AECOM Environment

Submitted to:
Tulip Corporation Site

Submitted by:
AECOM
Milwaukee, WI
60161535
September 2010

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Put in ENV. File.

Phase I Environmental Site Assessment

Tulip Corporation Site
3125 Highland Ave
Niagara Falls, NY

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September 23, 2010

Mr. James Rulseh
Chief Operating Officer
Tulip Corporation
714 E. Keefe Avenue
Milwaukee, WI 53212

RE: Phase I Environmental Site Assessment of the Tulip Corporation Site, 3125 Highland Avenue, Niagara Falls, New York 14305, AECOM Project No. 60161535

Dear Mr. Rulseh:

On behalf of Tulip Corporation, AECOM has completed a Phase I Environmental Site Assessment (Phase I ESA) for the above-referenced property. The objective of the Phase I ESA was to identify recognized environmental conditions (RECs) and historical RECs in connection with the property. This Phase I ESA was conducted in general accordance with the American Society for Testing and Materials (ASTM) Standard E1527-05 entitled *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. No sampling or testing was conducted as part of this Phase I ESA.

Thank you for the opportunity to assist you with this project. Please call if you have any questions or comments regarding the information presented in this report.

Yours sincerely,

Tamara Raby
Project Manager - Geologist

Jeanne M. Tarvin, P.G., C.P.G.
Senior Principal Hydrogeologist, Vice-President

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Executive Summary

AECOM was retained by Tulip Corporation (Client) to perform a Phase I Environmental Site Assessment (Phase I ESA) of the site located at 3125 Highland Avenue in Niagara Falls, Niagara County, New York (the subject property). The owner (Tulip Corporation) has owned the property since 1985.

This Phase I ESA was conducted in general accordance with the American Society for Testing and Materials (ASTM) Standard E1527-05 entitled *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The purpose of this Phase I ESA is to identify, to the extent feasible, recognized environmental conditions (RECs) and historical RECs in connection with the subject property. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report. Data gaps are described in Section 7.4.

The subject property consists of approximately nine acres of land located at 3125 Highland Ave in Niagara Falls, New York. The subject property is currently occupied by Tulip Corporation, which produces molded plastic products for the automotive industry and injection molded recycling containers and other specialized plastic containers. The subject property is located in a commercial and residential area.

It is unclear when the subject property consisted of undeveloped land. As early as 1914 the subject property was developed and used for manufacturing by The U.S. Light & Heating Company (USL), which manufactured axle lighting devices, storage batteries, and electric self starters for automobiles. It is believed that USL began manufacturing in 1910. Electric Autolite Company operated on the subject property until it merged with Prestolite Company as a Division of Eltra Corporation (no documentation was found when USL changed to Electric Autolite Company). Several name changes occurred through time, including AutoLite Battery Corporation, The Electric Auto-Lite Company, Prestolite Division of Eltra Corporation, Allied Chemical Corporation (later Allied Corporation), Niagara Molded Products, and Tulip Corporation.

RECS:

- **Significant Historical Chemical Usage:** The facility was historically and currently a large quantity generator of hazardous waste. The historic use, storage, and disposal of chemicals and petroleum products on-site are unknown and are considered a REC in connection with the subject property. Examples of current chemical usage areas include:
    - Chemicals noted in the facility testing laboratory included isopropyl alcohol, diethylene glycol, perchloroethlene, anti-freeze, relentless 15, sodium tartrate, sulfuric acid, and battery fluid, among others.
    - The tool and maintenance spare parts room was observed to have paint storage and a flammable materials storage cabinet, as well as miscellaneous supplies stored on shelves. Items stored in these locations included, but were not limited to, stains, concrete sealer, mineral spirits, paint, refrigerator oil, ink, and vacuum pump oil.

- In the basement of the boiler house, AECOM observed storage of paint, cleaning solution, and etching solution.
- In the courtyard area, an empty cabinet labeled "explosive gas" was observed. It is unknown what may have previously been housed in this location. Additionally, several empty drums and broken paper/pulp containers were observed in this area.
- In the Compressor House, compressor oil was observed to be stored near the floor drain in a small plastic wash tub and an open five gallon bucket.
- In Building Q, oil stained concrete floors were observed around the back-up air compressor.
- Historically in the Bushing Dip Room, bushings were dipped in a mixture of Hypalon and Zylene. This process was discontinued over 10 years ago. All chemical associated with this process were removed from the subject property at that time.
- Areas of concern include current and historic storage areas, truck loading docks, and railcar loading docks.

- **Hydraulic Oil:** Hydraulic oil was historically used at the subject property. Based on the age of the facility, there is a potential that hydraulic oil containing PCBs was used. Currently, hydraulic oil continues to be used at the subject property. All floor drains, except in the extrusion room of Building J-2, are routed to the local publicly-owned treatment works (POTW) (Figure 4). Additionally, a sump was observed below the chip storage bins (historically this area was used for oil storage). Historic and present day releases of hydraulic oil have potentially occurred. Hydraulic oil releases are considered a REC to the subject property.

- **Wooden Floor Located in Building H:** Historic use of the current machine shop room located in Building H is not known. This room is constructed with a wooden floor that appeared to be stained. The wooden floor is considered a REC to the subject property.

- **Former Coal Storage Pile and Unknown Historical Disposal of Fly Ash:** Sanborn maps beginning with the 1955 map and continuing until the most recent 1985 map, indicate the presence of a coal pile east of the present day plastic storage silo (formerly labeled powdered coal silo). The presence of this coal pile and the unknown historical disposal of fly ash are considered a REC to the subject property.

- **PPE Recycling Room Sump:** Process water, which potentially contains lead, is periodically released onto the floor of the PPE Recycling Room. The process water is subsequently collected in an unlined sump pit (located in the south end of building J-2 in the PPE Recycling Room. Fluid). From the sump, the process water is pumped into a holding tank for re-use in the recycling process. The condition of the sump is unknown. Potential releases of lead contaminated water may have occurred in this area. The potential lead containing process water in the PPE recycling room is considered a REC to the subject property.

- **Naphthenic Oil AST:** The 1955 Sanborn Map annotates an oil tank in the present day location of the Naphthenic Oil tank (north of Building X). It is unknown if this is the same tank

as the present day tank, or if the tank stored the same type of oil that is reported to have been stored in the present day tank. Additionally, it is not known if the tank has always had the secondary containment that presently exists. Staining was observed during the site visit near the tank loading valve. The naphthenic oil AST area is considered a REC to the subject property.

- **Adjoining Properties:** In the EDR report, the Power City Warehouse Tract I Site that is adjacent to the subject property to the south is listed on the Federal CERCLIS list, local Brownfield lists, RCRA-NonGen sites, and MANIFEST list (as Amherst Town Of at 3123 Highland Avenue). In the EDR report, the Power City Warehouse Tract II site (located ~60 east and to the south of the subject property) is listed on the Federal CERCLIS list, Federal RCRA generators list, State- and tribal-equivalent CERCLIS list, and the MANIFEST list. The potential for adverse impacts to have migrated onto the subject property from either the Power City Warehouse Tract I or Tract II sites cannot presently be determined. It is likely that the subject property was historically part of a larger parcel that included the properties to the south and southeast. The identified adjacent sites of environmental concern are considered a REC to the subject property. **Historic Battery Production and Associated Chemicals of Concern:** Based on the 1914 and 1950 Sanborn maps, battery formation and battery grid pasting occurred at the subject property. The site historically produced bushings, lead battery terminals, and hard rubber battery casings. In addition to the concerns related to the battery production operations, the following distinct features of concern were noted on historical maps: the sulfuric acid tanks between buildings J-2 and J-3, the sulfuric tanks located to the northeast of the current building (shown on the 1950 Sanborn map), and the bushing dip tank. The historic battery production, as well as other historic production processes, and associated chemicals are considered a REC to the subject property.

HRECS:

- **PCB Transformer Spill:** During the site visit, Tulip Corporation stated that an historical release of PCB oil occurred from a leaking valve on the PCB containing transformers. The release was reportedly cleaned up and is no longer considered an issue of concern.

- **Mercury Spill:** In 2004, while moving equipment from a building to an outside hopper, a mercury containing gauge broke and spilled less than one cup of mercury. The spill was contained mostly on asphalt pavement between the H and X buildings. A cleanup was performed and no further action was required by the New York State Department of Environmental Conversation (NYS DEC).

De Minimis Conditions:

This assessment has revealed the following de minimis conditions in connection with the subject property:

- **Surface Debris Area:** The northwest corner of tax ID parcel #130.18-2-4 was observed to have miscellaneous surface debris. Mr. Signore (Tulip Corporation) stated that this debris was not placed by Tulip Corporation, and that he was unaware that this parcel was part of Tulip Corporation property.

- **Miscellaneous Construction Debris:** The area located to the north of building W and north of Building Q has been used to stage concrete and soil from various construction projects on site. No odors or staining were observed associated with the soil piles during the site visit.

1.0 Introduction

1.1 Purpose

AECOM was retained by Tulip Corporation (Client) to perform a Phase I Environmental Site Assessment (Phase I ESA) of the Niagara Falls site located at 3125 Highland Avenue in Niagara Falls, Niagara County, New York (the subject property). The owner (Tulip Corporation) has owned the Niagara Falls site since 1985.

The purpose of this Phase I ESA was to identify, to the extent feasible, Recognized Environmental Conditions (RECs) and historical RECs in connection with the subject property. ASTM Standard E1527-05 defines a REC as the following:

> "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. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not recognized environmental conditions."

The ASTM Standard E1527-05 defines a historical REC as the following:

> "Environmental condition which in the past would have been considered a recognized environmental condition, but may or may not be considered a recognized environmental condition currently."

The ASTM Standard E 1527-05 states: The Phase I ESA is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) liability; that is, the practices that constitute "all appropriate inquiry into previous ownership and uses of the property consistent with good commercial or customary practice, as defined at 42 USC, Section 9601(35)(B)."

