TABLE 1
Nature and Extent of Contamination

December 1995 - August 2001

SOIL	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Tetrachloroethene	ND[c] - 330	1.4	19 of 48

April 1994 - March 2002

GROUNDWATER	Contaminants of Concern	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)[a]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Tetrachloroethene	ND[c] - 38,000	5	18 of 24

August 2001 - March 2002

SOIL GAS	Contaminants of Concern	Concentration Range Detected (mg/m^3)[a]	SCG[b]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Tetrachloroethene	ND[c] - 26,000	N/A	31 of 34

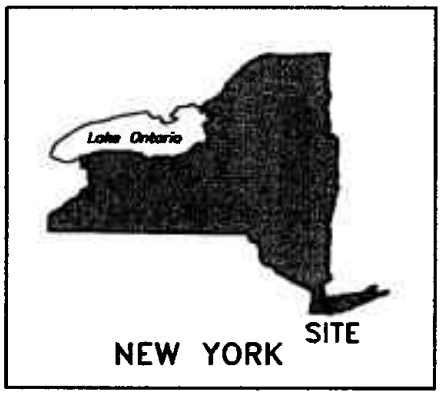
September 1998 - March 2003

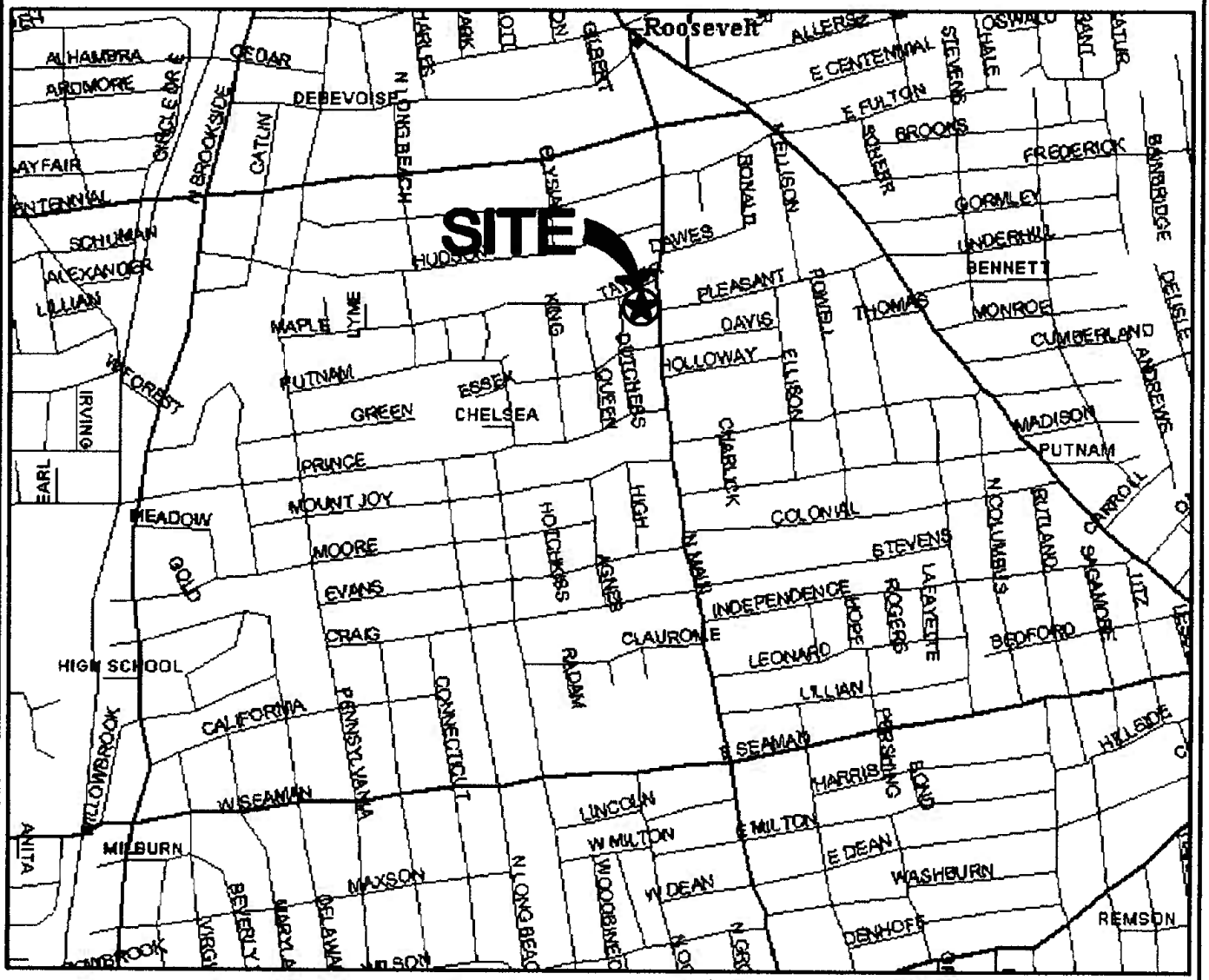
INDOOR AIR	Contaminants of Concern	Concentration Range Detected (ug/m^3)[a]	SCG[b] (ug/m^3)[a,d]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Tetrachloroethene	ND[c] - 1,400	100/back ground	5 of 37

[a]ppb = parts per billion, which is equivalent to micrograms per liter, ug/L, in water;
ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
ug/m^3 = micrograms per cubic meter
mg/m^3= milligrams per cubic meter
[b] SCG = standards, criteria, and guidance values
[c]ND = concentration not detected above method detection limit.
[d]The NYSDOH "Tetrachloroethene in Indoor and Outdoor Air" fact sheet states, "Reasonable and practical actions should be taken to reduce PERC exposure when indoor air levels are above background, even when they are below the guideline of 100 µg/m3... The goal of the recommended actions is to reduce PERC levels in indoor air to as close to background as practical."

TABLE 2
Remedial Alternative Costs

Remedial Alternative	Capital Cost	Annual OM&M	Total Present Worth
Groundwater Alternative 1: No Action	$42,000	$18,000	$264,000
Groundwater Alternative 2: Extraction and Treatment	$2,000,000	$790,000	$11,800,000
Groundwater Alternative 3: Chemical oxidation	$2,600,000	$39,000 (Yr 1) $54,000 (Yr 2)	$2,700,000
Soil/Soil Gas/Indoor Air Alternative 1: No Action	$0	$63,000	$780,000
Soil/Soil Gas/Indoor Air Alternative 2: Soil Vapor Extraction	$880,000	$250,000 (Yr 1-2) $50,000 (Yr 3-5)	$1,500,000
Soil Alternative 3: Excavation and Disposal	$8,000,000	$0	$8,000,000





NOT TO SCALE

REFERENCE:
MAP FROM DELORME'S MAP EXPERT,
FREEPORT, MAINE.

