

VOLUNTARY CLEANUP SITE ASSESSMENT REPORT

**POPULAR HAND LAUNDRY SITE
BROOKLYN, NEW YORK**

PREPARED FOR

**88 INGRAHAM REALTY CORPORATION
88 INGRAHAM STREET
BROOKLYN, NEW YORK 11237**

BY

**DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
WOODBURY, NEW YORK**

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Section 1



1.0 SITE DESCRIPTION

1.1 Location and Legal Description

The Popular Hand Laundry site is located at 88 Ingraham Street in Kings County (Brooklyn), New York (Figure 1). The section, block and lot numbers for this site are 10, 2998 and 19, respectively.

A description of the bounds for the site are as follows:

Beginning at a point on the southerly side of Ingraham Street distant 300 feet westerly from the southwesterly corner of Ingraham Street and Porter Avenue;

Running thence southerly parallel with Porter Avenue 100 feet;

Thence westerly parallel with Ingraham Street 75 feet;

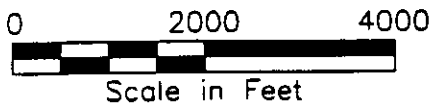
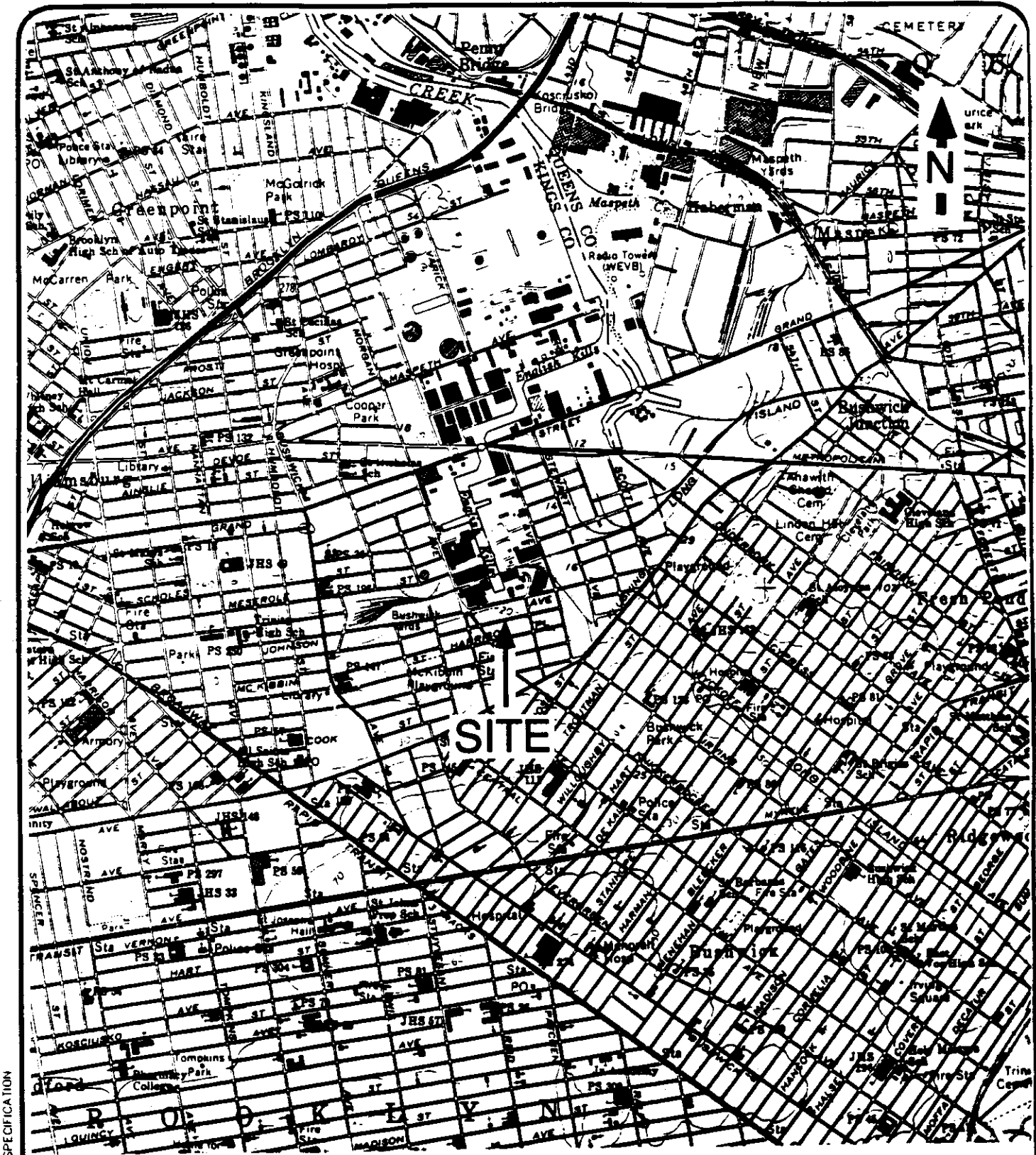
Thence northerly parallel with Porter Avenue 100 feet to the southerly side of Ingraham Street; and

Thence easterly along the southerly side of Ingraham Street 75 feet to the point or place of beginning.

1.2 Site and Vicinity Characteristics

Much of the information and environmental data provided in this report was obtained from Phase I and Phase II Environmental Assessment documents prepared by Environ Corporation on behalf of a prospective purchaser of the site. These documents are referenced in Section 4.1.