1.2 Detailed Scope-of-Services

This Phase I ESA included completion of the following tasks concerning the subject property:

- Records review of reasonably ascertainable information (governmental and historical);
- Site reconnaissance;
- A physical setting description;

- Interviews with present and past owners, operators, occupants, and/or local government officials, where applicable;
- A request for and review of user provided information; and
- Evaluation of the data collected and preparation of a written report.

These data collected and resources reviewed are discussed throughout the text of this report and are listed in Section 10.0. No sampling or testing was performed during this Phase I ESA. Limitations and exceptions to this Phase I ESA are described in Section 1.4 of this report. Data gaps are described in Section 7.4.

1.3 Significant Assumptions

AECOM assumes that all information obtained from the Client pertaining to the subject property is correct and complete. AECOM also assumes that the Client has provided AECOM with all reasonably ascertainable prior environmental reports concerning the subject property. Finally, AECOM assumes that this Phase I ESA report will be read as a whole by the user.

This report has been prepared to summarize observed RECs and historical RECs on the subject property. Environmental conditions and regulations are subject to constant change and re-interpretation. Current observations, conditions, or regulatory positions may not represent conditions at some future time. This report represents AECOM's judgment and opinion based on the information obtained. No warranty, either expressed or implied with regard to the site conditions, or Client's ability to assert any defense under CERCLA or any comparable state law for residual environmental impairment, is contained herein.

1.4 Limitations and Exceptions of Assessment

This Phase I ESA was conducted in general accordance with ASTM Standard E1527-05 and in a manner consistent with others performing Phase I ESAs under the same conditions and in the same locality. This Phase I ESA did not include a review of or testing for the additional non-scope items identified in ASTM E1527-05, Section 12.1.4, listed below:

- Regulatory Compliance
- Cultural and Historical Resources
- Industrial Hygiene
- Health and Safety
- Ecological Resources
- Indoor Air Quality
- Lead-Based Paint
- Lead in Drinking Water

- Radon
- High Voltage Power Lines
- Asbestos
- Wetlands
- Vapor Intrusion
- Endangered Species

Factual information regarding operations, conditions, and test data were obtained, in part, from the Client, outside agents, and third parties and have been assumed by AECOM to be correct and complete. Because the facts stated in this report are subject to professional interpretation, they could result in differing conclusions. In addition, the findings and conclusions contained in this report are based on various quantitative factors, as they existed on or near the date of the site reconnaissance.

This Phase I ESA reflects conditions, operations, and practices as observed on the date of the site visit (August 21, 2010). Changes or modifications to the subject property made after the site visit are not included.

1.5 Special Terms and Conditions

This Phase I ESA for the subject property has been prepared for Tulip Corporation. The work was performed in general accordance with ASTM Standard E1527-05 - Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Qualifications of persons who were involved with this Phase I ESA are included in Appendix A.

1.6 User Reliance

This report is confidential and was prepared for the Client subject to the scope of services described herein. AECOM recommends that this report be used only for the purpose intended by the Client and AECOM as of the date of this report. This report may be unsuitable for other uses, and reliance on its contents by anyone other than the Client is done at the sole risk of the user. AECOM accepts no responsibility for application or interpretation of the results by any other parties.

2.0 Site Description

2.1 Location and Legal Description

The subject property consists of approximately nine acres of land located at 3125 Highland Ave in Niagara Falls, New York according to the Online Assessment Roll System (OARS). The Plant Plan figure provided by site personnel noted that the subject property comprises an area of 12.88 acres. The subject property, based on OARS data, is described as consisting of the following eight parcels in the City of Niagara Falls, Niagara County, New York:

- 144.23-1-7
- 144.23-1-6
- 144.23-1-5
- 144.23-1-4
- 144.23-1-3
- 144.23-1-2
- 144.06-2-1
- 130.18-2-4

The location of the subject property is provided on Figure 1. Figure 2 depicts the current features of the subject property. Figure 3 (Plant Plan) depicts the historic plant building areas (circa 1982) including individual building designations (i.e, H, L, J-2, etc.). The legal descriptions and tax records are located in Appendix B.

2.2 Site and Vicinity General Characteristics

Tulip Corporation, a producer of molded plastic products, occupies the subject property which includes several buildings, an adjoining asphalt parking lot to the west (labeled "alley" on Figure 2), an asphalt parking lot to north, an asphalt paved courtyard, a material storage area outside of the buildings, and asphalt driveways to the north, south, and west of the property buildings. Buildings H, H-ADD, L, L-ADD consist of offices, a testing laboratory, equipment, maintenance and parts storage, and a machine shop. Northeast of the H and L Buildings is the Compressor House, which contains an air compressor and an air drier. Northeast of this building is a Boiler House that contains an unused boiler. Buildings J-2, J-3, Q, Q-1, Q-2, W, W-EXT, and X house the main operations of the plant including recycling processes, injection and extrusion processes, and storage (raw and finished product).

The subject property is located in a commercial and residential area bounded to the south by the Power City Warehouse Site, to the east by a narrow strip of land owned by National Grid beyond

which is the Tract II Site, to the north by Braun Horticulture, and to the west by Highland Avenue beyond which are an automobile repair shop, several residences, an Elks Lodge, and a health clinic.

2.3 Current Use of the Property

The subject property is currently occupied by Tulip Corporation, which produces molded plastic products for the automotive industry and injection molded recycling containers and other specialized plastic containers. The subject property is a plastics recycler of polypropylene and polyethylene, which is the material used in the production of the molded plastic products produced at the facility. The North American Industry Classification System (NAICS) code for the facility is 326199 (All Other Plastics Product Manufacturing).

2.4 Description of Improvements on the Site

The subject property is improved with a building complex at a combined area of approximately 123,115 square feet (a plant drawing is provided as Figure 3). A general building description, as relayed during the occupant interview is as follows:

Building ID	Number of Stories	Approximate Age	Wall Construction	Roof Construction
H, H-ADD, L, &L-ADD	2	Unknown, very old	Brick	Wooden
Boiler and Compressor Houses	1	1913	Brick/Metal	Unknown, thought to be wooden
X, W, W (EXT)	1	Unknown, very old	Brick	X & W - Wooden, W (EXT) - Metal
J-2, J-3	1	Unknown, very old	Brick	Wooden
Q-1	1	~1970s	Metal	Metal
Q	1	Unknown, very old	Brick	Wooden
Q-2	1	~late 1980s	Metal	Metal

Natural gas is provided by National Fuel and electricity is provided by National Grid. The source of drinking water is City of Niagara Falls municipal water. Sanitary and storm sewers are maintained by the City of Niagara Falls public works department.

2.5 Current Uses of the Adjoining Properties

AECOM observed adjoining property uses during the site reconnaissance to identify potential RECs concerning the subject property. Adjoining properties were observed from public rights-of-way. The

occupants of these properties were not contacted as part of this Phase I ESA. Adjoining property uses/occupants are as follows:

North – Braun Horticulture, Inc.

Northwest – Falls Steel Erectors, Inc. (directly adjacent, steel erectors & fabricators, rigging, millwrights, and in-plant maintenance service).

South – Power City Warehouse Site (formerly a lead-acid battery manufacturing facility).

East – National Grid owns a narrow strip of land (~60 feet). To the west of the National Grid property is the Tract II – Highland Avenue NYS Superfund Site (formerly used as a production facility). To the northeast and southeast is vacant land.

West – Highland Avenue, beyond which is a residential area, which includes homes, an Elks Lodge, and a medical facility. Additionally, an automobile repair shop is located within the residential area directly across Highland Avenue from the subject parcel.

Based on our visual observations from public rights-of-way, the adjoining properties to the north and west are not expected to adversely affect the subject property. The adjoining properties to the east and south are expected to adversely affect the subject property and are considered RECs with respect to the subject property. These sites are discussed further in Section 4.1.

3.0 User Provided Information

Section 6 of the ASTM Standard states that certain tasks, which will help to determine the possibility of RECs associated with the subject property, are generally conducted by the ESA report user. This includes the following: reviewing title records for environmental liens or activity and land use limitations and considering awareness of any specialized knowledge (e.g., information about previous ownership or environmental litigation), experience related to RECs at the subject property, or significant reduction in the purchase price of the site. Per the agreed scope-of-work, information related to these items should be provided by the ESA report user to AECOM. To assist the user in gathering information that may be material to identifying RECs, AECOM has provided the user with the User Questionnaire from the ASTM Standard.

Information regarding the review of recorded land title records, environmental liens or activity and use limitations, specialized knowledge, commonly known or reasonably ascertainable information and the reduction of subject property value due to environmental issues was requested from Tulip Corporation. The following information was provided in the User Questionnaire that is contained in Appendix C.

3.1 Title Records

AECOM was not supplied with a chain-of-title search by the Client as part of this Phase I ESA.

3.2 Environmental Liens or Activity and Use Limitations

The Client was not aware of any environmental lien information for the subject property.

3.3 Specialized Knowledge

The user of this report, Tulip Corporation, was not aware of current RECs associated with the subject property. According to the questionnaire, the adjacent property to the south was a battery manufacturing plant. Tulip Corporation personnel indicated that they were not certain if the subject property was historically involved in battery manufacturing.

3.4 Commonly Known or Reasonably Ascertainable Information

Other than the information contained in this report, the Client is not aware of commonly known or reasonably ascertainable information concerning the subject property. According to the questionnaire, sulfuric acid and lead were used in battery manufacturing. Tulip Corporation personnel are not certain if the subject property was historically involved in battery manufacturing. Additionally, Tulip Corporation stated that the current injection molding presses use hydraulic oil.

3.5 Valuation Reduction for Environmental Issues

The Client indicated that no purchase price has been set for the subject property.

3.6 Owner, Subject Property Manager and Occupant Information

The current owner of the subject property is: Tulip Corporation

The subject property manager is: Mr. John Signore, Plant Manager

The subject property currently operates as: Tulip Corporation.

3.7 Reason for Performing Phase I ESA

This Phase I ESA was completed at the request of the Client for proprietary reasons. Phase I ESAs are commonly performed to allow a party to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser defense to CERCLA liability. The purpose of the Phase I ESA is to identify, to the extent feasible, RECs and historical RECs in connection with the subject property, pursuant to ASTM Standard E1527-05.

