

**PHASE I
ENVIRONMENTAL SITE ASSESSMENT**

August 2005

For Property at:
11-02 Broadway, Long Island City, New York
Nelson Foundry

TRC Project Number: 31193-0300-00006

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Executive Summary

TRC Environmental Corporation (TRC) was contracted by the New York City Economic Development Corporation (NYCEDC) to perform a Phase I environmental site assessment (ESA) of the property identified as the Nelson Foundry located at 11-02 Broadway in Long Island City, New York, hereby known as the subject property. The subject property consists of approximately 0.67 acres of land that is currently occupied by an industrial warehouse building and contiguous two-story commercial building which contain a total of 29,129 square feet of space.

The objective of the Phase I scope of work was to assess past or present conditions related to hazardous waste and materials which could cause an environmental liability and to review the environmental regulatory status of the subject site for the purpose of site development. This assessment was performed following ASTM protocols for Phase I environmental site assessments.

As part of the Phase I site assessment, TRC reviewed existing relevant information regarding the subject property and conducted a visual inspection of the subject property for the purpose of identifying potential areas of environmental concern such as, but not limited to, oil or chemical spillage. TRC also contracted with Environmental Data Resources, Inc. (EDR) to conduct a background investigation of the subject property that consisted of a file review of State and Federal agency environmental databases, along with various City of New York municipal agency files. TRC also reviewed files on the subject property located at the Queens Department of Buildings office.

Based on the findings of the Phase I, TRC identified six (6) Recognized Environmental Conditions (RECs) and five (5) Potential Recognized Environmental Conditions (PRECs) on the subject property as described in the following sections.

Six (6) known recognized environmental conditions exist on the subject property as follows:

- Historically, several hundred drums containing acid wastes, caustic wastes, and solid/sludges were located at the subject property. The on-site drums contained elevated levels of sulfuric acid, hydrofluoric acid, sodium hydroxide, lead, chromium and arsenic. According to the documented condition of the facility between 1988 and 1990, the owners of the facility created conditions which pose a hazard to public health, welfare and the environment.
- The subject property is listed as a UST, AST, RCRA NLR, TRIS, and CERCLIS site.
- TRC identified approximately 30 55-gallon drums located in the southeastern portion of the warehouse building. These drums contained an unknown solid material and were deteriorated to the point where the materials discharged to the surrounding dirt floor.

- One leaking electrical transformer was identified on the floor on the northeastern corner of the warehouse building. The transformer oil is likely PCB-containing. A strong unidentifiable odor was also noted in this area. There is an adjacent sub-level transformer room with limited access.
- Soil staining appeared present throughout the majority of the southeastern portion of the warehouse building, specifically in the area containing deteriorated drums. This portion of the building has a dirt floor.
- Petroleum staining of the dirt floor was noted at various locations throughout the warehouse building.

Five (5) potential on-site recognized environmental conditions exist as follows:

- No known assessments of the overall on-site soil or ground water have been conducted on the subject property. Based on the historical and potential on-going presence of known hazardous materials improperly stored and discharged on the site, and the presence of a dirt floor located at the subject property during operations, it is likely that on-site soils and/or groundwater have been adversely impacted as a result of historic operations.
- TRC identified vent/fill pipes and the possible location of a suspect UST in the southeastern portion of the warehouse building. One additional vent pipe was noted along the sidewalk on the northwestern side of the office building.
- Large amounts of solid waste, including metal, wood, plastic, glass, plastic, and various types of additional materials are present throughout the warehouse building. In addition to solid waste, approximately 30 junk vehicles are present in the building, some of which are leaking fluids.
- The adjacent office building portion of the subject property was not inspected during the TRC walk-over due to the inability to access the ground floor and unsafe building conditions on the second floor. However, TRC identified a boiler room and a 275-gallon AST in this portion of the subject property.
- Suspect ACMs were noted by TRC in the warehouse and office buildings on the subject property.

Two (2) potential off-site recognized environmental conditions exist as follows:

- Numerous sites in the immediate vicinity of the site and the surrounding area are listed on U.S. E.P.A. and State environmental database lists, including RCRA NLR sites, RCRA CORRACT sites, RELEASE sites, UST and AST sites, LTANKS sites, State Hazardous Waste Sites, and State Spill sites.
- Several commercial properties, including an auto repair shop, abut the subject property building to the northeast and east, respectively.

1.0 INTRODUCTION

1.1 Statement of Purpose

This Phase I Environmental Site Assessment (ESA) was performed on the property located at 11-02 Broadway, Long Island City, NY (hereinafter the "subject property"). The subject property is occupied by the former Nelson Galvanizing, Inc. warehouse and office buildings. A site location map is presented as Figure 1 in Appendix A. This Phase I ESA has been prepared by TRC in accordance with American Society for Testing and Materials (ASTM) E 1527 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* and is intended for the sole use of the New York City Economic Development Corporation (NYCEDC). The purpose of this assessment is to identify *Recognized Environmental Conditions* as defined in the ASTM E 1527 standard, in connection with the property.

1.2 Scope of Investigation/ Services

This Phase I ESA consisted of the following tasks:

- Site reconnaissance.
- Description of historical site conditions.
- Review of environmental database and regulatory agency records.
- Review of previous reports associated with this and other adjacent properties.
- Preparation of a report summarizing findings, opinions, and conclusions.

1.3 Limitations and Exceptions

1.3.1 Accuracy and Completeness

TRC makes no guarantees as to the accuracy or completeness of information obtained from others. It is possible that information exists beyond the scope of this investigation or that was not provided to TRC. Additional data subsequently provided, discovered, or produced may alter findings or conclusions made in this Phase I ESA report. TRC is under no obligation to update this report to reflect such subsequent information. The findings presented in this report are based upon the information reasonably available and observed site conditions at the time of this assessment. Conditions may have changed since that time and the findings and conclusions of this report are not meant to be indicative of future conditions at the subject property. This report may not be relied on by any party other than the client with whom TRC has contracted to prepare this report.

1.3.2 Warranties and Representations

This report does not warrant against: (1) operations or conditions which were not in evidence from visual observations or historical information obtained; (2) conditions which could only be determined by physical sampling or other intrusive investigation techniques; or (3) locations other than the client provided addresses and/or legal parcel description or information on off-site location (with possible impact on the subject properties) not published in available records.

1.3.3 Continued Validity/User Reliance

This report is presumed to be valid for a period of 180 days from its completion or until NYCEDC obtains specific information that may materially alter a Finding, Conclusion or Opinion in this report or until NYCEDC is notified by TRC that it has obtained specific information that materially alter a Finding, Conclusion or Opinion in this report.

1.3.4 Exceptions to the ASTM E 1527 Practice

This assessment was conducted to obtain information on past or present environmental conditions or activities on the subject property that may present environmental risks or liabilities per ASTM standards. This assessment did not involve a detailed regulatory compliance audit or extensive interviews with key personnel (e.g., property owner, property manager). In addition, signatures and copies of professional resumes of the TRC personnel that completed and reviewed the Phase I report are not provided with this report.

1.3.5 Significant Assumptions

In this report, the terms "relevant issues" and "recognized environmental conditions" are used. "Relevant issues" refers to information regarding the subject property or properties in the immediate vicinity that, in TRC's opinion, is necessary to an overall understanding of the subject site, and/or conditions that influence the environmental status of the property. Information that is not considered relevant is not included in this report.

The term "recognized environmental conditions" refers to 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, ground water, or surface water of the property.