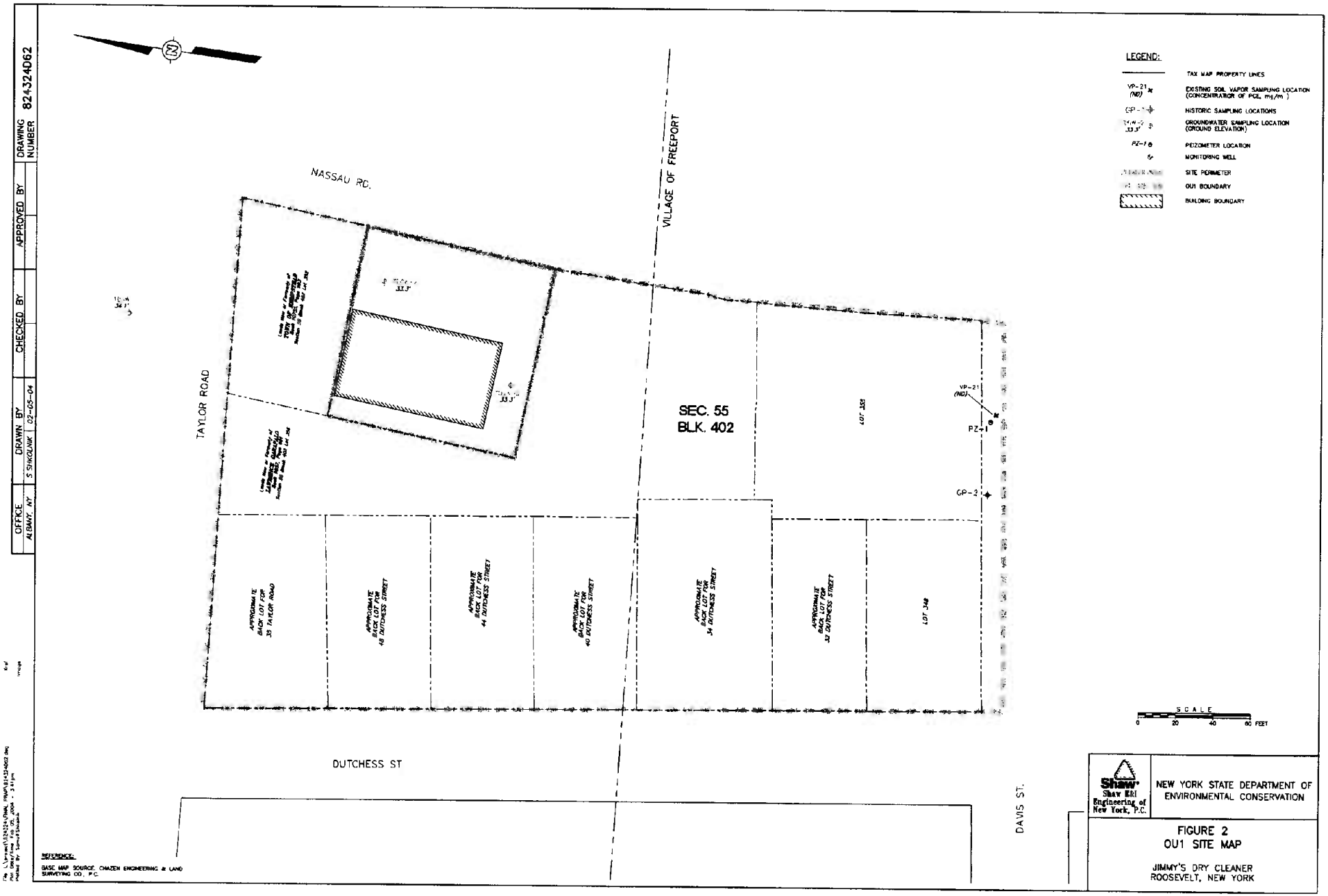
OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
ALBANY, NY	S. SHKOLNIK 11-13-03			824324A34

Shaw
Shaw E&I Engineering of New York, P.C.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FIGURE 1
SITE LOCATION MAP
OU1
JIMMY'S DRY CLEANER
ROOSEVELT, NEW YORK

N:\VOORIS\CAD\824324A34.dwg
Plot Date/Time: Jan 13, 2004 - 11:12am
Format Revised: 12/15/99
Image: L:\project\824324\ROOSEV_2.BMP
Xref:



OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
ALBANY, NY	S.SYKOLNIK 02-05-04			824324062

REFERENCE:
BASE MAP SOURCE: CHAZEN ENGINEERING & LAND SURVEYING CO., P.C.

Shaw
Shaw E&I
Engineering of New York, P.C.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FIGURE 2
OU1 SITE MAP

JIMMY'S DRY CLEANER
ROOSEVELT, NEW YORK

DRAWING NUMBER	824324B30
APPROVED BY	
CHECKED BY	
DRAWN BY	S. SHKOLNIK 12-04-03
OFFICE	ALBANY, NY

CONCRETE CURB

CONCRETE WALK

CONCRETE WALK

Lands Now or Formerly of
TOWN OF HEMPSTEAD
Book 10755, Page 993
Section 55 Block 402 Lot 352

AREA OF BROKEN PAVEMENT

CONCRETE PAD

CB

APPROXIMATE BACK LOT FOR 35 TAYLOR ROAD

Lands Now or Formerly of
LAWRENCE GARAFALO
Book 9857, Page 661
Section 55 Block 402 Lot 356

S 85°11'19" E

ITSB3

SP-2

100.00'

100.00'

BD

ITSB2

ITSB4

ITSB5

SP-6

FORMER DRY CLEANER

SP-3

DW

CONCRETE PAD

ITSB7

99.99'

CONCRETE CURB

NASSAU ROAD

SP-4

1 STORY CONCRETE BLOCK BUILDING

F.F.=34.2'

CONCRETE APRON

ITSB1

ASPHALT

CHIMNEY

DELI

CONCRETE CURB

ITSB6

SP-5

ITSB8

CB

CONCRETE PAD

N 85°11'19" W

S 04°12'56" W

101.04'

APPROXIMATE BACK LOT FOR 48 DUTCHESS STREET

APPROXIMATE BACK LOT FOR 44 DUTCHESS STREET

APPROXIMATE BACK LOT FOR 40 DUTCHESS STREET

Lands Now or Formerly of
LAWRENCE GARAFALO
Book 9857, Page 661
Section 55 Block 402 Lot 356

REFERENCE:
BASE MAP SOURCE: CHAZEN COMPANY.