4.0 Records Review

The purpose of the environmental records review is to identify RECs and historical RECs in connection with the subject property.

4.1 Standard Environmental Record Sources

Current federal and state database listings for hazardous waste and other potentially impaired sites within specified search distances were identified for the subject property and vicinity by Environmental Data Resources, Inc. (EDR), a subcontract environmental record search firm. These listed sites were reviewed by AECOM to identify sites that would be considered RECs with respect to the subject property. The databases reviewed by EDR were the most recently available as of August 13, 2010. The database sources and distances searched by EDR are included in Appendix C.

Subject Property

The subject property is listed in the Historical Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)/Toxic Substances Control Act (TSCA) Tracking System Administrative Case Listing Inspection [HIST FTTS INSP], which obtained information from the National Compliance Database (NCDB). This data base is no longer updated. The investigation type was "Section 6 PCB Federal Conducted. Violations were noted to have occurred but no date was provided.

The property is listed in the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)/Toxic Substances Control Act (TSCA) Tracking System Administrative Case Listing Inspection [FTTS INSP]. Violations were noted to have occurred. The investigation type was "Section 6 PCB Federal Conducted". No dates were provided but the enforcement action identification number suggests that enforcement actions were taken in 1999.

The property was also listed in the HIST FTTS and FTTS with violations of "PCB Failure to Report" and "Use; Fail to Inspect/Make Recs of Inspect". Inspection dates of 1998 and 1999 were noted. Under the FTTS and HIST FTTS, an EPCRA Enforcement Action was noted in 1999.

The property is also listed in the Integrated Compliance Information System (ICIS). The enforcement action is listed as TSCA 16 Action For Penalty. No dates are identified.

The subject property is listed on the Emergency Response Notification System (ERNS) list in the EDR report. The facility has reported emergency releases to the soil. The spill material is listed as mercury.

The property is listed as a Resource Conservation and Recovery Act Large Quantity Generator (RCRA-LQG). The universal waste summary included batteries, lamps, pesticides, and thermostats. The waste name is lead (Waste code D008). The facility has received notices of violations in 1992, 1994, 2005, 2006 2007. Compliance dates were reported for all violations except for the 2007 violation for TSD Preparedness and Prevention.

The facility was listed in the Facility Index System (FINDS) under the following listings: Aerometric Information Retrieval system (AIRS), National Compliance Data Base (NCDB), RCRA Info Facility Information System (FIS), and Integrated Compliance Information System (ICIS).

The facility was listed in the New York Facility and Manifest Data list (NY MANIFEST). The EDR listed waste codes D039 (tetrachloroethylene 0.73 mg/L TCLP) and D008 (lead 5.0 mg/L TCLP).

The facility was listed in the Toxic Chemical Release Inventory System (TRIS).

The site is listed on the NYS DEC Spills list. In 2004, while moving equipment from a building to an outside hopper, a mercury containing gauge broke and spilled less than one cup of mercury. The spill was contained mostly on asphalt pavement between the H and X buildings. A cleanup was performed and no further action was required by the NYS DEC.

Surrounding Properties

The EDR Radius Map Report was reviewed to assess those sites identified within the ASTM approximate minimum search distances of the subject property and are listed below:

National Priority List (NPL): The EDR report identified one NPL site within ½ to 1 mile of the subject property, known as the Occidental Chemical site (historically the Hyde Park Landfill NPL site). This site is located northeast of the subject property at a distance of 0.548 miles. According to the EDR Report, over 80,000 tons of chemical wastes including dioxin were disposed of at this 15 acre site. Groundwater and surface water contamination was documented. The site has been remediated and is currently undergoing operation and maintenance activities. Because the NPL site has been remediated and is undergoing operation and maintenance activities, it is not considered a REC in connection with the subject property.

CERCLIS: The EDR report identified three Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) sites within 0.5 miles of the subject property. One site is 0.054 miles west/southwest (Power City Warehouse Tract 1), one site is 0.145 miles southwest (Power City Warehouse Tract 2), and one site is 0.273 miles north/northeast (Hazsorb Site) from the subject property. Power City Warehouse Tract 1 and Tract 2 sites are immediately adjacent to the subject property and are considered RECs in connection with the subject property because they pose a significant threat to human health and the environment due to past battery manufacturing operations and placement of wastes on the Tract 1 and 2 sites. The Hazsorb Site has been cleaned up via a removal action with no further assessment required. As such, the Hazsorb Site is not considered a REC in connection with the subject property.

CERCLIS No Further Remedial Action Planned (NFRAP): The EDR report identified four CERCLIS NFRAP sites within 0.5 mile of the subject property. Two sites are located north (US Vanadium and Chisholm Ryder), one is located east/northeast (Union Carbide), and one is located east (Carborundum) of the subject property. Because no further action is required, these sites are not considered RECs in connection with the subject property.

RCRA CORRACTS site: – The EDR report identified two Corrective Action Sites within 1 mile of the subject property. One site is 0.548 miles northeast (Occidental Chemical) and one site is 0.172 miles north (Ucar Carbon Co. Inc.) of the subject property. The Occidental site (Hyde Park NPL site) is discussed above. The Ucar Carbon Co. Inc. site had a RCRA Facility Assessment (RFA) completed,

and it was determined that a RCRA Facility Investigation was not required. As such, the Ucar site is not considered a REC in connection with the subject property.

Large Quantity Generators: The EDR report identified one large quantity generator (Power City Warehouse Tract 2) within 0.25 miles of the subject property. This site is discussed above.

SHWS: The EDR report identified three State Hazardous Waste Sites (SHWS) within one mile of the subject property. One site is 0.145 miles to the southwest (Power City Warehouse Tract 2), one site is 0.477 miles east (Carborundum), and one site is 0.745 miles north northeast (TAM Ceramics) of the subject property. The Power City Warehouse Tract 2 site is discussed above. The Carborundum site is considered a significant threat; however, groundwater contamination does not appear to have migrated to the subject property. The TAM Ceramics site does not present a significant threat to public health or the environment according to the EDR report. As such, only the Power City Tract 2 site is considered a REC in connection with the subject property.

Vapor Reopened: The EDR report identified one site on the Vapor Reopen list within one mile of the subject property. The site (Carborundum) is located 0.477 miles east of the site. This site is discussed above.

SWF/LF: The EDR report identified two sites (The Drain Doctor and SKW Alloys SLF) on the SWF/LF list within 0.5 miles of the subject property. Both sites are located north of the site at a distance of 0.251 and 0.257 miles, respectively, from the subject property. The identified sites are inactive or do not require further action at this time. As such, these sites are not considered RECs in connection with the subject property.

LTANKS: The EDR report identified 11 sites on the LTANKS list within 0.5 miles of the subject property. Six sites are located to the north, from 0.154 to 0.276 miles, of the subject property. One site is 0.209 miles southeast, one site is 0.271 miles east southeast, one site is 0.299 miles east southeast, one site is 0.385 miles northwest, and one site is 0.466 miles east northeast of the subject property. The identified sites are not located adjacent to the subject property and have responsible parties identified. As such, they are not considered RECs in connection with the subject property.

HIST LTANKS: The EDR report identified eight sites on the HIST LTANK list within 0.5 miles of the subject property. Six sites are located north of the subject property at distances of 0.154 to 0.276 miles. Two sites are located east-southeast of the subject property at distances 0.271 to 0.299 miles, respectively. The identified sites are not located immediately adjacent to the subject property and have responsible parties identified. As such, they are not considered RECs in connection with the subject property.

UST Sites: The EDR report identified two UST sites within 0.25 miles of the subject property. One site is 0.049 miles to the west (vacant parcel) and the other site (3800 Highland Avenue) is 0.236 miles north of the subject property. The vacant parcel site may be associated with Power City Warehouse Tracts 1 and 2 discussed above. The 3800 Highland Avenue site is not considered a REC in connection with the subject property given its location and absence of a documented release.

AST Sites: The EDR report identified one AST site (3800 Highland Avenue) within 0.25 miles of the subject property. The site is located north of the subject property at a distance of 0.236 miles. The 3800 Highland Avenue site is not considered a REC in connection with the subject property given its location, and absence of a documented release.

BROWNFIELDS Sites: The EDR report identified two BROWNFIELDS sites within 0.5 miles of the subject property. Both sites are located to the north of the subject property (Old Union Carbide and 3807 Highland Avenue Site) at distances of 0.253 and 0.264 miles from the subject property. The identified sites are not considered RECs in connection with the subject property given they are in the Brownfield Sites program.

US BROWNFIELDS Sites: The EDR report identified six US BROWNFIELDS sites within 0.5 miles of the subject property. One site is located north/northwest (Highland Avenue) at a distance of 0.042 miles, one site is west/southwest (Power City Warehouse) at a distance of 0.054 miles, one site is 0.172 miles north (Union Carbide), two sites are located at distances of 0.273 and 0.452 miles (Hazorb and Maryland/Maple), and one east/northeast (Cerrone #2) at a distance of 0.467 miles from the subject property. The Power City Warehouse site is considered a REC in connection with the subject property. The remaining sites are not considered RECs in connection with the subject property given their status or location relative to the subject property.

HIST UST: The EDR report identified one HIST UST site within 0.25 miles of the subject property. The site (3800 Highland Avenue) is located 0.236 miles north of the subject property. The 3800 Highland Avenue site is not considered a REC in connection with the subject property given its location, and absence of a documented release.

NY Spills: The EDR report identified two NY Spills sites within 0.125 miles of the subject property. Both sites (Cataract Metal Finishing and 3216-3226 Highland Avenue) are located to the north of the subject property at distances of 0.030 and 0.049 miles, respectively. The identified sites have been closed; therefore, they are not considered RECs in connection with the subject property.

NY Hist Spills: The EDR report identified one NY Hist Spills site within 0.125 miles of the subject property. The site (Cataract Metal Finishing) is location 0.030 miles west of the subject property. The identified site has been discussed above and is not considered a REC in connection with the subject property.

