

**City of New York
Department of Environmental Protection**

**Emily Lloyd
Commissioner**



**PHASE I ENVIRONMENTAL SITE ASSESSMENT
FOR
THE PREFERRED SHAFT 33B SITE**

**OCTOBER 2005
Revised DECEMBER 2005**

Prepared By: Malcolm Pirnie, Inc.

CONTRACT: 561 (No. 20000030105)

New York City Department of Environmental Protection

ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

TABLE OF CONTENTS

	Starting on <u>Page</u>
Limitations	1
1. Introduction	3
1.1. Scope of Services.....	3
1.2. Relationship to ASTM Standard Practice E1527	3
2. Site Description	5
2.1. Site Reconnaissance	5
2.2. General Site Information	5
2.3. Observations of Current Site Conditions.....	6
2.4. Description of Adjacent Lands and Vicinity Land Uses	6
2.5. Physical Environmental Setting.....	7
2.6. Site and Vicinity Photographs	7
2.7. Site Geology and Hydrogeology.....	8
3. Records Review	9
3.1. Government Environmental Databases	9
3.2. Historical Uses of Site and Adjacent Properties.....	15
3.2.1. EDR Sanborn / Fire Insurance Maps	15
3.2.2. Aerial Photograph	16
3.2.3. NYC Department of Buildings Records	16
4. Conclusions and Recommendations	17
4.1. Conclusions – Environmental Site Assessment.....	17
4.2. Recommendations – Environmental Site Assessment.....	18

FIGURES

Figure 1 – Site Location Map

APPENDICES

- Appendix A – Site Topographic Map
- Appendix B - Site and Vicinity Photographs
- Appendix C – FirstSearch Electronic Database Report
- Appendix D – Aerial Photograph

ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

LIMITATIONS

This Environmental Site Assessment Report [Report] has been prepared for the sole use of Malcolm Pirnie, Inc.'s Client, the New York City Department of Environmental Protection (NYCDEP). The purpose of this Report is to provide information to the Client on the environmental conditions of the preferred Shaft 33B Site, bordered by the eastbound Queensboro Bridge approach to the north and west, E. 59th Street to the south, First Avenue to the east, and a multi-use area (Honey Locusts Park / Gateway Plaza) to the west (the Site).¹

The use of and reliance on this Report by any person or entity other than the Client is not authorized without an agreement between the user and Malcolm Pirnie. Without an agreement with Malcolm Pirnie, Inc., the use of this report by an unauthorized user is for their information only and *shall be solely at the unauthorized user's risk.*

Malcolm Pirnie's work presented in this Report was performed pursuant to the Professional Services Contract between Malcolm Pirnie, Inc. and the NYCDEP, dated January 1, 2002, and the scope of work as described in Malcolm Pirnie's proposal to the Client: A500203 Tunnel 3 DSC. Any modifications, deviations or exceptions to the services proposed or limitations in the scope of the Environmental Site Assessment (ESA) arising out of site access issues and the actual availability of data and information related to the Site are as described in Section 1.2 of this Report.

An ESA can reduce but not wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with the Site. The conclusions in this Report have been based, in part, on information obtained from third parties including environmental agency records,

¹ This ESA was previously submitted in October 2005 and was later revised for consistency in presentation and to clarify the results. Database results are based on the original FirstSearch database search conducted in December 2004.

ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

and other public records regarding the Site obtained from various sources. Unless noted, Malcolm Pirnie, Inc. has not independently evaluated or verified the accuracy or completeness of such third party information. Visual observations of the Site only represent conditions at the time of the Site visit. Malcolm Pirnie, Inc. makes no warranties that the on-site observations made during the ESA are representative of historical or future conditions at the Site. Malcolm Pirnie, Inc. performed its services and prepared this Report at the level customary for other prudent and competent professional engineers performing such services at the time and place where the services are provided. The Report shall be construed neither as a legal opinion nor as compliance with any environmental law. *Malcolm Pirnie, Inc. makes no other warranty, expressed or implied.*

1. INTRODUCTION

1.1. Scope of Services

An Environmental Site Assessment is a due diligence process to identify *recognized environmental conditions* on a property.² This ESA Report provides factual information about the Site in support of the Client's "all appropriate inquiry" into the previous ownership and uses of property consistent with good commercial or customary practices. The Report may not address all requirements to qualify for an innocent landowner defense commonly associated with the Comprehensive Environmental Response Compensation and Liability Act (see 42 USC § 9601(35)(B), the "Superfund" law). The Client's knowledge and experience may also be factors in determining the extent of an "all appropriate inquiry," and only legal counsel is competent to determine the legal implications of the information or conclusions in this Report.