References to upgradient and downgradient properties are based on an estimated direction of ground water flow. Ground water flow directions are estimated based on surface topography, which typically reflects ground water flow direction. The actual direction of ground water flow may differ from that assumed and may be influenced by the presence, if any, of subsurface structures or large volume

withdrawal wells in the area. The ground water is estimated to flow in a westerly direction, towards the East River.

2.0 SITE DESCRIPTION

2.1 Site Location and Legal Description

The subject property is located at 11-02 Broadway, Long Island City, Queens, New York. The site area consists of approximately 0.67 acres which is occupied by two (inter-connected) buildings totaling approximately 29,129 square feet of space.

Based on a review of the City of New York Assessor's records, the property is identified as being located in Section 3, Block 316, Lot 1 in the Borough of Queens.

A site location map is presented as Figure 1 in Appendix A. A detailed site plan developed by TRC is presented as Figure 2 in Appendix A.

2.2 Site and Vicinity General Characteristics

The subject property is located at the intersection of 11th Street and Broadway at 11-02 Broadway in Long Island City. The parcel encompasses a portion of Lot 1, with frontage along Broadway, 11th Street, 33rd Avenue, and 12th Street. The geographic coordinates of the site are N40° 46' 1" latitude and W73° 56' 7" longitude. A site location map is provided on the respective USGS Quadrangle shown as Figure 1.

There are currently two interconnected buildings on the subject property, including a warehouse building and a two-story office (former) building. The subject property encompasses road frontage along 11th Street between Broadway and 33rd Avenue, as well as road frontage on 33rd Avenue between 11th and 12th Streets (see Figure 2).

The subject property is located in an area zoned R-5, which is designated for residential purposes. Predominant zoning classifications within a 1/4-mile radius of the project site include residential R-4, R-5, and/or R-6 in all directions. A manufacturing district (MI-1) is located within 1/4-mile to 1/2-mile to the southwest of the subject property.

The subject property is serviced by municipal water and sewer.

2.3 Current Uses Of Property - Description of Structures, Roads, and Other Improvements

The two-story office building (former) portion of the subject property is currently vacant. The warehouse portion of the subject property consists primarily of vacant space. Based on the site inspection, the northwestern portion of the warehouse space is leased to a business identified as Bear Steel (see Figure 2). Bear Steel currently operates a metal cutting and welding operation at the subject property. In addition, during the site visit, TRC was informed that the adjacent auto repair business, located at 11-06 Broadway and abutting the subject property, also leases space to store junk automobiles.

Approximately 20-30 junk automobiles (taxi-cabs) are located in the northeastern portion of the subject property.

As indicated on Figure 2, the subject property is occupied by a steel frame/sided and metal roof warehouse building and a two-story brick building. No exterior parking areas are located on the subject property. The on-site building has been mostly vacant since 1994 when the former site occupant, Nelson Galvanizing, Inc., vacated the property. The subject property is located on a lot that is relatively flat. The terrain in the vicinity of the site slopes gently to the west towards the East River.

2.4 Current Uses Of Adjoining Properties

Several commercial properties abut the subject property building to the northeast and east, respectively. These properties include the Car & Van Auto Repair Shop & Taxi Meters, a gated parking lot occupied by a trailer and numerous vehicles, and Athens Fabrication, a structural and ornamental steel shop (see Figure 2). Access to the subject property warehouse building can be gained through the rear of the above-mentioned auto repair shop.

The subject property is located among commercial properties. To the northwest across 11th Street is PDC Truck Sales and Leasing, Inc. which occupies that entire adjacent block. To the north across Broadway is the Broadway Auto Repair shop, and to the northeast across Broadway is the Alpine Kitchens, Inc. warehouse. To the southeast across 12th Street is a vacant paved parking lot. To the southwest across 33rd Avenue are the Land Rover Parts & Service auto repair shop and Harry's Alignment auto repair shop, while directly west across 33rd Avenue is the Catholic Commission Municipal Board (CCMB). In general, the surrounding area consists of mixed commercial, light industrial, and residential properties.

3.0 USER PROVIDED INFORMATION

3.1 Title Records

Title records for the subject property were not reviewed or provided to TRC by the owner or occupant.

3.2 Environmental Liens or Activity and Use Limitations

Based on a review of information obtained for the property from the NYC Department of Finance Office of the City Register web page (<http://nyc.gov.html/contact/contact>), TRC identified information regarding City and Federal environmental liens associated with the subject property, as summarized below:

- Nelson Foundry, Inc. (Block 316, Lot 1) is listed on the 2004 New York City Tax Liens list of properties. According to the document, Nelson Foundry, Inc. had a lien in the amount of \$ 28,160.46 issued against the property and recorded at the above office.
- A Notice of Federal Lien was issued on April 20, 2000 by the United States Environmental Protection Agency (U.S. EPA) against the subject property. This statutory lien secures the repayment of all costs and damages for which Nelson Foundry, Inc. is liable to the U.S. EPA for environmental damages incurred and the subsequent remedial efforts conducted by the EPA at the subject property.
- A Federal Lien was issued on August 25, 2000 by the U.S. EPA against the subject property. This statutory lien secures the repayment of all costs and damages for which Nelson Foundry, Inc. is liable to the U.S. EPA for environmental damages incurred and the subsequent remedial efforts conducted by the EPA at the subject property. A summary of the conditions at the subject property and the actions taken by the EPA is provided in Section 4.4 of this report.
- An Order was issued and filed with the Office of the City Register by the New York City Department of Environmental Protection (NYCDEP) on April 17, 1998. This Order, issued under the NYC Hazardous Substance Emergency Response Law, related to the release or substantial threat of release of a hazardous substance, corrosives, and poisons, at the subject property. The NYCDEP issued a Scope of Work Order regarding environmental remedial actions to be taken at the subject property pursuant with the Order. Additional details regarding the Order are provided in Section 4.4.

- An Order was issued and filed with the Office of the City Register by the NYCDEP on August 17, 1988. Details regarding the issuance of this order are summarized in Section 4.4 of this report.

3.3 Owner, Property Manager, and Occupant Information

The owner of the subject property is Nelson Foundry, Inc. The subject property has remained mostly vacant since 1994. The property has been considered abandoned and vacant by the NYC Department of Buildings. TRC identified a copy of the Certificate of Occupancy (CO) issued by the New York City Department of Buildings for former occupant, Nelson Galvonizing, Inc. The CO is dated August 20, 1959 and provided with number 130435. According to the CO, the subject property contained three buildings, one identified for factory use, one for truck transfer depot and office, and one for storage. A copy of the CO is attached in Appendix C.

4.0 RECORDS REVIEW

4.1 Mandatory Standard Physical Setting Source

USGS 7.5' Topographic Quadrangle:

The subject property is located within the Central Park, New York, 7.5' United States Geological Service (USGS) Quadrangle (see Figure 1).

4.2 Discretionary and Non-Standard Physical Setting Sources

Surficial & Bedrock Geology:

According to the USGS report titled, Groundwater in Bronx, New York, and Richmond Counties with Summary Data on Kings and Queens Counties, New York City, New York, TRC has identified the subject property as being in the area of Pleistocene Deposits that include soil deposits of till which is composed of clay, sand and boulders. In regards to bedrock geology, the area is underlain by Ravenswood Granodiorite (Middle Ordovician to Middle Cambrian), which consists of medium to dark gray silimantite-garnet microcline-plagioclase-biotite-muscovite-quartz and/or biotite-hornblende-orthoclase banded gneiss.

Site Hydrology:

The topography of the site can be characterized as relatively flat with a slight downward slope towards the west. Based on the National Geodetic Vertical Datum of 1929, the subject property is at an elevation of approximately 20 feet above mean sea level. The East River is located approximately one-eighth of a mile to the west.