The Popular Hand Laundry site is located in a heavily developed and industrial area of Brooklyn. Land use in the vicinity of the site is primarily industrial and commercial; however, scattered residential buildings are also present in the area. The nearest residences are located approximately 200 feet southwest of the site along Harrison Place. The site is bordered to the



SOURCE: USGS 7.5 MINUTE SERIES (TOPOGRAPHIC) BROOKLYN, N.Y. QUADRANGLE

ENVIRON

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**SITE LOCATION MAP
POPULAR HAND LAUNDRY
BROOKLYN, NEW YORK**

Figure
1

c:\accd\FILE_SPECIFICATION

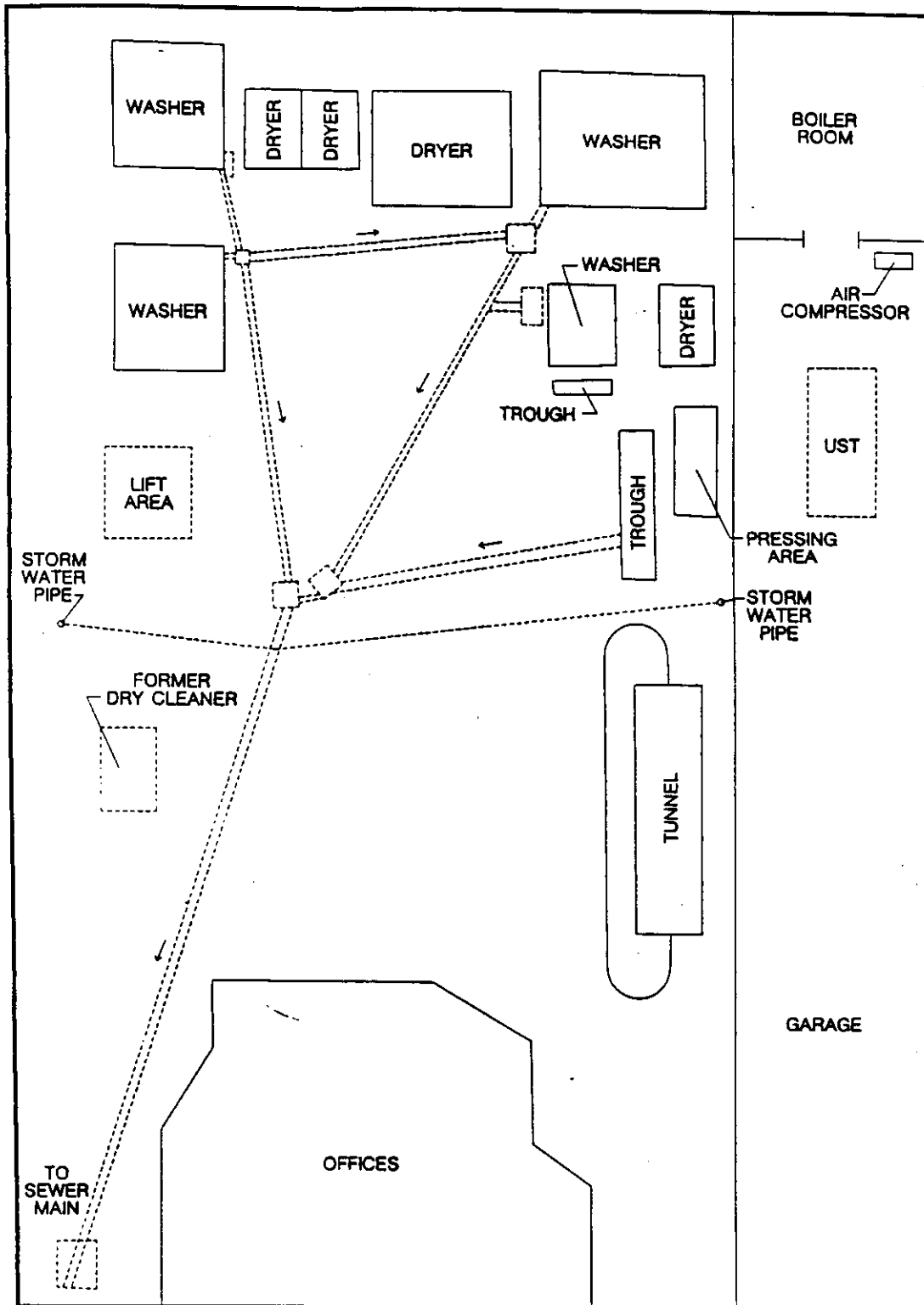
north by Ingraham Street. Across Ingraham Street are several industrial facilities including a manufacturer of springs. Immediately east of the site is a warehouse operated by a manufacturer of sesame candy. A facility that assembles and repairs ambulances borders the site to the west. Adjacent and to the south of the site is an empty lot that has been cleared of any structures. Facility personnel were unable to identify the owner of the lot.

The topography of the site and surrounding area is characterized by flat land. The site itself slopes gently to the north toward the English Kills canal. The site consists almost entirely of the main building and a paved sidewalk area along Ingraham Street. A narrow strip immediately south of the building is the only unpaved portion of the site. Storm water from the site flows into the building's main sewer line and is discharged to the municipal sewer system. There are no surface waters located on-site. The closest surface water is the English Kills canal, which is located approximately 750 feet north of the site. Based on the topography of the site vicinity, shallow groundwater likely flows to the north across the site toward the English Kills canal.

The site and surrounding area are serviced by the City of New York water and sewer facilities. Con Edison supplies electricity to the site and natural gas is supplied by Brooklyn Union. Fuel oil (Number 2) that is used in the on-site boilers, primarily in the winter time, is supplied by Rad Oil.

1.3 Description of Site Structures

The facility consists of a two-story building with an adjoining garage and a basement level. The building comprises approximately 11,000 square feet and occupies almost all of the site. The remaining areas of the site include a sidewalk along Ingraham Street and a narrow unpaved area immediately south of the building. A site plan map is provided in Figure 2.



Ingraham Street

NOTE: Not to Scale

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SITE PLAN MAP
POPULAR HAND LAUNDRY
BROOKLYN, NEW YORK

Figure

2

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1.4 Site Geology and Hydrogeology

The Popular Hand Laundry site is located approximately 750 feet to the south and hydraulically upgradient of the English Kills (the nearest surface water), a tributary creek/canal of the southern extent of the Newtown Creek. The topography of the site and surrounding area is generally flat and slopes downward to the north from approximately 20 feet above mean sea level (MSL) at the site to approximately 15 feet above MSL at the English Kills. Surface runoff may be directed into the English Kills and Newtown Creek from the drainage in the area surrounding the site.