1.2. Relationship to ASTM Standard Practice E 1527

The current American Society for Testing and Materials (ASTM) Standard E 1527 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* provides guidelines for conducting an ESA. However, in the performance of this Assessment, as with any professional service, modifications or exceptions to, or deviations from such guidelines may occur because of factors including but not limited to instructions from the client, site conditions, the availability of records, or scheduling and timing issues. The scope of services Malcolm Pirnie developed for this ESA and accepted by the Client is controlling. It is standard procedure to review certain items when developing Phase I ESA reports.

ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

The Bureau of Environmental Planning and Assessment (BEPA) instructed Malcolm Pirnie not to include the following items in this ESA:

- Interviews with site occupants, and past / present owners of the site and adjacent sites
- City Directories, title boundaries and aerial photographs

² The definition of “recognized environmental conditions” is provided in the conclusion section of this Report.
Shaft 33B – Preferred Shaft 33B Site

ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

2. SITE DESCRIPTION

This Report presents the findings of the ESA at the preferred Shaft 33B Site which is bordered by the eastbound by Queensboro Bridge approach to the north and west, E. 59th Street to the south, First Avenue to the east, and a multi-use area to the west in New York, New York. The ESA was commissioned by the NYCDEP and was conducted by Malcolm Pirnie, Inc. pursuant to an Agreement, under Contract 561 (No. 20000030105) and a scope of services first described in Malcolm Pirnie's proposal to the NYCDEP: A500203 Tunnel 3 DSC.

