The pattern of groundwater results does not point to the site as the source of VOCs in groundwater.

4.1.2 Extent of Contamination

Tables 1 and 2 summarize the extent of contamination for the contaminants of concern in soil/ sediments and groundwater, and compare the data with the proposed remedial action levels (SCGs) for the site. The following are the media which were investigated and a summary of the findings of the investigation. Sample locations are shown on Figure 2.

Soil

Soils surrounding an underground storage tank south of the Nassau Tool Works building (see Figure 2) were found to be contaminated in excess of SCGs, in particular metals such as

chromium, iron and nickel. The tank itself was empty of petroleum or other liquid at the time of its removal, and no VOCs were detected in surrounding soils.

Sediments

The term "sediment" is used in this PRAP to refer to material sampled and/or removed from various dry wells and sanitary cesspools on Nassau Tool Works' property. The same SCGs used to guide remediation of soils were used for comparison to sediment data. VOCs were detected in a few locations, but most notably in sanitary cesspool No. 1 (Sample SS1). In this cesspool, chloroethane was detected at 12 ppm, toluene at 19 ppm and 1,1-dichloroethane at 0.96 ppm.

In several cesspools, the semi-volatile organic compound 1,4-dichlorobenzene was detected, in concentrations up to 200 ppm. This chemical has been used widely as a septic tank additive. At locations where this contaminant was detected, sediments above recommended cleanup objective of 8.5 ppm were removed during the IRM.

Groundwater

The RI focused on the Upper Glacial Aquifer, a regional sand-and-gravel formation extending to a depth of about ninety feet below ground surface in the study area. The six monitoring wells ring the site and are screened at the water table (approximately fifteen feet below ground surface). Water-level measurements indicate a groundwater flow direction to the south-southeast, consistent with other area studies.

Groundwater results are summarized on Table 2. Highest concentrations of the previously named chlorinated VOCs (totaling 450 ppb in the first round and 928 ppb in the second round) were noted in MW-1, an upgradient well. Lesser but notable concentrations were found in MW-4 (totaling 28 ppb in the first round and 76 ppb in the second). Though MW-4 is in close proximity to sanitary leaching pool No. 1, in which high concentrations of chloroethane and 1,1-dichloroethane were found, confirmatory sampling after sediment removal in the leaching pool showed clean soils beneath and does not show this pool to be a local source of groundwater contamination.

The overall pattern of groundwater VOC contamination at the site, furthermore, is indicative of an upgradient source. This conclusion is corroborated by SCDHS' recent findings on Diamond Roller Corporation' property of high 1,1,1-trichloroethane concentrations in drainage structures and in shallow groundwater, including at Diamond Roller's southern boundary. SCDHS' investigation of New Ross Electrical Contractors has found significant concentrations of trichloroethene, perchloroethene, and *cis*-1,2-dichloroethene in drainage structure sediments on that property. The 1994 NYSDEC investigation and RI data show these three contaminants primarily on the eastern portion of the Nassau Tool Works property, downgradient of this potential source. Nassau Tool Works is not, therefore, considered a contributing source to the chlorinated solvent plume in the southern Lamar Street area.

Metals results in groundwater in the RI do not indicate the individual contaminated soil areas to have caused groundwater contamination. Iron and manganese were found in high concentrations, well in excess of SCGs, both upgradient and downgradient of the site. Groundwater is naturally abundant in these metals on Long Island.

4.2 Interim Remedial Measures:

Interim Remedial Measures (IRMs) are conducted at sites when a source of contamination or exposure pathway can be effectively addressed before completion of the RI.

During the course of the RI, several remedial actions, constituting an IRM, were taken at Nassau Tool Works to address conditions found on site:

- Sediment found to be contaminated in excess of SCGs was vacuumed out of several dry wells and sanitary cesspools and disposed of in a permitted off-site facility. Liquids removed from the cesspools were sampled and disposed of at a public sewage treatment plant or other permitted facility. Where necessary, for instance at sanitary cesspool No. 1, overflow pools were also sampled and impacted sediments removed. A total of 108.5 tons of sediment was removed from all locations and disposed of at permitted off-site facilities.

- An underground storage tank was removed and confirmatory soil sampling conducted. The tank, which was empty except for 30-50 gallons of sludge, was unearthed, cut up and transported off site to be recycled. The sludge was determined to be non-hazardous and was disposed of at a permitted off-site facility.

  Soils in the excavation that had surrounded the tank were sampled. These confirmatory samples, as summarized on Table 1, show slight exceedances of SCGs for several metals. The possibility of this remaining contamination affecting groundwater quality or causing an exposure pathway (Section 4.3) is unlikely. Nassau Tool Works intends to re-pave this area, which will further reduce the potential for impact. No soil removal was determined to be necessary, therefore, and the excavation was backfilled with clean soil.

