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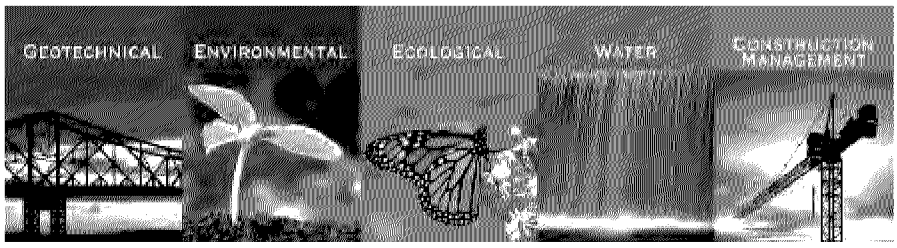

PHASE I ENVIRONMENTAL SITE ASSESSMENT

W.W. Grainger, Inc. Property
1657 Shermer Road
Northbrook, Illinois

DRAFT

March 1, 2018
File No. 81.0220267.07

PREPARED FOR:
Village of Northbrook
1225 Cedar Lane
Northbrook, Illinois

Huff & Huff, Inc.,
A subsidiary of GZA GeoEnvironmental, Inc.

915 Harger Road, Suite 330 | Oak Brook, IL 60523
630-684-9100

28 Offices Nationwide
www.gza.com

Huff & Huff Incorporated
A Subsidiary of GZA

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION MANAGEMENT

915 Harger Road
Suite 330
Oak Brook, IL 60523
T: 630.684.9100
F: 630.684.9120
www.huffnhuff.com
www.gza.com

March 1, 2018
File No. 81.0220267.07

Email: tom.poupard@northbrook.il.us

Mr. Thomas R. Poupard, AICP
Director of Department of Development & Planning Services (DPS)
Village of Northbrook
1225 Cedar Lane
Northbrook, Illinois 60062

Re: Phase I Environmental Site Assessment
W.W. Grainger, Inc.
1657 Shermer Road
Northbrook, Illinois

Dear Mr. Poupard:

Pursuant to our proposal dated December 11, 2017, Huff & Huff, Inc. (H&H) a subsidiary of GZA is pleased to submit the appended Phase I Environmental Site Assessment Report for the above-referenced target property ("Site"). H&H completed this assessment in general conformance with the guidelines described in ASTM International's Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process - E1527-13.

We hope this satisfies your present needs. If you need additional information, please feel free to contact us at 630-684-9100.

Very truly yours,

Huff & Huff, Inc.

Jill Connolly
Project Manager/Environmental Professional

Shane Cuplin, P.G.
Consultant Reviewer

Jeremy Reynolds, P.G.
Associate Principal

Attachment: Phase I ESA Report

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EXECUTIVE SUMMARY

The Village of Northbrook (also referred to herein as "Client" or "User") retained Huff & Huff, Inc. (H&H) a subsidiary of GZA GeoEnvironmental, Inc. (GZA) to perform a Phase I Environmental Site Assessment (ESA) of the target property located at 1657 Shermer Road in Northbrook, Cook County, Illinois (hereafter referred to as the "Site"). H&H performed this Phase I ESA in connection with the Client's planned property transaction of the Site.

This Phase I ESA was performed in general conformance with the scope and limitations of ASTM International's Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process – E1527-13 (ASTM E1527-13), and included our visual observation of the Site; a review of historical information, environmental databases, and information provided by the User; and interviews with current Site representatives. Limiting conditions and/or deviations from ASTM E1527-13 are described in **Sections 1.4** and **6.0** of this Phase I ESA Report. H&H prepared this Phase I ESA Report in conformance with the limitations presented in **Section 14.0** and with the terms and conditions of our proposal dated December 11, 2017.

The Site is situated on an approximate 8.9-acre parcel improved with a one story brick building that contains office and warehouse space. The original building was reportedly constructed by approximately 1952, with an expansion to the north between 1952 and 1955, an expansion to the east between 1955 and 1962, and an expansion to the east again between 1962 and 1972. The footprint of the on-site building has remained consistent with the current layout since approximately 1972.

According to reviewed records, the Site has been occupied by Culligan Inc. (from approximately 1952 to 1971), Doerr Electric Corp (1980), Dayton Industries (approximately 1986-1991), Parts Company of America (approximately 1996-2001), and W.W. Grainger, Inc. (Grainger) (approximately 2011-present). Prior to the development indicated on the 1952 aerial photograph, the Site appears to have been vacant and primarily used as farmland. It should be noted that additional information provided by the Owner indicates Grainger purchased the property in 1991-1992 and it appears the Site was occupied by companies that were purchased by Grainger through approximately 2001.

The property is currently owned and operated by Grainger. At the time of H&H's Site reconnaissance, Grainger was using the Site as an office, sales call center, and storage of office furniture from other Grainger properties. The Site employs approximately 465 people, most of whom work in the office portion of the building handling customer sales and technical support services by phone and on-line. The warehouse is mainly used for storage and minor maintenance activities.

Based on the findings of our Phase I ESA and on our professional judgment, H&H has identified the following in connection with the Site:

Recognized Environmental Conditions (REC)

- According to the underground storage tank (UST) database listing for the Site, two 2,500-gallon heating oil USTs and one 20,000-gallon heating oil UST were removed from the Site in 1991. A leaking UST (LUST) incident was reported as a release of fuel oil #2 due to holes in the tanks. According to the database, the incident was issued a No Further Remediation (NFR) letter by the Illinois Environmental Protection Agency (IEPA) in 2009 pursuant to Section 4(y) of the Environmental Protection Act. A UST removal report prepared by ATEC Environmental Consultants dated August 15, 1991 states that two 2,000-gallon heating oil USTs were removed

from the Site on June 12, 1991. The UST removal report figure shows the UST location at the northeast corner of the building, as well as an above-ground storage tank (AST) in the vicinity of the USTs. Based on this information, the number of USTs removed cannot be confirmed; the former location of a possible 20,000-gallon heating oil UST cannot be confirmed; and the contents of the former AST cannot be confirmed. It is H&H's opinion that the LUST incident that has been closed with a Section 4(y) Letter is considered an REC in connection with the Site because the soil samples collected during closure activities of a heating oil UST were only analyzed for BTEX; no PNA analyses were conducted. It is also H&H's opinion that the discrepancy as to the number of USTs on Site and the former AST of unknown contents are considered RECs in connection with the Site.

- In connection with the UST/AST information, as part of a Village of Northbrook Stormwater Project (Shermer Road Sewer Overflow), H&H collected soil samples in the northern parking lot, approximately 100 feet north of the UST area on February 2015 to assess soil conditions for off-site disposal considerations associated with stormwater improvements. A sample from boring SB-6 collected from 4 to 5 feet below ground surface detected benzene, toluene, ethylbenzene, and xylenes (BTEX, a subset of volatile organc compounds) above the applicable Maximum Allowable Concentration (MAC) values[1] for consideration of disposal at clean construction or demolition debris (CCDD) facilities. In addition, the results for ethylbenzene and xylenes were above the Construction Worker Inhalation Remedial Objective (RO) from the Illinois EPA Tiered Approach to Corrective action Objectives (TACO)[2]. Since contamiants have been found on the property from prior limited investigatory activity, this is considered an REC in connection with the Site.

- Based on the former status of the Site as a Large Quantity Generator (LQG) of hazardous waste (including but not limited to ignitable waste, reactive waste, and spent halogenated / non-haogenated solvents) and the former industrial use of the Site dating back to at least 1952, with little information about the operations that historically occurred at the Site, the potential for the Site to be impacted by these historical operations cannot be ruled out and is considered a REC.

- An NFR letter for the adjoining property to the south (1685 Shermer Road) includes an Environmental Land Use Restriction (ELUC) on a portion of the Site restricting the use of groundwater beneath a portion of the Site for potable purposes. The ELUC was included in the NFR due to levels of VOCs (chloroform and cis-1,2-dichloroethene) in soil samples near the north end of the adjoining property that exceeded the TACO Soil Component of the Groundwater Ingestion Pathway RO and for which modeling results indicated these constituents potentially migrating north onto the Site.

  Although closure was achieved for the adjoining property and subsequently developed into a large residential land-use complex, the vapor intrusion pathway was not evaluated as part of this closure due to the timing of the closure prior to the vapor intrusion regulations. On May 16, 2013, the Illinois Pollution Control Board adopted the final amendments to 35 Ill. Adm. Code Part 742 related to the indoor inhalation exposure route. ASTM E1527-13 includes an evaluation of the potential migration of vapors in the subsurface that originate from hazardous substances or petroleum products. The most recent groundwater samples collected from groundwater monitoring wells on the northern portion of the adjoining property in 2001 were compared to the Tier 1 residential and industrial/commercial (i/c) remediation objectives for the indoor inhalation exposure route (diffusion and advection) from Table H, Appendix B, Part 742. These groundwater results indicate a maximum concentration of chloroform of 0.29 mg/L (exceeding the residential objective of 0.07

[1] MAC values are found in 35 Ill. Adm. Code 1100 Attachment A Subpart F.

[2] TACO found in 35 Ill. Adm. Code Part 742

mg/L and the i/c objective of 0.15 mg/L) and a maximum concentration of cis-1,2-dichloroethene of 1.3 mg/L (achieving the residential and i/c objective of 3,500 mg/L). In addition, the 2001 groundwater sampling event detected a maximum concentration of carbon tetrachloride of 2.3 mg/L (exceeding the residential objective of 0.02 mg/l and the i/c objective of 0.076 mg/L) and a maximum concentration of vinyl chloride of 1.7 mg/L (exceeding the residential objective of 0.028 mg/l and the i/c objective of 0.21 mg/L).

Given the detected levels of VOCs in the soil and groundwater on the adjoining property to the south and the reported measured groundwater flow direction during site investigation activities to the north/northwest, the potential for vapor intrusion at the Site from the adjacent southern property is considered a REC.

Controlled Recognized Environmental Conditions (CREC)

- This Phase I ESA revealed no evidence of CRECs in connection with the Site.

Historical Recognized Environmental Conditions (HREC)

- This Phase I ESA revealed no evidence of HRECs in connection with the Site.

Environmental Concerns (EC)

- A railroad spur is visible on the east side of the Site in the 1950s aerial photogrpahs and topographic maps. Due to the uncertainty surrounding the railway unloading/offloading activities and the long industrial history of the Site, the potential for the Site to be impacted by these historical operations cannot be ruled out.

