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Phase One Environmental Site Assessment Update

5435, 5475 & 5455 Old Brock Road, Claremont, Ontario

G2S15515F

S. Larkin Developments Inc.
5475 Old Brock Road
Claremont, ON
L1Y 1A1

July 23, 2021

Executive Summary

G2S Consulting Inc. (G2S) was retained by S. Larkin Developments Inc. to complete a Phase One Environmental Site Assessment (ESA) Update for 5435, 5455 and 5475 Old Brock Road in Claremont, Ontario, hereafter referred to as the 'Site'. The current owner of the property is S. Larkin Developments Inc.

The triangular shaped Site is located on the east side of Old Brock Road and south of the intersection of Old Brock Road and Uxbridge-Pickering Townline. The Site is located in an area consisting of primarily agricultural and rural residential land use. The Site is located within the Oak Ridges Moraine. A tributary of Mitchell Creek is located approximately 120 m west, Mitchell Creek is located approximately 840 m west and a tributary of East Duffin Creek is located approximately 620 m east. An equestrian facility and landscaping company are located to the east of Hoxton Road. A CNR rail line is located approximately 260 m south of the Site traversing southwest to east. The Site location is illustrated on Drawing 1 in Appendix A.

The Site is developed with a one-storey residence with a basement, a split level one-story building including an office and small equipment storage for a landscaping company, a slab on grade metal clad shop with six bays, and two attached one storey metal clad barns. The area north of the barns and shop is rented by Hayes Landscaping, and includes an aggregate storage area, equipment storage and storage trailers. The shop includes workspace and storage for a tiny home construction company (Buildit Construction), a spray foam company (Revolution Spray Foam Inc.), a small metal fabrication business (Revolution Industries) as well as a repair bay used by S. Larkin Developments Inc. The barns are currently used to store tractor parts, tools, cars and construction equipment and supplies. A small area is rented out to store merchandise. The Site is approximately 4.37 hectares (10.81 acres) in size.

The purpose of this Phase One ESA Update is to determine the potential for impacts on the Site from present or past Site activities or from surrounding properties since the completion of the previous Phase One ESA Update in February 2019.

This Phase One ESA Update was completed in accordance with the general requirements of CSA Standard Z768-01, November 2001, which outlines the protocol for Phase One Environmental Site Assessments. Should a Record of Site Condition (RSC) be required for the property in the future, addition work would be necessary to meet the requirements of O. Reg 153/04.

The scope of work for this Phase One ESA Update included a review of the existing Phase One ESA report and Phase One ESA Update and available historical records, a visual inspection of the Site and surrounding properties and preparation of a report of the findings and any recommendations.

Potentially contaminating activities (PCAs) identified in the 2016 Phase One ESA were considered to not pose an environmental risk to the property. Three PCAs were identified in the current Phase One ESA Update. PCAs were located on the Site and include gasoline and associated products storage tanks, chemical manufacturing, processing and bulk storage and metal fabrication. Based on observations of the operations, the PCAs were judged to represent a low environmental risk to the Site. G2S recommends implementing a program to provide safe, immediate, clean-up of floor spills to prevent any potential contaminants from entering the subsurface soil and groundwater. The need for further investigation (i.e. a Phase Two ESA) has not been identified at this time.

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1. Introduction

G2S Consulting Inc. (G2S) was retained by S. Larkin Developments Inc. to complete a Phase One Environmental Site Assessment (ESA) Update for 5435, 5455 and 5475 Old Brock Road in Claremont, Ontario, hereafter referred to as the 'Site'. The current owner of the property is S. Larkin Developments Inc.

The purpose of this Phase One ESA Update is to determine the potential for contamination on the Site from present or past Site activities or from surrounding properties since the completion of the Phase One ESA Update in February 2019 and should be read in conjunction with the previous Phase One ESA Update (2019) and the Phase One ESA completed in January 2016.

This Phase One ESA Update was completed in accordance with the general requirements of CSA Standard Z768-01, November 2001, which outlines the protocol for Phase One Environmental Site Assessments.