RCRA Non Generator Sites: The EDR report identified seven Non-Generator sites within 0.25 miles of the subject property. Non-Generator sites are facilities that historically generated hazardous wastes but do not currently generate hazardous wastes. Three sites (Cataract Metal Finishing, Power City Warehouse Tract 1 and Smith Cleaners) are located 0.172, 0.222, and 0.236 miles respectively north, two sites (Ucar Carbon Co Inc and Niagara Falls Housing Authority) are located 0.078 and 0.182 miles southwest, one property is 0.030 miles west (Unity Park), and one site is 0.054 miles west/southwest (City of Niagara Falls) of the subject property. The Power City Warehouse Tract 1 site is considered a REC in connection with the subject property. Cararact Metal Finishing and Ucar Carbon are discussed above. The remaining sites are not listed as sites of environmental concern related to releases; therefore, they are not considered RECs in connection with the subject property.

ROD: The EDR identified one Record of Decision (ROD) site within 1 mile of the subject property. The ROD site (Hyde Park Landfill or Occidental Chemical) is located 0.548 miles northeast of the subject property. This site is discussed above and is not considered a REC in connection with the subject property.

HSWDS: The HSWDS list includes any known or suspected hazardous substance waste disposal sites. The EDR identified one HSWDS site (Chrisholm-Ryder) within 0.5 miles of the subject property. The site is located 0.258 miles north of the subject property. This site is an industrial landfill but no

cleanup actions related to the landfill were identified in the EDR report. As such, this site is not considered a REC in connection with the subject property.

MANIFEST List: The EDR identified six MANIFEST sites within 0.25 miles of the subject property. Manifest sites are facilities that generate a hazardous waste and the disposal of the waste is tracked by a manifesting system. The sites are located 0.030 miles west, 0.054 miles west southwest, 0.145 and 0.182 miles southwest, and 0.172 and 0.236 miles north of the subject property. These sites are not considered RECs in connection with the subject property because they are properly manifesting their waste currently. The Power City Warehouse Tract 2 site is considered a REC in connection with the subject property related to other issues as discussed above.

Orphan Sites

AECOM also reviewed the EDR Report for orphan sites. The orphan summary list typically includes sites with locations that could not be mapped by EDR due to incomplete or erroneous address information. Review of the orphan site list did not reveal sites within the applicable ASTM minimum search distance of the subject property.

4.2 Additional Environmental Record Sources

Additional Environmental Records Search

Record Source	Type of Records	Comments
Federal		
United States Environmental Protection Agency (USEPA) Envirofacts (USEPA 2010a)	USEPA databases providing information about environmental activities that may affect air, water, and land on the subject property	September 3, 2010: results of USEPA database included in Appendix E of this report.
USEPA Enforcement and Compliance History Online (ECHO) database (USEPA 2010b)	Compliance history of subject property with respect to USEPA.	September 3, 2010: results of USEPA database included in Appendix E of this report.
Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) or Superfund database list (USEPA 2009c)	Database of Superfund sites.	September 3, 2010: The subject property is not listed in the USEPA CERCLIS or Superfund database.
State		
New York State Department of Environmental Conservation (NYSDEC).	Spill Instances Database	September 3, 2010: The subject property is listed in the NYSDEC Spill Instances Database. Results of this NYSDEC database search are included in Appendix E of this report.

Record Source	Type of Records	Comments
New York State Department of Environmental Conservation (NYSDEC)	Environmental Site Remediation Database	September 3, 2010: The subject property is not listed in the NYSDEC Environmental Site Remediation Database.
New York State Department of Environmental Conservation (NYSDEC)	Bulk Storage Database	September 3, 2010: The subject property is listed in the NYSDEC Bulk Storage Database. Results of this NYSDEC database search are included in Appendix E of this report.
County		
Niagara County Assessor's Office	Parcel and ownership records.	FOIA request to the City Clerk's office on September 7, 2010. Received call from Assessor's Office on September 9, 2010. They were unable to provide further information more than was is available on the OARS webpage (information provided in Appendix B). Assessor's Office suggested performing a Title Search for acquiring historic ownership information.

Record Source	Type of Records	Comments
Local		
Niagara Falls Fire Department (Fire Chief)	Information with regard to recent fires, known fire hazards or violations/non-compliance, and information about tanks on the subject property.	FOIA request to the City Clerk's office on September 7, 2010. The following information (provided in Appendix E) was received: • Fire Safety Inspection Forms • Multi –company Inspection/Site Familiarization Report (lists chemicals stored on the subject property, historic fire violations noted) • Pre-Fire Plan Report • Hazardous Material Report for 1997, 1995, 1994, 1993, 1992 • Department of Fire Approval Forms for Issue of License for Flammable Liquids, Retain, Wholesale and Storage • Paperwork associated with previous fires
City of Niagara Falls	Information regarding city permits.	Building inspection records, as well as any other environmental records have been requested via a FOIA request to the City Clerk office on September 3, 2010. The following information (provided in Appendix E)was received: • Building Permits

4.3 Physical Setting

Published geologic and hydrogeologic information was reviewed to assess soil and bedrock types in the area. regional groundwater flow direction, and groundwater sources. The United States Geological Survey (USGS) 7.5-minute quadrangle map was used to determine general land features in the area of the subject property, to evaluate the local topography, and to estimate shallow groundwater flow direction. However, it should be noted that cultural influences such as sewers and

the New York Power Authority intake conduits can have a dramatic effect on the occurrence and direction of groundwater flow in the area of the subject property.

The 7.5-minute topographic map of the Niagara Falls quadrangle (dated 1995) shows the area topography and surface water features in and around the subject property (Figure 1). The topographic map shows the subject property as generally level with an estimated elevation of 582 feet above mean sea level (MSL) sloping generally to the northwest towards the Niagara River located approximately 0.85 miles west of the subject property.

The native surficial soils in the vicinity of the subject property consist of the Odessa silty clay loam, 0 to 2 percent slopes). The Odessa silty clay loam consists of deep, somewhat poorly drained, moderately fine textured soils. The soils are level to gently sloping and occur in basins of old glacial lakes (USDA Soil Conservation Service, 1972). Site specific soils are not mapped due to urban development.

The underlying bedrock formation is mapped as the Upper Silurian Eramosa (dolomite) Formation of the Lockport Group. The depth to bedrock is anticipated to be approximately 20 feet below existing ground surface.

In the vicinity of the subject property, no significant groundwater is found in the overburden. Shallow bedrock groundwater flow direction in the area of the subject property is difficult to interpret because cultural influences such as sewers and the New York Power Authority intake conduits can have a dramatic effect on the occurrence and direction of groundwater flow in the area of the subject property. Regional groundwater flow is to the north towards Lake Ontario. The depth to shallow bedrock groundwater is estimated to be within 20 to 25 feet below the existing ground surface.

4.4 Historical Use Information

The objective of consulting historical sources is to develop a history of the previous uses of the subject property and surrounding area, in order to help identify the likelihood of past uses having led to RECs and HRECs in connection with the subject property.

Historical City Directories

AECOM reviewed City Directory Abstract provided by EDR for the subject property, which included the years 1964 through 2010. According to the directory abstract, Prestolite Battery Division of Eltra Corporation occupied the subject property in 1964 until at least 1980. The 1985 directory noted Prestolite Battery Division of Allied Corporation. The 1990 to current directories indicate Tulip Corporation as the subject property occupant.

Historical Fire Insurance Maps

Certified Sanborn Maps from EDR for the subject property were available dated 1914, 1950, 1958, 1965, 1979, and 1985. Copies of the Sanborn Maps are included in Appendix G.

Subject Property:

In the 1914 Sanborn map, the subject property is depicted as developed and occupied by The U.S. Light & Heating Company, manufacturers of axle lighting devices, storage batteries, and electric self starters for automobiles. Two acid tanks are depicted in the alleyway between buildings J2 and J3.

On the subject property, four buildings (Buildings J.1, through J.4) are labeled Battery Formation and one building (Building H) is labeled Pasting Battery Grids.

The 1950 map depicts the subject property similar to the 1914 map; however, the subject property is shown as being occupied by Auto-Lite Battery Corporation. Six sulfuric acid tanks are shown in the northeast corner of the subject property. The building located in the northwest corner is labeled boiler room, with the area to the northwest of this building labeled coal pile. The acid tanks between building J2 and J3 are no longer depicted. Building J.1 is still labeled Battery Formations; however, Buildings J.2 and J.3 are not identified as such and Building J.4 no longer exists. Building H is now labeled Battery Grids Storage.

The 1955 map is similar to the 1950 map. An oil tank, powdered coal silo, and coal pile are depicted to the north of building J2 and Factory Building. Building J1 no longer exists and Building H is now labeled machine shop (first floor) and office and file room (second floor).

The 1958 map is similar to the 1955 map. The subject property is now labeled as The Electric Auto-Lite Company (battery case manufacturing). A coal silo is now depicted to the east of the boiler house in the northwest corner of the subject property.

The 1965 map is similar to the 1958 map. The subject property is now labeled as Prestolite Division of Eltra Corporation (battery case manufacturing).

The 1979 map is similar to the 1965 map.

The 1985 map is similar to the 1979 map. The subject property is now labeled as Niagara Falls Container Plant.

Surrounding Properties:

In the 1914 Sanborn map the adjoining properties to the west consist mostly of undeveloped land and residential properties. The properties to the north and east are not shown. The properties to the south appear as part of the U.S. Light & Heating Company.

In the1950 map the property to the south remains part of the subject property (Auto-Lite Corporation). The parcels to the north of the subject property are not depicted. To the east of the subject property, Property development has occurred to the east of the subject property since the 1914 map is depicted; however, it is unclear what the buildings are used for (assumed manufacturing as one building is labeled as asphalt storage and another is labeled as cotton picker room). Parcels to the west are primarily residential. To the northwest is a factory (Gerium Metals Corporation).

The 1955 map is similar to the 1950 map.

The 1958 map is similar to the 1955 map.

The 1965 map is similar to the 1958 map. Northwestern adjacent property is now depicted as Wholesale Pumping Supplies.

The 1979 map is similar to the 1965 map.