SCALE
0 20 40 FEET

N

LEGEND:

- APPROX. RESIDENT PROPERTY LINE
- NO PHYSICAL BOUNDS
- ADJACENT PROPERTY LINE
- EXISTING FENCE
- CB EXISTING CATCH BASIN
- DW EXISTING DRY WELL
- SB1 EXISTING SOIL BORING
- SP-1 HISTORIC SOIL BORING (APPROXIMATE LOCATION)
- SITE PERIMETER
- PCE CONCENTRATION IN SOIL (ppm)

Shaw
Shaw E&I Engineering of New York, P.C.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FIGURE 3
DISTRIBUTION OF PCE IN SOIL
SAMPLE DATES – 12/95 THROUGH 8/01
JIMMY'S DRY CLEANER
ROOSEVELT, NEW YORK

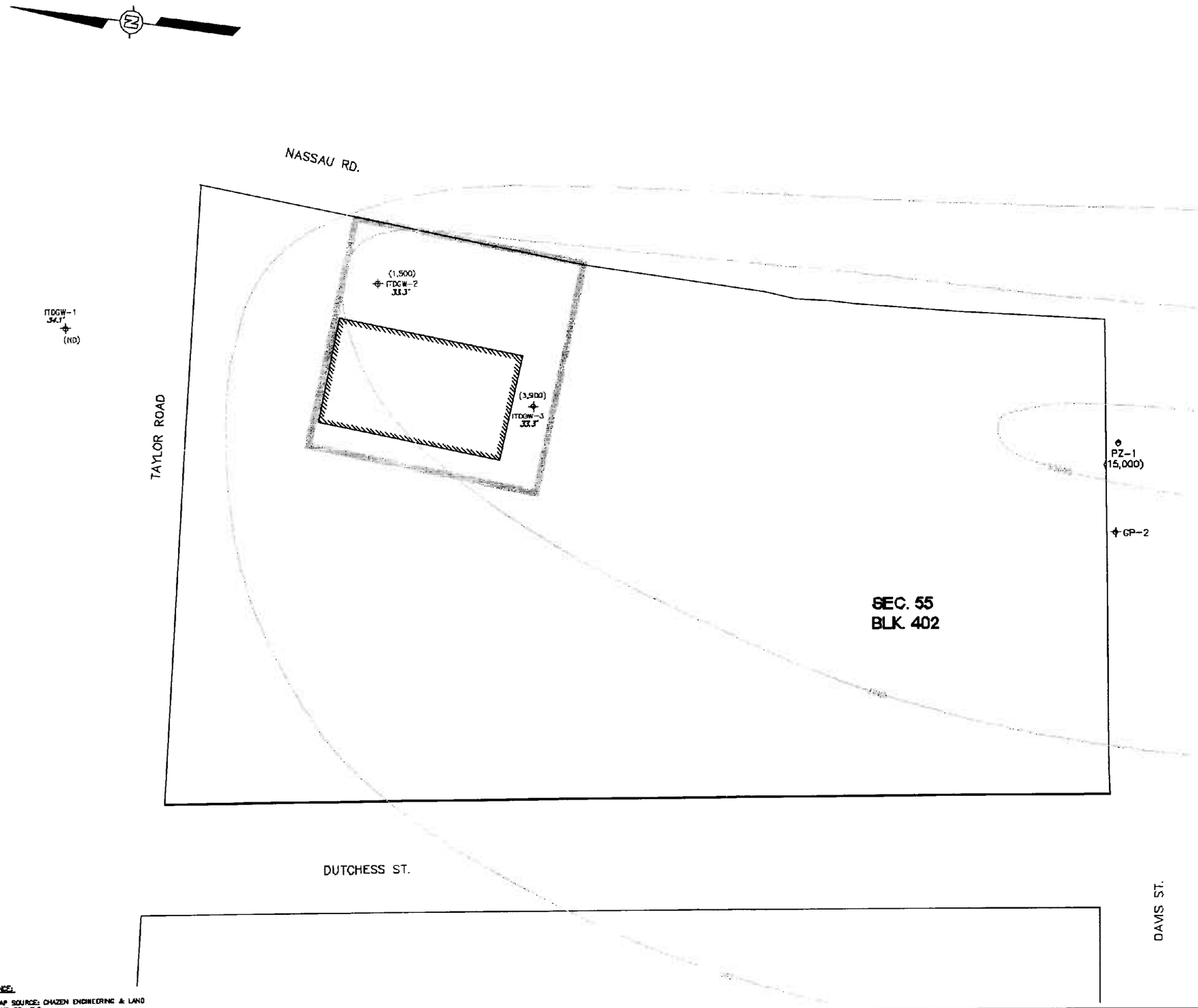
N:\VOORIS\CAD\824324B30.dwg
Plot Date/Time: Jan 22, 2004 - 4:17pm
Format Revised: 12/15/99

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
S.SHKOLNIK 12-07-03			824324053

OFFICE
ALBANY, NY

LEGEND:

- TAX MAP PROPERTY LINES
- GP-1 — HISTORIC SAMPLING LOCATIONS
- ITDGW-2 33.3' (1,500) — GROUNDWATER SAMPLING LOCATION (GROUND ELEVATION) (PCE CONCENTRATION IN GROUNDWATER (ppb))
- PZ-1 — PIEZOMETER LOCATION
- MONITORING WELL
- CONCENTRATION OF PCE (ppb)
- SITE PERIMETER
- BUILDING BOUNDARY



SCALE
0 20 40 80 FEET

REFERENCE:
BASE MAP SOURCE: CHAZEN ENGINEERING & LAND SURVEYING CO., P.C.