4.3 Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the health risks can be found in Section 6.0, "Exposure Assessment," of the RI Report.

An exposure pathway is how an individual may come into contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

The primary exposure pathway at the Nassau Tool Works site consisted of dermal contact, or as a more remote possibility, ingestion of contaminated soils, and sediments in drainage structures or leaching pools. Exposure to contaminants in these media would only have occurred upon opening or disturbing these structures, for instance during the IRM soil removals. The IRMs have effectively eliminated this pathway of exposure through removal of the contaminated soils.

4.4 Summary of Environmental Exposure Pathways:

There are no significant fish or wildlife resources in the vicinity of Nassau Tool Works, the site being located in a large industrial-use area. No surface water bodies are found within a mile of the site. Area-wide groundwater resources are impacted by contaminant plumes emanating from various sources in the industrial area, but not Nassau Tool Works, as previously discussed. NYSDEC and SCDHS are investigating and addressing other known and suspected plume sources.

SECTION 5: ENFORCEMENT STATUS

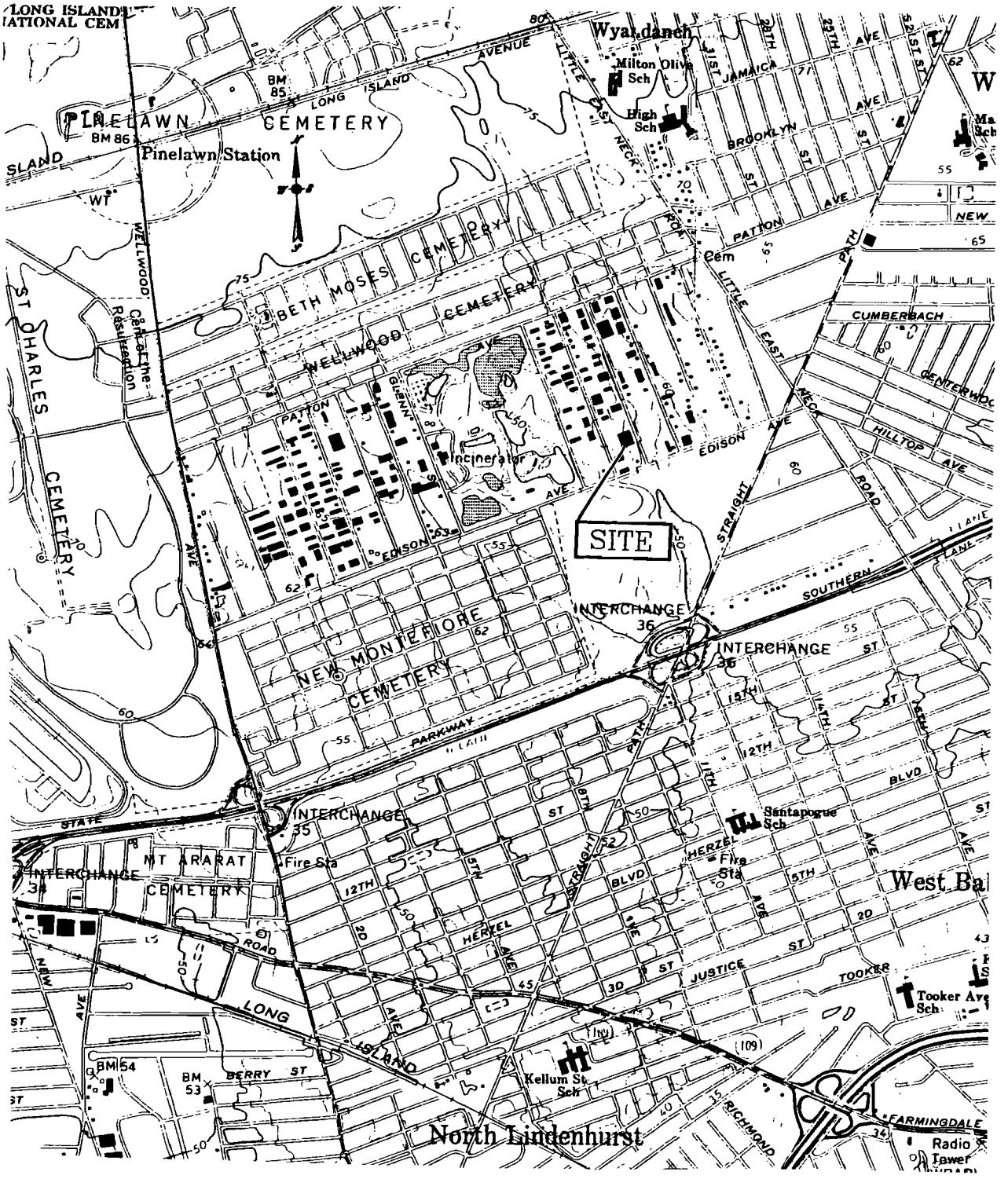
Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The NYSDEC and Edison Realty (owner of the site) entered into a Consent Order effective October 28, 1996. The Order obligates the responsible party to perform an RI/FS.