The 1985 map is similar to the 1979 map. Property to the south of the subject property now shows a different owner (Capital City Distribution) than the subject property (Prestolite Division of Eltra Corporation).

Historical Aerial Photographs

AECOM reviewed historical aerial photographs provided by EDR dated 1962, 1972, 1985, 1995, and 2006 for the subject property. Copies of the aerial photographs reviewed are included in Appendix H.

Year	Subject Property Features	Adjoining Property Features
1962	The subject property is developed with a manufacturing building.	Surrounding properties to the north, south, and east consist of industrial/manufacturing buildings. Properties to the northeast appear to have earthwork occurring and to the southwest the properties appear undeveloped. Properties to the west of Highland Avenue consist mostly of residential properties.
1972	No major changes are noted.	No major changes are noted. Property to the southeast appears cleared.
1985	No major changes are noted.	No major changes are noted, however, the photo has poor resolution (scale 1 inch = 1000 feet).
1995	No major changes are noted.	No major changes are noted.
2006	No major changes are noted.	No major changes are noted. Property to the southeast appears re-vegetated.

Historical Topographic Maps

AECOM reviewed historical target quadrangle topographic maps dated 1901, 1944, 1965, 1980, and 1995 for the subject property, and adjoining quadrangles for 1944, 1950, 1965, and 1980. The scale of the 1901 (1:62500) quadrangle does not allow for interpretation of the subject property and surrounding areas. Specific site features are depicted in the topographic maps from 1944. A 40 track rail yard (labeled NYC (Lewiston Branch) and Lehigh Valley) is noted to the west of the subject parcel on the 1944 map. This rail yard is not shown on the 1965 map. The subsequent 1980 map shows one rail line (Conrail). In the 1944 and later maps large industrial buildings are noted approximately ¼ mile to the northeast of the subject parcel. The EDR Historical Topographic Map Report is contained in Appendix I.

4.4.1 Summary of Subject Property History

It is unclear when the subject property consisted of undeveloped land. As early as 1914 the subject property is developed and used for manufacturing as indicated on the 1914 Sanborn Map (The U.S. Light & Heating Company (USL)), manufacturers of axle lighting devices, storage batteries and

electric self starters for automobiles. Based on the NYSDEC 1997 report entitled *Multi-Media/Pollution Prevention Inspection Report*, the manufacturing by USL began in 1910. Electric Autolite Company operated on the subject property until they merged with Prestolite Company as a Division of Eltra Corporation (no documentation was found when USL changed to Electric Autolite Company). The 1950 Sanborn map indicates "Auto-Lite Battery Corporation" operated at the subject property and the 1958 Sanborn map indicates "The Electric Auto-Lite Company" operated at the subject property. The 1965 Sanborn map indicates "Prestolite Division of Eltra Corporation" operated at the subject property. In 1980, Eltra Corporation was acquired by Allied Chemical Corporation (later Allied Corporation). In 1985, Tulip Corporation purchased the subject property and the name changed to Niagara Molded Products (also indicated on the 1985 Sanborn map). In 1988, Niagara Molded Products assumed the name Tulip Corporation.

4.4.2 Summary of Adjoining Property History

Based on a review of reasonably ascertainable historical information, AECOM developed this summary of adjoining property history. The adjoining properties have similar site histories in that the adjoining property to the south has been developed with industrial/manufacturing buildings since at least the mid 1910s (The southern and southeastern property (also referred to as Power City Warehouse Tracts 1 and 2) used to operate as part of the subject property and were used for battery manufacturing and disposal of wastes associated with battery production including battery casings. Note that in 1958, the manufacturing of batteries was reportedly discontinued and transferred to other Prestolite plants.). The properties to the west, across Highland Avenue, have consisted of residential properties since the mid 1910s.

5.0 Information from Site Reconnaissance

5.1 Methodology and Limiting Conditions

AECOM observed the subject property to identify RECs and HRECs. Photographs of the site reconnaissance are included in Appendix J.

5.2 General Site Setting

The site reconnaissance of the subject property was conducted by Ms. Tamara Raby, an AECOM Project Geologist, on August 21, 2010. The site reconnaissance was completed on a Saturday, when the plant was not in operation. Mr. John Signore, Tulip Corporation Plant Manager, accompanied Ms. Raby during the site visit. Mr. Signore has been familiar with the subject property for 27 years. AECOM observed the subject property for features usually associated with potential environmental impairment including: electrical transformers; USTs; ASTs; chemical/waste storage, generation, and management practices; and pesticide/herbicide application practices.

5.3 Subject Property Observations

The subject property consists of a multi-building complex, including buildings H, H-ADD, L, L-ADD, J, J-3, Q-1, Q, Q-2, X, W, W Ext., former Bushing Dip Room, PP chip storage building, compressor building, and boiler building.

Buildings H and L (two stories): The first story consists of a reception foyer, rest rooms, testing laboratory, maintenance storage area, tool and maintenance spare parts storage, and a machine shop. The second story consists of an office area and storage. AECOM observed deteriorated chemical containers and a moist floor in cabinets where chemicals were stored in the laboratory. Chemicals noted included isopropyl alcohol, diethylene glycol, perchloroethlene, anti-freeze, relentless 15, sodium tartrate, sulfuric acid, and battery fluid, among others. A small injection molding machine was located in the room outside the laboratory. Hydraulic oil was observed on the floor. A Universal Waste Storage Area was located in this same room as the injection molding machine; stored materials included nickel cadmium (labeled NiCad), mercury, and fluorescent lamps. An unlabeled drum was also observed in this same room. AECOM observed a wooden floor in the machine shop located in Building H. This wooden floor had oil staining. The tool and maintenance spare parts room was observed to have paint storage and a flammable materials storage cabinet, as well as miscellaneous supplies stored on shelves. Items stored in these locations included, but were not limited to, stains, concrete sealer, mineral spirits, paint, refrigerator oil, ink, and vacuum pump oil.

Compressor House: The Compressor House is one-story and contains an air compressor and an air drier. AECOM observed compressor oil stored near the floor drain in the compressor room in a small plastic wash tub and an open five gallon bucket. Mr. Signore stated that all floor drains (except in Building J-2 extrusion room as described below) in the plant are routed to the City of Niagara Falls water treatment facility.

Boiler House: The Boiler House is one-story with a basement and houses a coal fired boiler on the main floor that is no longer in use. In the first floor of the boiler house AECOM observed asbestos

wrapped pipes and a trench system that housed piping associated with the boiler. Water leaking from one of the pipes was noted to be dripping over an asbestos wrapped pipe. The basement houses pumps that are part of a cooling tower system that used to cool the heat exchanges on the air compressors. The first floor and basement are now used for maintenance storage and old boiler parts. In the basement of the boiler house, AECOM observed storage of paint, cleaning solution, and etching solution, among other items. AECOM also observed deteriorating paint on the basement walls; the paint may be lead-based given the age of the building.

Courtyard area between Buildings H/L and J-2: The paved courtyard is used for storage of empty drums that are later reused, two dumpsters (one for pallets, one for cardboard), a general plant non-hazardous waste compactor, coal storage silo (no longer in use), fly ash silo (no longer in use), and an air accumulator bottle for plant air compressors. AECOM observed an empty cabinet labeled "explosive gas". It is unknown what may have previously been housed in this location. AECOM also observed several empty drums and broken paper/pulp containers.

Bushing Dip Room/Old Truck Repair Shop: This complex is located to the west of Building J-2. As conveyed by Mr. Signore, historically bushings were dipped in a mixture of Hypalon and Zylene. This process was discontinued over 10 years ago. All chemical associated with this process were removed from the subject property at that time. Presently, in the northern part of the complex, AECOM observed a dump hopper and auger system that is used to transfer scrap ground plastic into the chip holding bins for reuse. In the northwest corner there is a 150 gallon AST that contains diesel fuel. The AST has no over fill protection; however, secondary containment is provided by tub in which the AST is situated. The southern portion houses the hazardous material roll-off (outside), an auger that moves chip materials to Building J-2, and chip storage bins (this area was previously used for oil storage area that required a sump (still present)).

Building J-2:

- South End: The southern portion houses machinery used in the polypropylene (PPE) chip recycling process (hazardous lead waste is handled in this portion of the property). This portion of the building has a concrete floor that is diked. In this location PPE is sorted, ground, washed, dried, and extruded into pellets which are then used in the injection molding process described below for production of new battery casings and lids. As communicated to AECOM by Mr. Signore (Tulip Corporation), one supplier of raw PPE battery chips does not pre-wash the chips prior to shipping to Tulip Corporation. These chips are contaminated with lead upon arrival to the subject property. Potentially lead contaminated water from the recycling process was observed on the floor. An unlined sump pit with pump is located in the south end of Building J-2. Fluid from the sump is pumped into a holding tank for re-use in the PPE recycling process. A hazardous sludge is produced from the PPE recycling process of the lead contaminated chips.

- North End: The northern portion of Building J-2 includes the extrusion room and houses machinery and a holding tank for water generated in this process. All floor drains in the extrusion room are routed to one central pit and from the pit to the holding tank (the water is used as make-up water in the PPE chip processing room). Hydraulic fluid was noted by AECOM on floors. Mr. Signore stated that some of the oily appearance within the extrusion room comes from the type of flooring (mastic).

Building X: This building houses a concrete diked hydraulic oil storage area within the west end of the building (hydraulic oil and gear oil drums noted in this area), a steam generator room (northwest

portion; no longer in use), cooling system tanks for water and anti-freeze (no longer in use; formerly used for a lumber line), and a vacuum system. Mr. Signore stated that the lumber line was installed to create extruded forms to sell as a new product line. The line never ran except to make samples. Tulip intends to sell the line at some point in the future.

Building J-3: The northern three-fourths of this building is used for material storage, and the remaining southern one-fourth of the building houses curbside recycling material (polyethylene [PE]). The recycling process is similar to that of the PPE described above. The recycled PE is used for recycling bins, water and milk bottle crates, among others.

Building W: This building houses a room with two transformers containing PCB oil. The remaining portion of building houses employee bathrooms and injection molding machinery. AECOM observed hydraulic oil and water on floors of the injection molding portion of building W.