Shaw
Shaw E&I Engineering of New York, P.C.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FIGURE 4
DISTRIBUTION OF PCE IN GROUNDWATER
SAMPLE DATES - 8/6/01 THROUGH 8/29/01
JIMMY'S DRY CLEANER
ROOSEVELT, NEW YORK

N:\DGN\824324053.dgn
Plot Date/Time: Jan 22, 2004 - 4:18pm
Format Revised: 12/15/04
Image Xref:

DRAWING NUMBER 824324B29
APPROVED BY
CHECKED BY
DRAWN BY S. SHKOLNIK 12-02-03
OFFICE ALBANY, NY

CONCRETE CURB
CONCRETE WALK
CONCRETE WALK

Lands Now or Formerly of
TOWN OF HEMPSTEAD
Book 10755, Page 993
Section 55 Block 402 Lot 352

AREA OF BROKEN PAVEMENT
CONCRETE PAD
CB

APPROXIMATE BACK LOT FOR 35 TAYLOR ROAD

Lands Now or Formerly of
LAWRENCE GARAFALO
Book 9857, Page 661
Section 55 Block 402 Lot 356

VP2 (190EJ) (190EJ)
VP6 (1000EJ) (1000EJ)
VP28 (590E) (592E)
VP12 (52.0) (52.0)
VP32 (2) (2)
VP3 (400J) (400J)
VP29 (110E) (112E)
VP38 (130E) (130E)
VP7 (510J) (510J)
VP9 (6,000) (6,000)
VP10 (26,000E) ~~(26,000E)~~
VP30 (ND) (ND)
VP22 (1,100E) (1,100E)
VP48 (110E) (110E)
VP4 (510.0) (510.0EJ)
VP33 (2) (2)
VP13 (3893.5J) (3900EJ)
VP23 (2,100E) (2,104E)
VP5 (130EJ) (131.8EJ)
VP31 (5) (41)
VP20 (130J) (131.1J)
VP24 (ND) (ND)
(2,500EJ) (2,500EJ)

1.000
100.00'
S 85°11'19" E
20,000
10,000
5,000
FORMER DRY CLEANER
1 STORY CONCRETE BLOCK BUILDING
DELI
F.F.=34.2'
CONCRETE APRON
0.23 ACRE
OW
CONCRETE PAD
BD
99.99'
CONCRETE WALK
CONCRETE CURB
1,000
100
10
0.1
ASPHALT
CHIMNEY
CB
CONCRETE PAD
N 85°11'19" W
S 04°12'56" W
101.04'

APPROXIMATE BACK LOT FOR 48 DUTCHESS STREET

APPROXIMATE BACK LOT FOR 44 DUTCHESS STREET

APPROXIMATE BACK LOT FOR 40 DUTCHESS STREET

Lands Now or Formerly of
LAWRENCE GARAFALO
Book 9857, Page 661
Section 55 Block 402 Lot 356

NASSAU ROAD

SCALE
0 20 40 FEET

N

LEGEND:

- APPROX. RESIDENT PROPERTY LINE
- NO PHYSICAL BOUNDS
- ADJACENT PROPERTY LINE
- EXISTING FENCE
- CB EXISTING CATCH BASIN
- DW EXISTING DRY WELL
- VP6 EXISTING SOIL VAPOR SAMPLING LOCATION (PCE CONCENTRATION (mg/m^3))
- E ESTIMATED VALUE
- SITE PERIMETER
- 100 PCE CONCENTRATION IN SOIL GAS (mg/m^3)

REFERENCE:
BASE MAP SOURCE: CHAZEN COMPANY.

Shaw
Shaw E&I Engineering of New York, P.C.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FIGURE 5
DISTRIBUTION OF PCE IN SOIL GAS
SAMPLE DATES – 8/01 THROUGH 3/02
JIMMY'S DRY CLEANER
ROOSEVELT, NEW YORK

N:\WOORIS\CAD\824324B29.dwg
Plot Date/Time: Jan 13, 2004 - 2:45pm
Format Revised: 12/15/99

LEGEND:

TAX MAP PROPERTY LINES

GP-1 HISTORIC SAMPLING LOCATIONS

ITDGW-2 33.3' (1,500) GROUNDWATER SAMPLING LOCATION (GROUND ELEVATION) (PCE CONCENTRATION IN GROUNDWATER (ug/l))

PZ3 PEIZOMETER LOCATION

MONITORING WELL

DIRECT PUSH CONDUCTIVITY PROBE

SITE PERIMETER

—10000— CONCENTRATION OF PCE IN GROUNDWATER (ug/L)

PROPOSED MONITORING WELL

PERMANGANATE INJECTION WELL LOCATION

NASSAU RD.

TAYLOR ROAD

ITDGW-1 34.1' (ND)

(1,500) ITDGW-2 33.3'

(3,900) ITDGW-3 33.3'

PZ-1 (15,000)

GP-2

10000

1000

100

SEC. 55
BLK. 402

DUTCHESS ST.

DAVIS ST.

SCALE 0 20 40 60 FEET

REFERENCE:

BASE MAP SOURCE: CHAZEN ENGINEERING & LAND SURVEYING CO., P.C.

Shaw Shaw E&I Engineering of New York, P.C.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FIGURE 6
GROUNDWATER REMEDIAL ALTERNATIVE 3
SAMPLE DATES – 8/6/01 THROUGH 8/29/01
JIMMY'S DRY CLEANER
ROOSEVELT, NEW YORK

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
S.SHKOLNIK 12-03-03			824324D54