Information obtained during the Phase II Environmental Assessment indicated that the depth to groundwater is approximately 20 feet below grade. Currently, groundwater is not used as a source of drinking water in Brooklyn and residents are supplied with potable water through the New York City water system originating from reservoirs in upstate New York.

The regional area of the site is underlain by five major geologic unconsolidated formations which overlie consolidated bedrock. The unconsolidated formations include, from deep to shallow: the Lloyd aquifer, the Raritan formation, Jameco aquifer, the Gardiners Clay and Upper Glacial aquifer. The upper Glacial aquifer in this area of Brooklyn is comprised of ground moraine (till) consisting of clay, sand, gravel and boulders.

Shallow groundwater most likely flows northerly towards the English Kills in the direction of decreasing hydraulic gradient as defined by the United States Geological Survey (USGS) 1981 Water Table Contour map (USGS - Groundwater Resources of Kings and Queens Counties, 1981 - Open File Report #81-1186). According to the USGS, no USGS monitoring wells exist in the immediate vicinity of this site, therefore, additional confirmation on local shallow groundwater flow direction could not be made. The USGS indicated that the "entrance" to the English Kills is tidally affected with a maximum range of 5 feet. However, the entrance to the English Kills is approximately 4,000 feet to the north of the site and the tidal effect in the southern extent of the English Kills is not known, and whether or not tidal effects are present at

the site. The Phase II Environmental Assessment indicated that the groundwater elevation at the site was approximately 5 feet above MSL and may be tidally influenced.

1.5 Nearby Public Areas of Concern

The nearest residences are located approximately 200 feet southwest of the site along Harrison Place. There are no other public areas located in the vicinity of the site. The site is located in a heavily developed industrial area.

1.6 Other Relevant Information Concerning Potential for Human Exposure

There is no other relevant information concerning potential for human exposure.

Section 2

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2.0 SITE HISTORY

2.1 Previous Site Uses and Operations

Based on a review of Sanborn Fire Insurance Maps, it appears the building currently located on-site was constructed prior to 1933. Since 1933, the building has been used for skein (coiled yarn or thread) dyeing, dry cleaning and laundry operations.

Popular Hand Laundry reportedly acquired the site in approximately 1970. Prior to 1970, the site was owned and operated by Klink. It is not known when Klink commenced operations at the site. Klink reportedly provided dry cleaning and laundry services during its tenure at the site. It has been reported that no dry cleaning was conducted by Popular Hand Laundry when Popular Hand Laundry initially occupied the site in 1970. Popular Hand Laundry reportedly operated one dry cleaning machine from approximately 1980 until 1990, at which time dry cleaning operations were discontinued at the site. It has been reported that in 1982, Popular Hand Laundry constructed the garage and installed the underground storage tank that currently exists at the site.

Sanborn Fire Insurance Maps for the site vicinity were reviewed for the years 1888, 1907, 1933, 1951, 1977, 1981, 1982, 1984, 1990, 1993 and 1994. The 1888 and 1907 maps do not indicate any structures located on-site. The maps show that a chemical company (Powell's Chemical Works) operated approximately 500 feet east of the site and a lumber company (Borough Lumber Company) operated immediately across Ingraham Street at the time.

The 1933 map shows what appears to be the building that currently exists at the site. Based on a review of the map, it appears that the boiler room (and main building) had been constructed, but that the garage had not yet been built. The map indicates that skein dyeing operations were conducted on-site in 1933 and that several industrial, commercial and residential facilities had been constructed in the site vicinity. These include a fur dyeing facility immediately

south of the site, a stone cutting facility and a neon sign facility east of the site, and automobile repair facilities west of the site.

The 1951 map shows that the on-site building was used for dry cleaning operations. A lumber yard and a metal working facility operated to the east of the site. A metal cabinet manufacturing facility was located west of the site and a paper box manufacturing facility operated to the north of the site.

According to the 1977, 1981, 1982, 1984, 1990, 1993 and 1994 maps, the on-site building was used for laundry operations. The maps show that the area surrounding the site had been heavily developed. In the maps, a variety of industrial facilities surround the site including a plastic products facility to the north, automobile repair shops and a metal working facility to the east, and an ambulance repair facility to the west.

All of the maps since 1907 show apartment buildings located within one-eighth of a mile of the site. The closest residential buildings are to the southwest of the site.

2.2 Previous Uses of Property Around Site

(See information provided in Section 2.1 above.)

2.3 Products, By-Products and Wastes Stored or Discharged at Site

2.3.1 Site Operations

Popular Hand Laundry employs approximately 65 people to operate a uniform rental and laundry service. Operations at the facility include washing, drying, pressing and performing minor repair on uniforms used in industrial facilities. Uniforms generally include shirts, trousers and jackets. The facility washes approximately 8,000 pounds of fabric per day. Uniforms from the automotive industry (typically automobile repair shops) constitute approximately 85 percent

of the fabric washed each day. Entrance mats are also washed by the facility, however, the washing of these mats amounts to less than two percent of the facility's operations. Shop rags were formerly washed at the facility, however, these are currently cleaned off-site.

Equipment used in the laundry process includes four electric washers, four dryers and a steam tunnel. A variety of soaps, bleach, surfactants, softeners and sour s are used to wash the uniforms. These soaps are typically fed directly from the drums in which they are purchased to the washing machines during the wash cycle. A softener, bleach or sour may be used in the subsequent rinses. The facility also operates two boilers and one natural gas-powered direct-fire hot water heater that supply hot water and steam to the washers, dryers and steam tunnel. Three of the dryers are heated by steam and one is heated with either natural gas or oil. The two boilers are also configured so they may be powered by natural gas or oil. It was reported that the facility typically uses Number 2 fuel oil as a substitute for natural gas in the winter months when natural gas prices are elevated. Fuel oil is stored in an underground storage tank located below the garage. The facility also maintains one active air compressor and two spare compressors.