According to the USGS Report (Open-File Report 81-1186) titled "Reconnaissance of the Groundwater Resources of Kings and Queens Counties, New York" and dated 1981, the groundwater flow is generally in a westerly direction.

4.3 Standard Environmental Record Sources

In addition to reviewing the reports referenced in Section 2.3, TRC reviewed information gathered from several environmental databases by FirstSearch Technology Corporation (FirstSearch) of Massachusetts to evaluate whether activities on or near the subject property have the potential to create a Recognized Environmental Condition on the subject property. FirstSearch reviews environmental information databases compiled by federal, state, and local government agencies. The complete list of databases reviewed by FirstSearch for TRC for this project is included in the FirstSearch report provided in Appendix B. A municipal records search was also contracted to Environmental Database Resources (EDR). The findings of that records review are presented in Appendix C. It should be noted that this

information is reported as received by TRC from FirstSearch and EDR, which in turn reports information as it is provided in various government electronic databases. It is not possible in the scope of this Phase I ESA for TRC, FirstSearch or EDR to verify the accuracy or completeness of the information contained in these databases. However, the use of and reliance on this information is generally accepted practice in the conduct of environmental due diligence. A description of some of the databases searched and the information obtained is summarized below: A full listing of all federal and state databases searched is provided in the FirstSearch report.

Federal

CERCLIS – Comprehensive Environmental Response Compensation and Liability Information System. These are current and potential Superfund sites currently or previously under investigation.

RCRA COR - Resource Conservation and Recovery Information System Corrective Action Sites. Sites on the database of RCRIS sites with reported corrective action.

RCRA GEN – Resource Conservation and Recovery Information System Large and Small Quantity Generators (create more than 100 kg of hazardous waste per month).

RCRA NLR – Resource Conservation and Recovery Information System site No Longer Regulated (create less than 100 kg of hazardous waste per month or meet other RCRA requirements).

ERNS – Emergency Response Notification System (emergency response actions).

FINDS – The Facility Index System. Sites in which identification numbers associated with a property or facility which the U.S. EPA has investigated or has been made aware of in conjunction with various regulatory programs.

TRIS – Toxic Release Inventory System. Sites that have had or may be prone to toxic material releases.

New York State

State Sites – New York State Department of Environmental Conservation's Registry of Inactive Hazardous Waste Disposal Sites.

Spills – The New York State Department of Environmental Conservation's database of emergency response actions and spill releases maintained by the Division of Spills Management.

REG UST/AST – The New York State Department of Environmental Conservation's database of Petroleum Bulk Storage (PBS) facilities, Major Oil Storage Facilities (MOSF), and Chemical Bulk Storage (CBS) facilities maintained by the Division of Spills Management.

LUST – The New York State Department of Environmental Conservation's database of Leaking Underground Storage Tanks (LUSTs) maintained by the Division of Spills Management.

RELEASES – Air and Surface Water Releases. A subset of the ERNS database which have impacted only air or surface water.

In addition to the above databases, a search of available business directories including city, cross reference and telephone directories were reviewed by EDR at approximately five year intervals for the years spanning from 1922 through 2000. A copy of the EDR city directory search report is also provided in Appendix B.

Municipal records reviewed by TRC for the subject property included those available from the Queens Building Department during a visit on August 14, 2005.

4.3.1 Subject Property

The subject property is identified as Nelson Galvanizing Inc. (Nelson) in the database report and is listed as a UST (active PBS facility), a RCRA NLR, TRIS, and CERCLIS site. According to the database report, the subject property is listed as an active PBS facility with two (2) tanks totaling 6,000-gallons which have a certificate date of 10/14/88 and an expiration date of 10/14/93. One (1) 3,000-gallon steel UST containing fuel oil is listed as in service and one (1) 3,000-gallon steel UST with unlisted contents is listed as temporarily out of service. A 3,000-gallon AST is listed in the Chemical Bulk Storage (CBS) Facility database. The one (1) 3,000-gallon AST is listed as having stored sulfuric acid and was closed in place in 1998.

Nelson is also listed as a RCRA NLR site. Several violations and enforcement actions have taken place between approximately 1991 and 2000 pertaining to Generator Requirements and Generator Land Ban Requirements.

TRIS reporting for the subject property was listed in the database report for 1987 and 1988. In 1987, Nelson reported sodium hydroxide (solution) and sulfuric acid. In 1988, Nelson reported use of sodium hydroxide, sulfuric acid and zinc compounds.

The CERCLIS information in the database report states that Nelson has operated its galvanizing process since approximately 1967 and was involved in custom hot-dip galvanizing. Federally funded removal assessments were performed on the property from 11/19/90 to 01/30/91 and from 06/30/99 to 09/21/99. Private party removal efforts took place between 02/12/91 and 11/08/91 and U.S. EPA financed removal efforts took place between 01/24/00 and 04/21/00. A federal lien was placed on the property in 04/03 and a federal consent agreement was issued on 04/04/03.

4.3.2 Adjacent Sites

The FirstSearch report indicated that there is one (1) RCRA COR site, which is the Con Edison-Ravenswood site located at 38-54 Vernon Boulevard, southwest and in the estimated downgradient direction of the subject property.

There are six (6) RCRA GEN sites listed within one-quarter mile of the subject property. A & D Steel Equipment Co Inc. (SQG), located at 11-35 31st Street; Structural Display Inc (SQG), located at 12-12 33rd Avenue; Parker Association (SQG), located at 12-04 31st Avenue; Catholic Medical Mission Board Inc. (LQG), located at 33-01 11th Street; POP Display Inc (SQG) located at 11-12 30th Drive; and

Con Edison (LQG) located at Broadway & 21st Street. Four (4) sites are in the approximate upgradient direction of the subject property.

A total of nine (9) RCRA NLR sites are listed within one-quarter mile of the subject property. All sites are in the approximate crossgradient or downgradient direction of the subject property.

The database lists fourteen (14) sites within one-quarter mile as Spills Sites. A spill, dated 03/20/96, indicated that a factory was dumping unknown hazardous material into the sewer on 46th Road and 11th Street. A spill report, dated 05/17/94, occurred when a wall fell onto a 275-gallon AST containing fuel oil located at 33rd Avenue and 12th Street. A spill report, dated 01/31/02, indicated that abandoned drums were left in front of 11-02 31st Avenue. The aforementioned spills are in the estimated upgradient direction of the subject property. Spills not discussed here are in the estimated crossgradient or downgradient direction of the subject property.

Four (4) sites are listed as REG UST/AST sites within one-eighth of a mile of the subject property. According to the database report, these sites are located in the estimated crossgradient direction of the subject property. The five (5) 550-gallon USTs listed at Cipico Construction, Inc. located at 32-03 Vernon Boulevard (northwest), are listed as being closed-removed. The two (2) 550-gallon USTs located at The Isamu Noguchi Foundation, Inc., located at 32-37 Vernon Boulevard, are listed as temporarily out of service. The USTs located at Thypin Steel Co. Inc., situated at 32-50 Vernon Boulevard, varying in size from 550-gallons to 20,000-gallons are listed as closed-removed. Structural Display Inc., located at 12-12 33rd Avenue, has one (1) 5,000-gallon UST in service.