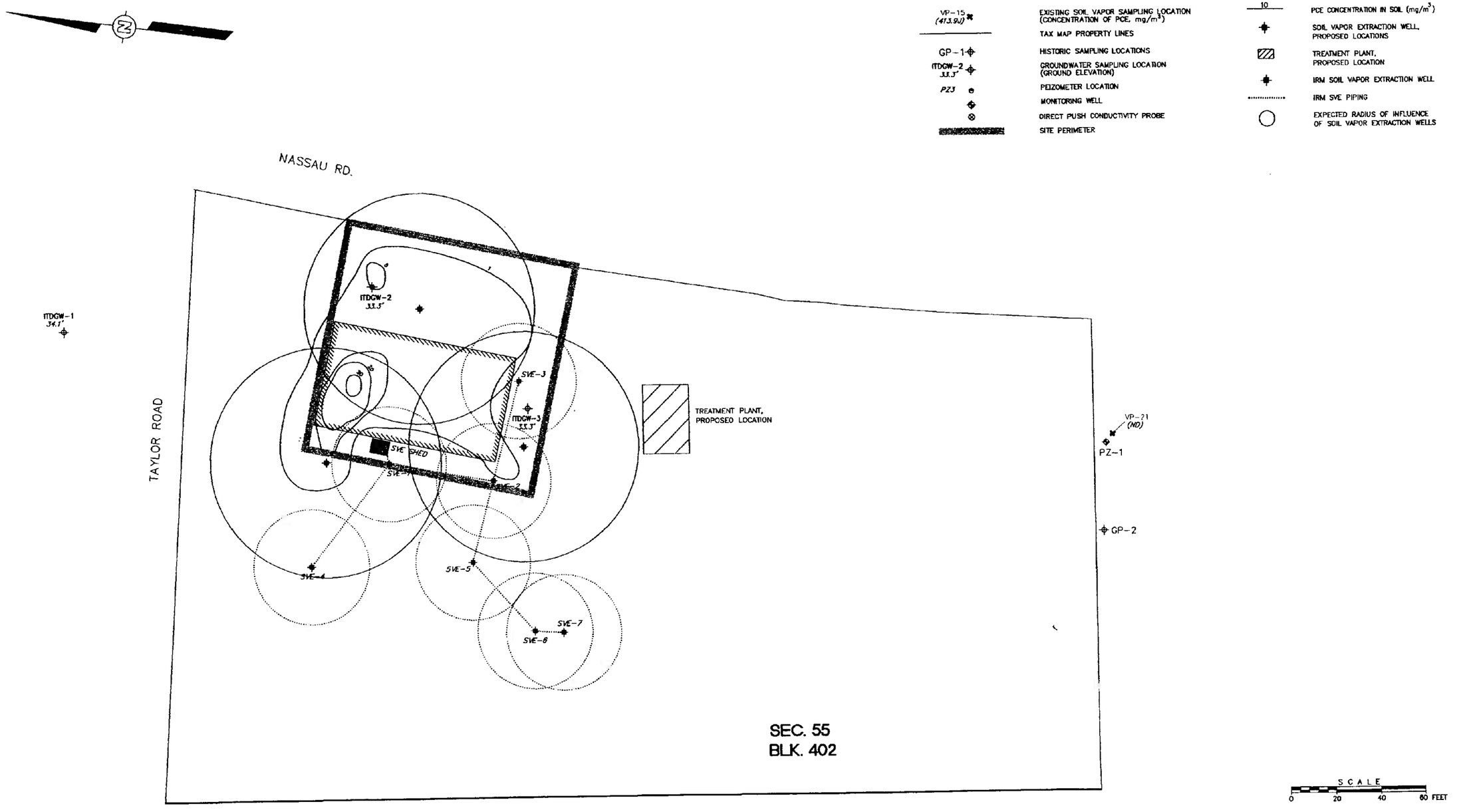
OFFICE
ALBANY, NY

N:\YORK\Chazen\824324D54.dwg
Plotted: Dec 13, 2004 - 2:45pm
Format: Revised: 12/15/98
Image: Xref:

DRAWING NUMBER	APPROVED BY	CHECKED BY	DRAWN BY	OFFICE
824324D51			S.SHKOLNIK 01-12-04	ALBANY, NY

LEGEND:

VP-15 (413.9J)	EXISTING SOIL VAPOR SAMPLING LOCATION (CONCENTRATION OF PCE, mg/m^3)
	TAX MAP PROPERTY LINES
GP-1	HISTORIC SAMPLING LOCATIONS
ITDGW-2 33.3'	GROUNDWATER SAMPLING LOCATION (GROUND ELEVATION)
PZ3	PEIZOMETER LOCATION
	MONITORING WELL
	DIRECT PUSH CONDUCTIVITY PROBE
	SITE PERIMETER
10	PCE CONCENTRATION IN SOIL (mg/m^3)
	SOIL VAPOR EXTRACTION WELL, PROPOSED LOCATIONS
	TREATMENT PLANT, PROPOSED LOCATION
	IRM SOIL VAPOR EXTRACTION WELL
	IRM SVE PIPING
	EXPECTED RADIUS OF INFLUENCE OF SOIL VAPOR EXTRACTION WELLS



SCALE
0 20 40 80 FEET

REFERENCE:
BASE MAP SOURCE: CHAZEN ENGINEERING & LAND SURVEYING CO., P.C.

Shaw
Shaw E&I Engineering of New York, P.C.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FIGURE 7
SOIL/SOIL GAS/INDOOR AIR
ALTERNATIVE 2
JIMMY'S DRY CLEANER
ROOSEVELT, NEW YORK

H:\VDGWS\CAD\824324D51.dwg
Plot Date/Time: Jan 13, 2004 - 2:46pm
Format Revised: 12/15/98
Image: Xref:

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Jimmy's Dry Cleaners
Operable Unit No. 1
Roosevelt, Nassau County, New York
Site No. 130080

The Proposed Remedial Action Plan (PRAP) for the Jimmy's Dry Cleaners site, was prepared by the New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 12, 2004. The PRAP outlined the remedial measure proposed for the contaminated soil and groundwater at the Jimmy's Dry Cleaners site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on March 1, 2004, which included a presentation of the Remedial Investigation (RI) and the Feasibility Study (FS) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 15, 2004.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the NYSDEC's responses:

Comment 1: What symptoms do you experience when you have exposure to perc? What are the general health effects of exposure to these chemicals? What is the impacts of perc on human beings?

Response 1: The New York State Department of Health (NYSDOH) has a Fact Sheet which describes the health related symptoms of Perchloroethylene (PCE) human exposure. PCE is also know as "Perc" and Tetrachloroethylene. The following information regarding the effects of exposure to tetrachloroethene (also called perchloroetheylene, PCE, or Perc) is from the New York State Department of Health (NYSDOH) fact sheet *Tetrachloroethene (Perc) in Indoor and Outdoor Air (May 2003)*. Copies of the fact sheet are available from the NYSDOH (call 1-800-458-1158). The fact sheet is also posted on the NYSDOH web site at http://www.health.state.ny.us/nysdoh/environ/btsa/fs_perc.htm In humans and animals, the major effects of PCE exposure are on the central nervous system, kidney, liver, and possibly the reproductive system. These effects vary with the level and length of exposure.

In studies involving people who were exposed to PCE, not all humans exposed showed effects at the same levels. The difference in how people respond to the same or similar exposure levels is due, in part, to the individual differences among people. People, for example, differ in age, sex, diet, family traits, lifestyle, genetic background, the presence of other chemicals in their body (e.g., alcohol, prescription drugs), and state of health. These differences can affect how people will respond to a given exposure. One person may feel fine during and after an exposure while another person may become sick. This is known as sensitivity. Differences in sensitivity should be kept in mind when reading the following information on the human health effects of PCE.

Short-Term Exposure - Studies with volunteers show that exposures of 8-hours or less to 700,000 micrograms per cubic meter of air ($\mu g/m^3$) cause central nervous system symptoms such as dizziness, headache, sleepiness, lightheadedness, and poor balance. Exposures to 350,000 $\mu g/m^3$ for 4 hours affected the nerves of the visual system and reduced scores on certain behavioral tests (which, for example, measure the speed and accuracy of a person's response to something they see on a computer screen). These effects were mild and disappeared soon after exposure ended.

Long-Term Exposure – Numerous studies of dry-cleaning workers indicate that long-term exposure (9 to 20 years, for example) to workplace air levels averaging about 50,000 $\mu g/m^3$ to 80,000 $\mu g/m^3$ reduces scores on behavioral tests and causes biochemical changes in blood and urine. The effects were mild and hard to detect. How long these effects would last if exposure ended is not known.