On the second floor of the facility, uniforms are repaired, emblems (typically name tags) are sealed onto uniforms and entrance mats are sorted. Several sewing, tying and heat sealing machines are operated on the second floor. Heat sealing machines are used to fasten emblems onto uniforms. Emblems are removed from the uniforms on an as-needed basis in the garage. In this removal operation, employees spray small quantities of a methylene chloride based solvent (92 percent methylene chloride and eight percent methanol) from a can to facilitate removal of the emblems. It has been reported that the facility uses approximately 100 gallons per year of methylene chloride for this purpose.

In addition to its uniform services, Popular Hand Laundry also rents rags that are used in a variety of industrial processes. These rags were formerly washed at the facility, but in response to regulatory concern regarding the facility's wastewater discharges, Popular Hand Laundry discontinued the practice of washing rages in approximately June 1995. Instead, rags are now sent to an off-site contractor for cleaning. However, both soiled and clean rags are still stored

on-site, and new rags are periodically dyed to a customer's color of choice (typically blue). Popular Hand Laundry was not able to provide information regarding the kind of dye currently used at the facility.

Dry cleaning was formerly conducted at the site. As mentioned previously, Sanborn Fire Insurance Maps indicate that dry cleaning was conducted at the site in the 1950s. In addition, Popular Hand Laundry reportedly operated one "dry to dry" dry cleaning machine at the site from approximately 1980 to 1990. The dry cleaning machine is still owned by Popular Hand Laundry, but has reportedly not been used since 1990 and is currently stored at Popular Hand Laundry's Bohemia, New York warehouse. The machine has a 120-pound capacity and was used to dry clean approximately 5 loads per day. It has been reported that while in operation, the machine used approximately 1,200 gallons of perchloroethylene (PCE) per month. It has also been reported that the dry cleaning machine was connected to the municipal sewer, however, it is not clear how much PCE was discharged to the sewer. It has been further reported that the machine was equipped with a PCE separator so that the waste PCE could be captured. The machine was cleaned out periodically, and waste PCE was stored in a drum and periodically removed from the site by a licensed waste facility (Safety Kleen) for subsequent recycling.

2.3.2 Chemical and Chemical Waste Storage

Underground Storage Tanks (USTs)

The facility currently maintains one 3,000-gallon underground storage tank (UST) that stores Number 2 fuel oil used to power the boilers and dryers in the winter. In the winter, the facility consumes approximately 1,500 gallons of fuel oil per week. Popular Hand Laundry installed the UST in 1982, when the garage was constructed. The UST is permitted by the City of New York Fire Department, Bureau of Fire Prevention (Identification Number: 112001073).

It has been reported that in July 1995, a leak occurred at the filling pipe located along Ingraham Street. A small quantity of fuel oil was reportedly spilled onto the concrete sidewalk.

The spilled oil was reportedly cleaned up and the use of that filling pipe was discontinued. The UST is now filled directly through its drop tube. Facility personnel did not know of any other releases associated with the UST.

Aboveground Storage Tanks

The facility has aboveground tanks that store hot water and small tanks that store compressed gases used in welding. No potentially significant environmental concerns have been associated with these tanks.

Drum and Container Storage

Drums and containers of raw materials and waste materials, including soap, bleach, caustic alkali liquid, surfactants and dye, are stored indoors near their points-of-use. One drum of the methylene chloride based solvent used to remove emblems was observed in the garage. Leaks or spills have not been identified in any raw material storage areas.

2.4 Spills or Other Releases at Site

As result of a hole in an elbow connection of the building's main sewer pipe that feeds from the two central pumps to the municipal sewer system, wastewater periodically discharges through the hole in the pipe onto the basement floor. Also, as a result of occasional clogging of the wastewater conveyance system, water ponds around certain floor drains in the boiler room. Facility personnel reported that leaks in elbow joints of the boilers release small quantities of oil during pressure release blow down. Condensate from the facility's air compressor is discharged to the floor of the garage.

The area of these discharges and spills, including the UST leak discussed in Section 2.3.2. above, was the focus of the subsurface investigation, and based upon the analytical results, these leaks and spills did not result in significant contamination, as discussed in Section 4.2.

2.5 Review of Aerial Photographs

No review of aerial photographs has been performed, nor has any review been deemed necessary for the site assessment report.

2.6 Results of Interviews

(See information provided in Section 2.3 above and Section 3.0 below.)

Section 3



3.0 REGULATORY HISTORY

3.1 Permits or Approvals Obtained by Site Owner

The facility's wastewater discharges are regulated by the City of New York Department of Environmental Protection (NYDEP) Bureau of Clean Water. The facility is required to comply with regulations set forth in the Rules of the City of New York (RCNY), including those rules relating to the Use of the Public Sewers (15 RCNY, Chapter 19). RCNY establishes limits on permissible contaminant concentration in sewer discharges. These include a 50 mg/L limit on the total petroleum hydrocarbons (TPH) concentration and a pH range from 5 to 11. The Sewer Use Regulations also limit the concentration of heavy metals and other contaminants in sewer discharges.

3.2 Violation Orders, Decrees or Other Documents Regarding Site Operations

According to the Facility Risk Profile prepared by Vista, the facility was issued a Notice of Violation (NOV) for a Class I Violation on March 30, 1987 resulting from a RCRA nonfinancial record review evaluation. The violation type is listed as a generator requirement and a written informal state enforcement action is noted. The report indicates the facility achieved compliance on April 1, 1987. Facility personnel were unable to provide any information regarding this violation or any other violations regarding hazardous waste management. Based on the indication that the facility achieved compliance with the violation and on reports that the facility has not generated hazardous waste since 1990, it is believed that it is unlikely that this NOV currently represents a potentially significant environmental concern.