A total of thirty-two (32) LUSTs are located within one-half mile of the subject property and seven (7) sites are in the estimated upgradient direction of the site. The Farraro Brothers, located at 12-10 31st Avenue, had a 4,000-gallon diesel UST that had a tank test failure but the status is closed. Astoria Health Center, located at 12036 31st Avenue, is listed as having a leak in the vent line of a 3,000-gallon #2 fuel oil UST. This LUST site is still active. City Wide Transit, located at 11-08 30th Avenue, is listed as a LUST because of a tank test failure. This LUST site is closed. A property located at 11008 30th Avenue is listed as having a tank test failure in a 4,000-gallon gasoline UST. This LUST site is closed. A LUST site, located at 2308 30th Drive, is listed as having a spill of #2 fuel oil which was contained on concrete floors. This LUST site is closed. A property at 918 27th Avenue is listed as having a tank test failure in a 10,000-gallon UST. This LUST site remains active. An apartment complex, located at 8-10 27th Avenue, is listed as having a #2 fuel oil release. This LUST site remains open.

Three (3) sites are listed as RELEASE sites and two (2) of those sites are listed as in the estimated upgradient direction of the subject property. A call was made on 06/16/03 from 12th Street and 31st Street stating that 4 quarts of hydraulic oil was spilled from a hose on a truck and released to the ground and storm drain. The other RELEASE was standing water due to a clogged drain at 31-63 14th Street.

4.4 Supplemental Federal/State Agency Records

TRC received several documents relating to the Nelson facility from the NYCEDC which were forwarded from the U.S. EPA Region 2. Copies of these documents are provided in Appendix C. A complaint was filed on 12/20/90, from the City of New York (plaintiff) against Nelson Galvanizing, Inc., Nelson Foundry, Inc., and John Sweeney (defendants). The City of New York seeking action against the defendants to "abate the hazardous conditions created by the presence and substantial threatened release of hazardous substances at their facility," to reimburse "the costs incurred by the City in assessing the environmental contamination at the defendants' facility", and "civil penalties for defendants' violation of an Order issued by the Commissioner of the Department of Environmental Protection." On August 19, 1988, the Commissioner of NYCDEP determined that the site presented an immediate and substantial danger to the public health, welfare and environment. The Commissioner issued an Order for the defendants to abate the hazardous conditions on their property. The defendants failed to fully comply with the terms of the Order and failed to remove approximately 291 drums of chemical wastes (149 known to be hazardous). The drums of waste were improperly stored, unstable and posed a hazard to public health, welfare and environment. The defendants also failed to complete spill control measures. Several NYCDEP investigations and correspondence to the defendants were listed in this complaint between 08/88 and 07/89. The defendants were considered responsible for the costs of \$9,601.50 incurred by the City for response measures, to comply with the August 1988 Order or three times the costs the City incurs for future response measures at the facility, a civil penalty of \$5,000 for each day in violation of the August 1988 Order and an additional amount of three times the costs incurred by the City, and to complete abatement of the public nuisance created by the presence and threatened release of hazardous substances or discontinue operations.

A Request for Removal Action at the Nelson Galvanizing Site memorandum dated 01/30/91 from the U.S. EPA Region 2, requested funds to conduct a "time critical removal action at the subject site". The NYSDEC agreed that U.S. EPA would conduct a removal of hazardous substances, pollutants and contaminants at Nelson. Two (2) joint U.S. EPA-NYCDEP inspections (11/19/90 and 11/29/90) and one (1) U.S. EPA inspection on 12/13/90, found Nelson had over one hundred (100) drums of spent acids and caustics inside the building. Several open-top drums were stacked four to five rows high. Some open drums with acid had pH values of less than 2. Standing liquids on the floor had pH values less than 2. The inspections also found five (5) large dipping tanks; three (3) tanks each hold approximately 4,000-gallons sulfuric acid, one (1) 2,500-gallon tank of sodium hydroxide, and one (1) 1,500-gallon tank of zinc ammonium chloride.

According to the 01/30/91 U.S. EPA action memorandum, a portion of Nelson Galvanizing operated on a dirt floor. In 1988 when the NYCDEP ordered Nelson to stop discharging materials to the city sewer system, it is believed Nelson began disposing chemicals into an excavated dirt trench and "allowing chemicals to drain-off into the outside soil." Approximately 30 drums of contaminated soils that were excavated by Nelson were from an unidentified area just outside of the premises. This was reportedly done in response to the clean-up order issued in 1988. According to the letter, scrap metal was

lying about and leaking acid and caustic tanks. A small boiler being used by Nelson was also observed to be in such poor condition that the EPA inspector believed that a boiler explosion was imminent.

U.S. EPA proposed actions in the 01/30/91 memorandum included: after ceasing business operations and obtaining access, EPA would activate an Emergency Response Cleanup Services contractor to secure the building; move scrap metal and debris to uncover possible drums; inventory and waste profile of all visible materials and containers; evaluate if any materials can be recycled (mostly spent acids and caustics) and returned to their manufacturer; and assess whether some acids could be neutralized on-site with resulting waste shipped to wastewater treatment facility. The total removal cost was estimated by U.S. EPA at \$1,059,000. The RCRA Enforcement Survey Sampling Inspection, which will be discussed below, indicated that the Superfund removal activity was completed in 1991 although TRC did not receive or review this documentation.

A NYCDEP Order was issued to John T. Sweeney on 05/01/98 because on 04/17/98 the NYCDEP was made aware of the release or substantial threat of release of hazardous substances, corrosives and poisons. The Scope of Work to be performed by John T. Sweeney included: provide the NYCDEP Division of Emergency Response & Technical Assessment (DERTA) with an inventory list of chemicals stored at the site; provide DERTA with MSDSs; repackage chemicals in dented, broken, or damaged containers; label all containers; sampling of all wastewaters and unknown chemicals for characterization; perform soil analysis of all affected areas; provide a written analysis from a NYS certified laboratory with all analysis performed; containerize spilled substances; excavate all contaminated soil; containerize and label all chemical wastes, waste plating solutions and sludge for transport and disposal; transport and dispose of all chemical wastes, hazardous waste sludge, and wastewater; transport and dispose of all contaminated or unusable materials; fill excavated areas with clean soil or clean backfill material; and provide DERTA with copies of all Hazardous Waste Manifests and Bills of Lading for transport and disposal.

A U.S. EPA RCRA Enforcement Survey Sampling Inspection was completed for the Nelson facility on 07/23/98. According to the inspection report, six (6) drums and three (3) tanks were selected for sampling to verify that the appropriate labeling was posted on the drums and tanks.

TRC reviewed a Request for a CERCLA Removal Action memorandum for the Nelson facility dated 09/30/99. According to this request, the U.S. EPA removal assessment on 06/30/99 indicated that there were still over one hundred (100) 55-gallon drums of spent acids and caustic along with thirty (30) other containers which were stored without regard to compatibility. Some drums were found to have acids with a pH less than 2. There were also three (3) open-top tanks or vats containing sulfuric acid sludge, sodium hydroxide and inc ammonium chloride. Proposed actions included: stabilization and securing of vats, sumps, drums and other containers of hazardous materials; removal of debris; sampling and determination of waste characteristics for the contents of tanks/vats, sumps and drums and waste consolidation; preparation of waste streams for shipment; testing of surficial soils and removal of contaminated soils and transportation and disposal of all wastes in accordance with CERCLA Off-Site Disposal Rule. The total removal cost was estimated by U.S. EPA at \$810,000.