Building Q: This building acts as storage for finished product. The building also contains a vent assembly room, a lunch room, back-up batteries, and a back-up air compressor. AECOM noted oil stained concrete floors around the back-up air compressor. Three truck loading docks are located on the north side of Building Q. Each dock is equipped with a spring loaded truck dock level mechanism. There is also a smaller garage door for small truck loading and unloading. On the southeast corner of Building Q are the facility's main two (pad mounted, non-PCB containing) transformers. No date was provided as to when these transformers were installed. No staining was observed on the floor in the vicinity of the transformers during the site visit. On the northern end of building Q is the facility's back up fire protection room which contains a 300 gallon AST that contains diesel fuel. The AST has no over fill protection nor secondary containment associated with it.

Building Q-1: This building houses machinery associated with injection molding for bigger parts. AECOM noted water and hydraulic oil on the floors of injection molding portion of Building Q-1. There is a non-PCB step down transformer located outside of Building Q-1. This transformer is feed for the two main transformers located outside Building Q.

Building Q-2: Storage for finished product.

Injection Molding Production: Tulip Corporation manufactures plastic battery containers using injection molding processes. PPE pellets are stored in exterior silos (located on the south side of the building) and transported to specific injection molding machines using overhead vacuum lines. Specialty pellets are staged adjacent to injection machines and vacuum fed as needed. The injection molding area is located in the northeast quadrant of the facility and consists of 22 injection molding machines (which use a closed hydraulic system). Four injection molding machines are serviced with a die cart that can be moved from press to press. All other presses are serviced by an overhead crane and/or A-frame hoists.

Five of the injection molding machines are mounted on a concrete pad with a lined sump crock (approximately 24 inches deep). All water and air supplies to the presses are situated overhead and not in the floor sumps. Hydraulic oil from these machines is contained in the sump crocks. Oil in the crocks is pumped out and stored in ASTs in the oil storage area where they are later filtered for reuse by an outside contractor. All other molding machines are diked above ground to contain any water or oil that is released from the machines. The majority of the water and oil is collected for reuse after filtering. Some of the water is soaked up with PIGS and oil absorption mats for disposal by an approved outside contractor.

Exterior Observations: Asphalt parking areas are present to the west of the office area and to the north of Virginia Ave (north of Building W). The majority of outside surfaces are paved, except for the area between Highland Avenue and the office area parking, and the area north of Buildings X, W, W Ext, and Q,

AECOM observed above ground storage silos containing plastic resin on the subject property. Mr. Signore indicated that there were a total of 18 silos with a total capacity of 2,810,000 pounds, which were 75-80% full at the time of site visit. Plastic resin in the silos is transported to individual injection molding machines by overhead vacuum lines. Additionally, AECOM observed a 20,000 gallon double walled diked AST to the north of Building X that was previously used to store naphthenic oil (this oil was used in the compression molding of hard rubber product which is no longer performed at the subject property). AECOM noted staining near the AST loading valve area.

Wood pallets and purgings are stored in the northeast corner of the subject property. A catch basin observed in this area is routed to Niagara Falls Water Treatment Facility. Raw curbside recycling materials (bails) are stored to the north of Buildings X and W, north of Virginia Avenue, and also on the south side of the subject property.

The main transformers that feed the plant are located on the southeast corner of the facility (outside of Building Q). No staining was noted on the ground near these transformers during the site visit.

The subject property has cooling towers and chillers for non-contact cooling water. These are closed loop systems. Boiler treatment chemicals are used for the building cooler tower as stated by Mr. Signore. An outside water treatment contractor provides service to the cooler tower.

A formerly used railcar unloading area was noted along the eastern side of the subject property. Piping was used to transfer raw materials from tankers to storage silos.

AECOM observed miscellaneous debris in the northwest portion of the subject property. Mr. Signore (Tulip Corporation) stated that this debris was not placed by Tulip Corporation, and that he was unaware that this parcel was part of Tulip Corporation property. Based on the tax mapping acquired by Niagara County On-Line Mapping System this land appears to be part of Tulip Corporation's property. Items noted included, but are not limited to, buckets, empty drums, tires, and miscellaneous general debris.

The area located to the north of building W and north of Building Q has been used to stage concrete and soil from various construction projects on site. No odors or staining was observed associated with the soil piles during the site visit.

5.4 Hazardous Substances in Connection with Identified Uses

The following hazardous substances are generated and disposed of by a licensed disposal contractor:

- Mercury (disposed of annually)
- Fluorescent light bulbs (disposed of annually)
- Nickel Cadmium (disposed of annually)
- Oil/water mix (small amounts produced, no disposal schedule supplied)

- Hydraulic fluid filters
- Lead waste: generated from recycling of PPE

In addition, Tulip Corporation used boiler treatment chemicals for the building cooling tower. Process non-contact cooling water, chill water tower and hydraulic machine mold cooling water is discharged to the combined sewer system.

5.5 Hydraulic Fluid Usage

Hydraulic fluids are used by each of the five injection molding machines on-site. The machines use a closed hydraulic system.

5.6 Storage Tanks, Oil/Water Separators, and Grease Traps

There is one 20,000 gallon (volume provided by Mr. Signore) AST present on the north side of Building X. This AST was previously used to store naphthetic oil used for rubber production; the AST is no longer in use.

AECOM observed a small 150 gallon diesel fuel AST in the former Bushing Dip Room (used for fueling a skid loader) and one small 300 gallon diesel fuel AST in the former electric sub-station building (room on north end of Building Q that houses of the fire protection back-up system). Neither of the diesel tanks has overflow protection. The AST located in the former Bushing Dip Room has secondary containment provided by a plastic tub that the AST is situated within.

There are five – 300 gallon ASTs that store used hydraulic oil located in the oil storage area of Building X. The oil is filtered for reuse by an outside contractor.

There are 18 storage silos containing plastic resin located on the south side of the property and north side of Building X. Pellets are transported to individual injection molding machines by overhead vacuum lines.

5.7 Indications of Polychlorinated Biphenyls

AECOM observed indications of PCB use during the site assessment. Building W houses a room with two transformers containing PCB oil. Mr. Signore stated that PCB-containing transformers are tested on an annual basis. On the southeast corner of Building Q are the facility's main two (pad mounted, non-PCB containing) transformers powered by National Grid. There is a non-PCB step down transformer outside Building Q-1. This transformer is feed for the two main transformers located outside Building Q. No staining was observed below of any of the transformers during the site visit.

5.8 Indications of Hazardous Waste Disposal

Hazardous substances (discussed above) generated on-site are disposed of by Tonawanda Tank Transport.

5.9 Indications of Solid Waste Disposal

AECOM observed the subject property for solid waste management issues, including generation and disposal methods. Cardboard and paper are recycled. General trash is disposed of by Modern Disposal.

5.10 Adjoining Properties Observations

AECOM did not enter adjoining properties during the site visit. Observations of potential RECs are limited to circumstantial evidence. Considering the manufacturing history of the property immediately south of the subject property, it is reasonable to assume that RECs exist (lead contamination, among others).

6.0 Interviews

6.1 Interview with Owner

AECOM was provided a User Questionnaire completed by a representative of Tulip Corporation. There were no indications of environmental liens or use restrictions in connection with the subject property.

6.2 Interview with Site Manager

Mr. John Signore, Tulip Corporation Plant Manager was present at the time of the site reconnaissance and provided information included throughout this report.

6.3 Interviews with Occupants

See Section 6.2.

6.4 Interviews with Local Government Officials

AECOM interviewed local government officials and reviewed local government records as part of this Phase I ESA (refer to Section 4.2 of this report).

7.0 Findings and Opinions

AECOM performed a Phase I ESA of the Tulip Corporation property located at 3125 Highland Avenue located in the City of Niagara Falls, Niagara County, New York in conformance with the scope and limitations of ASTM Practice E 1527-05, which meets the requirements of 40 CFR Part 312 and is intended to constitute *all appropriate inquiry* for purposes of the LLPs. No physical environmental sampling was performed. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report.

According to the ASTM standard, potential findings can include RECs, historical RECs (HRECs) and de minimis conditions. RECs are conditions where the data collected indicates that there is or has been a release or that there is a potential for a release of hazardous substances or petroleum products into the structures at the subject property, or into the ground, groundwater or surface water of the subject property. HRECs are generally conditions that in the past have been remediated to the satisfaction of the responsible regulatory agency. De minimis conditions are those situations that do not present a material risk of harm to public health or the environment and generally would not be subject to enforcement action if brought to the attention of the regulating authority. The following presents our findings related to RECs, HRECs and de minimis conditions.

Evidence of RECs or historical RECs in connection with the subject property are as follows:

RECS:

- **Significant Historical Chemical Usage:** The facility was historically and currently a large quantity generator of hazardous waste. The historic use, storage, and disposal of chemicals and petroleum products on-site are unknown and are considered a REC in connection with the subject property. Examples of current chemical usage areas include:
    - Chemicals noted in the facility testing laboratory included isopropyl alcohol, diethylene glycol, perchloroethlene, anti-freeze, relentless 15, sodium tartrate, sulfuric acid, and battery fluid, among others.
    - The tool and maintenance spare parts room was observed to have paint storage and a flammable materials storage cabinet, as well as miscellaneous supplies stored on shelves. Items stored in these locations included, but were not limited to, stains, concrete sealer, mineral spirits, paint, refrigerator oil, ink, and vacuum pump oil.
    - In the basement of the boiler house, AECOM observed storage of paint, cleaning solution, and etching solution.
    - In the courtyard area, an empty cabinet labeled "explosive gas" was observed. It is unknown what may have previously been housed in this location. Additionally, several empty drums and broken paper/pulp containers were observed in this area.
    - In the Compressor House, compressor oil was observed to be stored near the floor drain in a small plastic wash tub and an open five gallon bucket.

- In Building Q, oil stained concrete floors were observed around the back-up air compressor.
- Historically in the Bushing Dip Room, bushings were dipped in a mixture of Hypalon and Zylene. This process was discontinued over 10 years ago. All chemical associated with this process were removed from the subject property at that time.
- Areas of concern include current and historic storage areas, truck loading docks, and railcar unloading area.