SECTION 6: SUMMARY OF THE REMEDIAL GOALS AND SELECTED ACTION

The selected remedy for any site should, at a minimum, eliminate or mitigate all significant threats to the public health or the environment presented by the hazardous waste present at the site. The State believes that the remediation already completed at the site, which is described in section 4.2, would accomplish this objective.

Based upon the results of the RI and the IRM that has been performed at the site, the NYSDEC is proposing no further action as the preferred remedial alternative for the site. The Department would also delist the site from the New York State Registry of Inactive Hazardous Waste Disposal Sites.



SCALE: 1:24000

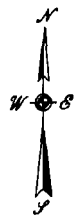
P.W. GROSSER CONSULTING
ENGINEER & HYDROGEOLOGIST, P.C.
630 Johnson Avenue, Suite 7
Bohemia, N.Y. 11716-2618
Ph: 516 589-6353 Fx: 516 589-6705
E-mail: pwgge-hg@worldnet.att.net

SITE PLAN

NASSAU TOOL WORKS

34 LAMAR ST.
WEST BABYLON N.Y.

Project No.	NTW9701
Prepared By	PWG
Approved By	LS
Drawn By	DLM
Figure No.	1
Date	6/16/98



LAND N/F DIAMOND ROLLER CORP.
ZONED: INDUSTRIAL

LAND OF NEW ROSS ELECTRIC
ZONED: INDUSTRIAL

MW-6
ELEV: 59.80
41.79

LAND N/F EDISON REALTY
VACANT LAND
ZONED: INDUSTRIAL

MW-1
ELEV: 58.25
41.76

500 GALLON WASTE OIL ABOVE GROUND STORAGE TANK

4000 GAL. UST FUEL OIL

INACTIVE COOLING WELL No. 2

INACTIVE DIFFUSION WELL No.2

MW-2
ELEV:56.55
41.53

DW-3

DW-1

OF1

CESSPOOL (OF3)

PRIMARY SS3

SS-3

CESSPOOL (OF1)

PARTS WASHER

CONTAINMENT AREA

REMOVED 5000 GAL. UST

SEPTIC TANK

INACTIVE COOLING WELL No.1

KEAN STREET

LAMAR STREET

SS-2

NASSAU TOOL

1 STORY BRICK BUILDING
34 LAMAR STREET

CESSPOOL (OF3)

CESSPOOL (OF2)

SANITARY VENT

CESSPOOL (OF1)

SEPTIC TANK

SS-4

MW-3
ELEV: 56.51
41.26

ROOF DRAIN

DW-5

DW-4

DW-6

REMOVED 2000 GAL. UST

INACTIVE DIFFUSION WELL No.1

VENT LINE

ROOF DRAIN

CESSPOOL (OF1)

PRIMARY

CESSPOOL (OF2)

SS-1

DW-7

DW-8

MW-5
ELEV: 56.12
41.13

REMOVED 550 UST

METAL RECYCLING AREA

MW-4
ELEV: 55.96
40.99

EDISON AVENUE
(APPROX. 200' SOUTH OF SITE)

KEY

SS-1	ON SITE SANITARY SYSTEMS
DW-8	DRYWELLS
MW-4	MONITORING WELL
ELEV: 58.25	MEASURING POINT ELEVATION
41.76	GROUNDWATER ELEVATION
	DRYWELL WITH COVER
-----	NOT FIELD VERIFIED
——	FIELD VERIFIED

ABBREV.

TR.	TRANSFORMER
(OF1)	OVERFLOW 1

NOTE:
THIS DRAWING WAS REFERENCED FROM VINCENT S. SITIS ARCHITECT, P.C. 6/29/81 - 'PLOT PLAN.'

0 30 60
SCALE IN FEET

J:\SHARED\PWG\NTW\9701\REPORTS\RIFS\FIG-2

P.W. GROSSER CONSULTING
ENGINEER & HYDROGEOLOGISTS, P.C.
630 Johnson Avenue Suite 7
Bohemia NY 11716-2618
Ph: 516 589-8705 Fx: 516 589-8705
E-mail: pwgo-kg@worldnet.att.net

SITE PLAN
NASSAU TOOL WORKS
34 LAMAR ST.
WEST BABYLON N.Y.