One study reported reduced scores on behavioral tests in 14 healthy adults living (for 10.6 years, on average) in apartments near dry-cleaning shops. The effects were small; the average test scores of the residents were slightly lower than the average score of unexposed people. The range of measured air levels in 13 apartments was 7.6 $\mu g/m^3$ to 23,000 $\mu g/m^3$; one air level was below 100 mcg/m^3, five values were between 100 and 1,000 $\mu g/m^3$, and seven values were above 1,000 $\mu g/m^3$. The average air level in all apartments was 5,000 $\mu g/m^3$ and the median value was about 1,400 $\mu g/m^3$ (that is, half the measured air levels were above 1,400 $\mu g/m3$ and half were below it). As with the long-term occupational studies, how long these effects would last if exposure ended is not known. Confidence in the understanding of exposure in this study is less than that in the occupational studies.

Some studies show a slightly increased risk of some types of cancer and reproductive effects among workers, including dry-cleaning workers, exposed to PCE and other chemicals. Cancers associated with exposures include cancers of the esophagus, bladder, and non-Hodgkin's lymphoma. Cancers less clearly associated with exposures include cancers of the cervix, tongue, and lung. The reproductive effects associated with exposure included increased risks of spontaneous abortion, menstrual and sperm disorders, and reduced fertility. The data suggest, but do not prove, that the effects were caused by PCE and not by some other factor or factors. Data on the workplace air levels in these studies ranged from none (reproductive studies) to some (cancer studies); however, workplace air levels during the times these studies were conducted were considerably higher than those typically found in indoor or outdoor air.

Comment 2: What are the PCE concentrations levels in indoor air?

Response 2: The most recent indoor air monitoring data available is from September 2003, when PCE was detected at 26 $\mu g/m^3$ in the on-site deli and between 5.2 and 6.2 $\mu g/m^3$ in off-site buildings. The concentration of PCE in the Deli is below the NYSDOH air guideline, and in off-site locations levels are similar to typical background concentrations for PCE. A soil vapor extravtion (SVE) system was installed in the Summer of 2002. The highest concentration detected before the SVE system was installed was 1,400 $\mu g/m^3$ in the deli. Concentrations in other buildings near the site ranged from nondetectable to 490 $\mu g/m^3$.

Comment 3: How deep is the soil gas contamination?

Response 3: Soil gas sampling was performed 4 to 8 feet below the ground surface (bgs). PCE contamination in soil gas is likely to be found deeper than 8 feet bgs (as deep as 20 feet bgs), but the 4 to 8 foot depth was chosen to represent the typical depth to a building basement/foundation.

Comment 4: How long will the soil vapor extraction system be running?

Response 4: The NYSDEC plans to expand the current soil vapor extraction system so the entire source area can be remediated. This system is expected to operate until the cleanup is complete, approximately five years.

Comment 5: Has a faster remedy been considered such as the demolition of the building and the removal of contaminated soil? Wouldn't it make more sense to excavate the contaminated soil, especially if this could be done in one year? Wouldn't excavation ultimately be the most cost effective remedy?

Response 5: Currently, there is no exposure to soils via direct contact (contaminated soils are beneath the building and paved areas) and soil gas is being controlled by the existing SVE system. If we were to excavate PCE contaminated soil after the building was demolished, heavy construction equipment (excavation equipment, trucks, etc.) would be needed. It would be necessary to excavate down to approximately 20 feet below the surface of the ground. Excavation would take about 1 year, involve transporting contaminated material over long distances, and would create additional traffic, pollution, and noise through the neighborhood during transport.

The SVE system pulls vapors away from local residences with minimal risk of exposure. When selecting a remedy, we need to balance short term impacts with possible longer term threats, and for this site the short term impacts associated with excavation is greater than the slightly longer term threat of cleaning the soil with an SVE system. It would cost approximately $8 million to demolish the Jimmy's Dry Cleaners building and excavate all contaminated soils but only $1.5 million to expand the existing SVE system.

Comment 6: What caused the contamination to take place, storage or disposal?

Response 6: The causes for contamination include: poor housekeeping practices, storage of spent solvents in drums and other available containers in an inappropriate manner, and cracks and other openings in the floor where the spilled PCE entered the soil beneath the building. The dry cleaning machines also leaked.

Comment 7: How does perc react in the environment? How did it contaminate groundwater?

Response 7: PCE enters the soil as liquid and most of it gets tied up in the spaces between the soil particles. The PCE either slowly migrates down to the water table and then dissolves into the groundwater or it is dissolved by infiltrating precipitation which carries it down to the water table. The PCE groundwater contamination has spread approximately 3/4 of a mile to the south. The PCE contamination also sinks as it is carried along by the groundwater.

Comment 8: Could the Village of Freeport (VOF) water supply wells potentially be impacted by this contamination plume? PCE dissolves in water. Won't that ultimately impact other water supplies? Are drinking water supplies being impacted by this plume?

Response 8: The current VOF drinking water supply wells are to the south of the leading edge of the PCE contaminated groundwater plume from Jimmy's Dry Cleaners. The VOF water supply wells are also significantly deeper than the groundwater contamination and therefore are not likely to be impacted in the future. The drinking water supply wells are regularly tested to insure that all drinking water standards are met.

Comment 9: Are people going to be given devices that they can put into their homes to determine what impacts may be occurring in their homes? Is there equipment, similar to carbon monoxide detectors, available to test for perc and other chemicals in homes?

Response 9: Right now there are no monitoring devices (e.g. like smoke detectors) that residents can buy commercially. However, the NYSDEC, NYSDOH, and Nassau County Department of Health (NCDOH) have monitored those structures closest to the site and have implemented an IRM to mitigate any impacts on these structures. Structures farther from the source area are not expected to have indoor air impacts, but if the agencies believe there is a threat, due to new information, additional monitoring may be performed.

Comment 10: What can a homeowner do to protect themselves?

Response 10: The NYSDEC, NYSDOH, and NCDOH have tested those homes most likely at risk and either found no problem or took measures to reduce indoor air concentrations (i.e. implemented the IRM). If you are still concerned contact us and we will evaluate your situation.

Comment 11: When are gases more of a danger? Summer or Winter?

Response 11: The potential for PCE soil gas contamination to impact structures is greatest in the winter months when there is little ventilation in residents homes (windows are closed tight) and heating systems can cause a negative pressure which may tend to draw PCE soil gas into structures

Comment 12: What are the levels of perc at 44 Dutchess?

Response 12: The PCE concentration at 44 Dutchess in July 2002 was slightly above background concentrations. A soil vapor extraction (SVE) system and Interim Remedial Measure (IRM) was designed and built (in August 2002) to reduce PCE soil vapor concentrations (resulting in a reduction of indoor air concentrations) at this residence and nearby businesses. The SVE IRM has been in operation since August 2002 and has reduced indoor air PCE levels to below typical background concentrations.