Business Environmental Risks (BER)

- This Phase I ESA revealed no evidence of BERs in connection with the Site with the exception of the potential for the presence of asbestos containing material (ACM) and universal hazardous waste including lead-based paint (LBP) and possibly poly-chlorinated biphenyls (PCBs) which may be present in historic painted surfaces or sealing matrials (caulking). Typcially, a pre-demolition assessment/survey for these types of materials is conducted to ensure that if found to exist, that proper pre-demolition abatement activity can be compelted to address the presence of these materials.

De Minimis Conditions

- This Phase I ESA revealed no evidence of de minimis conditions in connection with the Site.

Data Gaps and Their Significance

- In H&H's opinion, based on the information made available during this assessment, significant data gaps were not identified that affected our ability to identify RECs, CRECs, or HRECs at the Site with the exception of being able to accurately determine historic operations by former occupants (Doerr, Dayton, and Parts Company of America). While we have a general understanding of their operations, we have not been able to access historic floor plans to aid in understanding specific operations within specific areas of the site. We have coordinated with Grainger staff and we understand they may have access to such historic site plans and we have proposed borings in areas that we suspect included use and storage of hazardous substances.

1.0 INTRODUCTION

This Phase I Environmental Site Assessment Report (Phase I ESA Report) presents the field observations, results, and opinions of a Phase I ESA conducted by Huff & Huff, Inc. (H&H) a subsidiary of GZA GeoEnvironmental, Inc. (GZA) for the Village of Northbrook (also referred to herein as "Client" or "User") at the property identified as 1657 Shermer Road in Northbrook, Illinois (hereafter referred to as the "Site"). H&H prepared this Phase I ESA Report in conformance with the limitations presented in **Section 14.0** and with the terms and conditions of our proposal dated December 11, 2017. This Phase I ESA Report is subject to modification if H&H or an other party develops subsequent information.

1.1 REASON FOR PERFORMING THE PHASE I ENVIRONMENTAL SITE ASSESSMENT

H&H understands that this Phase I ESA was requested as part of environmental due diligence in support of the potential purchase of the Site. We understand that this Phase I ESA is not funded with a federal grant under the US Environmental Protection Agency (EPA) Brownfield Assessment and Characterization Program or the US Small Business Administration, and that an evaluation of controlled substances at the Site is not required.

1.2 PROJECT OBJECTIVES

We designed the Scope of Services described below in general conformance with ASTM International's Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process – E1527-13 (ASTM E1527-13). The objectives of this Phase I ESA were:

- To render an opinion as to whether surficial or historical evidence indicates the presence of recognized environmental conditions (RECs) that could result in the presence of hazardous substances or petroleum products in the environment, as defined in ASTM E1527-13; and
- To permit the User of this Phase I ESA to satisfy the requirements for qualifying for certain Landowner Liability Protections under the Comprehensive Environmental Response, Compensation and Liability Act.

1.3 DEFINITIONS

As defined in ASTM E1527-13:

- A REC indicates "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment."
- The term "Controlled REC" (CREC) applies to a site that has reached regulatory closure with the implementation of an engineering control, such as an impermeable cap, and/or an institutional control, such as a deed restriction or property use restriction.
- A "historical recognized environmental condition" (HREC) is "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls.)"

- If regulatory standards have changed since the prior release was closed and the data used to close the case indicate hazardous substances or petroleum products are or are likely to be on the Site at concentrations greater than their respective regulatory standard(s) for unrestricted land use, then GZA will identify the historical (previously closed) release as a REC.

- A "*de minimis*" condition, as defined by ASTM E1527-13, is "a condition that generally does 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." ASTM E1527-13 does not consider *de minimis* conditions RECs.

- A data gap refers to a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice. A data gap is only significant if other information and/or professional experience raises reasonable concerns involving the data gap.

- A business environmental risk (BER) is a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated under ASTM E1527-13. Consideration of BERs, for example, may involve addressing one or more non-scope considerations outlined in ASTM E1527-13. Common non-scope environmental business risk items referred to include: asbestos, lead paint, lead and arsenic in drinking water, radon, wetlands, cultural and historical resources, regulatory compliance, industrial hygiene, health and safety, indoor air quality, mold, etc.

1.4 SCOPE OF SERVICES

H&H's Scope of Services consisted of the following activities:

- A review of federal and State regulatory agency databases for the Site and the minimum search distance from the Site;

- Contact with certain local regulatory agencies to inquire about environmental conditions at the Site and in its vicinity;

- A review of the Site history through available Standard Historical Sources;

- A site reconnaissance to observe current Site conditions for evidence of recognized environmental conditions;

- The completion of a reconnaissance of the Site vicinity;

- A review of adjoining properties to identify the use of hazardous substances or petroleum products;

- Interview with the key site manager, regarding the current and past Site usage and facility operations; and

- The preparation of this Phase I ESA Report of our findings.

There were no significant deviations from ASTM E1527-13. Significant limitations to H&H's assessment included the following:

- At the time of H&H's site reconnaissance on February 12, 2018, the ground was covered with snow, limiting visibility of outdoor areas. It is H&H's opinion that various other sources provided sufficient information to identify RECs at the Site.

This Phase I ESA does not include an evaluation of environmental issues or conditions that ASTM E1527-13 considers non-scope considerations. In addition, it should be noted that, while ASTM E1527-13 includes an evaluation of the potential migration of vapors in the subsurface that originate from hazardous substances or petroleum products, it does not require Vapor Encroachment Screening as defined in ASTM guidance E2600.

2.0 DESCRIPTION OF SITE AND VICINITY

H&H obtained the following information resulting from its site reconnaissance, its research, and from interviews with people knowledgeable about the Site. Photographs depicting Site conditions during H&H's reconnaissance are presented in **Appendix A**.

2.1 SITE LOCATION

The Site is located in Northbrook, Cook County, Illinois, on the east side of Shermer Road between Farnsworth Lane and Oak Avenue. The approximate center of the Site is located at 42.122950° latitude and -87.827708° longitude. Based on the information obtained from the Cook County Property Tax Portal, the Site is located within the following tax parcel:

Parcel Number	Parcel Address	Parcel Size	Owner Name
04-15-100-047-0000	1657 Shermer Road, Northbrook, 60062 Township: Northfield	387,160 square feet (approximately 8.9 acres)	Not Listed

The Site plat map is provided in **Appendix B.** A topographic map showing the location of the Site is provided as **Figure 1**.

2.2 DESCRIPTIONS OF SITE AND SITE BUILDINGS

The Site is situated on an approximate 8.9-acre parcel improved with a one story brick building that contains office and warehouse space. The office portion occupied the west half of the building and contained offices, cubicles, meeting rooms, a computer room, restrooms, and a kitchen/cafeteria. The warehouse portion occupied the east half of the building and contained the heating and cooling system components; overhead doors and loading docks; a maintenance area; electrical system components that support the computer and phone system; and storage of furniture, equipment, and miscellaneous maintenance tools and supplies.

Exterior portions of the Site included paved parking and driveway areas on the north, west, and part of the south sides of the Site, with limited grass-covered areas near the main entrance on the west side of the Site and also at the northeast corner of the Site. The area east of the Site, between the building and the railroad tracks, contained numerous trees and shrubs.

Information regarding the Site building is provided in the following table.

Feature	Description
Year of Construction	Approximately 1952
Square Footage	178,000 square feet
# Stories/Basement	One-story / no basement
Heating/Cooling Systems	HVAC (combination of natural gas-fire units on roof and baseboard heaters fueled by two condensing package boilers)
Elevators	None
Other Relevant Building Features	Three docks with overhead doors located on south side of building

The following entities provide utilities to the Site:

Service	Provider
Electricity	Commonwealth Edison
Natural Gas	Nicor
Drinking Water	Village of Northbrook
Sanitary Sewer Services	Village of Northbrook
Other Services	Waste Management garbage pick-up

2.3 CURRENT SITE USE

At the time of H&H's Site reconnaissance, W.W. Grainger, Inc. (Grainger) was using the Site as and office, sales call center, and storage of office furniture from other Grainger properties. The on-site building contained office and warehouse space. Grainger is a provider of industrial equipment, maintenance supplies, tools, and parts to commercial, industrial, and business clients and contractors. The Site employs approximately 465 people, most of whom work in the office portion of the building handling customer sales and technical support services by phone and on-line. The warehouse is mainly used for storage of overflow office furniture, Grainger vending machines, and minor maintenance activities.

2.4 ADJOINING PROPERTIES

The following table lists the properties that adjoin the Site and describes their current use.

Direction	Street Address/Location	Name (as applicable) and Current Use
West/Northwest	1625 Shermer Road	Championship Martial Arts Facility
North	Various residential addresses along Oak Avenue	Residential properties
South	1707 Shermer Road and various residential addresses along Farnsworth Lane	Glenview State Bank, professional offices, and residential properties (Red Seal Shermer Place Community)
East	1750 Techny Road	Anetsberger Golf Course and residences beyond the Chicago, Milwaukee, & St. Paul Railroad and Metra's Milwaukee District/North Line
West	Various	Residential properties along the west side of Shermer Road

Although the adjoining properties may store and use hazardous substances and/or petroleum products, no evidence of such storage or usage was observed at these properties as viewed from the Site or publicly accessible areas.

2.5 VICINITY PROPERTIES

As part of this Phase I ESA, H&H performed a reconnaissance of the Site vicinity. The Site vicinity is a mix of residential and commercial land uses. Commercial properties exist south, west/northwest, and east of the Site, across the railroad tracks, as noted above. In addition, commercial properties exist approximately 200 feet northwest of the Site near the intersection of Shermer Road and Illinois Road including an auto repair facility, a convenience store and professional offices, and approximately 800 feet south of the Site near the intersection of Shermer Road and Stanley Street. The remainder of the surrounding area is mainly residential.

3.0 ENVIRONMENTAL SETTING

Section 3.0 provides information regarding the general physiographic, hydrogeologic, hydrologic, and soil conditions in the area of the Site.

3.1 REGIONAL PHYSIOGRAPHY

Based on a review of the Highland Park Quadrangle, Illinois, United States Geological Survey (USGS) Topographic Map (2015), the Site is situated at an approximate elevation of 645 feet above mean sea level. The topography of the Site is realtively flat. The nearest water body is the West Fork of the North branch of the Chicago River, located approximately 850 feet east of the Site.