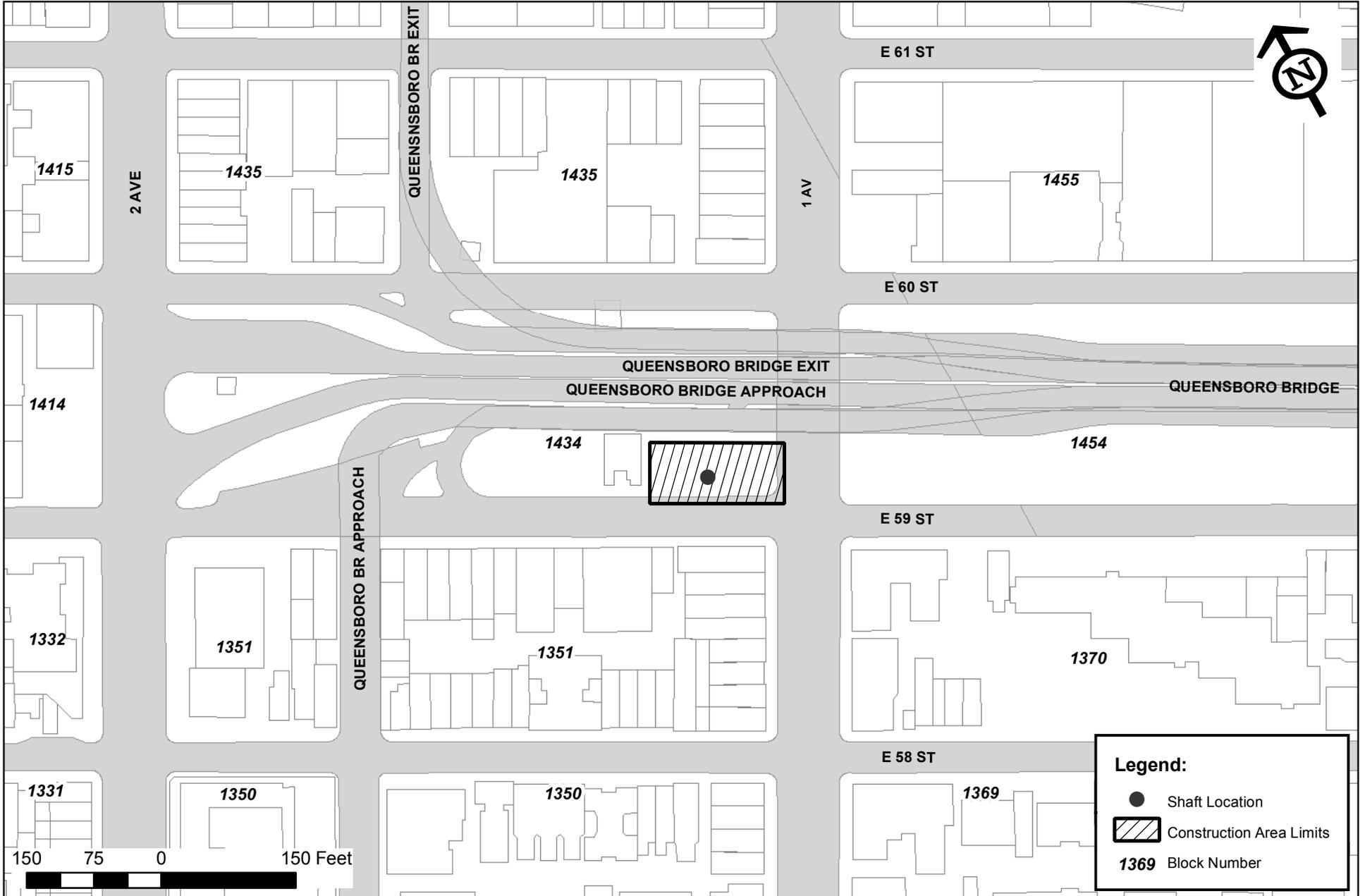
2.1 Site Reconnaissance

Warren Riznychok (Malcolm Pirnie) performed a site reconnaissance on December 8th, 2004. This reconnaissance included a general observation of the preferred Shaft 33B Site and the surrounding buildings, properties, and neighborhoods.

2.2 General Site Information

In total, the preferred Shaft 33B Site (NYC Department of Transportation [NYCDOT] site and portions of the adjacent sidewalks) would be 7,400 square feet in size. The preferred Shaft 33B Site, as shown in Figure 1, is located at the intersection of E. 59th Street and First Avenue in New York, New York. The area around the Site is zoned for commercial and retail uses, residential development, and personal services. Occupied commercial space consists predominantly of small, independently-owned businesses at ground level with residential space above.

The Site is bordered by the eastbound Queensboro Bridge approach to the north and west, E. 59th Street to the south, First Avenue to the east, and the multi-use area to the west. The properties in the



Legend:

- Shaft Location
- ▨ Construction Area Limits
- 1369 Block Number

Map Document (S:\Projects\2175158\GIS_Figures\Shaft_33\BEIS_Field_Work\DEP_Site_(HazMat).mxd) 12/8/2005 -- 11:40:26 AM



**NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
 PROPOSED SHAFT 33B TO CITY TUNNEL NO. 3
 STAGE 2 - MANHATTAN LEG
 PREFERRED SHAFT SITE
 SITE LOCATION MAP**

FIGURE 1

ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

immediate area to the south of E. 59th Street are primarily 4- to 5-story structures with commercial storefronts and personal service establishments at street level with residential space above.

2.3 Observations of Current Site Conditions

Malcolm Pirnie personnel observed the following conditions:

- The Site is currently being used as a construction staging area for the rehabilitation of the Queensboro Bridge.
- There are underground electrical utilities serving lamp posts and traffic signals on the Site.
- The multi-use area is adjacent to and west of the Site.
- The area surrounding the Site on the south side of E. 59th Street primarily comprises 4- to 5-story structures with commercial storefronts and personal service establishments at street level with residential space above.
- The ground cover on the Site includes pavement, asphalt, and sidewalks.

2.4 Description of Adjacent Lands and Vicinity Land Uses

The preferred Shaft 33B Site is located in a mixed business, commercial, residential, and public transportation area. There are 17 buildings listed in the National Register of Historic Places within ½ mile of the Site, and six receptor sites also within ½ mile of the Site. These receptor sites include:

- Five schools (P.S. 59; P.S.167; Aviation Trades High School; Richman High School; and Rockefeller University).
- Ewing Memorial Hospital.

ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

The following are descriptions of current lands and land uses immediately adjacent to the Site as observed during site reconnaissance:

- North: The Queensboro Bridge, eastbound approach, and NYCDOT facility.
- South: A fitness center, apparel store, home furnishing sales, home decorating stores, an underground parking garage, and small restaurants at street level with residential apartments above.
- West: The multi-use area and the Queensboro Bridge eastbound approach.
- East: A Food Emporium supermarket.

2.5 Physical Environmental Setting

Land in the vicinity of the preferred Shaft 33B Site is relatively flat, and areas within ½ mile from the Site along the East River are located within both 100- and 500-year flood plains. In addition, these areas are classified as wetlands by the National Wetlands Inventory. There are no water bodies at the Site itself. The nearest water body is the East River, approximately ¼ mile to the east. A topographic map is provided in Appendix A.

There are four federal United States Geological Survey (USGS) wells within ½ mile of the preferred Shaft 33B Site; two of these sites are within ¼ mile of the Site. Based on database information, out of these four wells, only one is still active.

2.6 Site and Vicinity Photographs

Photographs taken during site reconnaissance are provided in Appendix B. The photographs show the following features:

- The Site is in a general state of good repair.

ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

- The Site and surrounding area is predominantly covered with asphalt, pavement, curbs, and concrete.