Comment 13: Have any homes further down on Dutchess been tested? Why are some homes impacted while adjacent homes are not impacted?

Response 13: All accessible homes, commercial establishments, and schools in the immediate area have been tested, starting on-site and working outward, until no indoor air impacts were found. PCE levels may be different in adjacent homes because some foundations are in better shape than others (fewer cracks and piping penetrations). As the PCE contaminated groundwater plume moves in a southern direction, the contaminated groundwater plume becomes deeper, with cleaner water entering at the water table. This prevents soil gas from becoming a problem in homes further away from the site.

Comment 14: If PCE is diluting in water wouldn't that ultimately result in it sinking deeper into the aquifer?

Response 14: The PCE concentration slowly attenuates while moving through the soil via dispersion, adsorption, and dilution if no active remediation is undertaken. By implementing this remedy on-site, the majority of the source of groundwater contamination will be removed and the remaining groundwater plume should begin to attenuate sooner. There is also a clay layer (confining layer) beneath the contaminated groundwater plume which restricts its ability to impact the deeper aquifer.

Comment 15: How far is well 27 from the site?

Response 15: Well 27 is on Claurome Place which is approximately 2400 feet downgradient of the site.

Comment 16: How wide is the plume?

Response 16: The PCE contaminated plume is approximately 500 feet wide at its widest point, along the east/west axis. It extends from N. Main Street to about 2 blocks to the west of N. Main Street.

Comment 17: Has the plume traveled further than Claurome? How far has the contamination gone?

Response 17: The plume extends south of Claurome Place past West Seaman Avenue (about 3900 feet from the site). Down gradient monitoring wells are located as far south as West Milton Street. These wells are positioned ahead of the PCE contaminated groundwater plume.

Comment 18. How are people on Dutchess being impacted by air contamination from the site?

Response 18: Indoor air has been sampled at three homes on Dutchess Street near the site. Efforts to arrange indoor air sampling at other homes in the immediate vicinity have been unsuccessful. In August 2001, air samples were collected at two homes on Dutchess Street. PCE concentrations of less than 5 $\mu g/m^3$ were detected in both homes. When one of those homes was resampled in May 2002, 490 $\mu g/m^3$ of PCE was detected in a basement bedroom. Since the SVE system began operating in August 2002, concentrations in the monitored homes have been below the NYSDOH air guideline. Periodic indoor air monitoring will continue until the soil vapor contamination has been remediated.

Comment 19: Can someone (NCDOH, NYSDOH) come back and test my home?

Response 19: Individuals who would like to have their residences tested for PCE indoor air levels may contact NYSDOH or NCDOH.

Comment 20: Can the homeowners be supplied data relating to their individual homes?

Response 20: New York State has provided and will continue to provide the results of all air sampling to the owners of the homes and businesses where the samples are collected.

Comment 21: What impacts from perc are taking place at the Deli and Kentucky Fried Chicken (KFC)?

Response 21: Before the SVE system was installed in August 2002, indoor air was sampled six times at the deli (beginning in 1998) and twice at KFC (in 2001 and 2002). PCE concentrations in the deli ranged from 108 to 1,400 $\mu g/m^3$. PCE concentrations at KFC ranged from 10 to 70 $\mu g/m^3$. With the SVE system running, PCE concentrations at the deli have ranged from 26 to 119 $\mu g/m^3$. Concentrations at KFC have ranged from 3.3 to 42 $\mu g/m^3$. The most recent data available are from September 2003, when PCE concentrations were 26 $\mu g/m^3$ at the deli and 5.9 $\mu g/m^3$ at KFC.

Comment 22: Were people aware when they went to eat in the Deli about the perc issue? Were notices posted

in the Deli about the perc (air) contamination.

Response 22: It does not appear that notices were posted to inform patrons of the deli about the indoor air contamination. In the past, customers and employees at the deli were exposed to PCE at concentrations above the NYSDOH guideline for PCE in air. However, it is important to note that the guideline is not a line between concentrations that cause health effects and those that do not. It is much lower than concentrations that have been shown to cause either non-cancer or cancer effects. In addition, the guideline (100 $\mu g/m^3$) is based on the assumption that people are continuously exposed to PCE in air all day, every day for as long as a lifetime. This is not likely the case for employees or patrons of the deli, who are more likely to be exposed for a part of the day and a part of their lifetime.

Comment 23: Who would be at fault if I suffer health impacts from this site?

Response 23: This question is outside the scope of this decision document. However, the SVE IRM has reduced PCE indoor air concentrations at residences and business near the site to levels below the NYSDOH air guideline, and they should remain that way now and in the future.

Comment 24: Should I be concerned about putting in an in-ground pool? (Question was from a Dutchess Street resident who lived directly in back of the site.)

Response 24: Since the groundwater elevation is 20 feet below the ground surface, if you wanted to put in an in-ground pool, there would be no adverse effects from PCE contaminated groundwater.

Comment 25: When was the soil vapor extraction system put in?

Response 25: The SVE system was installed and began operation in August 2002. It has been operating continuously since then.

Comment 26: Before this, were all of the homes in the area contaminated by perc?

Response 26: Homes near the site were first tested in August 2001, and the SVE system began operating in August 2002. Between those dates, significant indoor air contamination was detected in one of the three Dutchess Avenue homes that were tested. It is possible that other homes were affected in the past, but there are no data to show what indoor air PCE concentrations might have been.

Comment 27: Are there private businesses that can come into my home and test my indoor air?

Response 27: Phone numbers for private environmental consultants can be found in your local phone book. All accessible homes, commercial establishments, and schools in the immediate area have been tested, starting on-site and working outward, until no indoor air impacts were found.

Comment 28: What precautionary measures might homeowners take to protect themselves from exposure to these chemicals?

Response 28: The SVE system at the Jimmy's Dry Cleaners site is addressing the indoor air contamination that has been identified in homes and businesses near the site. The SVE system draws in contaminated soil vapor, which keeps the vapors from migrating away from the source area and into overlying buildings.

Comment 29: How much contaminated soil is in this area?

Response 29: About twelve thousand tons of soil would have to be excavated and disposed of in a hazardous waste landfill.

Comment 30: Where is the nearest hazardous waste landfill?

Response 30: The nearest hazardous waste landfill is located in Buffalo.

Comment 31: Where is the money coming from to fund this cleanup?

Response 31: The New York State Superfund is paying for this clean up. The NYSDEC will continue to seek PRP participation in the clean up of this site at every step of the remedial process. In this case we will contact the attorney of James Lawrence's estate, the deceased owner of Jimmy's Dry Cleaners.