2. Scope of Work

The scope of work for this Phase One ESA Update included the following:

1. Review of the previous Phase One ESA and Phase One ESA Update reports;
2. Visual inspection of the Site and surrounding properties;
3. Review of available regulatory databases pertaining to the Site and surrounding properties;
4. Interviews with Site personnel; and,
5. Preparation of a report of the findings and any recommendations.

Based on a review of the Phase One ESA completed in January 2016, no changes to the following records were identified during the Phase One ESA Update.

1. Interviews with third party individuals or government officials; and
2. Review of physical setting – topographic maps, soil and geological maps; and
3. Regulatory Inquiries for the Site.

3. Phase One Property Information

3.1 Phase One Study Area Determination

The Phase One Study Area includes the Site and lands within approximately 150 m of the Site, as shown on Drawing 2 Appendix A.

3.2 Site Location

The triangular shaped Site is located on the east side of Old Brock Road and south of the intersection of Old Brock Road and Uxbridge-Pickering Townline. The Site is located in an area consisting of primarily agricultural and rural residential land use. The Site is located within the Oak Ridges Moraine. A tributary of Mitchell Creek is located approximately 120 m west, Mitchell Creek is located approximately 840 m west and a tributary of East Duffin Creek is located approximately 620 m east. An equestrian facility and landscaping company are located to the east of Hoxton Road. A CNR rail line is located approximately 260 m south of the Site traversing southwest to east. The Site location is illustrated on Drawing 1 in Appendix A.

3.3 Site Occupancy

The Site is currently occupied by S. Larkin Development Inc., Hayes Landscaping, Buildit Construction, Revolution Spray Foam Inc., Revolution Industries and a residence.

3.4 Site Features

The Site is developed with a one-storey residence with a basement, a split level one-story building including an office and small equipment storage for a landscaping company, a slab on grade metal clad shop with six bays, and two attached one storey metal clad barns. The area north of the barns and shop is rented by Hayes Landscaping, and includes an aggregate storage area, equipment storage and storage trailers. The shop includes workspace and storage for a tiny home construction company (Buildit Construction), a spray foam company (Revolution Spray Foam Inc.), a small metal fabrication business (Revolution Industries) as well as a repair bay used by S. Larkin Developments Inc. The barns are currently used to store tractor parts, tools, cars and construction equipment and supplies. A small area is rented out to store merchandise. The Site is approximately 4.37 hectares (10.81 acres) in size.

The Site is serviced with hydro and utilizes wells located to the north of the house and to the east of the barn for potable water. Septic systems service the house and a historic apartment in the barn. Entrance to the Site is via Old Brock Road.

3.5 Surrounding Properties

Surrounding properties within 150 m of the Site have not changed significantly since the 2019 Phase One ESA Update. A residential/agricultural property is located south of the Site which includes a barn and a house. Brock Road is located to the east and a rural residential property is located to the east. A farm is located to the north of Uxbridge-Pickering Townline. Rural residential properties and Claremont Horse Action are located to the west of Old Brock Road.

3.6 Aerial Photographs

An aerial photograph of the Site and surrounding area from 2018 was available for review on Google Earth, shown as Drawing 4 in Appendix A.

- The 2018 aerial photograph shows that the Site and remaining surrounding area are developed similar to present and consistent with observations made during the Site visit.

4. Previous Environmental Reports

A summary of previous reports completed are provided below:

Table 1: Summary of Previous Environmental Reports

Report Details	Summary of Findings and Conclusions
Title: Phase I Environmental Site Assessment, 5435, 5455 & 5475 Old Brock Road, Claremont, Ontario **Date of Report:** January 6, 2016 **Author of the Report:** G2S Environmental Consulting Inc. **Completed for:** S. Larkin Developments Inc.	- Three potentially contaminating activities (PCAs) were located on-Site and were identified as gasoline and associated products storage tanks, truck and tractor repair and maintenance and hazardous waste generator. The PCAs were judged to represent a low environmental risk to the Site based on observations of the operations, and the results of recent shallow soil remediation completed for the Site in November and December of 2015. - The need for a Phase Two ESA was not identified.
Title: Soil Investigation 5435 Old Brock Road, Claremont, Ontario **Date of Report:** January 31, 2019 **Author of the Report:** G2S Environmental Consulting Inc. **Completed for:** S. Larkin Developments Inc.	- A soil investigation was conducted on December 20th, 2018. Two areas of investigation were the ground surface directly to the north of the shop where soil had formerly been stockpiled and the ground surface surrounding the diesel AST located to the east of the Hayes landscaping office/ shop. - Soil samples collected from the ground surface in the area of the former stockpile was analyzed for petroleum hydrocarbons (PHCs), volatile organic compounds (VOCs), metals, inorganics, polycyclic aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs). All soil samples submitted for analysis met the MECP Table 2 standards for industrial/ commercial property use. - Soil samples collected from the ground surface surrounding the diesel AST was analyzed for PHCs and VOCs. All soil samples submitted for analysis met the MECP Table 2 standards for industrial/ commercial property use.
Title: Preliminary Geotechnical/ Hydrogeological Report, Proposed Commercial/Industrial Development Claremont North Business Park Development 5435, 5455 and 5475 Old Brock Road Pickering Ontario. **Date of Report:** January 17, 2019 **Author of the Report:** Stantec Consulting Ltd. **Completed for:** S. Larkin Developments Inc.	- In order to characterize hydrogeological conditions on the Site, four boreholes were advanced, three test pits were excavated and six groundwater monitoring wells were installed. - In general the subsurface stratigraphy across the Site can be described as dark grey organic silty clay underlain by silty clay, sandy silt, silty sand, sand and gravel fill underlain by native silty clay till, underlain by native sandy silt till. - Significant deposits of fill material were identified on -Site varying from 1.5 m thick in the northern portion, increasing in depth to 5.2 m in the southwest corner of the property. - Groundwater was encountered in all boreholes ranging in depth from 4.18 m bgs to 1.46 m ags. - Shallow groundwater contours indicate horizontal groundwater flow is to the south-east, generally following surface topography. Deep groundwater contours indicate that deep horizonal groundwater flow direction is to the south-west. - Water quality from both the shallow and deep monitoring wells indicate raw groundwater quality does not meet the ODWQS criteria;
G2S Comments	- Groundwater samples from the newly installed monitoring wells on-Site meet the MECP Table 2 standards for industrial/ commercial property use for all, metals and inorganic parameters.

Report Details	Summary of Findings and Conclusions
Title: Natural Heritage Evaluation Report and Oak Ridges Moraine Conformity Evaluation **Date of Report:** January 17, 2019 **Author of the Report:** Stantec Consulting Ltd. **Completed for:** S. Larkin Developments Inc.	- Based on the information obtained through the various agencies, records review and site investigations, the following key natural heritahe features were identified in or within 120 m of the subject property: • Glen Major Wetland Complex Provincially Significant Wetland • A small unevaluated wetland area (meadow marsh) • Significant Woodlands
Title: Phase I Environmental Site Assessment Update, 5435, 5455 & 5475 Old Brock Road, Claremont, Ontario **Date of Report:** February 7, 2019 **Author of the Report:** G2S Environmental Consulting Inc. **Completed for:** S. Larkin Developments Inc.	- Potentially contaminating activities (PCAs) identified in the 2016 Phase One ESA were considered to not pose an environmental risk to the property. Three PCAs were identified in the current Phase One ESA Update. PCAs were located on the Site and include gasoline and associated products storage tanks, chemical manufacturing, processing and bulk storage and importation of fill of unknown quality. Based on observations of the operations and the results of a recent shallow soil investigation completed for the Site in December of 2018 the PCAs were judged to represent a low environmental risk to the Site. The need for further investigation (i.e. a Phase Two ESA) has not been identified at this time. - The need for a Phase Two ESA was not identified.

5. Environmental Source Information

(i) Environmental Registry

The Environmental Bill of Rights Registry was searched for new references to the Site and Study Area. No records from 2016 to present were located.