2.7 Site Geology and Hydrogeology

Recent geotechnical borings taken at the preferred Shaft 33B Site showed bedrock to be approximately at 23 feet below grade. Groundwater was encountered from 10 to 15 feet below grade and recent environmental borings in June 2005 showed groundwater at 9 to 13 feet below grade. The general direction of groundwater flow is from west to east towards the East River. Based on topographical maps of the area around the Site, the overland flow of water, i.e. stormwater, environmental releases, would also flow in a west to east direction.

3. RECORDS REVIEW

Malcolm Pirnie reviewed records from reasonably ascertainable sources, which were publicly available and obtained within the time and budget constraints of this ESA, but did not require an extraordinary review of irrelevant data in the process. This record review was conducted to obtain information regarding the recognized environmental conditions of the preferred Shaft 33B Site.

3.1 Government Environmental Databases

Malcolm Pirnie obtained a listing of federal and state environmental enforcement sites from a private database management firm, FirstSesarch Technology Corporation, for the area in which the preferred Shaft 33B Site is located. This firm organizes government agency list sources in a consolidated format. Malcolm Pirnie makes no representation about the reliability and accuracy of the information contained within the lists. The complete database report is provided in Appendix C and is available at Malcolm Pirnie Inc.'s New York City office located at:

Malcolm Pirnie, Inc.
75-20 Astoria Boulevard, Suite 350
Jackson Heights, New York 11370

The lists and the geographic area included in the search are presented below. **Please note, the list names for which the search returned positive findings are noted in bold letters and highlighted.**

ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

Government Database List	Distance From Site (miles)
<i>Federal</i>	
NPL	National Priority List 1.00
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System CERCLIS – No Further Remedial Action 0.50
CERCLIS-NFRAP	Planned 0.25
RCRIS-TSD	Resource Conservation and Recovery Information System –Treatment, Storage, Disposal 0.50
RCRIS-COR	RCRIS – Corrective Action Sites 0.25
RCRIS-GEN	RCRIS – Hazardous Waste Generator 0.25
RCRIS-NLR	RCRIS – No Longer Regulated 0.25
ERNS	Emergency Response Notification System 0.25
NPDES	National Pollution Discharge Elimination System 0.25
FINDS	Facility Index System 0.25
TRIS	Toxic Release Inventory System 0.25
HMIRS	Hazardous Material Incident Reporting System 0.25
NCDB	National Compliance Database 0.25
PADS	PCB Administrative Database System 0.25
Wetlands	National Wetlands Inventory 0.50
Floodplains	Flood Zone Boundaries 0.50
Nuclear Permits	Nuclear Regulatory Commission Permits 0.50
Historic/ Landmark	National Register of Historic Places 0.50
Federal Land Use	Federal Land Use Restricted Areas 0.50
Federal Wells	Federal Wells List 0.50
Receptors	1990 Census Bureau Listing 0.05

ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

Government Database List	Distance From Site (miles)
<i>Federal Cont.</i>	
Soils	USGS Soil Data
	0.25
Federal Other	0.25
<i>State</i>	
State Sites	State Sites List
	1.00
Spills – 1990	State Spills List
	0.25
Spills – 1980	State Spills List
	0.25
SWL	Solid Waste Landfills
	0.50
Permits	Permitted Facilities
	0.25
REG UST/ AST	Registered Underground Storage Tanks/ Aboveground Storage Tanks
	0.25
LUST	Leaking Underground Storage Tanks
	0.25
State Wells	State Wells List
	0.50
State Other	0.25
<i>Federal and State</i>	
Aquifers	Water Related GIS Data Layers
	0.50
ACEC	Areas of Critical Environmental Concern
	0.25
Releases (Air/Water)	0.25
Towers	0.15
Misc.	0.25

Of the positive database findings, the following items may represent an environmental condition as related to the Site. Detailed information regarding these items can be found within the FirstSearch database report located in Appendix C and is available at Malcolm Pirnie Inc.’s New York City office located at:

Malcolm Pirnie, Inc.
 75-20 Astoria Boulevard, Suite 350
 Jackson Heights, New York 11370

Within 0.25 miles of the preferred Shaft 33B Site, there are:

ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

- 4 RCRIS Large Quantity Generators
- 17 RCRIS Small Quantity Generators
- 14 RCRIS Conditionally Exempt Small Quantity Generators
- 14 RCRIS Sites with no available information.
- 1 RCRIS Transporters

There were three spills reported within ¼ miles of the site in the 1980 database. Two of these spills were within 0.15 miles of the Site. There were 49 spills reported within ¼ mile of the site as identified in the 1990 database; 21 of these sites were within 0.15 mile of the site. These spills included:

- Gasoline
- Diesel
- Motor Oil
- Unknown Petroleum Products
- # 2, #4 and #6 Fuel Oil
- Transformer Oil
- Ethylene Glycol
- A Non-Petroleum Hazardous Material
- Dielectric Fluid
- Asbestos

Groundwater hydrogeology at the preferred Shaft 33B Site flows from west to east towards the East River. Area topography based on USGS mapping of the area around the preferred Shaft 33B site also suggest that spills which are west of the site would flow in an eastwardly direction and therefore represent incidents most likely to impact Site groundwater or soils. Additional details regarding all spills can be found in the environmental database search report provided as part of Appendix C which is located in Malcolm Pirnie Inc.'s New York City office at:

ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

Malcolm Pirnie Inc.
 75-20 Astoria Boulevard, Suite 350
 Jackson Heights, New York 11370

The following table lists the spills located immediately to the west or within one block north or south of the site and are the spills most likely to have had any impact on the site:

Search ID No.	Location	Material Spilled	Media Affected	Quantity	Status/ Closure Date
1433	E. 59 th Street & 1 st Avenue	Unknown Petroleum	Soil	1 Gallon	10/14/04
1491	E. 59 th Street & 2 nd Avenue (Queensboro Bridge Approach)	Unknown Petroleum	Land	Unknown	08/25/04
1437	E. 58 th Street & 1 st Avenue	Unknown Petroleum	Land	2 Gallons	06/03/04
1031	E. 59 th Street b/t 2 nd & 3 rd Avenues	Motor Oil	Sewer	25 Gallons	08/04/98
1033	E. 59 th Street & 2 nd Avenue	Diesel	Land	Unknown	06/20/97
1074	345 E. 59 th Street (DOT Garage)	Gasoline	Air	<1 Unknown	02/18/97
1205	398 E. 58 th Street	# 2 Fuel Oil	Land	1 Gallon	04/21/94

There is one Emergency Response Notification System (ERNS) site within 0.15 miles of the preferred Shaft 33B Site having asbestos as the material reported. A second site within 0.25 miles of the Site also had asbestos as the reported material.

There are two Toxic Release Inventory System (TRIS) sites within 0.25 miles of the preferred Shaft 33B Site. For one of the sites 1,1,1-Trichloroethane was the material reported. The Environmental Database did not have any information on the second TRIS site.

ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

There are seven Hazardous Material Incident Reporting System (HMIRS) sites within 0.25 miles of the preferred Shaft 33B Site; one additional site is within 0.15 miles of the Site. The following materials were reported:

- #1, #2, #4, #5, and #6 fuel oils
- Gasoline
- Three unknown products having ID's: 84093, 24104 and 14196

There are 23 Regulated Underground Storage Tanks (USTs) / Aboveground Storage Tanks (ASTs) sites within 0.15 miles of the preferred Shaft 33B Site and another 23 within 0.25 miles of the Site.

There are seven Leaking Underground Storage Tanks (LUSTs) sites within 0.15 miles, 10 more within 0.25 miles and an additional 21 within 0.5 miles of the preferred Shaft 33B Site. The following materials were reported:

- Diesel Fuel
- #2, #4, and #6 Fuel Oils
- Gasoline
- Natural Gas

There are nine reported release sites within 0.25 miles of the preferred Shaft 33B Site and one other within 0.15 miles. The following materials were reported:

- Asbestos
- Dielectric Fluid
- Diesel Fuel
- Transformer Oil
- Unknown Material

ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

There are two nuclear permitted sites within 0.5 miles of the preferred Shaft 33B Site. Both are at 450 Park Avenue and registered to Alfred Dunhill (North American) LTD.

Based on the number of spills, permitted RCRIS generators, regulated USTs and ASTs, LUST sites and environmental releases in the vicinity of the site, there exists the potential for soil and groundwater contamination from off-site sources that may have migrated onto the site.

3.2 Historical Uses of Site and Adjacent Properties

Malcolm Pirnie reviewed the following reasonably ascertainable historical sources to obtain information on the history of the preferred Shaft 33B Site. This information provides historical information from 1892 to the present and was obtained from:

- EDR Sanborn / Fire Insurance Maps
- Aerial Photographs
- NYC Department of Building (DOB) Records

3.2.1 EDR Sanborn / Fire Insurance Maps

Malcolm Pirnie obtained Sanborn Maps from Environmental Data Resources, Inc. Copies of these maps have not been included in this ESA, but have been kept on file at Malcolm Pirnie. These maps are available for review by the Client at their request.