Comment 32: Where does the groundwater go and will it ultimately reach the bays towards the south?

Response 32: The groundwater is moving in a southernly direction toward the south shore of Long Island. If left untreated, the groundwater could eventually reach the ocean. In order to address this contamination sooner, and prevent the contamination from spreading further, the site is being split into OU1 and OU2, with OU1 being the source area. By focusing on OU1, the NYSDEC will remediate the source of the contaminated plume thereby reducing PCE groundwater concentrations as soon as possible. In OU2, the NYSDEC will evaluate additional remedies for the contaminated off-site groundwater.

Comment 33: Are there other sites in the area?

Response 33: There was another inactive hazardous waste disposal site near Jimmy's Dry Cleaners. It was called Ranco Wiping Cloth Site (site #130076- located at 409 N. Main St., Freeport), which was cleaned up and delisted in the year 2000. There are also other active dry cleaners, which are not inactive hazardous waste disposal sites, in the immediate area.

Comment 34: How long will it take to get this process going, especially given the fact that Jimmy's estate has no money?

Response 34: The PRP (James Lawrence's estate) will be contacted to determine if they have the resources for the next step. Assuming the PRP can't implement the remedy, the NYSDEC will begin the design process for the remedy (a pilot test will be necessary for the chemical oxidation) which will take about one year. The construction process will probably begin for OU1 in about two years. There are two components to the OU1 remedy; SVE enhancement and chemical oxidation. Since the enhanced SVE will not require an extensive pilot test, the NYSDEC may decide to bid these components separately in order to implement the enhanced SVE portion of the remedy sooner.

Comment 35: Why has the cleanup process taken so long?

Response 35: Nassau County first became aware of a problem at Jimmy's Dry Cleaners in 1988. The county performed some tests and determined the site presented a threat. The New York State Department of Environmental Conservation became involved in 1994. Jimmy's Dry Cleaners was listed in the Registry of Inactive Hazardous Waste Disposal sites in New York and negotiations began with the owner James Lawrence to investigate and clean up the site. The owner subsequently became ill and died. Negotiations continued with legal representatives of Lawrence's estate. The NYSDEC brought a consultant (Shaw E&I) on board and began investigation work in 1999.

Comment 36: How are dry cleaners tested now?

Response 36: Nassau County has a program called Article 11 (regulates hazardous materials and is administered by NCDOH)) whereby dry cleaners are now inspected on a regular basis. Dry cleaners are now required to hire licensed haulers to dispose of hazardous materials (e.g. PCE). Through these inspections some of the dry cleaners with problems are discovered. The NCDOH doesn't routinely collect samples but sometimes does when it sees sloppy house keeping (e.g. leaking drums, stained soils, appearance of spills). Nassau County has one of the best dry cleaning inspection programs in the state. The problem here is historical in nature when dry cleaners operated 20, 30, even 40 years ago, before NYSDEC existed and before the county had a program to inspect dry cleaners. We now have environmental staff able to evaluate these problems and hopefully correct them before they become significant problems. Today's operating dry cleaners are much better at handling hazardous materials, use better technology, are more closely regulated, and consequently much less likely to cause a problem like this.

Comment 37: How is the quality of drinking water? Will the new supply well being constructed by the VOF be impacted by this plume?

Response 37: The water quality of drinking water supplies is regulated by NYSDOH and must meet New York State and federal drinking water standards before it enters the public water supply system.

NYSDEC is aware of the VOF's development of new water supply wells and we have been sharing information with them. The NYSDEC has placed a monitoring well between the plume the VOF's proposed water supply well location on Prince Avenue (West of Jimmy's Dry Cleaners). No contamination was found in that monitoring well. The new supply well will draw water from the Magothy aquifer, which is much deeper than the groundwater contaminant plume emanating from the Jimmy's Dry Cleaners Site. There is also a clay layer below the contaminant plume and above the Magothy aquifer, which restricts the movement of contaminated groundwater in the vertical direction. While any threat to the new supply well posed by this groundwater plume is minimal, the NYSDEC's goal is to remediate the on-site source area as soon as possible.

Comment 38: What is the rate that the plume is moving at?

Response 38: The difference in the water table from Jimmy's Dry Cleaners to West Seaman Avenue is about 5 feet over a distance of 3400 feet. Therefore, the hydraulic gradient (which is the main driving force for groundwater movement) is very low. In addition, the soils in the aquifer tend to slow down (retard) the movement of contaminants. That is the reason the PCE contaminated groundwater plume has not moved too far (approximately 3400 feet) over approximately a 40 year period.

Comment 39: What is the soil like?

Response 39: The groundwater table is approximately 20 feet deep at Jimmy's Dry Cleaners. The geological composition is coarse sand at that point. As the plume drops through the geological formation, the sand particles decrease in size and become mixed with clay and silt particles. The clay and silt layer acts as an aquatard or aquaclude (confining layer), which limits or prevents the contaminated groundwater from moving down into the Magothy (lower) aquifer.

Comment 40: How does the plume affect drinking water supply wells?

Response 40: To date, no drinking water supply wells have been impacted by the plume. NYSDEC has monitoring wells situated down gradient of the plume. We have not detected contaminants in those wells. The VOF's drinking water supply wells are much further south of the down gradient monitoring wells. The NYSDEC will continue to monitor those down gradient wells to determine if there is any indicator that the plume is migrating further south. By implementing the OU1 remedy, a natural attenuation process will begin and PCE concentrations in the plume will start to decline. Additional remedial measures will also be evaluated for the off-site groundwater plume (OU2), to prevent contamination from reaching supply wells to the south or west.

Comment 41: An unsigned, undated written comment was received on March 11, 2004, which essentially said, "the Village is drilling supply wells about five short blocks (southwest) from your site".

Response 41: The supply well location referred to in this comment is the same location (Prince Avenue) discussed in comment #37. See Response #37.

APPENDIX B

Administrative Record

Administrative Record

Jimmy's Dry Cleaners
Operable Unit No. 1
Site No. 130080

1. RI/FS Workplan for Jimmy's Dry Cleaners, dated July 20, 2001, by IT Corporation.

2. Remedial Investigation Report, August 2003, prepared by Shaw Environmental & Infrastructure Engineering of New York, P.C.

3. Feasibility Study Report Jimmy's Dry Cleaners Operable Unit 1, January 2004, prepared by Shaw Environmental & Infrastructure Engineering of New York, P.C.

4. Proposed Remedial Action Plan for the Jimmy's Dry Cleaners site, Operable Unit No. 1, dated February 2004, prepared by the NYSDEC.