- **Hydraulic Oil:** Hydraulic oil was historically used at the subject property. Based on the age of the facility, there is a potential that hydraulic oil containing PCBs was used. Currently, hydraulic oil continues to be used at the subject property. All floor drains, except in the extrusion room of Building J-2, are routed to the local publicly-owned treatment works (POTW) (Figure 4). Additionally, a sump was observed below the chip storage bins (historically this area was used for oil storage). Historic and present day releases of hydraulic oil have potentially occurred. Hydraulic oil releases are considered a REC to the subject property.

- **Wooden Floor Located in Building H:** Historic use of the current machine shop room located in Building H is not known. This room is constructed with a wooden floor that appeared to be stained. The wooden floor is considered a REC to the subject property.

- **Former Coal Storage Pile and Unknown Historical Disposal of Fly Ash:** Sanborn maps beginning with the 1955 map and continuing until the most recent 1985 map, indicate the presence of a coal pile east of the present day plastic storage silo (formerly labeled powdered coal silo). The presence of this coal pile and the unknown historical disposal of fly ash are considered a REC to the subject property.

- **PPE Recycling Room Sump:** Process water, which potentially contains lead, is periodically released onto the floor of the PPE Recycling Room. The process water is subsequently collected in an unlined sump pit (located in the south end of building J-2 in the PPE Recycling Room. Fluid). From the sump, the process water is pumped into a holding tank for re-use in the recycling process. The condition of the sump is unknown. Potential releases of lead contaminated water may have occurred in this area. The potential lead containing process water in the PPE recycling room is considered a REC to the subject property.

- **Naphthenic Oil AST:** The 1955 Sanborn Map annotates an oil tank in the present day location of the Naphthenic Oil tank (north of Building X). It is unknown if this is the same tank as the present day tank, or if the tank stored the same type of oil that is reported to have been stored in the present day tank. Additionally, it is not know if the tank has always had the secondary containment that presently exists. Staining was observed during the site visit near the tank loading valve. The naphthenic oil AST area is considered a REC to the subject property.

- **Adjoining Properties:** In the EDR report, the Power City Warehouse Tract I Site that is adjacent to the subject property to the south is listed on the Federal CERCLIS list. loca. Brownfield lists, RCRA-NonGen sites, and MANIFEST list (as Amherst Town Of at 3123 Highland Avenue). In the EDR report, the Power City Warehouse Tract II site (located ~60 east and to the south of the subject property) is listed on the Federal CERCLIS list, Federal

RCRA generators list, State- and tribal-equivalent CERCLIS list, and the MANIFEST list. The potential for adverse impacts to have migrated onto the subject property from either the Power City Warehouse Tract I or Tract II sites cannot presently be determined. It is likely that the subject property was historically part of a larger parcel that included the properties to the south and southeast. The identified adjacent listed sites of environmental concern are considered a REC to the subject property. **Historic Battery Production and Associated Chemicals of Concern:** Based on the 1914 and 1950 Sanborn maps, battery formation and battery grid pasting occurred at the subject property. The site historically produced bushings, lead battery terminals, and hard rubber battery casings. In addition to the concerns related to the battery production operations, the following distinct features of concern were noted on historical maps: the sulfuric acid tanks between buildings J-2 and J-3, the sulfuric tanks located to the northeast of the current building (shown on the 1950 Sanborn map), and the bushing dip tank. The historic battery production, as well as other historic production processes, and associated chemicals are considered a REC to the subject property.

HRECS:

- **PCB Transformer Spill:** During the site visit, Tulip Corporation stated that an historical release of PCB oil occurred from a leaking valve on the PCB containing transformers. The release was reportedly cleaned up and is no longer considered an issue of concern.

- **Mercury Spill:** In 2004, while moving equipment from a building to an outside hopper, a mercury containing gauge broke and spilled less than one cup of mercury. The spill was contained mostly on asphalt pavement between the H and X buildings. A cleanup was performed and no further action was required by the New York State Department of Environmental Protection (NYS DEC).

De Minimis Conditions:

This assessment has revealed the following de minimis conditions in connection with the subject property:

- **Surface Debris Area:** The northwest corner of tax ID parcel #130.18-2-4 was observed to have miscellaneous surface debris. Mr. Signore (Tulip Corporation) stated that this debris was not placed by Tulip Corporation, and that he was unaware that this parcel was part of the Tulip Corporation property.

- **Miscellaneous Construction Debris:** The area located to the north of building W and north of Building Q has been used to stage concrete and soil from various construction projects on site. No odors or staining was observed associated with the soil piles during the site visit.

7.1 Data Failures/Data Gaps

A data gap is considered the lack of or inability to obtain information required by ASTM E1527-05 despite good faith efforts by AECOM to gather such information. A data gap by itself is not considered significant. The following data gaps were identified during performance of this Phase I ESA. The significance of the data gap is discussed below as well as data failures, if any. AECOM's ESA identified the following data failures/gaps:

- Chain of title information for the subject property was not provided to AECOM for review as part of the Phase I ESA. Given the historical use of the subject property and past ownership information provided by historical resources, the inability to assess chain of title information is not considered a significant data gap.

- According to ASTM, past owners, operators, and occupants of the subject property, who are likely to have material information regarding the potential for contamination at the subject property, shall be contacted to the extent that they can be identified and that the information likely to be obtained is not duplicative of information already obtained from other sources. AECOM obtained historical property information from site representatives, historical topographic maps, and aerial photographs. According to this information, the subject property has been improved or utilized as a manufacturing facility since at least 1914 and has been owned by Tulip Corporation since 1985. Past owners, operators, or occupants were not available for interview. Based on historic use of the subject property and surrounding area, and because contact information was not available for the past owners, past owners were not contacted. This data gap is not expected to represent a significant limitation to this investigation.

- An Environmental Lien search and Activity and Use Limitation (AUL) search was not provided to AECOM for review as part of the Phase I ESA. The client did not indicate any AULs or environmental liens on the subject property.

AECOM has no information to suggest that by eliminating the above-listed data gaps through review of documentation that is not reasonably ascertainable, additional RECs and/or historical RECs would be identified with respect to the subject property.

8.0 Conclusions

AECOM performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527 of the Tulip Corporation property located at 3125 Highland Ave in the City of Niagara Falls, Niagara County, New York. Any exceptions to, or deletions from, this practice are described in Chapter 1.0 of this report. Data failures and data gaps are presented in Section 7.4.

This assessment has revealed no evidence of RECs or historical RECs in connection with the subject property, with exception of the following:

RECS:

- Significant Historical Chemical Usage
- Hydraulic Oil
- Wooden Floor Located in Building H
- Former Coal Storage Pile and Unknown Historical Disposal of Fly Ash
- PPE Recycling Room Sump
- Naphthenic Oil AST
- Adjoining Properties
- Historic Battery Production and Associated Chemicals of Concern

HRECS

- PCB Transformer Spill
- Mercury Spill

This assessment has revealed the following de minimis conditions in connection with the subject property:

- Surface Debris Area
- Miscellaneous Construction Debris

Appendix I

Subject Property Photographs

Tulip Corporation Environmental Site Assessment

3125 Highland Ave, Niagara Falls, NY

August 21, 2010 Photographs

Front parking area. Building H in background, facing southeast.

Second floor office area of Building H, facing northeast.

One of the chemical storage areas in the testing laboratory located in Building H-ADD.

Hydraulic oil stained floor in room outside laboratory, Building H-ADD. Small injection molding machine, facing southwest.

Tulip Corporation Environmental Site Assessment

3125 Highland Ave, Niagara Falls, NY

August 21, 2010 Photographs

Universal waste storage area (same room as previous photo was taken in). Building H-ADD, facing northeast.

Machine shop, Building H, facing southwest. Oil soaked wooden floor noted.

Storage (paints, stains, concrete sealer, mineral spirits, pump oil, etc) in tool and maintenance spare parts room in Building L.

Boiler Building, coal storage silo, and fly ash hoper.

Tulip Corporation Environmental Site Assessment

3125 Highland Ave, Niagara Falls, NY

August 21, 2010 Photographs

Explosive gas storage, located in courtyard, outside Building L-ADD.

Miscellaneous storage, including empty drums and broken paper/pulp waste containers. Located in courtyard, outside Building L-ADD.

Roll-offs for pallets and cardboard (black and blue containers on left, respectively) and general plant non-hazardous waste compactor (blue on right). Facing northwest.

Compressor oil staged in compressor building (Building S). Note floor drain to right of wash tub containing oil.

Tulip Corporation Environmental Site Assessment

3125 Highland Ave, Niagara Falls, NY

August 21, 2010 Photographs

Boiler, no longer in use. Note asbestos wrapped piping.

Example of floor trench system in boiler room.

Miscellaneous maintenance supplies stored in boiler room.

Water leak from overhead pipe in boiler room. Leaking water runs over asbestos covered pipes.

Tulip Corporation Environmental Site Assessment

3125 Highland Ave, Niagara Falls, NY

August 21, 2010 Photographs

Miscellaneous maintenance supply storage including secluding bonding mortar and other unidentified items.

Deteriorating paint on basement walls of boiler building.

Recirculation water pumps and tank in boiler building basement.

Hazardous waste roll-off in courtyard, facing southeast (berm not required).

Tulip Corporation Environmental Site Assessment

3125 Highland Ave, Niagara Falls, NY

August 21, 2010 Photographs

Diesel fuel AST in former Bushing Dip Room.

Bottom side of chip storage pins and auger.

Storage silos and staged materiel bails (used in curbside recycling). Located on southern portion of property, facing east.

Sump pit below chip/storage bins. Previously oil storage area required this sump. Now just used to collect storm water (e.g. rain water).

Tulip Corporation Environmental Site Assessment

3125 Highland Ave, Niagara Falls, NY

August 21, 2010 Photographs

Sump pit with pump in south end of Building J-2. Water noted on floor from recycling process.

Building J-2, south end. Chip recycling process equipment, facing west.