(ii) National Pollutant Release Inventory

The National Pollutant Release Inventory (NPRI) data base was searched for records in the vicinity of the Site. No records were found for the Site or Study Area from 2017 to present.

(iii) Waste Management Records

Hazardous Waste Information Network (HWIN) databases from 2011- Present were reviewed. No records were found for the Site or Study Area from 2019 to present.

(iv) Retail Fuel Storage Tanks

G2S contacted the Technical Standards and Safety Authority (TSSA) by email in July 2021. G2S requested a search for records of fuel storage on the Site and immediate surrounding properties on Old Brock Road, Brock Road and Uxbridge-Pickering Townline in Claremont, Ontario. The TSSA response is included in Appendix E. The TSSA did not have records for the addresses searched of any active or inactive fuel storage sites.

(v) Notices and Instruments

The Brownfields Environmental Site Registry was searched for references to the Site and surrounding properties. No records were located from 2016 to present within the Study Area.

6. Interviews

6.1 Site Personnel

An interview regarding the Site use was conducted with Site owner, Mr. Shaun Larkin on June 25, 2021. Mr. Larkin completed a Phase One ESA Questionnaire and the completed questionnaire is included as Appendix D.

Availability of Site Operating Records requested in the Phase One Questionnaire are summarized in the following chart:

Site Operating Records	
Regulatory Permits and Records	No records available
Material Safety Data Sheets	Material Safety Data Sheets were provided for the drums of rigid polyurethane foam airmetic soya stored in the shop and are included in Appendix D.
Underground Utility Drawings	No records provided
Chemical Inventory and Storage	No records provided
Storage Tanks	Underground storage tank decommissioning report prepared by G2S Environmental Consulting Inc., dated August 2015 was reviewed for the previous Phase One ESA. One Soil Investigation Report prepared by G2S Environmental Consulting Inc. dated January 31, 2019 was also reviewed for this report.
Environmental Monitoring Data	A Preliminary Geotechnical/ Hydrogeological Report was provided and reviewed as part of this report.
Waste Management Records	No records available
Process, Production and Maintenance Documents	No records available
Spills and Discharges	No records available
Emergency Response and Contingency Plans	No records available
Environmental Audit Reports	No records available
Facility Site Plans	Property survey plans were provided and reviewed for the previous Phase One ESA.

7. Site Reconnaissance

7.1 General Requirements

Ms. Elyse Naylor of G2S conducted the Phase One ESA Site visit at 5435, 5455 and 5475 Old Brock Road in Claremont, Ontario on June 25, 2011. The purpose of the Site reconnaissance was to assess the current conditions of the Site, adjacent and surrounding properties to the extent practicable. The following table provides details regarding the Site visits:

Table 2: Site Reconnaissance

Date	June 25, 2021
Time	10:00 am
Length of Site Visit	1.5 hours
Weather	Overcast 19º Celsius
Person who conducted the Site visit	Elyse Naylor
Qualified Person supervising the Site visit	Jacky So, P. Eng.
Facility Operating: Yes/No	Yes

Observations of the Site, adjacent and surrounding properties were conducted by walking over the Site. Adjacent and surrounding properties were observed from within the Site or by other public means.

(i) Site Limitations

Due to the COVID 19 pandemic G2S was not able to access inside the house on-Site. Site owner Mr. Shaun Larkin stated that no renovations had been conducted on the residence since 2016 and the house is heated with propane.

(ii) Property Use, Buildings and Structures

The Site is developed with a one-storey residence with a basement, a split level one-story building including an office and small equipment storage for a landscaping company, a slab on grade metal clad shop with six bays, and two attached one storey metal clad barns. The area north of the barns and shop is rented by Hayes Landscaping, and includes an aggregate storage area, equipment storage and storage trailers. The shop includes workspace and storage for a tiny home construction company (Buildit Construction), a spray foam company (Revolution Spray Foam Inc.), a small metal fabrication business (Revolution Industries) as well as a repair bay used by S. Larkin Developments Inc. The barns are currently used to store tractor parts, tools, cars and construction equipment and supplies. A small area is rented out to store merchandise. The Site is approximately 4.37 hectares (10.81 acres) in size.