3.2 GEOLOGIC, HYDROGEOLOGIC, AND HYDROLOGIC CONDITIONS

The ISGS published a map titled "Potential for Contamination of Shallow Aquifers in Illinois" (a.k.a. "Berg Map"; Berg et al, 1984). The system used to develop the map evaluates the general ability of the upper horizons of soil to contain and attenuate contaminants resulting from activities occurring above or within those soil horizons. Soils with the least potential for containment and attenuation allow shallow water, and thereby contaminants, to move through them rapidly. As the potential for containment and attenuation increases, the potential for aquifer contamination decreases. The Berg Map indicates that the geology at the Site is primarily as follows:

- Uniform, relatively impermeable silty or clayey till at least 50 ft thick; no evidence of interbedded sand and gravel.

This description indicates a low potential for aquifer contamination. The general site location has been mapped onto the Berg Map and can be found in **Appendix C**.

Based on the Soil Survey of Cook County, Illinois, and USGS geology information, the Site is underlain by varying thicknesses and layers of silty clay and silty clay loams of the Markham, Ashkum, and Beecher Formations, underlain by Undifferentiated Silurian bedrock. The soil map and USGS geology maps are provided in **Appendix C.**

Based on a Remedial Action Completion Report reviewed for the adjoining property to the south located at 1685 Shermer Road (refer to **Section 7.0**), the estimated depth to groundwater is between 1 and 18 feet below ground surface (bgs), and the direction of groundwater flow was measure to be to be in a north/northwesterly direction.

The localized direction of groundwater flow near the Site might vary because of underground utilities, subsurface preferential pathways, variations in weather, or heterogeneous geological and/or anthropogenic conditions. We subsequently refer to upgradient and downgradient properties in this Phase I ESA Report based on the inferred direction of groundwater flow to the north/northwest.

4.0 HISTORICAL USE INFORMATION

The Site history was developed from "Standard Historical Sources" as defined in ASTM E1527-13, available files at the Illinois Environmental Protection Agency (IEPA) Document Explorer website, and interviews with knowledgeable parties. We include a historical summary at the beginning of **Section 4.0** of this Phase I ESA Report. Specific information obtained from standard historical sources is contained in following subsections, and **Appendix C** includes copies of relevant historical documents.

4.1 SITE AND AREA HISTORY SUMMARY

In 1900, 1929, and 1938, the Site was vacant and appears to have been used as farmland with the nearest structures shown on historical aerial photographs and topographic maps being farm residences located west of the Site, across Shermer Road. The railroad east of the Site is shown on the 1900 topographic map with a spur first shown leading onto the Site in the 1952 aerial photogrpah. By 1952, the Site is developed with a building generally matching the footprint of the west half of the current building. The surrounding area also shows significant development by 1952, with a building on the south adjoining property and residential development north and west of the Site. The on-site building appears to have expanded to the north between 1952 and 1955, expanded to the east between 1955 and 1962, and expanded to the east again between 1962 and 1972. According to Mr. Michael Quinlan, the current Site Manager at Grainger, the west end of the north side of the building formerly contained loading docks, but they were closed off in order to convert the northwest portion of the building into a multi-purpose room, office space, and cafeteria. The footprint of the on-site building has remained consistent with the current layout since approximately 1972.

According to historical city directories, the Site has been occupied by Culligan Inc. (approximately 1957-1971), Doerr Electric Corp (1980), Dayton Industries (approximately 1986-1991), Parts Company of America (approximately 1996-2001), and Grainger (approximately 2011-present). On-line research indicates that the Culligan Inc. specialized in manufacturing water softeners, water filtration systems, and other water treatment systems and that their headquarters were moved to this Site in 1952. Doerr Electric manufactured electric motors and was acquired by Grainger in 1969. Dayton Electric Manufacturing Company made bench grinders and other industrial equipment, and Grainger was their long-time distributor. Dayton Electrical Manufacturing Company was acquired by Grainger in 1966, and their products are only available through Grainger. Parts Company of America was a specialty distribution business started by Grainger in 1986 that provided replacement parts, general industrial products, safety products, and sanitary supplies for equipment manufacturers.

The historical information reviewed suggests the following environmental concerns have the potential to impact the Site:

- A railroad spur is visible on the east side of the Site in the 1950s aerial photogrpahs and topographic maps. Due to the uncertainty surrounding the railway unloading/offloading activities and the long industrial history of the Site, the potential for the Site to be impacted by these historical operations cannot be ruled out.

The historical information reviewed suggests the following recognized environmental conditions have the potential to impact the Site:

- Based on the former status of the Site as a Large Quantity Generator (LQG) of hazardous waste (ignitable waste, reactive waste, and spent halogenated / non-haogenated solvents) and the former industrial use of the Site dating back to at least 1952, with little information about the operations that historically occurred at the Site, the potential for the Site to be impacted by these historical operations cannot be ruled out.

4.2 AERIAL PHOTOGRAPH REVIEW

H&H consulted historical aerial photographs provided by Environmental Risk Information Services (ERIS). The table below contains H&H's description of the Site and adjoining properties as shown in the aerial photographs.

Year	Scale	Description of Site	Description of Adjoining Properties
1938	1" = 500'	The Site is undeveloped and appears to be farmland.	The railroad is visible east of the Site. The adjoining properties to the north, south and east across the railroad tracks are undeveloped. The adjoining property to the west, across Shermer Road contains what appears to be a farm residence.
1952	1" = 500'	The Site is improved with one building – approx. 200 feet by 300 feet. A railroad spur is visible leading to the northeast corner of the building. A parking lot is visible at the southeast corner of the building.	A small structure is depicted adjoining the Site to the west/northwest. The adjoining property to the south is now developed with several buildings. The adjoining property to the north contains residential development. The adjoining property to the west across Shermer Road contains residential development. The adjoinging property to the east beyond the railroad is undeveloped. Golf course development is visible southeast of the Site beyond the railroad.
1955	1" = 500'	The quality of this aerial photograph is poor and specific Site features are difficult to discern; however, the Site building appears to have been expanded slightly to the north. The remainder of the Site appears generally consistent with the 1952 aerial photograph.	The building on the adjoining property to the south appears to have expanded to the south. There is an increase in residential development to the north and west of the Site. The adjoinging property to the east beyond the railroad is undeveloped.
1962	1" = 500'	The Site building appears to have been expanded to the east. The remainder of the Site appears generally consistent with the 1955 aerial photograph.	The building on the adjoining property to the south appears to have been expanded to the south again. There is an increase in residential development to the north and west of the Site. A parking lot is now visible on the adjoining property to the north. The adjoining property to the east beyond the railroad is undeveloped.

Year	Scale	Description of Site	Description of Adjoining Properties
1972	1" = 500'	The Site building appears to have been further expanded to the east and the Site building now resembles the current building footprint. The remainder of the Site appears generally consistent with the 1962 aerial photograph.	The building on the adjoining property to the south appearas to have been expanded to the south again. There is an increase in residential development to the north and west of the Site. The adjoining property to the east beyond the railroad is undeveloped.
1978	1" = 500'	The Site appears generally consistent with the 1972 aerial photograph.	The adjoining properties appear generally consistent with the 1972 aerial photograph.
1981	1" = 500'	The Site appears generally consistent with the 1978 aerial photograph.	The adjoining properties appear generally consistent with the 1978 aerial photograph.
1988	1" = 500'	The quality of this aerial photograph is poor and specific Site features are difficult to discern; however, the Site appears to be generally consistent with the 1981 aerial photograph.	The quality of this aerial photograph is poor and specific features are difficult to discern; however, the adjoining properties appear generally consistent with the 1981 aerial photograph.
1998	1" = 500'	The parking lot at the north end of the Site appears to have merged with the adjoining off-site parking lot to the north. The remainder of the Site appears generally consistent with the 1988 aerial photograph.	The adjoining properties appear generally consistent with the 1988 aerial photograph.
2005	1" = 500'	The Site appears generally consistent with the 1998 aerial photograph.	The adjoining property to the south has been replaced with a new residential/commercial development. The golf course southeast of the Site appears to have expanded to the north. The remainder of the adjoining properties appear generally consistent with the 1998 aerial photograph.
2006, 2007, 2009, 2010, 2011, 2012, 2014, 2015, 2017	1" = 500'	The Site appears generally consistent with the 2005 aerial photograph.	The adjoining properties appear generally consistent with the 2005 aerial photograph.

4.3 FIRE INSURANCE MAPS

H&H consulted a historical fire insurance map, provided by ERIS. ERIS provided one map dated 1905 that is poorly arranged with few reference points and does not appear to show the Site as it depicts structues including farm buildings, St. James Old Peoples Home and St. Josephs Technical adjacent to Glenview Avenue (a former name of Waukegan Road). No other Sanborn Fire Insurance Maps were provided by ERIS for the Site area. However, we are currently coordinating with ERIS to determine if they can refine the search specific to the correct location.

4.4 PROPERTY TAX FILES

H&H consulted property tax files available at the Cook County Assessor's Office website. The files did not list the current owner, but listed the mailing address as Marvin F. Poer & Company at 2211 York Rd, Ste 222, Oak Brook, IL 60523 and the property address as 1657 Shermer Rd, Northbrook, IL 60062. The property usage is classified as industrial with a lot size of 387,160 square feet.

4.5 RECORDED LAND TITLE RECORDS

The Client did not provide H&H with an abstract of title for its review and a title search was not included in the scope of this Phase I ESA. An environmental lien search (**see Section 9.0**) conducted by Advanced Searches did not identify activity use limitations (AULs) or other institutional or engineering controls associated with the Site. A deed in trust dated September 4, 1987 was found listing Northbrook Trust & Savings as the Grantee and W.W. Grainger Incorporated as the Grantor.

Mr. George R. Avery, Regional Facility Manager with Grainger, indicated in the Key Site Manager Questionnaire that Grainger purchased and occupied the facility in 1991-1992.

4.6 HISTORICAL USGS TOPOGRAPHIC MAPS

H&H reviewed historical USGS topographic maps provided by ERIS The table below contains H&H's description of the Site and adjoining properties as shown on the historical topographic maps. Note that select topographic maps provided by ERIS did not contain the Site and/or surrounding area.