North end of Building J-2, extrusion room, facing west. Hydraulic oil leak.

All floor drains in extrusion room located in north end of building J-2 go to this central pit, facing south. From pit, fluid goes to holding tank. Fluid used for make-up water in chip recycling processing room.

Tulip Corporation Environmental Site Assessment

3125 Highland Ave, Niagara Falls, NY

August 21, 2010 Photographs

Diked hydraulic oil storage, west side of Building X, facing north. Drums labeled gear oil also noted.

Building J-3 storage (northern end), facing south.

Building J-3, southern end. Curbside recycling process equipment, facing southwest.

One of two PCB containing transformers located in a room within Building W, facing northeast.

Tulip Corporation Environmental Site Assessment

3125 Highland Ave, Niagara Falls, NY

August 21, 2010 Photographs

Eastern end of Building W and Building W EXT. Injection molding equipment, facing east. Hydraulic oil noted on floor.

Building Q storage, facing south.

Facility backup air compressor located in Building Q, facing east. Oil noted on floor with oil boom placed.

Building Q-1 injection molding equipment for larger parts. Water and hydraulic oil noted on floor, facing north.

Tulip Corporation Environmental Site Assessment

3125 Highland Ave, Niagara Falls, NY

August 21, 2010 Photographs

Finished product storage located in Building Q-2, facing south.

Formerly used above ground storage tank, located north of Building X, facing south. Stored napthetic oil used for rubber compression molding.

Vegetated area north of Building W. Staged concrete from construction activities. Facing east.

Northeast corner of property, facing northeast. Pallet and solid plastic purging storage.

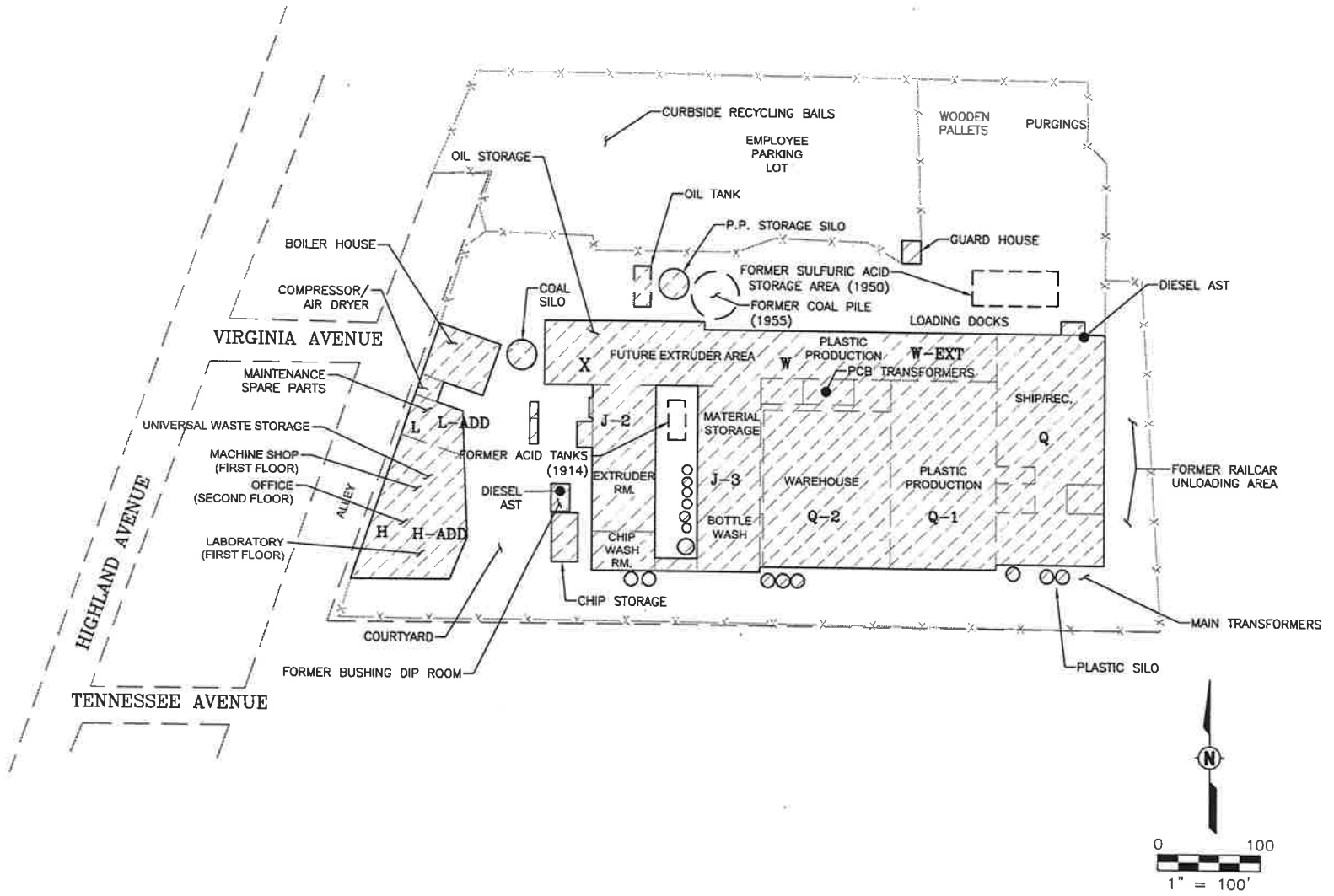
Tulip Corporation Environmental Site Assessment

3125 Highland Ave, Niagara Falls, NY

August 21, 2010 Photographs

Stockpiled soil from various construction jobs completed at the facility located on northeastern portion of site, facing east.

Diesel Fuel tank located in fire protection back-up system room, north of building Q.



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SITE MAP
PHASE I ESA
TULIP CORPORATION
3125 HIGHLAND AVENUE
NIAGARA FALLS, NEW YORK

Drawn:	CJH	9/9/2010
Checked:	DLM	9/9/2010
Approved:	MMM	9/9/2010
PROJECT NUMBER	60161535	
FIGURE NUMBER	2	

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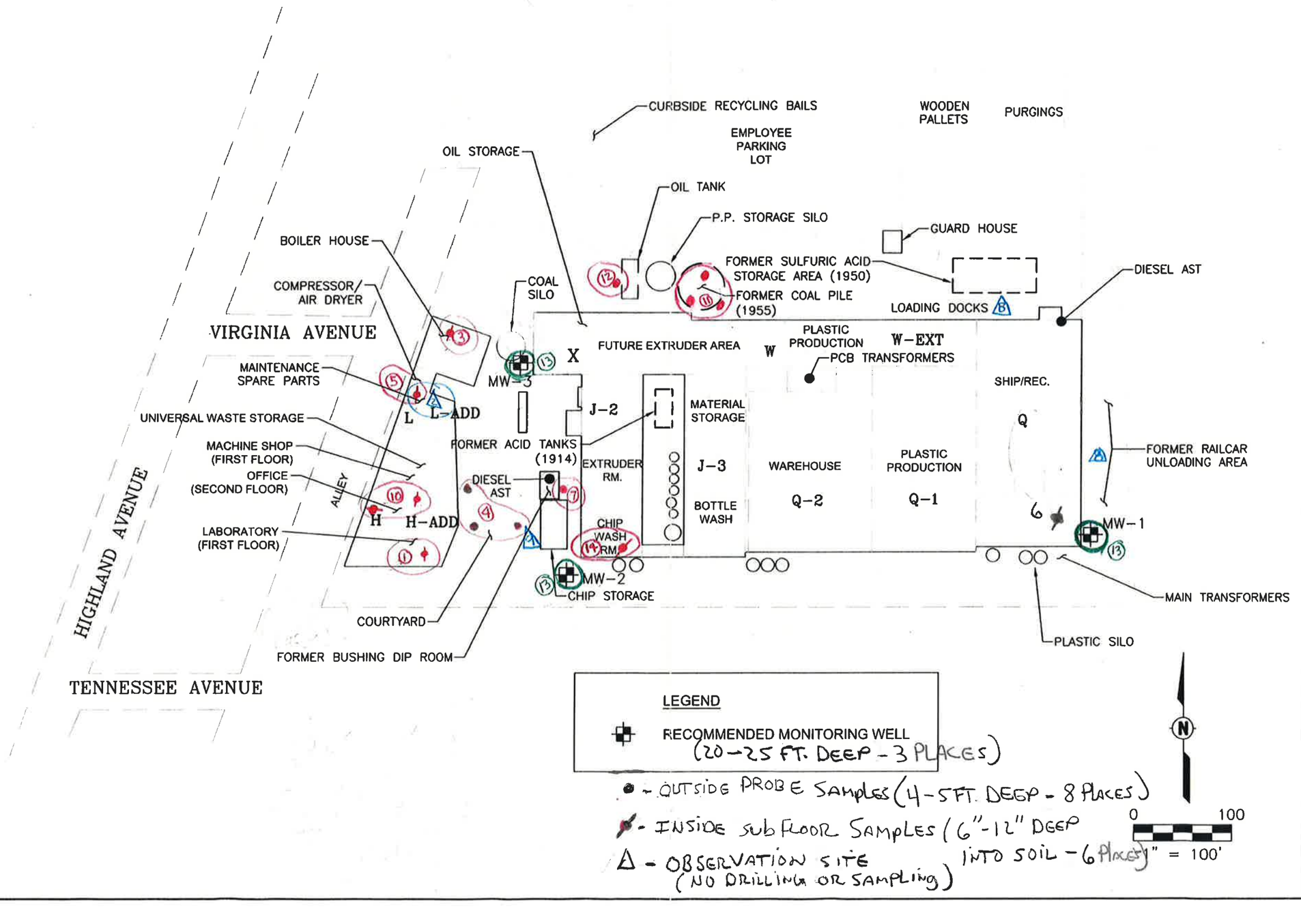
RECOMMENDED MONITORING WELL LOCATIONS
TULIP CORPORATION
3125 HIGHLAND AVENUE
NIAGARA FALLS, NEW YORK



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PROJECT NUMBER 60220285-1

FIGURE NUMBER 3