According to a U.S. EPA Pollution Report dated 03/08/00, the removal effort began on 01/24/00. Five (5) drums of flammable liquid and methanol belonging to a hot dog vendor renting storage space on the site were sampled by U.S. EPA and the vendor removed the drums. The vats were cleaned out and five (5) one cubic yard boxes and one hundred forty-six (146) drums of solid and thirty-four (34) drums of liquids were generated from the contents. Seventy-four (74) drums were inventoried and sampled. Scrap metal and the vats were decontaminated and staged on-site. Demobilization occurred on 03/08/00 pending receipt of the analytical data and subsequent schedule of the waste transportation and disposal.

A U.S. EPA Pollution Report dated 04/08/00 indicated that 229 drums of waste and nine (9) cubic yards of bulk wastes were shipped off of the property by a U.S. EPA contractor from 04/04/00 to 04/07/00. On 04/07/00, an attempt was made to remove the furnace vat containing 44,000 pounds of zinc dross using a crane and flatbed truck. The crane broke a hydraulic line and was unable to remove the vat.

A U.S. EPA Pollution Report dated 05/12/00 stated that on 04/18/00 a second attempt was made to remove a furnace vat with the 44,000 pounds of zinc dross. The vat was removed and transported to Zinc Corporation of America for recycling.

4.5 Historical Use Information on the Property/Adjoining Properties

Based on the NYCDEP 1988 Order described above, between 1967 and 1994 the Nelson Galvanizing facility was in the business of coating metal parts with zinc to prevent corrosion. The zinc galvanizing process involved cleaning iron and steel metal parts in baths of acids and caustics, pretreating them in zinc ammonium chloride and immersing them in molten zinc. The facility operated five (5) 3,000-gallon process tanks. Three (3) tanks contained sulfuric acid (used hydrofluoric acid until replaced with sulfuric acid in 1989), sodium hydroxide and zinc ammonium chloride (which was replaced with a 1,200-gallon tank between October and November 1990). One (1) tank contained molten zinc. The facility also contained drums of sulfuric acid, hydrofluoric acid, zinc ammonium chloride, zinc oxide and solid zinc pieces, liquid, sludge and solid wastes. One (1) 3,000-gallon tank contained sulfuric acid which was transferred into plastic drums in 1989. Nelson would discharge process waste into the public sewers until August 1988, when the City prohibited this discharge. A neutralization pit was used to neutralize spent baths of sulfuric acid, hydrofluoric acid and sodium hydroxide.

4.5.1 Aerial Photograph Review

TRC did not review any aerial photographs for the subject property.

4.5.2 Sanborn Fire Insurance Company Historic Maps

A Sanborn Fire Insurance map search was conducted by EDR. TRC reviewed Sanborn maps for the subject property and surrounding properties for the years 1898, 1915, 1936, 1950, 1967, 1977, 1985, 1990, and 1996.

As indicated by the 1896 Sanborn map, the subject property consisted of vacant land between at least 1896 and 1915. Residential dwellings are located to the north, east, and west, while mixed commercial and vacant land is located to the south along Vernon Avenue.

According to the 1936 Sanborn map, the subject property was developed for industrial uses and occupied by the American Petrometal Corporation, an iron and steel wholesaler. The building footprint appears similar to the current day, which consists of a warehouse building labeled as "Cutting and Storage" and an office area containing a "Boiler Room." The adjacent building to the north/northeast is labeled "Machine Shop," which appears to be part of American Petrometal Corporation. Two adjacent properties to the southwest (currently occupied by automotive businesses) consist of a "Poultry Market." Additionally, one property labeled "junk yard" is located across Broadway to the north of the subject property. The surrounding properties consist of mixed residential/commercial properties.

The 1950 Sanborn map indicates no changes to the subject property from the 1936 map. Numerous additional commercial/industrial properties appear located in the immediate vicinity of the subject property. Among these properties include an auto repair and filling station facility located on the corner of Broadway and Vernon Avenue, a large truck body facility identified as Gar Wood Industries, Inc. located adjacent to the west along 11th Street, and a pipe hanger manufacturing facility located to the east across 12th Street. A large contractor's yard located on the docks of the East River along Vernon Street is present and labeled as the A.A. Johnson Corporation, which contains numerous structures, including a machine shop.

1967 and 1977 Sanborn maps, respectively, depict the subject property as occupied by Nelson Galvanizing, Inc. A small room located on the northeastern corner of the building is labeled "Transformer Room." No additional site features are depicted on the subject property. The adjacent building to the north/northeast is identified as a motor freight station. The contractor's yard located on Vernon Avenue is occupied by Dreier Structural Steel Co., Inc. In general, properties in the vicinity remain primarily unchanged from the 1950 Sanborn map.

As indicated by the 1985 Sanborn map, the subject property remains unchanged from previous years. Adjacent properties remain unchanged except for the adjacent properties to the southwest which are labeled as "auto repair." The subject property, adjacent properties, and the surrounding area appear primarily unchanged in the 1990 and 1996 Sanborn maps.

4.5.3 City Directories

A city directory search was conducted by EDR between 1922 and 2000. The subject property was not listed in the directories until 1939 when it was occupied by American Petrometal Corporation Plant and Warehouse, Cancos Tile Co., Key City Bolt & Spike Weeks Inc., Petrometal American

Corporation Warehouse, Petrometal Corporation (steel and importers) and Societe Petrometal Corporation. There were no listings for the property between 1945 and 2000. Nelson Galvanizing Inc. was listed at the subject property in 2000.

City directories were also reviewed from 1922 and 2000 for properties in the immediate vicinity of the subject property. Adjacent Broadway listings during 1934 consist of mixed commercial/industrial properties, including the following: Miller Geo May Porter (11-01 Broadway); Petro Bros. Anthony and Jos Junk (11-25); and Petro Jos Petro Bros. (11-27). Adjacent Broadway listings during 2000 consist of commercial properties, including the following: Aenos Towing & Apollo Electronics (11-06); B&L Inc. (11-06); and Red Car Mgmt. Corp. (11-06). These businesses are located directly adjacent to the subject property in the abutting building.

The directories indicate that there were no listings for Vernon Avenue properties in 1922. Garwood Engineering Co. was located at 3203 Vernon Boulevard in 1934. This property was then occupied by Garwood Industries Inc. from 1962 to 1976. In 1983 this property was occupied by the Lord Electric Company, while 3205 Vernon Avenue was occupied by Feiman Steel Corp. Year 2000 listings for 3203 Vernon Avenue consist of CDD Construction and Saga Consulting Corporation.

4.5.4 Additional Agency Contact Information – Freedom of Information Letters

- To determine whether any environmental records concerning the subject property are filed with the NYSDEC, Freedom of Information Letter (FOIL) requests were submitted to the Region 2 Office on August 10, 2005 and to the Albany Office on August 15, 2005. According to a letter dated, August 18, 2005 and received from the NYSDEC Region 2, they are in receipt of our request for information and indicated they would respond within 20 days.
- To determine whether any environmental records concerning the subject property are filed with the NYCDEP, a Freedom of Information Letter (FOIL) request was submitted August 10, 2005. To date, TRC has not received any information from the NYCDEP regarding the FOIL request. Any information received from the NYCDEP will be evaluated by TRC and submitted to the NYCEDC as an addendum to this report.
- To determine whether any environmental records concerning the subject property are filed with the U.S. EPA, Region 2, a Freedom of Information Letter (FOIL) request was submitted August 15, 2005. To date, TRC has not received any information from the U.S. EPA regarding the FOIL request. Any information received from the U.S. EPA will be evaluated by TRC and submitted to the NYCEDC as an addendum to this report.
- To determine whether any environmental records concerning the subject property are filed with the City of New York Department of Health (DOH), a Freedom of Information Letter (FOIL) request was submitted August 15, 2005. To date, TRC has not received any information from the

DOH regarding the FOIL request. Any information received from the City of New York Department of Health will be evaluated by TRC and submitted to the NYCEDC as an addendum to this report.