Based on a review of facility documents, it appears the facility has received Notices of Violations (NOVs) from the NYCDEP, including NOVs for exceedances of contaminant concentrations specified in the Sewer Use Regulations. Historical information indicates that TPH concentrations measured in the facility's wastewater have significantly exceeded the RCNY limit of 50 mg/l. For example, Popular Hand Laundry received a NOV for a TPH concentration

of 2900 mg/l measured on September 4, 1992. Based on information provided, it appears that prior to 1993, the facility's wastewater discharge consistently exceeded the RCNY's former upper pH limit of 9.5. On June 15, 1992, NYCDEP issued Popular Hand Laundry a NOV for discharging wastewater with a measured pH of 12. In addition, it appears that the facility has been found to exceed discharge limits for certain heavy metals, such as copper and zinc. A NYCDEP Notification of Noncompliance indicates that results from sampling conducted on September 15, 1993 for copper (6.77 mg/l) and zinc (6.02 mg/l) slightly exceeded the discharge limit of 5.0 mg/l (applicable for both metals).

By issuing Corrective Action Orders, NYCDEP has required the facility to sample its wastewater discharges and to submit self-monitoring reports (SMRs) twice a year. NYCDEP has also issued orders requiring Popular Hand Laundry to install a pH monitor and to submit engineering plans for pH neutralization and petroleum hydrocarbon treatment.

Facility personnel explained that Popular Hand Laundry recently (in approximately June 1995) decided to discontinue the washing of shop rags at the facility as an attempt to comply with RCNY TPH limitations. Facility personnel believe that this change in operations has reduced the TPH concentration in the facility's wastewater to permissible levels. Facility personnel also believe that the pH of the facility's wastewater has consistently been within the currently acceptable range of 5 to 11, and that any exceedances of RCNY limitations for heavy metals or other contaminants do not represent a consistent compliance concern.

Section 4

4.0 PREVIOUS STUDIES

4.1 List of Previous Investigations and Assessments for Site

1. Phase I Environmental Assessment of Popular Hand Laundry, Brooklyn, NY; Environ Corporation, Arlington, VA, March 19, 1996; and
2. Phase II Environmental Assessment, Popular Hand Laundry, Brooklyn, NY; Environ Corporation, Arlington, VA, August 12, 1996.

4.2 Summary of Findings of Previous Investigations

4.2.1 Phase I Environmental Assessment

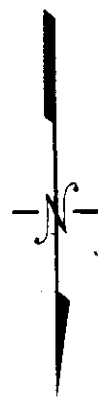
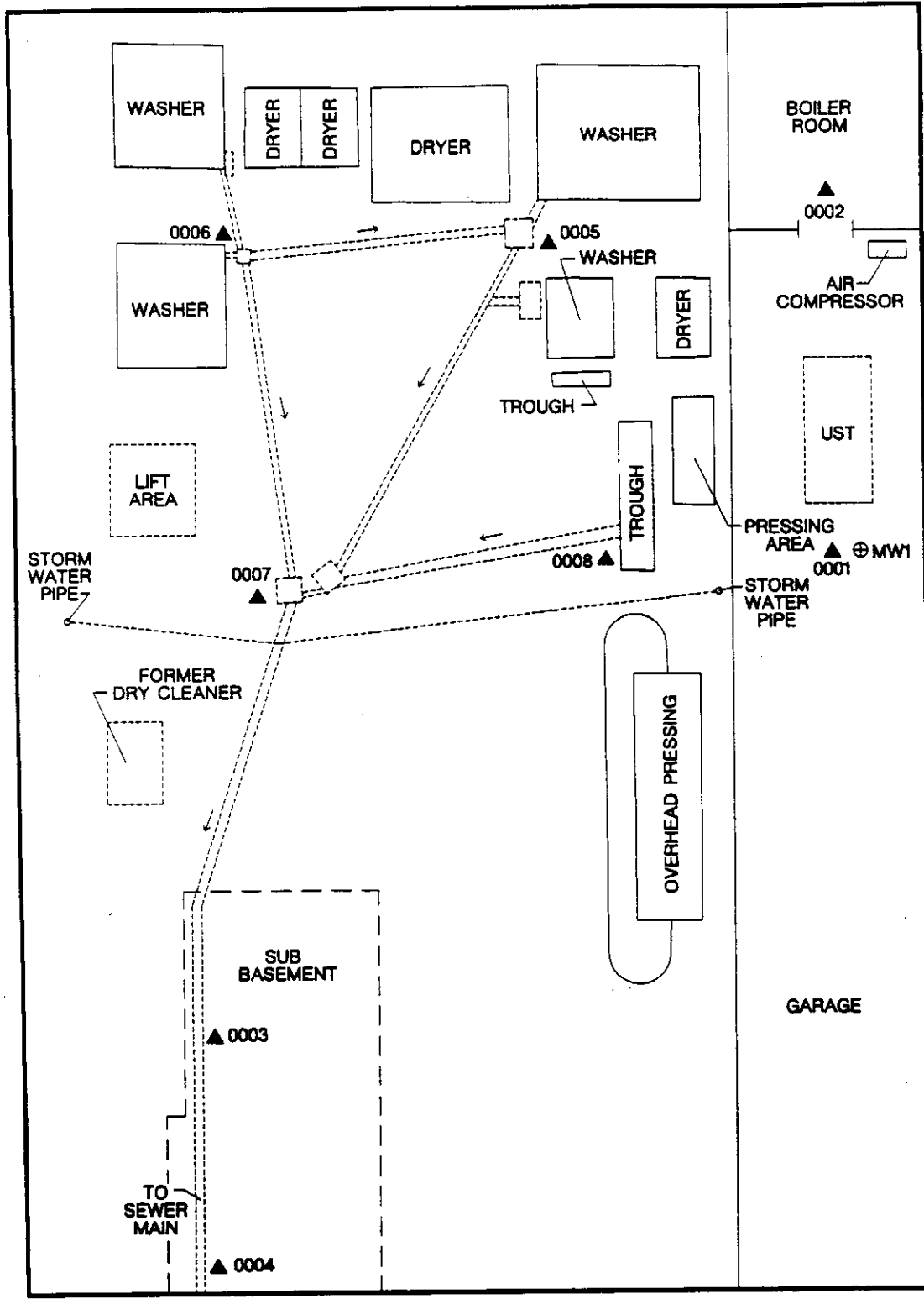
The findings of the Phase I Environmental Assessment conducted for the Popular Hand Laundry site relevant to this document are summarized in Sections 1.0 through 3.0 above.