Year	Description of Site	Description of Adjoining Properties
1900, 1929	The Site is undeveloped.	The adjoining properties to the north, east, and west are undeveloped. The adjoining property to the west, across Shermer Road, contains three small structures in 1900 and one small structure in 1929. The railroad is visible east of the Site in 1900.
1953	A structure is depicted at the Site, consistent with the footprint of the west half of the current Site building. A railroad spur ending at a smaller structure is depicted on the east side of the Site.	One large and two smaller structures are depicted on the adjoining property to the south. A railroad spur is depicted on the adjoining property to the south. The area north and west of the Site are shaded to indicate a "built-up area"; however, no structures are shown. The remainder of the surrounding area is undeveloped.
1963	The on-site building has been expanded to the east. The remainder of the Site is consistent with the 1953 topographic map.	A small structure is depicted adjoining the Site to the west/northwest. The structure on the adjoining property to the south has been expanded. The remaining adjoining properties are generally consistent with the 1953 topographic map.
1972	The on-site building has been expanded to the east and west. A small structure is depicted northeast of the building. The remainder of the Site is consistent with the 1963 topographic map.	The structure on the adjoining property to the south has been expanded. The remaining adjoining properties are generally consistent with the 1963 topographic map.
1980	The Site is generally consistent with the 1972 topographic map.	The adjoining properties are generally consistent with the 1972 topographic map.
1993, 1995	The Site is generally consistent with the 1980 topographic map, although the railroad spur is not depicted.	The adjoining properties are generally consistent with the 1980 topographic map. The property east of the Site, across the railroad tracks, is now labeled as a golf course.
2015	Structures are not depicted on the 2015 topographic map.	Structures are not depicted on the 2015 topographic map.

4.7 CITY DIRECTORIES

H&H reviewed historical city directories provided by ERIS. The table below contains H&H's description of the Site and select adjoining properties as presented in the historical city directories.

Year(s)	Listings for Site, 1657 Shermer Road
1957	Culligan Inc.
1960	Culligan Inc.
1965	Culligan Inc.
1971	Culligan Inc.; Culligan Soft Water; Detwiler Earl B
1974	Detwiler Earl B
1980	Doerr Electric Corp
1986	Dayton Industries
1991	Dayton Industries
1996	Parts Co of America
2001	Parts Co of America; Tan Data Modem
2006	No listing
2011	WW Grainger; Tan Data Modem
2016	Grainger Industrial Supply; Tan Data Modem

Year(s)	Listings for 1685 Shermer Road, adjoining property to the south
1957	Fire Guard Corp
1960	No Listing
1965	Fire Guard Corp
1971	Fire Guard Corp; Genl Fire Extngshr
1974	Fire Guard Corp; Genl Fire Extngshr; Stoddard John D
1980	Fire Guard Corp; Genl Fire Extngshr
1986	Fire Guard Corp; Genl Fire Extngshr
1991	Fire Guard Corp Genl Fire Extngshr
1996	Fire Guard Corp The; Genl Fire Extngshr
2001	Fire Guard Corp The; Genl Fire Extngshr
2006	No Listing
2011	(Listed as 1707 Shermer) 15 Minute Respond Locksmith; Athans Tony T DDS; Egger Paul T DDS; Glenview State Bank; Harry E; Marshall Ltd Engineering Svc; Resnick Thomas E DDS; Stiles William R MD; Tatel Frederic S DDS
2016	(Listed as 1707 Shermer) Athans Tony T DDS; ATM Automated Teller Machines/Commercial Banking; Glenview State Bank; Harry E; Marshall Ltd Attorneys; Stiles William R MD; Tidemark Capital Management LLC

Year(s)	Listings for 1625 Shermer Road, adjoining property to the northwest
1957	McCowan R
1960	McCowan R
1965	McCowan R
1971	Gilchrest Thornton
1974	No Listing
1980	Brandel Johnson Law; Erickson Grant D; Michealsen Bros Inc.
1986	Erickson Grant Atty; Erickson Papanek; Michealsen Brothers; Nord Donald C Atty; Papanek S 3D Atty; Viking Investment
1991	Erickson Grant Atty; Erickson Papanek; Jensen Cynthia Atty; Michealsen Brothers; Papanek S 3D Atty; Peterson Julie A
1996	Erickson Grant Atty; Erickson Papanek; Jensen Cynthia Atty; Michealsen Brothers; Papanek S 3D Atty; Peterson Julie A
2011	Petersen Erickson Lawyers
2016	Erickson & Papanek Attorneys

4.8 BUILDING DEPARTMENT RECORDS

GZA requested access to building and permit records available at the Village of Northbrook Records Offices through a Freedom of Information Act (FOIA) request. The Village of Northbrook provided an application for a tank removal permit dated May 21, 1991 and copies of several building/demo permits dated from 1959 to 1991.

4.9 OTHER HISTORICAL RECORDS

H&H requested access to historical records available at the Village of Northbrook and the Illinois Office of the State Fire Marshall (OSFM) through a FOIA request. As of the date of this report, H&H has not received a response to our requests from the OSFM. The Village of Northbrook provided an application for a tank removal permit dated May 21, 1991 and copies of several building/demo permits dated from 1959 to 1991. H&H gathered additional historical information during review of FOIA information available on the IEPA Document Explorer (see **Section 7.0**) and interviews with knowledgeable parties (see **Section 9.0**).

We have also contacted the Northbrook Historical Society and they responded indicating they have limited information on file for review I person, including aerial photographs that are likely different than published aerials due to the local resident who was engaged in aerial flyover photography and also some documentation regarding the history of Culligan. We are currently arranging a time to review this information and the report will be updated as necessary if reviewed information is pertinent to the findings and recommendations.

5.0 PREVIOUS SITE INVESTIGATIONS

H&H requested information regarding previous site investigations from the Client and Grainger. Grainger provided H&H with the following documents regarding previous site investigations:

- Grainger Property Well Restriction (11/4/2003), IEPA
- IEPA Letter to Parts Company of America (8/27/1997), Compliance Survey

- Grainger Email (11/10/2008), Northbrook Boilers Asbestos Abatement Proposal Correspondence; From: Stacy Gatz; To: Kilpatrick, Shawn; Piacenza, Teri; Raven, Bill; cc: Chambers-Milton, Tressa; Leis, Robert
- Bureau Veritas North America, Inc. (11/10/2008), Results of Bulk Sampling and Analysis for Suspect Asbestos-Containing Materials (ACMs)
- Hygieneering, Inc. (11/11/2008), Proposal for Boiler Asbestos Abatement Services
- Hygieneering, Inc. (10/26/2010), Air Quality Management & Mold Prevention Program Report
- Advance Disposal (2016), Zion Landfill Waste Disposal Profile
- Terracon, Inc. (4/11/2016), Environmental Soil Evaluation
- Pepper Environmental Technologies (9/15/2016), Mold Inspection and Air Sampling
- Hygieneering, Inc. (9/12/2016), Mold & Moisture Assessment

Relevant documents mentioned above have been reviewed and incorporated into this report. This Phase I ESA does not include an evaluation of environmental issues or conditions that ASTM E1527-13 considers non-scope considerations such as asbestos, lead paint, lead and arsenic in drinking water, radon, wetlands, cultural and historical resources, regulatory compliance, industrial hygiene, health and safety, indoor air quality, mold, etc.

The Grainger Property Well Restriction issued by IEPA and dated November 4, 2003, refers to an Environmental Land Use Restriction (ELUC) issued for a portion of the Site and is discussed further in **Section 7.2**.

The Terracon , Inc. Environmental Soil Evaluation report dated April 11, 2016, refers to soil samples collected from the parking lot area on the west side of the building for clean construction or demolition debris (CCDD) disposal purposes of soil generated from the installation of an underground storm water detention basin and parking lot on the west side of the property in 2016. Six soil samples were collected from depths ranging from 2 to 5 feet bgs. The analytical results indicated that low levels of benzo(a)pyrene, arsenic, total iron , and total chromium were detected, which exceded the Maximum Allowable Concentrations (MACs) for CCDD disposal and a portionof the spoils was directed to a sanitary landfill for disposal as a result of the findings.

H&H conducted soil sampling at the Site for the Vilage of Northbrook in February 2015 as part of CCDD coordination associated with disposal of excavated soils generated from the Shermer Road Sewer Overflow Project which included installation of a storm sewer line that generally ran in an east-west direction through a Village easement in the parking lot on the north portion of the Site. Three soil borings were conducted on the north side of the Site to depths ranging from 5 to 10 feet bgs. The analytical results indicated BTEX constituents in the eastern-most boring SB-6 (4-5 ft) that exceeded the Maximum Allowable Concentrations (MACs) for CCDD disposal and the TACO Soil Component of the Groundwater Ingestion Exposure ROs. All PNA results achieved the objectives. An excerpt from this report is included in **Appendix C.**

6.0 SITE RECONNAISSANCE

The purpose of H&H's site reconnaissance was to observe current Site conditions for evidence of recognized environmental conditions that could result in the presence of hazardous substances or petroleum products in the environment at the Site. H&H Project Manager, Ms. Jill Connolly, conducted a site reconnaissance at the Site on February 12, 2018. Mr. Michael Quinlan, Site Manager for Grainger, and Mr. Leonard Kapka, Maintenance Manager for Grainger, accompanied H&H during the site reconnaissance. H&H documented its observations and photo-documented pertinent features and/or areas of environmental concern, which we reference in this Phase I ESA Report. Selected photographs are included in **Appendix A**. **Figure 2 - Site Layout Map** and **Figure 3 – Identified Sites Map** depict the pertinent Site features.

The following factor limited H&H's Site reconnaissance:

- At the time of H&H's site reconnaissance on February 12, 2018, the ground was covered with snow, limiting visibility of outdoor areas. It is H&H's opinion that various other sources provided sufficient information to identify RECs at the Site.

The following table discusses features of potential environmental concern that we identified at the Site.

Feature	Description
Aboveground storage tank (AST) systems	None observed or reported to H&H by escort
Underground storage tank (UST) systems	None observed or reported to H&H by escort
Chemical or petroleum storage or handling areas	Five flammable storage cabinets were located in the warehouse portion of the building. One in the maintenance area at the south end of the warehouse that contained de minimis quantities (i.e., containers no larger than three gallons) of maintenance fluids such as quarts/liters of oils, cleaning fluids, and paint; and four in the central portion of the warehouse that contained gallons of paint, quarts/liters of cleaning fluids, and painting supplies. No staining was observed in these areas. A maintenance closet was also observed in the office portion of the building with minor amounts of janitorial supplies. No staining was observed in this area. Two battery-operated forklifts were observed at a battery charging station in the northeast portion of the warehouse. Minor staining was observed on the concrete floor near the charging station. The concrete floor in this area was in good condition.
Chemical waste or petroleum waste storage or handling areas	Used fluorescent bulbs are managed in the maintenance area of the warehouse using a light bulb recycler that crushes the used fluorescent bulbs and captures the vapors released. At the time of the Site visit, one 55-gallon drum was in use and was attached to the bulb crusher and one closed 55-gallon drum was labeled as hazardous waste and was awaiting pick-up. The drum was labeled as mercury containing waste (D009), but did not indicate an accumulation start date. Housekeeping was good in this area with no apparent staining in the vicinity of the drum. Mr. Quinlan and Mr. Kapka indicated that the bulbs waste drums are scheduled for pick up as needed.
Dumpsters	One dumpster for solid waste was observed on intact pavement on the exterior of the south side of the building. One dumpster for solid waste was observed on the intact concrete floor inside the dock area at the south end of the warehouse.
Floor drains, trenches, sumps and associated piping	Circular and trench floor drains were observed in the building. One trench drain was located at the base of the loading docks at the south end of the warehouse. Mr. Quinlan and Mr. Kapka were not aware if it was connected to the sanitary or storm sewer system.