A total of 17 maps were obtained. The earliest of these maps dates from 1892 and the most recent map dates from 1996. After reviewing these maps, it appears that in general, there are few significant construction projects that have occurred on any of the adjacent properties to the preferred Shaft 33B Site within the past 100 years other than the replacement of 5- to 6-story structures with

ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

high-rise residential buildings. The most significant change on the Sanborn maps occurred between the 1907 map and the 1951 map, when New York City Block #1434, which had previously consisted primarily of small mixed-use residential and commercial buildings, was replaced by the Queensboro Bridge. Although the Queensboro Bridge was constructed in the early 1900's, Sanborn maps were not available from 1907 to 1951 which includes the construction period of the Queensboro Bridge. As part of the construction effort, open space was preserved along the E. 59th Street side of the Queensboro Bridge and is the multi-use area.

3.2.2 Aerial Photograph

A December 2005 aerial photograph shows the preferred Shaft 33B Site located immediately below the Queensboro Bridge, on a block designated as 'transportation' on the NYC's Preliminary Land Use Tax Output map. The Queensboro Bridge approach is located approximately 300 feet to the west of this Site. This Site is located slightly east of the multi-use area. Other open space in the area include tennis courts to the northwest of the Site, and areas in the center of the nearby blocks, which area likely the backyards of the residential properties.

The majority of building structures in this area appears to be low-rise residential and mixed-use commercial and residential development. A few high-rise complexes are evident from 1996 aerial photographs.

3.2.3 NYC Department of Buildings Records

An attempt was made to acquire available Site information through the NYC DOB Building Information System (BIS). However, since no specific address exists for the preferred Shaft 33B Site, no information was available.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions - Environmental Site Assessment

Malcolm Pirnie performed an ESA for the preferred Shaft 33B Site and its findings are provided in Chapters 2 and 3 of this Report. As a result of the findings in Chapters 2 and 3, the following conclusions are offered:

Recognized Environmental Conditions

A recognized environmental condition means "...the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater or surface water of the property." Recognized environmental conditions do not "...include de minimis conditions that generally do not present a material risk of harm to public health or the environment, and that generally would not be subject of an enforcement action if brought to the attention of appropriate government agencies. Conditions determined to be de minimis are not recognized environmental conditions." (ASTM E1527 ¶3.3.31)

This ESA has revealed no evidence of recognized environmental conditions in connection with the preferred Shaft 33B Site.

Historical Recognized Environmental Condition

A historical recognized environmental condition means an "... environmental condition which in the

ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

past would have been considered a recognized environmental condition, but which may or may not be considered a recognized environmental condition currently.” (ASTM E 1527 ¶ 3.3.16) The use of this term largely depends on the current impact of the condition on the preferred Shaft 33B Site. For example, if a site remediation had occurred and the overseeing government agency accepted the remediation, the condition may be considered a ‘historical recognized condition’.

This ESA has revealed no evidence of historical recognized environmental conditions in connection with the preferred Shaft 33B Site.

Other Environmental Conditions

In certain situations, a Site condition, observed by Malcolm Pirnie or noted in the available records, may not meet the definition of a ‘recognized environmental condition’. However, presence of these environmental conditions may impact the Client’s due diligence decisions regarding the Site.

In the course of this ESA, other environmental conditions in connection with the preferred Shaft 33B Site were observed or discovered in the previously-described documents, as follows:

- Environmental Database records indicate the potential for soil and groundwater contamination, based on sources in the vicinity (e.g., the history of spill records).

4.2 Recommendations - Environmental Site Assessment

Malcolm Pirnie performed an ESA for the preferred Shaft 33B Site and its findings are provided in Chapters 2 and 3 of this Report. As a result of the findings in Chapters 2 and 3, the following recommendations are offered:

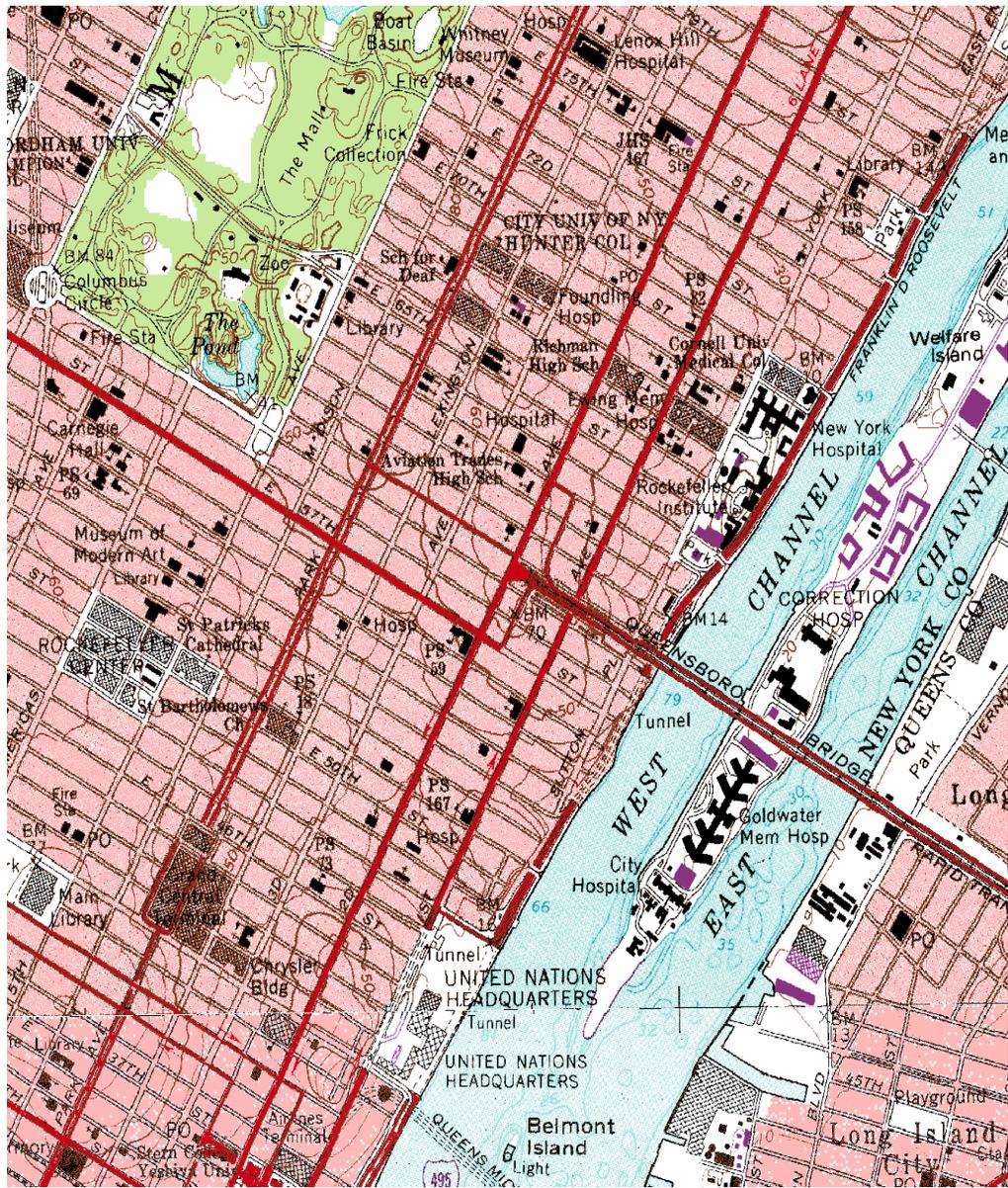
ENVIRONMENTAL SITE ASSESSMENT REPORT
Preferred Shaft 33B Site
New York, New York

Phase II Environmental Site Assessment

Based upon the information obtained, it is recommended that a Phase II ESA be performed for the preferred Shaft 33B Site, to include soil borings and associated chemical testing within and adjacent to the Site boundaries. The constituents listed in Section 3.1, Government Environmental Databases, would be reviewed to determine the appropriate chemical analyses to be conducted. These soil borings and chemical analyses are recommended to determine the potential for off-site migration of contaminants to the preferred Shaft 33B Site, and to identify disposal needs and costs of Site soils during construction. Water testing may also be necessary, depending upon whether excavation activities occur at or below the water table.