4.2.2 Phase II Environmental Assessment

As a result of the findings of the Phase I Environmental Assessment, a Phase II Environmental Assessment was performed in areas of potential contamination. The field investigation included tightness testing of the 3,000-gallon underground storage tank, construction of soil borings, soil sampling, and collection of groundwater and wastewater samples. The locations of the samples are shown in Figure 3. The procedures used to conduct the field testing program are provided in the Phase II Environmental Assessment document. The results of the investigation are provided below.

UST Tightness Testing

At the time of the testing, the tank contained approximately 1,500 gallons of product. The liquid-filled portion of the tank was tested by a precision float test, and the air-filled portion



EXPLANATION
 ▲ Soil sampling location
 ⊕ Ground water sampling location

NOTE: Not to Scale

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of the tank and fill line was pressure-tested. The results indicated that the liquid-filled portion of the tank passed the tightness test, but the air-filled portion of the tank failed. Based on observations during the test, the remote fill line was responsible (at least in part) for the failure of the air-filled portion of the system. The remote fill line is no longer in active use since its leak in 1995, and the tank is reportedly filled from a vertical drop tube.

Soil Sampling

Eight soil borings were constructed beneath the building using two-foot stainless steel sampling probes. A description of the physical setting and investigation objectives of each boring location is as follows:

- SB01: Located immediately adjacent to the north end of the fuel oil UST to evaluate potential impact resulting from operation of the tank.
- SB02: Located beneath the concrete floor in the boiler room to evaluate potential impact by fuel oil releases in the room.
- SB03 and SB04: Located beneath the concrete floor in the basement to evaluate potential impact by releases from leaking sewer lines and wastewater overflow through basement flooring (observed to be in poor condition).
- SB05 through SB08: Located beneath process lines, drains and sumps in the laundry room to evaluate potential impact by releases from the wastewater collection and discharge system.

At each boring location one soil sample was collected for laboratory analysis. The sampling intervals, provided in Table 1, were biased towards evidence of potential contamination by collecting soil from the vertical interval exhibiting the greatest organic vapor meter (OVM) reading. At SB01, adjacent to the UST, significant OVM readings (i.e., 120 to 200 parts per million [ppm]) and a petroleum odor was observed in the 10 to 12 foot interval below ground surface (bgs). OVM readings decreased steadily with depth to approximately 3 ppm in the 17 to 20 foot bgs interval immediately above the water table. Similar OVM readings (120 to 450 ppm) and a petroleum odor were observed at SB02 in the boiler room from 1.0 feet bgs to the point of

probe refusal at 2.5 bgs. OVM readings at all other soil boring locations, which were located in the laundry room and basement, were relatively low, ranging from 0 to 7 ppm.

All soil samples were analyzed for volatile organic compounds (VOCs) by USEPA Method 8240, total petroleum hydrocarbons (TPH) by USEPA Method 418.1 and semivolatile organic compounds (SVOCs) by USEPA Method 8270. Selected samples collected from beneath the laundry room lines and basement were also analyzed for metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc).

Groundwater Sampling

Groundwater samples were collected at three locations using direct-push probes (i.e., Geoprobe) advanced with a van-mounted percussion hammer. Physical access restrictions prevented groundwater sampling directly beneath the building or south and east of the facility. Therefore, all groundwater sampling was conducted along the northern and western perimeter of the facility. Based on local topography, proximity to the English Kills canal to the site and regional flow information as described in Section 1.4, the sample locations north of the facility (MW2 and MW3) are downgradient. A description of the groundwater sampling locations follows:

- Probe MW1 was conducted at the same location as Soil Boring SB01, immediately adjacent to, and north (the anticipated downgradient direction) of the UST. MW1 is also approximately 20 feet north of the boiler room.
- Probe MW2 was conducted near the northeastern corner of the facility immediately adjacent to, and north of, the basement where the highest levels of VOCs were detected in soils. MW2 is also located north of the eastern portion of the laundry room.
- Probe MW3 was conducted near the northwestern corner of the facility, north of the western portion of the laundry area, the UST and the boiler room.

Groundwater was encountered at approximately 20 feet below ground surface at each probe location. Groundwater samples were collected from the probes using dedicated polyethylene tubing connected to a ball and check valve hand pump system.

All groundwater samples were submitted for analysis of VOCs and TPH. The groundwater sample from MW01 was also analyzed for SVOCs.

Wastewater Sampling

To evaluate TPH in wastewater from uniform laundering, seven grab samples of the discharge from a discharge sump were collected following each of the seven washing steps.

Provided below are the results of the sample collection program.

Soil Sample Results

For purposes of evaluating the significance of the soil sample analytical results, which are provided in Table 1, as related to potential impacts on human health and the environment, the results are compared initially to NYSDEC Soil Cleanup Objectives contained in Technical and Administrative Guidance Memorandum (TAGM) 4046 (Proposed). Although these Soil Cleanup Objectives (SCOs) are developed for residential land use and primarily protection of drinking water supply, they can be used for initial screening purposes to determine potential contaminants of concern. Exceedances of the SCOs do not necessarily mean that remediation is required.