Feature	Description
	Two trench drains were observed in the electrical equipment room in the northeast portion of the warehouse. These drains were dry and appeared to be concrete lined. Mr. Quinlan and Mr. Kapka indicated that these drains are not currently used and they were not aware of the historic purpose of the drains or what they are connected to. Staining was not observed near the floor drains.
Oil/water separators	A grease trap was observed in the cafeteria in the northwest portion of the building. According to Mr. Quinlan, the grease trap is cleaned out as needed approximately once every 3 months.
Storm water drains, grates and associated piping	Storm water drains were observed in the parking lots to the north and west of the building. The ground surrounding the area was covered with snow at the time of the Site visit and could not be observed for additional storm drains.
Drainage swales, culverts, impoundments, and surface water bodies	Mr. Quinlan and Mr. Kapka indicated that an underground storm water detention basin was installed beneath the west parking lot in 2016.
Septic systems, leach fields, seepage pits, and dry wells	None observed or reported to H&H by escort
Open pipe discharges	None observed or reported to H&H by escort
Landfills and solid waste dumping	None observed or reported to H&H by escort
Historical fill or other fill material	None observed or reported to H&H by escort
Staining or stressed vegetation	None observed or reported to H&H by escort
Electrical transformers or capacitors	Two pad mounted transformers and two industrial generators were located on concrete pads on the exterior of the northeast corner of the building. Non-PCB stickers were observed on the transformers. No evidence of leakage was observed on the visible portions of the concrete pad; however, the ground surrounding the area was covered with snow at the time of the Site visit and could not be observed.
Hydraulic equipment, including lifts, elevators, and compactors	Three hydraulically operated loading docks and a compactor, used as a recycling compactor, were located in the south end of the warehouse area, on the south side of the building. These contained minor amounts of oil and there was no evidence of leakage observed on the floor beneath them.
Active or inactive production wells	None observed or reported to H&H by escort
Monitoring wells, former boreholes, or other evidence of environmental investigations	None observed or reported to H&H by escort
Other observations potentially indicative of the presence of RECs	Mr. Quinlan and Mr. Kapka indicated that a janitorial supply room in the northeast portion of the warehouse, conncected to the electrical equipment room may have been a "paint room" at one time. This room contained a trench drain and a fire-proof door.

7.0 REGULATORY DATABASE REVIEW

H&H developed the information in this section based on public information obtained from various federal, state, and local agencies that maintain environmental regulatory databases.

7.1 FEDERAL AND STATE ENVIRONMENTAL RECORD SOURCES

Federal and state databases were searched by ERIS, a professional data search company, and search results were provided to H&H in a report dated January 25, 2018. The following table summarizes the databases searched by ERIS, the minimum search distances from the Site, and the number of properties that appear on the database within the minimum search distances used. Descriptions of the federal and state databases, and the dates that ERIS accessed the federal and state databases, are provided in ERIS's report (see **Appendix D**).

Federal and State List	Approximate Minimum Search Distance[1]	# Sites Within Search Distance	Site and Adjoining Properties	Other Potential Sites of Concern[2]
NPL	*1 mile*	0	0	0
Delisted NPL	*½ mile*	0	0	0
SEMS	*½ mile*	0	0	0
SEMS ARCHIVE	*½ mile*	1	0	0
RCRA CORRACTS	*1 mile*	1	0	0
RCRA-TSD	*½ mile*	0	0	0
RCRA-CESQG/SQG/LQG	*Site and adjoining properties*	0	0	
RCRA-NON GEN	*Site and adjoining properties*	5	2	
CERCLIS	*½ mile*	1	0	0
CERCLIS-NFRAP	*½ mile*	1	0	0
Federal IC/EC Registries	*Site only*	0	0	
ERNS	*Site only*	0	0	
State Equivalent NPL	*1 mile*	N/A	N/A	N/A
State Equivalent CERCLIS – Illinois EPA State Sites Unit (SSU)	*½ mile*	0	0	0
Special Waste Site List (SWF)	*½ mile*	0	0	0
State Landfill and/or Solid Waste Disposal Site - NIPC	*½ mile*	0	0	0
Leaking Underground Storage Tanks (LUSTs)	*½ mile*	20	6[3]	0
Delisted LUST	*½ mile*	0	0	0
Registered USTs	*Site and adjoining properties*	6	2	
State IC/EC Registries	*Site only*	5	2	
IEMA Spills and Incidences (SPILLS)	*Site and adjoining properties*	9	6[3]	0
Site Remediation Program (SRP)	*½ mile*	6	2	0

Federal and State List	Approximate Minimum Search Distance[1]	# Sites Within Search Distance	Site and Adjoining Properties	Other Potential Sites of Concern[2]
Brownfield Cleanup Program Sites	*½ mile*	0	0	0

[1]The approximate minimum search distance indicates the minimum distance measured from the nearest Site boundary for which ERIS performed the database review.
[2] Refers to sites upgradient of the Site (and adjoining properties) with an open database listing. These sites are discussed further in **Section 7.3** to determine their status as a Recognized Environmental Condition in connection with the Site.
[3]Please note that five of the six identified LUST and SPILLS sites refer to five separate incidents at the south adjoining 1685 Shermer Road property.

7.2 LISTINGS FOR SITE AND ADJOINING PROPERTIES

7.2.1 The Site 1657 Shermer Road

The Site was listed in the Resource Conservation and Recovery Act (RCRA) Non Generator (NON GEN), SPILLS, underground storage tank (UST), and LUST databases. The Site is listed in the RCRA database under the name "Dayton Industries Parts Co of America" with an Owner/Operator name listed as "Grainger WW Inc." According to the RCRA listing, the Site is a former large quantity generator (LQG) of hazardous of waste. An LQG is defined as one who generates more than 1,000 kg per month of hazardous waste. The database identifies the hazardous waste on site as ignitable waste (D001); reactive waste (D003); spent halogenated solvents (F002); spent nonhalogenated solvents (F003); 1,3-pentadiene (I) (OR) 1-methylbutadiene (I) (U186); ethene, tetrachloro- (or) tetrachloroethylene (U210); benzene, methyl- (or) toluene (U220); and F017 and F018 with no waste code descriptions. According to the listing, the Site submitted its first RCRA permit application in 1980. One violation/evaluation detail is listed in the database as a compliance assistance visit dated April 14, 1997. It is H&H's opinion that the former LQG status of the Site is considered a REC in connection with the Site.

According to the UST database listing, two 2,500-gallon heating oil USTs and one 20,000-gallon heating oil UST were removed from the Site in 1991. The age of the USTs was reported as 49 years. According to the LUST and SPILLS listings, LUST incident # 911603 is associated with removal of these USTs. The LUST incident was reported in 1991 as a release of fuel oil #2 due to holes in the tanks. According to the database, the incident was issued an NFR letter by the IEPA in 2009 pursuant to Section 4(y) of the Environmental Protection Act. A Section 4(y) Letter does not necessarily represent that all or certain environmental conditions at a site do not constitute a threat to human health and the environment, only that limited remedial actions have been successfully completed.

A UST removal report prepared by ATEC Environmental Consultants dated August 15, 1991 states that two 2,000-gallon heating oil USTs were removed from the Site on June 12, 1991; the UST excavation was over-excavated; and floor and wall confirmatory soil samples were collected with benzene, toluene, ethylbenzene, and xylene (BTEX) results of <0.005 mg/kg. The UST removal report figure shows the UST location at the northeast corner of the building, as well as an AST in the vicinity of the USTs. A figure depicting the UST locations is included in **Appendix C**. The AST contents are not shown on the map or mentioned in the report. The UST certificate of destruction from Dudek, Inc. that was included in the UST removal report states that 4 tanks were delivered to them from W.W. Grainger on June 15, 1991. The OSFM Log of UST Removal form states that 3 heating oil USTs were removed from the Site on June 12, 1991: one 20,000-gallon and two 2,500-gallon USTs. Based on this information, the number of USTs removed cannot be confirmed; the former location of a possible 20,000-gallon heating oil UST cannot be confirmed; nor can the contents of the former AST be confirmed. A FOIA request has been sent to the Village of Northbrook, the OSFM, and IEPA in an attempt to obtain additional information about

USTs and ASTs on the Site. A response to this FOIA request has not yet been received from the OSFM and IEPA. If the FOIA response findings alter the findings of this report, an addendum will be sent to the Client. The Village of Northbrook provided an application for a tank removal permit dated May 21, 1991, which states that one 10,000-gallon and two 1,000-gallon tanks were planned for removal.

It is H&H's opinion that the LUST incident that has been closed with a Section 4(y) Letter is considered an REC in connection with the Site because the soil samples collected during closure activities of a heating oil UST were only analyzed for BTEX; no PNA analyses were conducted. It is also H&H's opinion that the discrepancy as to the number of USTs on Site and the former AST of unknown contents are considered RECs in connection with the Site.

7.2.2 Adjacent Site to South at 1685-1707 Shermer Road

General Fire Extinguisher Corporation, formerly located at 1685-1707 Shermer Road and adjoining the south side of the Site, was listed in the SRP, IC/EC, UST, LUST, SPILLS and RCRA databases. The RCRA listing associates site operations with the use/storage of VOCs. The UST, LUST, and SPILLS listings associated with this property are related to the five SPILL/LUST incidents summarized below:

IEMA #	Release Date	Material	Cause of Release	LUST Status	NFR Date	Special Conditions
903355	11/13/1990	Diesel Fuel	Unknown	Closed	3/23/1999	None
911503	6/4/1991	Gasoline	Unknown	Closed	11/2/1999	None
952112	10/11/1995	Leaded Gasoline	corrosion	Closed	11/2/1999	None
20021776	12/12/2002	Heating Oil	Leak or Spill	Open	NA	NA
20021777	12/12/2002	Heating Oil	Leak or Spill	Open	NA	NA

The 1685 Shermer property was entered into the SRP in 2002, and subsequently received a Comprehensive No Further Remediation Letter (NFR) from IEPA in 2003. The 1707 Shermer property was entered into the SRP in 2003, and subsequently received a Comprehensive NFR from IEPA in 2003. The SRP listings were further reviewed using FOIA information provided on the IEPA Document Explorer website. The FOIA information indicated that the NFR letters include an engineered barrier consisting of a 3-foot thick clay cap on the northern portion of the property, that abuts the Subject Site. Soil analytical data along the north property border indicates that soil borings exhibiting concentrations of contaminants above the IEPA Tier 1 soil remediation objectives (SROs) were

greater than 30 feet south of the north property line. Borings within 30 feet of the north property line achieved the SROs.