Project:	NTW9701
Designed By:	DLM
Date:	6/17/98
Approved By:	LS

Figure No: 2

Table 1.
Pre- and Post-IRM Results: Soils and Drainage Sediments

MEDIA	CLASS	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppm) PRE-IRM	LOCATIONS EXCEEDING SCGs	CONCENTRATION RANGE POST-IRM (ppm)[1]	SCGs (ppm)
Drainage Structure and Sanitary Cesspool Sediments	Volatile Organic Compounds (VOCs)	Chloroethane	ND - 12E[2]	1of 18	ND	1.9
		Acetone	ND - 1.8	1 of 18	ND - 0.012J[3]	0.2
		1,1-Dichloroethane	ND - 0.96	2 of 18	ND - 0.002J	0.2
		Toluene	ND - 19	1 of 18	ND	1.5
	Semi-VOCs	1,4-Dichlorobenzene	ND - 220	2 of 18	ND	8.5
	Metals[4]	Cadmium	ND - 101	3 of 20	ND - 0.64	10*
		Chromium	4.6 - 199	6 of 20	1.8 - 4	50*
		Copper	9.7 - 1090	14 of 20	1.4J - 33.6	25
		Mercury	0.04 - 5.2	11 of 20	ND	0.1
		Nickel	1.8 - 454	11 of 20	0.62J - 5.1	13
		Lead	2.4 - 72.6	16 of 20	0.79 - 2	4
		Iron	955 - 11,800	15 of 20	534 - 3030	2000
		Zinc	9 - 743	15 of 20	2.0J - 23.2	20
Soils in Excavation after Underground Storage Tank Removal[5]	Metals	Cadmium	No pre- IRM samples were taken at the UST location.	0 of 3	ND - 1.6	10*
		Chromium		0 of 3	2.2 - 27.5	50*
		Nickel		1 of 3	1.6 - 27.4	13
		Iron		3 of 3	2680-5750	2000
		Zinc		2 of 3	7.2 - 93.2	20

Table 1
Pre- and Post-IRM Results
Soil and Drainage Sediments
(CONTINUED)

Notes:

1. Because VOCs were rarely detected and found at low concentrations in the dry wells, the post-IRM samples for the dry wells were only analyzed for metals and cyanide. Sanitary cesspool post-IRM samples were analyzed for VOCs, metals and cyanide.
2. The "E" after a value denotes the result is estimated because the high value of this result exceeds the measurement range of the analysis method.
3. The "J" after a value denotes the result is estimated because it is less than the quantitation limit for the analysis method.
4. The NYSDEC TAGM"Determination of Soil Cleanup Objectives and Cleanup Levels" (HWR-94-4046) provides several criteria for soil comparison, including site background values and Eastern United States ranges for individual metals, as well as risk-based values or groundwater protection values. The cleanup levels cited on this table represent the lowest values used in the RI/ IRM Report for comparison to data *except* for cadmium and chromium (see * note below).
5. The tank excavation was backfilled with clean soil. Nassau Tool Works, Inc., intends to pave this area, reducing the potential for contact with or groundwater impact from these soils.

* Proposed NYSDEC soil cleanup objectives (1998); former values were cadmium - 1 ppm and chromium - 10 ppm.

Table 2
Nature and Extent of Contamination in Groundwater

MEDIA	CLASS	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppb)	LOCATIONS EXCEEDING SCGs	SCG (ppb)
Upgradient Groundwater (11/97 and 12/97 rounds: Wells MW-1 and MW-6)	Volatile Organic Compounds (VOCs)	Chloroethane	ND -130	1 of 2	5
		1,1,1-Trichloroethane	ND - 320E*	1 of 2	5
		1,1-Dichloroethane	ND - 460E	1 of 2	5
	Metals	Iron	156 - 9880	2 of 2	300
		Manganese	19.1 - 339	1 of 2	300
Downgradient Groundwater (11/97 and 12/97 rounds)	Volatile Organic Compounds (VOCs)	Chloroethane	ND	0 of 4	5
		1,1,1-Trichloroethane	ND - 12	2 of 4	5
		1,1-Dichloroethane	ND - 70	1 of 4	5
	Metals	Iron	135 - 1760	4 of 4	300
		Manganese	56.1 - 979	2 of 4	300

* The "E" after a value denotes the result is estimated because the high value of this result exceeds the measurement range of the analysis method.