For determination of potential health impacts related to direct exposure (ingestion and inhalation), USEPA Soil Screenings Levels (SSLs) will be utilized initially. Since the SSLs are developed for residential land use, they are not applicable to the Popular Hand Laundry site which is used for industrial purposes. Again, exceedance of the SSLs do not necessarily mean that remediation is necessary, but rather the degree of exceedance needs to be considered in relation to potential receptors and exposure pathways.

TABLE 1

PHASE II ENVIRONMENTAL ASSESSMENT

ANALYTICAL RESULTS FOR SOIL SAMPLES
POPULAR HAND LAUNDRY, BROOKLYN, NEW YORK

Constituent	Guidance Values		Sample ID and Depth (feet bgs)							
	NYS Soil Cleanup Objectives	USEPA Soil Cleanup Levels	SB01-SS02	SB02-SS01	SB03-SS01	SB04-SS01	SB05-SS01	SB06-SS01	SB07-SS01	SB08-SS01
			10.5-11.5	1.5-2.0	0.0-1.0	0.0-1.0	1.5-2.0	1.5-2.0	2.5-3.5	1.0-2.0
Volatile Organic Compounds (ug/kg)										
cis-1,2-Dichloroethylene	250	780,000	<11	<65	36	700	15.1	<1.1	7.4	<1
Ethylbenzene	5,500	400,000	<9	301	<0.83	<60	<0.88	<0.90	2.3	<0.84
Tetrachlorethylene	1,400	11,000	<11	<67	284	4,750	121	5.1	1,490	113
Toluene	1,500	650,000	<4.5	<27	<0.41	37.5	<0.44	<0.45	<0.42	<0.42
Trichloroethylene	700	5,000	<6.4	<38	13	550	13.4	<0.64	9	1.6
Xylenes (total)	1,200	410,000	<12	1,590	<1.1	<79	<1.2	<1.2	3	<1.1
Semivolatile Organic Compounds (ug/kg)										
Acenaphthene	50,000	4,700,000	559	<45	NA	NA	NA	NA	NA	NA
Acenaphthylene	41,000	NV	190	<45	NA	NA	NA	NA	NA	NA
Anthracene	50,000	23,000,000	228	<45	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	224	900	762	32.3	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	61	90	754	32.8	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	224	900	1,250	55.6	NA	NA	NA	NA	NA	NA
Benzo(a,h,i)perylene	50,000	NV	384	29.8	NA	NA	NA	NA	NA	NA
Chrysene	400	88,000	1,050	35.4	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	14	90	206	14.4	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	50,000	2,300,000	64.2	23	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	50,000	46,000	<60	39.1	NA	NA	NA	NA	NA	NA
Fluoranthene	50,000	3,100,000	2,180	49	NA	NA	NA	NA	NA	NA
Fluorene	50,000	3,100,000	473	<42	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	3,200	900	410	26.7	NA	NA	NA	NA	NA	NA
Naphthalene	13,000	3,100,000	184	125	NA	NA	NA	NA	NA	NA
Phenanthrene	50,000	NV	1,340	33.5	NA	NA	NA	NA	NA	NA
Pyrene	50,000	2,300,000	2,050	56.8	NA	NA	NA	NA	NA	NA
Metals (mg/kg)										
Arsenic	7.5	0.4	NA	NA	52	8	4.1	6.3	NA	NA
Cadmium	10	78	NA	NA	13.7	21.7	<0.58	<0.59	NA	NA
Chromium	50	270	NA	NA	41.6	91.3	17.8	15	NA	NA
Copper	25	NV	NA	NA	529	1,360	48	121	NA	NA
Lead	200-500	400	NA	NA	534	297	150	200	NA	NA
Mercury	0.1	10	NA	NA	0.84	1.8	0.78	1.8	NA	NA
Nickel	13	1,600	NA	NA	43.3	94.5	15	10.9	NA	NA
Zinc	20	23,000	NA	NA	1,580	618	97	168	NA	NA
Petroleum Hydrocarbons (mg/kg)										
Total Petroleum Hydrocarbons	NV	NV	575	175	3,990	899	74.8	<29	<28	35.8

Notes:

Results are shown only for compounds detected in one or more samples.

USEPA SSLs - Lower of SSL for ingestion and inhalation.

NA - Constituent not analyzed.

NV - No guidance value.

< - Constituent not detected, detection limits shown.

For the soil sample obtained adjacent to the UST, the SCOs for a number of metals and individual SVOCs (polycyclic aromatic hydrocarbons [PAHs]) were exceeded, however, total carcinogenic PAHs (4.4 mg/kg) did not exceed the NYSDEC Soil Cleanup Objective of 10 mg/kg. Also, a few of the results for PAHs and metals exceeded USEPA's SSLs. As a result of these findings and the fact that the soil is beneath a paved surface and there is little potential for exposure, and the groundwater samples collected in the vicinity/downgradient of the UST did not exceed groundwater standards for any of the PAHs (Table 2) remediation of the soil in the vicinity of the UST is not required.

For the soil samples collected beneath the building basement floor, only two of the six samples exceeded the SCOs, these being SB04, where cis-1,2-dichloroethane (0.7 mg/kg) and tetrachloroethane (4.75 mg/kg) exceeded the SCOs of 0.25 mg/kg and 1.4 mg/kg, respectively, and SB07, where tetrachloroethene (1.49 mg/kg) only slightly exceeded the SCO of 1.4 mg/kg. However, none of the samples exceeded the SCO for total volatile organic compounds of 10 mg/kg. Also, none of the soil results exceeded USEPA's SSLs.

With regard to metals, all of the soil samples analyzed exceeded the SCOs and SSLs for a number of metals. Based upon activities conducted at the facility, it is not clear whether these metals are the result of release from the facility, backup of the sewer system which has been documented by NYCDEP to contain elevated levels of metals, or contaminated fill on which the facility was constructed. However, since the soil is below the concrete basement floor, there is very little or no potential for exposure to this soil and no need for remediation. In addition, there is little potential for the metals to migrate to groundwater, since metals have an affinity to adhere to soil and the soil is covered by the building, and there is no driving mechanism for migration of the metals.