The NFR letters for this adjoining property also include an Environmental Land Use Restriction (ELUC) on a portion of the property to the north, the south side of the Subject Site, restricting the use of groundwater beneath the Site for potable purposes.

The ELUC was included in the NFR due to levels of VOCs (chloroform and cis-1,2-dichloroethene) in soil samples near the north end of the property that exceeded the Soil Component of the Groundwater Ingestion Pathway and for which modeling showed these constituents potentially migrating north onto the Site.

Although closure was achieved for this property, the vapor intrusion pathway was not evaluated as part of this closure. On May 16, 2013, the Illinois Pollution Control Board adopted the final amendments to 35 Ill. Adm. Code Part 742 related to the indoor inhalation exposure route. ASTM E1527-13 includes an evaluation of the potential migration of vapors in the subsurface that originate from hazardous substances or petroleum products.

The most recent groundwater samples collected from groundwater monitoring wells on the northern portion of the property in 2001 were compared to the Tier 1 residential and industrial/commercial (i/c) remediation objectives for the indoor inhalation exposure route (diffusion and advection) from Table H, Appendix B, Part 742. These groundwater results indicate a maximum concentration of chloroform of 0.29 mg/L (exceeding the residential objective of 0.07 mg/L and the i/c objective of 0.15 mg/L) and a maximum concentration of cis-1,2-dichloroethene of 1.3 mg/L (achieving the residential and i/c objective of 3,500 mg/L). In addition, the 2001 groundwater sampling event detected a maximum concentration of carbon tetrachloride of 2.3 mg/L (exceeding the residential objective of 0.02 mg/l and the i/c objective of 0.076 mg/L) and a maximum concentration of vinyl chloride of 1.7 mg/L (exceeding the residential objective of 0.028 mg/l and the i/c objective of 0.21 mg/L).

Given the detected levels of VOCs in the soil and groundwater at the property and the measured groundwater flow direction during site investigation activities to the north/northwest, the potential for vapor intrusion at the Site from the adjacent southern property is considered a REC.

7.3 LISTINGS FOR OTHER VICINITY PROPERTIES

The following properties are of potential concern to the Site:

Site Name	Marathon Oil Co./Marathon Petroleum Co./Marathon Unit #2377
Address	1544 Shermer Road, Northbrook, IL
Distance/Direction from Site	250 feet / northwest
Database Map ID Number	2
Database(s)	UST, LUST, SPILLS
Comments	According to the database listings, four USTs were removed from this site in 1988. The incident discovered during UST removal activities was reported in 1990 and LUST incident # 902323 was assigned to the site related to a release of unleaded gasoline and used oil. An NFR letter with no restrictions was issued by IEPA for this incident in 1990.

Site Name	Village Tire, Inc./Michael Scimeca
Address	1530 Shermer Road, Northbrook, IL
Distance/Direction from Site	300 feet / northwest
Database Map ID Number	5
Database(s)	UST, LUST, SPILLS
Comments	According to the database listings, three USTs were removed from this site in 1997. LUST incident # 990863 was assigned to the site on April 15, 1999, related to a release of gasoline from a UST on the property. An NFR letter was issued by IEPA for this incident in 2002 with the following restrictions: pavement barrier and industrial/commercial land use restriction.

It is H&H's opinion that the database listings for the properties listed above do not represent an REC for the Site based on NFR status, separation distance, and potential for being considered downgradient from the Site.

7.4 EVALUATION OF UNMAPPED PROPERTIES

H&H also reviewed the list of "orphan" sites, which are properties with insufficient address information to allow the mapping software to plot a location. Based on the locations and descriptions provided in the database summary, it does not appear that the listed properties could impact the Site.

7.5 REGULATORY FILE REVIEW

H&H requested files from the Village of Northbrook, IEPA, OSFM, and the USEPA for the Site. No regulatory records were received from the IEPA, OSFM or USEPA as of the date of this report. The Village of Northbrook provided an application for a tank removal permit dated May 21, 1991, and several building/demo permits dated 1959 to 1991.

In addition, H&H utilized the IEPA Document Explorer website to access FOIA information directly online in order to better clarify the statuses of multiples sites identified in the database search. The following files available on the IEPA Document Explorer website for the Site and adjoining property to the south at 1685-1707 Shermer Road are discussed in detail in **Section 7.2**.

- *"Underground Storage Tank Removal Report,"* ATEC Environmental Consultants, August 15, 1991. (1657 Shermer Road)
- *"IEPA Site Remediation Program, Comprehensive Site Investigation Report-Addendum,"* Pioneer Engineering & Environmental Services, Inc., August 13, 2002. (1685-1777 Shermer Road)
- *"IEPA Site Remediation Program, Comprehensive Site Investigation Report"* Pioneer Engineering & Environmental Services, Inc., March 6, 2002. (1685-1777 Shermer Road)
- *"IEPA Site Remediation Program, Remedial Action Completion Report"* Pioneer Engineering & Environmental Services, Inc., January 10, 2003. (1685-1777 Shermer Road)
- *"IEPA Site Remediation Program, Site Investigation Report-Comprehensive & Remedial Action Completion Report"* Pioneer Engineering & Environmental Services, Inc., April 8, 2003. (1707 Shermer Road)

8.0 INTERVIEWS

Ms. Connolly interviewed the following people as part of this Phase I ESA. The information that the interviewee provided is discussed and referenced within the text of this Phase I ESA Report.

- Mr. Michael Quinlan, Site Manager at Grainger. Mr. Quinlan has been working at the Site for approximately 1.5 years.
- Mr. Leonard Kapka, Maintenance Manager at Grainger. Mr. Kapka has been working at the Site for approximately 5 years.
- Mr. George R. Avery, Regional Facility Manager at Grainger completed the Key Site Manager Questionnaire. Mr. Avery has been associated with the Site for approximately 10 years.

9.0 USER-PROVIDED INFORMATION

H&H requested information from the Client regarding title information, environmental liens, Activity and Use Limitations, and specialized knowledge or commonly known information regarding the Site and, if applicable, the reason for a significantly discounted purchase price. The completed User Questionnaire is provided in **Appendix E**.

A limited AUL review conducted by ERIS (see **Section 7.0**) did not identify AULs or other institutional or engineering controls associated with the Site. In addition, an environmental lien search was conducted by Advanced Searches and is included in **Appendix D**. The environmental lien search identified a deed in trust dated September 4, 1987 was found listing Northbrook Trust & Savings as the Grantee and W.W. Grainger Incorporated as the Grantor.

10.0 NON-ASTM E1527-13 CONSIDERATIONS

This Phase I ESA does not include an evaluation of environmental issues or conditions that ASTM E1527-13 stipulates as non-scope considerations.

11.0 FINDINGS AND CONCLUSIONS

H&H performed a Phase I ESA in general conformance with the scope and limitation of ASTM E1527-13 for the property located at 1657 Shermer Road in Northbrook, Cook County, Illinois. Exceptions to this practice are described in **Section 1.4** of this Phase I ESA Report. **Figure 3 – Identified Sites Map** depicts the relevant sites of concern identified during this Phase I ESA.

11.1 RECOGNIZED ENVIRONMENTAL CONDITIONS (REC)

This Phase I ESA revealed the following RECs in connection with the Site:

- According to the underground storage tank (UST) database listing for the Site, two 2,500-gallon heating oil USTs and one 20,000-gallon heating oil UST were removed from the Site in 1991. A leaking UST (LUST) incident

was reported as a release of fuel oil #2 due to holes in the tanks. According to the database, the incident was issued a No Further Remediation (NFR) letter by the Illinois Environmental Protection Agency (IEPA) in 2009 pursuant to Section 4(y) of the Environmental Protection Act. A UST removal report prepared by ATEC Environmental Consultants dated August 15, 1991 states that two 2,000-gallon heating oil USTs were removed from the Site on June 12, 1991. The UST removal report figure shows the UST location at the northeast corner of the building, as well as an above-ground storage tank (AST) in the vicinity of the USTs. Based on this information, the number of USTs removed cannot be confirmed; the former location of a possible 20,000-gallon heating oil UST cannot be confirmed; and the contents of the former AST cannot be confirmed. It is H&H's opinion that the LUST incident that has been closed with a Section 4(y) Letter is considered an REC in connection with the Site because the soil samples collected during closure activities of a heating oil UST were only analyzed for BTEX; no PNA analyses were conducted. It is also H&H's opinion that the discrepancy as to the number of USTs on Site and the former AST of unknown contents are considered RECs in connection with the Site.

- In connection with the UST/AST information, as part of a Village of Northbrook Stormwater Project (Shermer Road Sewer Overflow), H&H collected soil samples in the northern parking lot, approximately 100 feet north of the UST area on February 2015 to assess soil conditions for off-site disposal considerations associated with stormwater improvements. A sample from boring SB-6 collected from 4 to 5 feet below ground surface detected benzene, toluene, ethylbenzene, and xylenes (BTEX, a subset of volatile organc compounds) above the applicable Maximum Allowable Concentration (MAC) values[3] for consideration of disposal at clean construction or demolition debris (CCDD) facilities. In addition, the results for ethylbenzene and xylenes were above the Construction Worker Inhalation Remedial Objective (RO) from the Illinois EPA Tiered Approach to Corrective action Objectives (TACO)[4]. Since contamiants have been found on the property from prior limited investigatory activity, this is considered an REC in connection with the Site.

- Based on the former status of the Site as a Large Quantity Generator (LQG) of hazardous waste (including but not limited to ignitable waste, reactive waste, and spent halogenated / non-haogenated solvents) and the former industrial use of the Site dating back to at least 1952, with little information about the operations that historically occurred at the Site, the potential for the Site to be impacted by these historical operations cannot be ruled out and is considered a REC.