- To determine whether any records concerning the subject property are filed with the City of New York Fire Department, a records search request was submitted August 15, 2005. To date, TRC has not received any information from the Fire Department regarding the request. Any information received from the NYC Fire Department will be evaluated by TRC and submitted to the NYCEDC as an addendum to this report.

Copies of each of the agency records requests are provided in Appendix C.

5.0 SITE RECONNAISSANCE

5.1 Methodology and Limiting Conditions

On August 12, 2005, TRC personnel performed a visual inspection of the interior and exterior areas of the subject property. The inspection included a walkover of the grounds to identify evidence of activities or conditions that may be relevant to this assessment, both within and around the property boundaries. The inspection of building materials, plumbing, and exterior storage areas was limited to accessible, exposed locations. On the date of the inspection, TRC was unable to access the following buildings and/or site features: 11-02 office building portion of subject property (which includes several rooms and a boiler room); a locked trailer located adjacent to the office building on the sidewalk along 11th Street; and a locked storage container located in the northwestern portion of the warehouse building. Results of the site inspection are described in the following sections. Figure 2 is a site plan which indicates the location of relevant site features identified during the site inspection and/or during the background investigation. Copies of photographs taken during a recent TRC site visit are provided in Appendix D.

5.2 Observations

5.2.1 Current Uses of the Property

The majority of the subject property consists of a vacant industrial building (see Photos 1-2, and 32-33). The two-story office building portion of the subject property is also currently vacant. The warehouse portion of the subject property consists primarily of vacant space. Based on a conversation with the lessee during the site inspection, the northwestern portion of the warehouse space is leased to a business identified as Bear Steel (see Figure 2 and Photo 39). Bear Steel operates a metal cutting and welding operation in this portion of the subject property. In addition, based on conversations with operator of the adjacent auto repair business located at 11-06 Broadway and abutting the subject property, that operator also leases space in the warehouse portion of the subject property to store junk automobiles. Approximately 20-30 junk automobiles (taxicabs) are located in the northeastern portion of the subject property (see Photos 25 and 28).

5.2.2 Past Uses of the Property

The subject property was developed for industrial uses during the mid-1930s, and occupied by the American Petrometal Corporation, an iron and steel wholesaler. The American Petrometal Corporation appeared to occupy all of the buildings on the lot. A large machine shop building was in use in the

current location of the adjacent auto repair shop at 11-06 Broadway. This building and the subject property are connected by a staircase (see Figure 2). Between at least 1967 and 1994, the subject property was occupied and used by Nelson Galvanizing, Inc., an industrial zinc galvanizing operation. Since 1994, the subject property has primarily remained vacant, although a small portion of the building is reportedly leased to Bear Steel. Historically, the site has been for industrial purposes since at least 1937.

5.2.4 Hazardous Substances and Petroleum Products in Connection with Identified Uses

Historically, the Nelson Galvanizing facility coated metal parts with zinc to prevent corrosion. The zinc galvanizing process involved cleaning iron and steel metal parts in baths of acids and caustics, pretreating them in zinc ammonium chloride and immersing them in molten zinc. The facility operated five (5) 3,000-gallon process tanks. Three (3) tanks contained sulfuric acid (used hydrofluoric acid until replaced with sulfuric acid in 1989), sodium hydroxide and zinc ammonium chloride (which was replaced with a 1,200-gallon tank between October and November 1990). One (1) tank contained molten zinc. The facility also contained drums of sulfuric acid, hydrofluoric acid, zinc ammonium chloride, zinc oxide and solid zinc pieces, liquid, sludge and solid wastes. The content of one (1) 3,000-gallon tank that contained sulfuric acid was transferred into plastic drums in 1989.

5.2.5 Storage Tanks

One 275-gallon aboveground storage tank (AST) was identified in "office" portion of the building (see Figure 2). TRC was able to access this portion of the subject property; however an opening in the wall made it possible to view the AST. It is believed this AST supplied fuel to the boiler located in the adjacent room (see Figure 2).

One 3,000-gallon AST (empty), which formerly contained sulfuric-acid used in the galvanizing process, is located along the interior western wall of the warehouse building (see Figure 2 and Photos 13 & 14). Numerous five-gallon containers of lacquer adhesive are currently located inside the AST. A strong odor, most likely from the adhesive containers, is emanating from the AST.

On the date of the site inspection, TRC identified vent/fill pipes, indicating the presence of a suspect UST, along the exterior southern wall of the warehouse building (see Figure 2 and Photos 15 & 16). The exact location of the suspect UST could not be identified; however, based on the presence of a rectangular concrete pad located directly to the west of the vent/fill pipes, it is likely that the suspect UST is located inside the building (see Figure 2). It should be noted that the fill pipe is broken off at the base of the exterior wall; however, the pipe appears to point inside the building. One additional suspect vent pipe was identified on the sidewalk area located along 11th Street (see Figure 2 and Photo 29).

According to the EDR report, the subject property is listed as an active PBS facility with two (2) underground storage tanks (USTs) totaling 6,000-gallons which have a certificate date of 10/14/88 and an

expiration date of 10/14/93. One (1) 3,000-gallon steel UST containing fuel oil is listed as in service and one (1) 3,000-gallon steel UST with unlisted contents is listed as temporarily out of service. Another 3,000-gallon steel AST is listed in the CBS facility database as containing sulfuric acid and being closed in place in 1998.

5.2.6 Odors

The following odors were noted at the subject property:

- A caustic odor in the vicinity of old transformer located on the northeastern corner of the warehouse building.
- A petroleum odor in the vicinity of oil-stained soil around the old generator on the southeastern portion of warehouse building.
- A volatile/paint odor inside and around the 3,000-gallon AST which contained numerous discarded adhesive containers.
- Unidentified odors in the vicinity of the drum storage area located in the southeastern portion of the subject property.

5.2.7 Pools of Liquid

On the date of the inspection, a pool of liquid, which appears to be water, was identified inside one of the former galvanizing dip tanks (see Figure 2 and Photos 8 & 9). Additionally, several partial 55-gallon drums were noted inside the dip tank. Based on historical information reviewed, the contents of the dip tanks were reportedly removed years ago during one of the U.S. EPA removal actions. The presence of liquid in the tank may be due to the accumulation of rainwater entering through the deteriorated roof.

5.2.8 Drums

TRC identified approximately 30 55-gallon drums located in the southeastern portion of the warehouse building (see Figure 2 and Photos 3-7, 9). These drums contained an unknown solid material and were deteriorated to the point where the materials discharged to the surrounding dirt floor. Based on the eroded condition of the steel drums, it appears that the contents of the drums may have contributed to their deterioration. Based on the background investigation, highly corrosive acidic wastes and/or sludge may have been drummed during prior remedial actions at the subject site (see Section 4.4). If these drums were not properly removed, it is likely that they contained hazardous wastes. One 55-gallon drum was observed to contain an unknown liquid (see Photo 4).

At least four additional 55-gallon drums (full) containing unknown materials were identified in the southwestern and northern portions of the warehouse building (see Figure 2). Numerous partial

drums were noted throughout the warehouse building. Additionally, a large pile of drums cut in half (approximately 100 plastic drums) was identified in the southeastern portion of the warehouse building (see Figure 2 and 12). It is not known why these empty drums were cut in half; however, it is possible the drums are related to past cleanup activities.