TABLE 2

PHASE II ENVIRONMENTAL ASSESSMENT

ANALYTICAL RESULTS FOR GROUNDWATER AND QA/QC SAMPLES
POPULAR HAND LAUNDRY, BROOKLYN, NEW YORK

Constituents	Guidance Values		Sample ID				
	NYSGA Standards	Federal MCLs	MW01-GW01	MW02-GW01	MW03-GW01	Field Blank	Trip Blank
Volatile Organic Compounds (ug/l)							
1,1-Dichloroethane	5	NV	3.5	<0.39	1.4	<0.39	<0.39
cis-1,2-Dichloroethylene	5	70	41.3	74.9	72	<0.6	<0.6
Methylene chloride	5	NV	6.1	3.4	<0.61	7.9	<0.61
Tetrachloroethylene	5	5	24.9	16.2	58.2	<0.23	<0.23
Toluene	5	1,000	1.6	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	5	5	48.3	8.9	28.3	<0.49	<0.49
Vinyl chloride	2	2	9.6	12.2	7.9	<0.39	<0.39
Xylene (total)	5	10,000	1.9	<1	<1	<1	<1
Semivolatile Organic Compounds (ug/l)							
Acenaphthene	20	NV	3.5	NA	NA	<1.1	NA
Anthracene	50	NV	1.1	NA	NA	<1.6	NA
Di-n-butyl phthalate	50	NV	3.2	NA	NA	1.7	NA
Fluoranthene	50	NV	0.74	NA	NA	<1.3	NA
Fluorene	50	NV	9.8	NA	NA	<1.2	NA
Naphthalene	10	NV	8.6	NA	NA	1.1	NA
Phenanthrene	50	NV	12.3	NA	NA	<2.1	NA
Pyrene	50	NV	1.4	NA	NA	<1.6	NA
Petroleum Hydrocarbons (mg/l)							
Total Petroleum Hydrocarbons (418.1)	NV	NV	1.3	<0.50	<0.50	<0.50	NA
Notes:							
Results are shown only for compounds detected in one or more samples.							
NYSGA - Groundwater quality standard/guideline, or drinking water standard if no groundwater standard/ guideline exists.							
MCL - Federal drinking water maximum contaminant level.							
NA - Constituent not analyzed.							
NV - No guidance value.							
< - Constituent not detected, detection limits shown.							
J - Indicates an estimated value, below the detection limit.							

Groundwater Sample Results

All of the groundwater samples exceeded the Class GA standards for tetrachloroethene and its breakdown products, trichloroethene, cis-1,2-dichloroethene and vinyl chloride (see Table 2). (Although methylene chloride exceeded the standard in one sample [MW01] at 6.1 ug/l, methylene chloride also exceeded the standard in the field blank [7.9 ug/l] and is therefore likely a laboratory contaminant.)

Although there are exceedances of groundwater standards, the exceedances are not substantial and groundwater in the area of the site is not used for potable purposes. In addition, there are no potential exposures to contaminated groundwater since there are no subways in the vicinity of the site and discharge of groundwater would likely be to the nearest surface water, which is English Kills, approximately 750 feet north of the site. This water body is classified as SD for which its best intended usage is for fish propagation. Since the contaminant exceedances are relatively minor and there are no potential receptors that could be impacted, remediation of groundwater is not required.

Wastewater Samples Results

As shown in Table 3, none of the seven wastewater samples, except for one minor exceedance, exceeded RCNY discharge limits for TPH. Based on these results, the average TPH concentration that would discharge to the New York City sewer system is 25.4 mg/l which is less than the discharge limitation of 50 mg/l.

Table 3
PHASE II ENVIRONMENTAL ASSESSMENT
ANALYTICAL RESULTS FOR WASTEWATER
POPULAR HAND LAUNDRY, BROOKLYN, NEW YORK

Constituents	Sample ID						
	WW01 -GS01	WW01 -GS02	WW01 -GS03	WW01 -GS04	WW01 -GS05	WW01 -GS06	WW01 -GS07
Petroleum Hydrocarbons (mg/l)							
Gasoline - Range Organics	0.329	0.298	0.597	7.21	12.9	0.213	37.2
Diesel - Range Organics	22.7	23.2	21.4	5.67	1.94	2.78	4.04
Total	23.3	23.5	22.0	12.9	14.8	2.99	77.7

Notes:

Results are shown only for compounds detected in one or more samples.

Section 5



5.0 DESCRIPTION OF INTENDED SITE USE

5.1 General Description of Intended Future Use

The prospective purchaser of the property intends to continue the current operation at the site which is the rental and laundering of uniforms used in industrial facilities. A detailed description of the facility operations is provided in Section 2.1.

5.2 Permits or Approvals Required for Intended Use

Based upon the continuation of current operations, it is anticipated that only a New York City sewer discharge permit would be required.

Section 6



6.0 PROPOSED REMEDIAL PLAN/SUPPLEMENTAL SITE ASSESSMENT WORK PLAN

6.1 Description of Anticipated Remedial Activities

Based on the data collected as part of the Phase II Environmental Assessment and absence of potential impacts on human health and the environment as described in Section 4.2, based on planned use of the site, the industrial development surrounding the site, the fact that groundwater is not used for potable purposes and there is no anticipated impacts on surface waters, no remedial activities are anticipated.

6.2 Description of Additional Site Assessment Activities

During a site visit conducted on November 6, 1996, no elevated levels of volatile organic vapors were measured in the interior of the main building utilizing a photoionization detector, including a survey of cracks in the basement floor. (The only elevated levels which were noted were in the boiler room in close proximity where oil rags were temporarily stored, and in sumps where hot wash water was discharged which likely affected the photoionization detector). However, in order to confirm that there are no potential impacts to occupants of the facility, it is recommended that a limited number of air samples be collected in the building for volatile organic compounds of potential concern (tetrachloroethene and its breakdown products).