APPENDIX A

SITE TOPOGRAPHIC MAP



SITE TOPOGRAPHIC MAP



**NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
THE PREFERRED SHAFT 33B SITE**

APPENDIX A

APPENDIX B

SITE AND VICINITY PHOTOGRAPHS



**INTERSECTION OF E. 59TH STREET AND FIRST AVENUE
LOOKING AT THE PREFERRED SHAFT 33B SITE**



**FOOD EMPORIUM EAST OF THE PREFERRED SHAFT 33B SITE
LOOKING UP FIRST AVENUE**



**NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
THE PREFERRED SHAFT 33B SITE**

APPENDIX B



PREFERRED SHAFT 33B SITE



**LOOKING WEST ON E. 59TH STREET SOUTH OF THE
PREFERRED SHAFT 33B SITE**



**NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
THE PREFERRED SHAFT 33B SITE**

APPENDIX B



**LOOKING EAST ON E. 59TH STREET
SOUTH OF THE PREFERRED SHAFT 33B SITE**



**NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
THE PREFERRED SHAFT 33B SITE**

APPENDIX B

APPENDIX C

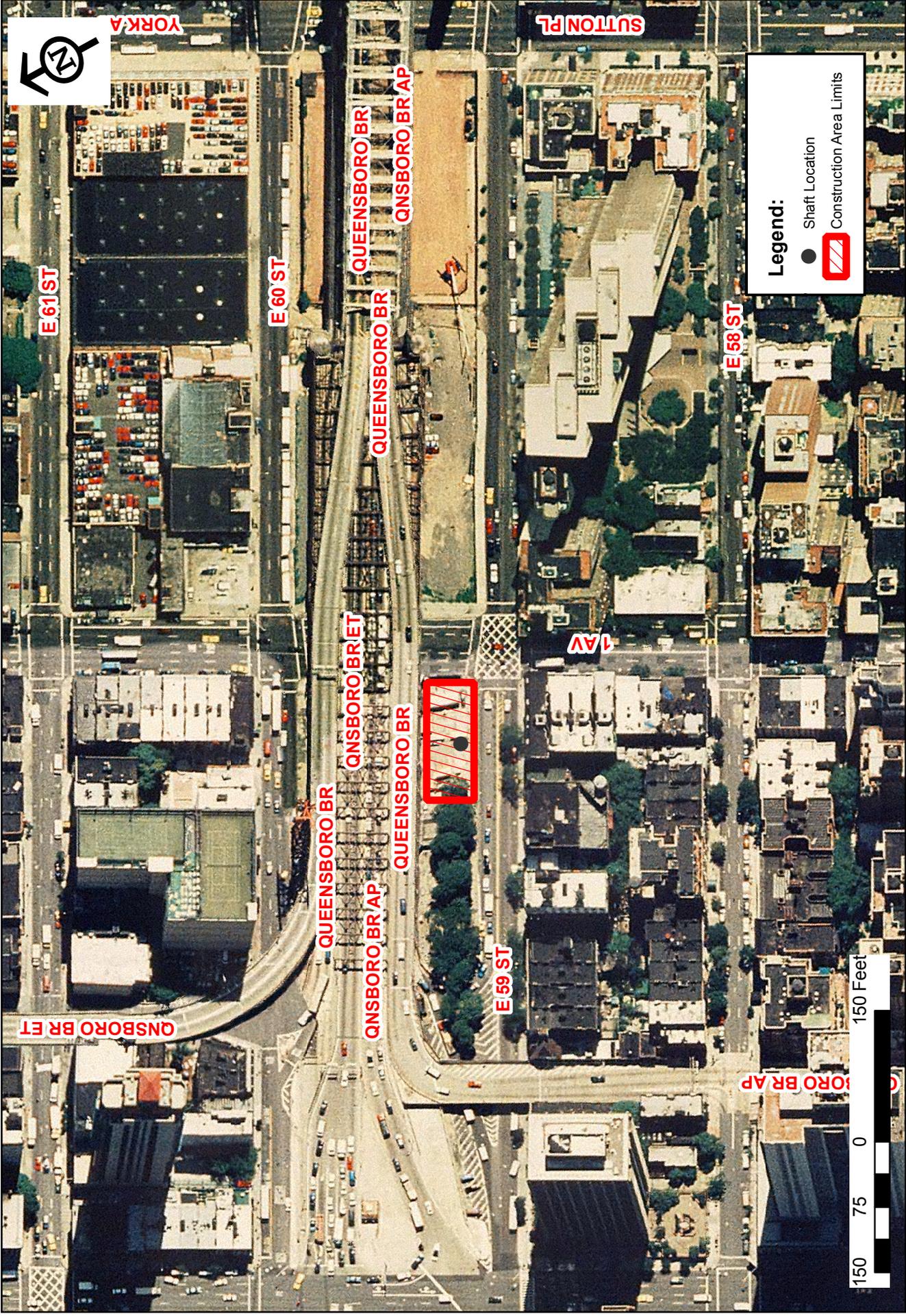
FIRST SEARCH ELECTRONIC DATABASE REPORT

The FirstSearch Electronic Database Report is on file and available at Malcolm Pirnie Inc.'s New York City office:

Malcolm Pirnie Inc.
75-20 Astoria Boulevard, Suite 350,
Jackson Heights, New York 11370

APPENDIX D

AERIAL PHOTOGRAPH



Legend:

- Shaft Location
- ▨ Construction Area Limits

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
 CITY TUNNEL NO. 3, STAGE 2
 PREFERRED SHAFT 33B SITE
 AERIAL MAP



DECEMBER 2004