Historically, several hundred drums containing acid wastes, caustic wastes, and solid/sludges were located at the subject property, as previously described in Section 4.4. The on-site drums contained elevated levels of sulfuric acid, hydrofluoric acid, sodium hydroxide, lead, chromium and arsenic. According to the documented condition of the facility between 1988 and 1990, the facility created conditions which pose a hazard to public health, welfare and the environment.

5.2.9 Hazardous Substance and Petroleum Products Containers

Several five-gallon containers of lacquer adhesives were identified in the northern portion of the warehouse building in the area leased by Bear Steel. A total of 15 oxygen and acetylene compressed gas cylinders were also noted in this area (see Figure 2 and Photos 37 & 38). Numerous empty 1-quart oil containers were observed throughout the warehouse building. One discarded car battery was also present in the southwestern portion of the warehouse building (see Figure 2).

See above Section 5.2.8 and Section 4.4.

5.2.10 Polychlorinated Biphenyls (PCBs)

One leaking oil-containing electrical transformer was identified on the dirt floor in the northeastern corner of the warehouse building (see Figure 2 and Photo 17). This transformer appeared very old and in poor condition. Based on the age and observed corrosion on the top of the transformer, fluid leakage has occurred from the unit. Additionally, a strong caustic odor was noted in this area. Based on the apparent age of the transformer, it is likely that PCB-containing oils are present inside and may have leaked from the unit.

Based on a review of the historic Sanborn maps, the small underground room located next to the above-mentioned transformer was a transformer room. TRC was unable to observe any additional transformers inside the room due to the debris materials scattered throughout the area, however, it is possible that additional electric equipment is located in the room.

5.2.11 Pits, Ponds, and Lagoons

On the date of the inspection, no pits, ponds or lagoons were identified on the subject property. Historically, a process waste neutralization pit was reportedly used on the subject property. However, the possible location of this pit was not identified during the site inspection.

5.2.12 Stained Soil or Pavement

Soil staining appeared present throughout the majority of the southeastern portion of the warehouse building, specifically in the area containing deteriorated drums (see Figure 2 and Photo 18). This portion of the building has a dirt floor. Historically, galvanizing operations were reportedly conducted in this area. Based on this information and the known hazardous materials formerly and/or currently located at the site, it is likely that historic spills and discharges have impacted the subject property.

Reddish-orange staining was noted on the exterior concrete sidewalk located directly east (and downgradient) of the interior drum storage area (see Figure 2 and Photo 21).

Petroleum staining was observed on the dirt floor at various locations throughout the warehouse building, including below a generator located on the southeastern corner of the warehouse building (see Figure 2 and Photo 19). Additional petroleum staining was identified under several of the taxicabs located in the northern portion of the building (see Figure 2 and Photo 20). The floor beneath the taxi cabs appears to consist of concrete.

5.2.13 Stressed Vegetation

On the date of inspection, no signs of staining or stressed vegetation relating to contamination were observed on the surface of the grassy areas along the adjacent sidewalks.

5.2.14 Solid Waste

Various types of solid waste, including metal debris, cars, piping, light posts, auto parts, assorted empty metal and plastic containers, drums, and large amounts of historic industrial supplies and equipment were identified throughout the subject property (see Figure 2 and Photos 22-28). Based on the unknown nature of materials, there is a possibility of additional petroleum and/or chemical wastes located within the debris.

5.2.15 Waste Water

Other than sanitary wastes, there are no current waste waters associated with the facility's operations. Historically, prior to 1988, the facility discharged all of its industrial process waste water to the sewer system. After Nelson Galvanizing was issued an Order to abate pollution from the NYCDEP, the facility stopped this operation and utilized a "neutralization pit" to neutralize waste prior to discharging to the sewer. Historic discharges to the City sewer system of highly acidic/caustic substances reportedly eventually corroded the sewer pipe connections at the facility's exterior (assumed to be along 11th Street). Additionally, according to information reviewed, prior to 1988, Nelson Galvanizing discharged wastes directly to the exterior ground surface via an excavated trench located at an unidentified location inside the facility. This trench and the exterior location of discharge was reportedly

part of a Cleanup Action by the U.S. EPA in 2000. One catch basin was noted at the corner of 11th Street and 33rd Avenue. The location of the former "sludge trench" was not identified.

5.2.16 Wells

There are no known private or public supply water wells on the site or in the immediate vicinity of the site. The EDR records database search report summarized in Section 4.3 of this report and presented in Appendix B indicates that there are no known public water supply wells on the site or within 1 mile of the subject property. The building on the subject property is serviced by the municipal water supply system.

5.2.17 Septic Systems

There are no known septic systems associated with the subject property.

5.2.18 Suspect Asbestos-Containing Materials (ACMs)

Suspect ACMs were noted in both boiler rooms on the subject property in the form of boiler insulation and pipe insulation (see Figure 2 and Photos 30 & 31). In addition, possible fire retardant spray insulation was noted on the structural beams on the southeastern portion of the warehouse building. Based on the age of the building and the time period that Nelson Galvanizing began operations (1967), this material is likely ACM.

6.0 INTERVIEWS

6.1 Interview with Site Manager

During the Phase I ESA, TRC did not contact or interview the owner and/or site manager associated with the subject property. However, on the date of the site inspection, TRC interviewed the owner of the adjacent auto repair business located at 11-06 Broadway (Car & Van Auto Repair) regarding the subject property. According to the aforementioned unnamed property owner, he indicated that Nelson Galvanizing conducted operations until the early 1990s. Since then, he stated that several cleanup operations had been conducted (as referenced in Section 4.4) in the southeastern interior areas, including drum removal and a soil removal from around the former galvanizing dip tanks. Additionally, this individual stated that the remaining drums located in the southeastern corner of the building leach a reddish liquid during heavy rains.

6.2 Interviews with State/Local Officials

Queens Department of Buildings:

- On August 14, 2005, TRC reviewed available files located at the Queens Department of Buildings. No relevant information regarding the known environmental issues at the subject property was identified at the Queens Department of Buildings. According to the Department of Buildings database records researched on-line by TRC, numerous violations regarding building safety and access have been issued between 1987 and 1999. Based on a review of the violations, they appear to remain as active violations (i.e., not resolved) against the property owners.

7.0 SUMMARY

The subject property consists of approximately 0.67 acres of land located in Long Island City, New York. The site is currently occupied by a former industrial warehouse and office building. Between at least 1936 and 1967, the subject property was occupied by an industrial iron and steel wholesaler, known as the American Petrometal Corporation. Between 1967 and 1994, the subject property was occupied by Nelson Galvanizing, Inc., an industrial facility which stripped metal using acids and then coated the metal with zinc. Since the development of the property for industrial purposes in the 1930s, the basic footprint of the two interconnected on-site buildings has remained unchanged. Nelson Galvanizing ceased operations in 1994 and vacated the subject property.

Based on the environmental database review, the subject property is listed as a UST (active PBS facility), AST (closed CBS), a RCRA NLR, TRIS, and CERCLIS site.

Historically, several hundred drums containing acid wastes, caustic wastes, and solid/sludges were located at the subject property. The on-site drums contained elevated levels of sulfuric acid, hydrofluoric acid, sodium hydroxide, lead, chromium and arsenic. According to the documented condition of the facility between 1988 and 1990, the owners of the facility created conditions that posed a hazard to public health, welfare and the environment.