- An NFR letter for the adjoining property to the south (1685 Shermer Road) includes an Environmental Land Use Restriction (ELUC) on a portion of the Site restricting the use of groundwater beneath a portion of the Site for potable purposes. The ELUC was included in the NFR due to levels of VOCs (chloroform and cis-1,2-dichloroethene) in soil samples near the north end of the adjoining property that exceeded the TACO Soil Component of the Groundwater Ingestion Pathway RO and for which modeling results indicated these constituents potentially migrating north onto the Site.

  Although closure was achieved for the adjoining property and subsequently developed into a large residential land-use complex, the vapor intrusion pathway was not evaluated as part of this closure due to the timing of the closure prior to the vapor intrusion regulations. On May 16, 2013, the Illinois Pollution Control Board adopted the final amendments to 35 Ill. Adm. Code Part 742 related to the indoor inhalation exposure route. ASTM E1527-13 includes an evaluation of the potential migration of vapors in the subsurface that originate from hazardous substances or petroleum products. The most recent groundwater samples collected from

[3] MAC values are found in 35 Ill. Adm. Code 1100 Attachment A Subpart F.

[4] TACO found in 35 Ill. Adm. Code Part 742

groundwater monitoring wells on the northern portion of the adjoining property in 2001 were compared to the Tier 1 residential and industrial/commercial (i/c) remediation objectives for the indoor inhalation exposure route (diffusion and advection) from Table H, Appendix B, Part 742. These groundwater results indicate a maximum concentration of chloroform of 0.29 mg/L (exceeding the residential objective of 0.07 mg/L and the i/c objective of 0.15 mg/L) and a maximum concentration of cis-1,2-dichloroethene of 1.3 mg/L (achieving the residential and i/c objective of 3,500 mg/L). In addition, the 2001 groundwater sampling event detected a maximum concentration of carbon tetrachloride of 2.3 mg/L (exceeding the residential objective of 0.02 mg/l and the i/c objective of 0.076 mg/L) and a maximum concentration of vinyl chloride of 1.7 mg/L (exceeding the residential objective of 0.028 mg/l and the i/c objective of 0.21 mg/L).

Given the detected levels of VOCs in the soil and groundwater on the adjoining property to the south and the reported measured groundwater flow direction during site investigation activities to the north/northwest, the potential for vapor intrusion at the Site from the adjacent southern property is considered a REC.

11.2 ENVIRONMENTAL CONCERNS (EC)

This Phase I ESA revealed the following EC in connection with the Site:

- A railroad spur is visible on the east side of the Site in the 1950s aerial photogrpahs and topographic maps. Due to the uncertainty surrounding the railway unloading/offloading activities and the long industrial history of the Site, the potential for the Site to be impacted by these historical operations cannot be ruled out.

11.3 CONTROLLED RECOGNIZED ENVIRONMENTAL CONDITIONS (CREC)

In H&H's opinion, this Phase I ESA revealed no evidence of CRECs in connection with the Site.

11.4 HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS (HREC)

In H&H's opinion, this Phase I ESA revealed no evidence of HRECs in connection with the Site.

11.5 *DE MINIMIS* CONDITIONS

In H&H's opinion, this Phase I ESA revealed no evidence of *de minimis* condition in connection with the Site.

11.6 DATA GAPS AND THEIR SIGNIFICANCE

In H&H's opinion, based on the information made available during this assessment, significant data gaps were not identified that affected our ability to identify RECs, CRECs, or HRECs at the Site with the exception of being able to accurately determine historic operations by former occupants (Doerr, Dayton, and Parts Company of America). While we have a general understanding of their operations, we have not been able to access historic floor plans to aid in understanding specific operations within specific areas of the site. We have coordinated with Grainger staff and we understand they may have access to such historic site plans and we have proposed borings in areas that we suspect included use and storage of hazardous substance.

11.7 NON-ASTM E1527-13 CONSIDERATIONS

No non-ASTM E1527-13 considerations were evaluated as part of GZA's Scope of Services.

11.8 BUSINESS ENVIRONMENTAL RISKS (BER)

In H&H's opinion, this Phase I ESA revealed no evidence of BERs in connection with the Site with the exception of the potential for the presence of asbestos containing material (ACM) and universal hazardous waste including lead-based paint (LBP) and possibly poly-chlorinated biphenyls (PCBs) which may be present in historic painted surfaces or sealing matrials (caulking). Typcially, a pre-demolition assessment/survey for these types of materials is conducted to ensure that if found to exist, that proper pre-demolition abatement activity can be compelted to address the presence of these materials.

12.0 REFERENCES

ASTM International, Designation: E1527 – 13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Asessment Process.

Environmental Risk Information Services (ERIS), January 31, 2018. Topograph Map Research Results, Report ID 20180124151, 1657 Shermer Road, Northbrook, IL.

ERIS, January 25, 2018. Historical Aerial Report, Report ID 20180124151, 1657 Shermer Road, Northbrook, IL.

ERIS, January 25, 2018. Database Report, Report ID 20180124151, 1657 Shermer Road, Northbrook, IL.

ERIS, February 1, 2018. Historical Directory Report, Report ID 20180111167, 1657 Shermer Road, Northbrook, IL.

13.0 ENVIRONMENTAL PROFESSIONAL OPINION

I declare, to the best of my professional knowledge and belief, that I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 12; that I have the specific qualifications based on education, training, and experience to assess a property of the nature, history and setting of the subject property; and that I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR 312. The signature of the Environmental Professional is contained on the cover letter of this Phase I ESA Report. The qualifications of the Environmental Professional are provided in **Appendix F**.

14.0 LIMITATIONS

H&H a subsidiary of GZA prepared this Phase I ESA Report on behalf of, and for the exclusive use of the Village of Northbrook for the stated purposes for the Site identified in this Phase I ESA Report. [However, H&H acknowledges and agrees that this Phase I ESA Report may be conveyed to the entities associated with the proximate transaction involving the Site to the extent set forth in our Terms and Conditions provided in our proposal dated December 11, 2017.] Use of this Phase I ESA Report, in whole or in part, at other locations, or for other purposes, might lead to inappropriate conclusions, and we do not accept any responsibility for the consequences of such use. Further, reliance by any party not identified in the agreement, for any use, shall be at that party's sole risk, and without any liability to H&H.

H&H performed its services to render an opinion on the presence of RECs in connection with the Site. We performed our services using that degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. We make no warranty, express or implied.

Our findings and conclusions are based on the work conducted as part of the Scope of Services set forth in this Phase I ESA Report, and reflect our professional judgment. Our findings and conclusions should not be considered as scientific certainties or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work.

No environmental site assessment can eliminate the uncertainty of the possible presence of RECs. This Phase I ESA Report was prepared to help reduce, not to eliminate, such uncertainties. Consistent with ASTM E1527-13, we developed our opinions in light of the constraints imposed by time and budget.

As indicated within this Phase I ESA Report, we observed conditions at the Site and at adjoining properties for evidence of RECs at the Site. Where access to portions of the Site or to structures on the Site was unavailable or limited, H&H renders no opinion as to the presence of hazardous substances, hazardous waste, or petroleum products, or to the presence of indirect evidence relating to these materials, in those portions of the Site or structure. In addition, H&H renders no opinion as to the presence of hazardous substances, hazardous waste, or petroleum products, or to the presence of indirect evidence relating to these materials, where direct observation of the interior walls, floors, and/or ceilings of a structure on the Site was obstructed by objects and/or coverings on and/or over such surfaces. We based our opinions on such limited observations. Additionally, some activities or events impacting environmental conditions at the Site or on adjoining properties might have been transient and not observable at the time of H&H's site reconnaissance.

We relied upon information made available by federal, state, and local authorities, the key site manager, and others. We did not attempt to independently verify the accuracy or completeness of that information. We noted inconsistencies in this information within the Report.

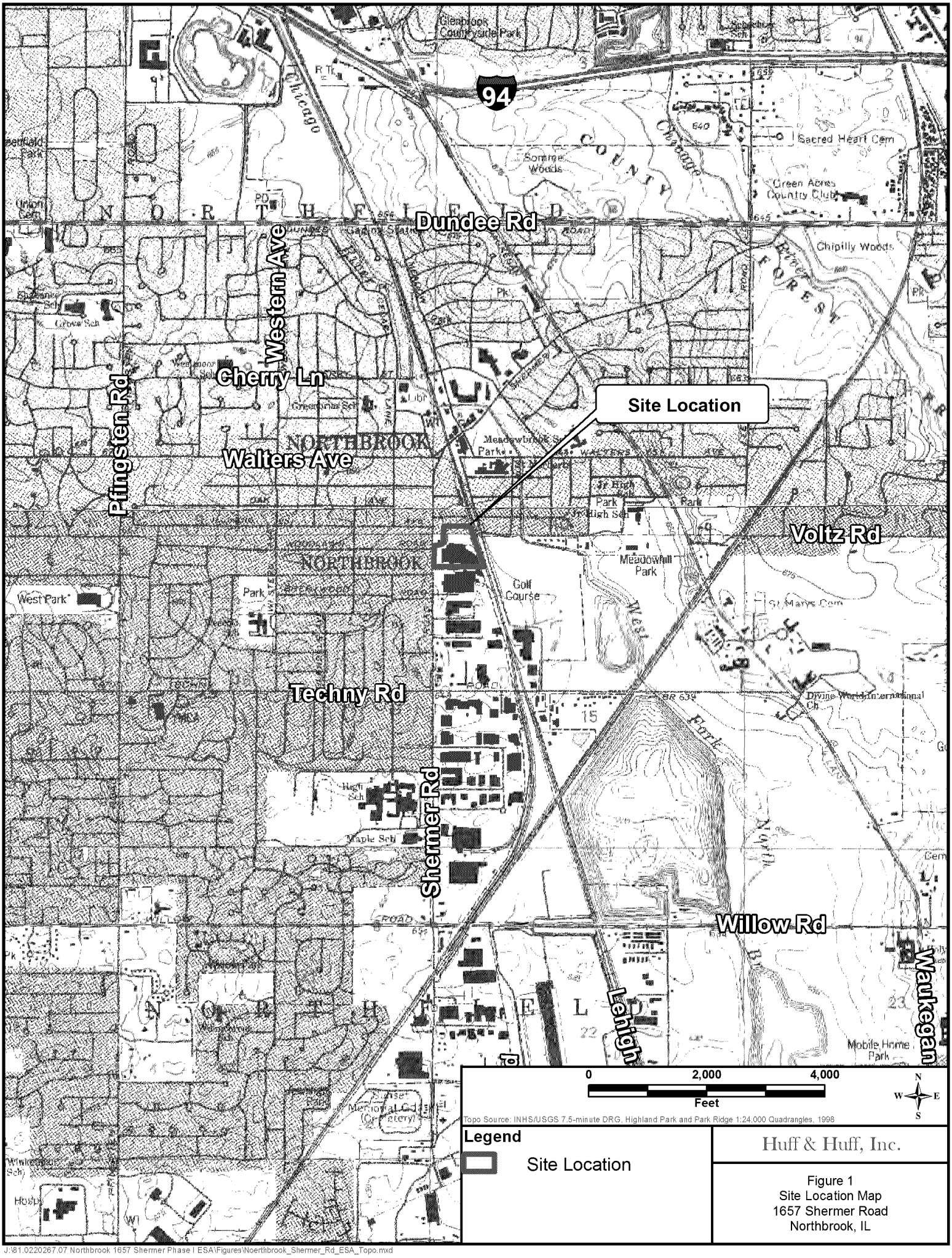
The lender, seller, buyer, or other parties that might become involved with the Site might develop additional opinions or information regarding the presence or absence of RECs at the Site. Such additional opinions or information might not fully support the opinions provided in this Phase I ESA Report. In the event such additional opinions or information is developed, we recommend retaining H&H to review this material so that we have the opportunity to evaluate and modify, as necessary, the opinions provided in this Phase I ESA Report.