On August 19, 1988, the Commissioner of the NYCDEP determined that the site presented an immediate and substantial danger to the public health, welfare and environment. The NYCDEP issued an Order for the defendants to abate the hazardous conditions on their property. The defendants failed to fully comply with the terms of the Order and failed to remove approximately 291 drums of chemical wastes (149 known to be hazardous). The drums of waste were improperly stored, unstable and posed a hazard to public health, welfare and environment. The defendants also failed to complete spill control measures. Based on inspections of the facility, it was determined that the facility's galvanizing operations, including waste storage areas, were located on a dirt floor. In addition, the facility utilized an earthen trench to discharge waste sludge to the exterior and/or sewer system.

The conditions at the facility and the general lack of cooperation from the property owners prompted numerous additional federal, state and city enforcement actions to be issued against the property, including a summons and complaint issued by the City of New York in 1990, two U.S. EPA removal response actions (i.e., cleanup actions) conducted in 1991 and 2000, respectively, pursuant to Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. 104, a 1998 RCRA Enforcement Survey Sampling Inspection, and a 1998 NYCDEP order to abate pollution. As indicated by the documents reviewed, after each cleanup action, the operators of the property continued to store drums containing known hazardous/toxic materials from the site and/or cleanup activities. It is believed that the approximately 30 deteriorated drums currently located at the facility contain waste solids and/or liquids from previous cleanup activities were never disposed of. These materials have since corroded the metal drums and discharged to the underlying dirt floor. According to a May 2005 letter from the U.S. EPA Region 2 to the NYC Regional Counsel, the

U.S. EPA has recovered the bulk of its cleanup costs from the operators of the subject property. To date, numerous federal, state, and municipal liens, including tax and environmental liens, have been issued against the subject property.

Based on a review of the historical documents relating to the known contamination present at the subject property, no known surface or subsurface investigations have been conducted to assess the potential impacts to on-site soils and/or ground water due to the historic and on-going conditions at the facility. One of the U.S. EPA cleanup actions consisted of the removal of soils beneath one of the former process vats; however, TRC was unable to obtain any documentation regarding the specific location and scope of removal activities. In general, the previously described enforcement and cleanup actions related to the immediate concerns to the health and welfare of the public and the environment based on the presence of hazardous materials and conditions at the facility. These actions were implemented to characterize and remove these hazardous materials from the facility. TRC was unable to find any information on the conduct of assessments of the overall on-site soil or ground water conditions on the subject property. Based on the presence of improperly stored and discharged hazardous materials on the site, and the presence of an earthen (dirt) floor at the subject property during operations, it is likely that on-site soils and/or ground water have been adversely impacted as a result of historic operations.

8.0 CONCLUSIONS

TRC performed a Phase I ESA of the subject property located at 11-02 Broadway in Long Island City, New York, in conformance with the scope and limitations ASTM Practice E 1527. Any exceptions to, or deletions from this practice are described in Section 1.3.4 of this report. This assessment has revealed the following evidence of Recognized Environmental Conditions in connection with the subject property:

Six (6) known recognized environmental conditions exist on the subject property as follows:

- Historically, several hundred drums containing acid wastes, caustic wastes, and solid/sludges were located at the subject property. The on-site drums contained elevated levels of sulfuric acid, hydrofluoric acid, sodium hydroxide, lead, chromium and arsenic. According to the documented condition of the facility between 1988 and 1990, the owners of the facility created conditions which pose a hazard to public health, welfare and the environment. Between 1990 and 2000, several cleanup actions directed by the U.S. EPA have been conducted on the property. Furthermore, numerous actions by federal, state, and city authorities against the Nelson facility were issued between 1988 and the late 1990s. Documented conditions at the former Nelson facility have the potential to impact on-site soils and ground water.
- The subject property is listed as a UST, AST, RCRA NLR, TRIS, and CERCLIS site.
- TRC identified approximately 30 55-gallon drums located on the southeastern portion of the warehouse building. These drums contained an unknown solid material and were deteriorated to the point where the materials discharged to the earthen surface. One 55-gallon drum contains an unknown liquid. Any open or deteriorated drum containing a hazardous material represents a potential threat to the public health and safety and environment.
- One leaking electrical transformer was identified on the floor in the northeastern corner of the warehouse building. A strong caustic odor was noted in this area. The adjacent sub-level room is depicted on historic Sanborn maps as being a transformer room. TRC was unable to fully inspect this room due to the large amount of debris present. Based on the apparent age of the transformer, it is likely that PCB-containing oils are present inside and may have leaked from the unit.

- Soil staining appeared present throughout the majority of the southeastern portion of the warehouse building, specifically in the area containing deteriorated drums. This portion of the building has a dirt floor. Historically, galvanizing operations were conducted in this area. Based on this information and the known hazardous materials formerly and/or currently located at the site, it is likely that historic spills and discharges have impacted the subject property
- Petroleum staining was observed on the dirt floor at various locations throughout the warehouse building, including below a generator located in the southeastern corner of the warehouse building and below several of the junk taxi cabs located in the northern portion of the building. The floor beneath taxi cabs appears to consist of concrete.

Five (5) potential on-site recognized environmental conditions exist as follows:

- No known assessments of the overall on-site soil or ground water condition have been conducted on the subject property. Based on the historical and potential on-going presence of known hazardous materials improperly stored and discharged on the site, and the presence of a dirt floor at the subject property during operations, it is likely that on-site soils and/or ground water have been adversely impacted as a result of historic operations.
- TRC identified vent/fill pipes and the possible location of a suspect UST in the southeastern portion of the warehouse building. One additional vent pipe was noted along the sidewalk on the northwestern side of the office building. The database report indicates that a 3,000-gallon "fuel" UST is located at the subject property. To date, TRC has not received information regarding a records search request to the City of New York Fire Department requesting additional information, if any, on possible petroleum USTs at the subject property. Any relevant information received from the NYC Fire Department will be reviewed and submitted to the NYCEDC as an addendum to this report. If the suspect steel UST identified on the southeastern portion of the warehouse building is present, it would very likely be beyond its life expectancy and present a potential threat to the environment.
- Large amounts of solid waste, including metal, wood, plastic, glass, plastic, and various types of additional materials are present throughout the warehouse building. In addition to solid waste, approximately 30 junk vehicles are present in the building, some of which are leaking fluids. These vehicles represent a potential source of contamination in the case of leaking fluids to the surface of the subject property. Unknown and/or potentially hazardous materials may exist within the piles of debris located throughout the subject

property, particularly in the former transformer room and the adjacent office building, which was not inspected by TRC.

- The adjacent office building portion of the subject property was not inspected during the TRC walk-over due to the inability to access the ground floor and unsafe building conditions on the second floor. However, TRC identified a boiler room and a 275-gallon AST in this portion of the subject property. An inspection of this area should be conducted once safe access is provided.
- Suspect ACMs were noted by TRC in the warehouse and office buildings on the subject property. Prior to any building demolition or renovation activities at the subject property, an asbestos survey by a licensed investigator must be conducted.

Two (2) potential off-site recognized environmental conditions exist as follows:

- Numerous sites in the immediate vicinity of the site and the surrounding area are listed on U.S. E.P.A. and State environmental database lists, including RCRA NLR sites, RCRA CORRACT sites, RELEASE sites, UST sites, LTANKS sites, State Hazardous Waste Sites, and State Spill sites. Many of these sites, including Spill sites are located in the upgradient direction of the subject property.
- Several commercial properties abut the subject property building to the northeast and east, respectively. These properties include the Car & Van Auto Repair Shop and Taxi Meters, a gated parking lot occupied by a trailer and numerous vehicles, and Athens Fabrication, a structural and ornamental steel shop. Vehicle auto body repairs and vehicle spray painting was observed in the Car & Van repair shop. Spills and/or illegal discharges from these adjacent properties have the potential to impact the subject property.