Unless otherwise specified within this Phase I ESA Report, we have rendered no opinion on the compliance of Site conditions or activities with federal, state, and local codes, laws, or regulations.

H&H based the opinions expressed in this Phase I ESA Report on conditions observed during the course of our work on this Site; these conditions might change over time. ASTM E1527-13 specifies that observations and opinions are only valid for 180 days from the date the underlying information is developed. After 180 days, portions of this Phase I ESA Report may need to be updated.

Huff & Huff
Incorporated
A Subsidiary of GZA

Figures



Topo Source: INHS/USGS 7.5-minute DRG, Highland Park and Park Ridge 1:24,000 Quadrangles, 1998

Legend

Site Location

Huff & Huff, Inc.

Figure 1
Site Location Map
1657 Shermer Road
Northbrook, IL

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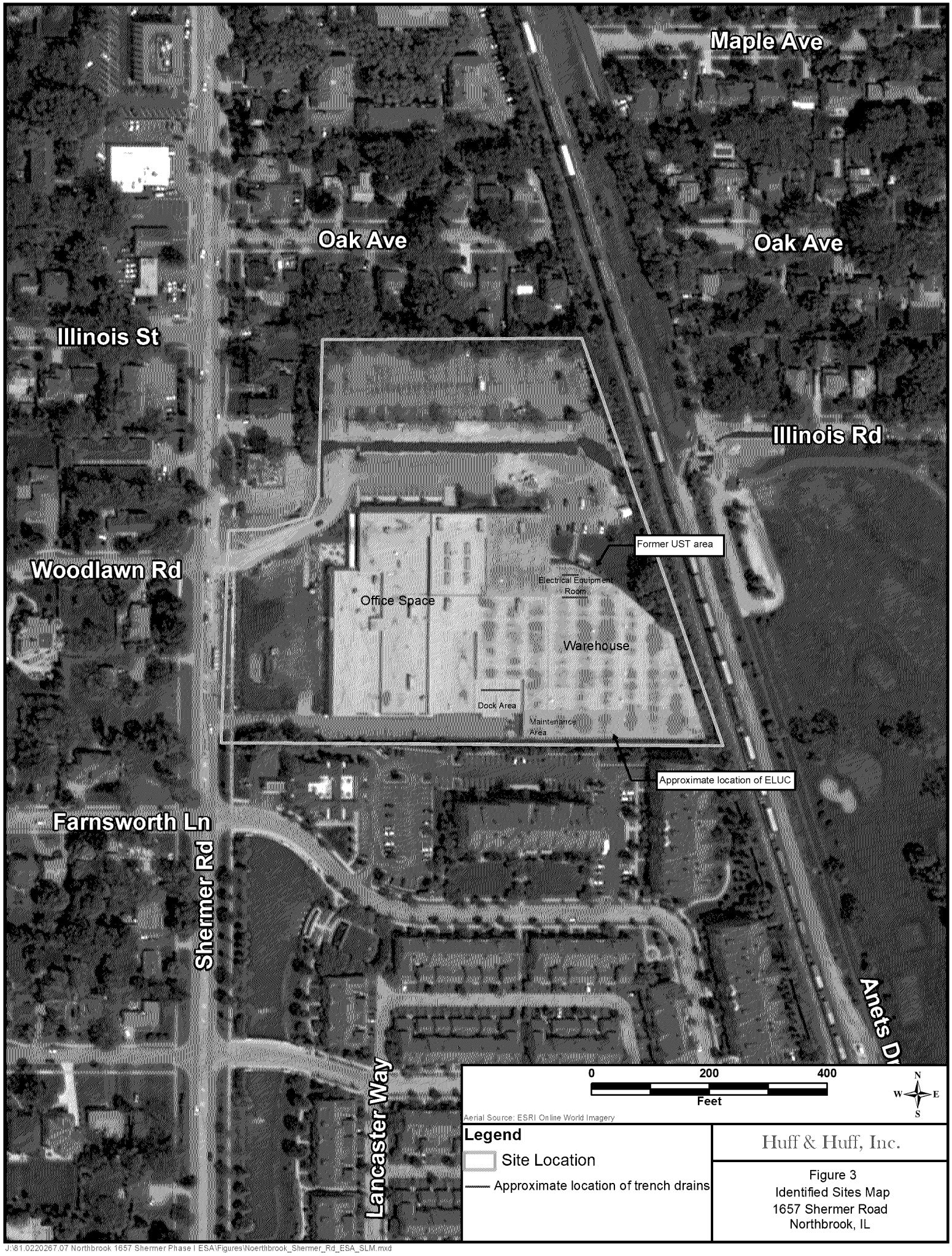

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Appendix A – Photograph Log

Photographic Log

Client Name: Village of Northbrook	**Site Location:** 1657 Shermer Road, Northbrook, IL	**Project No.** 81.0220267.07

Photo 1 **View of dock area at south end of warehouse**

Photo 2 **View of trench drain in dock area**

Photo 3 **View of Recycling Compactor in dock area**

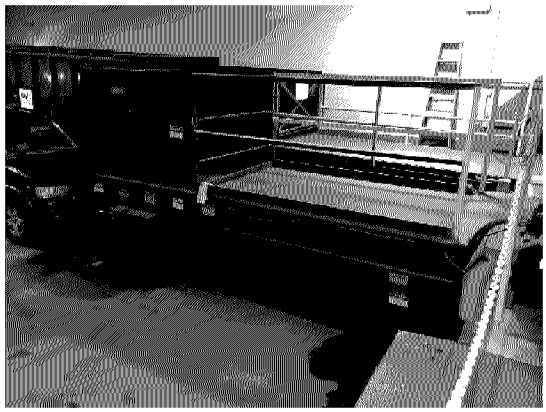

Photo 4 **View of maintenance area, looking west**

Photographic Log

Client Name: Village of Northbrook	Site Location: 1657 Shermer Road, Northbrook, IL	Project No. 81.0220267.07

Photo 5 Fluorescent bulb recycler in maintenance area

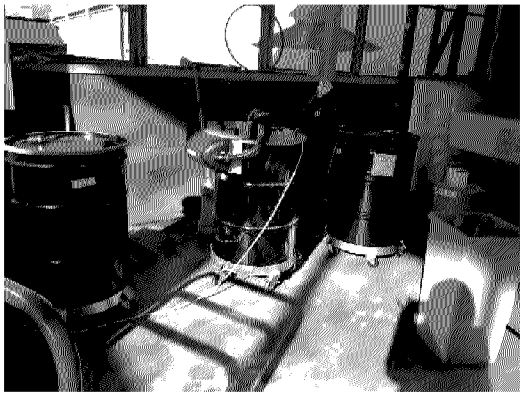

Photo 6 View of warehouse space

Photo 7 Hazardous materials storage cabinets in warehouse

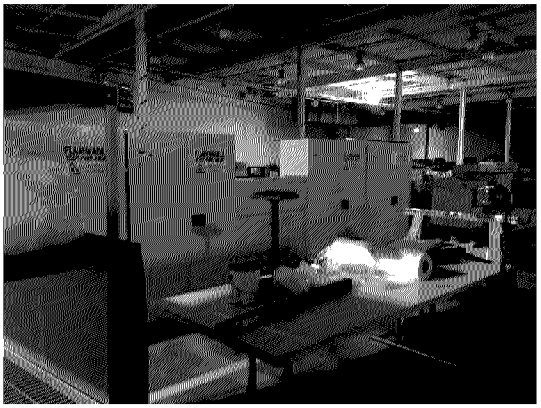

Photo 8 Hazardous materials storage cabinet in warehouse

Photographic Log

Client Name: Village of Northbrook	Site Location: 1657 Shermer Road, Northbrook, IL	Project No. 81.0220267.07

Photo 9 Trench drain in electrical equipment room, looking southeast

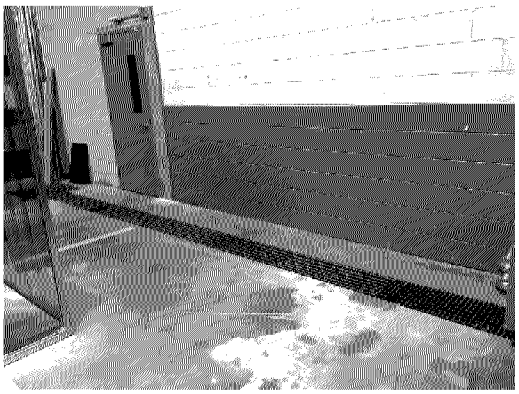

Photo 10 Floor drain in electrical equipment room

Photo 11 Trench drain in electrical equipment room, looking north into storage room

Photo 12 Forklift battery charging area, looking west

Photographic Log

Client Name: Village of Northbrook	Site Location: 1657 Shermer Road, Northbrook, IL	Project No. 81.0220267.07

Photo 13 Office space

Photo 14 Multi-purpose room on north end of building, fomer north dock area

Photo 15 Cafeteria/kitchen

Photo 16 View of floor drain and grease trap in kitchen

Photographic Log

Client Name: Village of Northbrook	Site Location: 1657 Shermer Road, Northbrook, IL	Project No. 81.0220267.07

Photo 17 South side of building, looking east at dock area

Photo 18 Parking lot on west side of building

Photo 19 Generators and transformer at northeast corner of building

Photo 20 Transformer at northeast corner of building