The Site is serviced with hydro and utilizes wells located to the north of the house and to the east of the barn for potable water. Septic systems service the house and a historic apartment in the barn. Entrance to the Site is via Old Brock Road.

(iii) Locations of Current and Former Wells

Domestic water wells are located to the north of the house and to the east of the barn. Geotechnical wells have recently been installed on the north and eastern portion of the property.

(iv) Sewage Works

A septic system is utilized on Site.

(v) Ground Surface

The ground surface includes gravel driveways to the house, barn, shop and landscaping company building. A large concrete pad is located south of the shop. The remainder of the Site is grassed.

(vi) Current or Former Railway Lines or Spurs

The closest railway line is located approximately 260 m south of the Site, traversing southwest to east.

(vii) Areas of Stained Soil, Vegetation or Pavement

Minor areas of staining were located within the stop. Stains were small, localized, and not located near floor or wall joints or floor drains. Concrete appeared in good condition, no cracks were observed.

(viii) Stressed Vegetation

G2S did not identify any stressed vegetation during the Site visit.

(ix) Fill and Debris Materials

Aggregates are stored by Hayes Landscaping on the property to the north and northeast of the main shop. Aggregates include gravel, and large stones etc. and are not expected to affect the quality of the underlying soil.

Other areas of fill or debris materials were not observed at the time of the Site visit.

(x) Potentially Contaminating Activities On Site

Three potentially contaminating activities were identified on Site at the time of this assessment and are identified as the following :

- Gasoline and associated products storage in fixed tanks identified as the one active heating oil AST and the currently unused diesel AST;
- Chemical manufacturing, processing and bulk storage identified as approximately 15 drums of rigid polyurethane foam and A-PMDI (Diphenylmethane Diisocyanate) located in the shop; and
- Metal fabrication identified as the use of the shop for the manufacturing of miniature forklifts with the presence of welding machinery, a mill, a lathe and a CNC machine.

(xi) Below Ground Structures

Septic beds are expected to be located within the vicinity of the house and the bathroom located in the barn. The exact locations are unknown.

Two cisterns are located to the west of the southern barn and west of the eastern barn. An interceptor is located inside the southern barn. These below ground structures have reportedly not been utilized since the piggery closed in the late 1960's. It is unknown if these structures were used while the zoo utilized the barns.

No other pits and/or lagoons were observed during our Site visit. Although utility locations have not been identified as part of the Phase One ESA, it is likely that some utilities are provided to the building via underground services (phone, etc.).

(xii) Storage Tanks

One 1,137 litre (L) above ground storage tank (AST) was observed in the northwest corner of the shop. The tank was manufactured in 2005 and is in good condition with no staining observed on the concrete below.

One 4,540 L capacity double walled, diesel AST is located to the east of the landscaping company building. The tank appeared in good condition and manufactured in 2013. Historic PHC staining had been remediated in this area. Shallow soil samples were obtained from the ground surface in the area of AST in December of 2018. Samples obtained met MECP Table 2 SCS for industrial/ commercial property use with coarse textured soil. The AST is currently empty and has been unused for at least the last year. No current evidence of stains or leaks were observed.

A large water storage tank is located to the northwest of the aggregate storage area.

(xiii) Material Storage

An aggregate storage area is located between the shop and the landscape contractors building. The contractors building is used to store tools, miscellaneous small equipment, tires, and some landscaping supplies. The barns are currently used to store tractor parts, tractors, cars, e-bikes, small tools, construction equipment, building materials, and a small area is rented out to store merchandise. Small amounts of paints, automotive oils containers are stored in the northern portion of the barn. Ten secants/ truck trailers are located on the property and are used to store e-bikes and e-bike parts, tools, small machinery, tractor parts, lumber, furniture, building materials, cables, sand blasting sand, scrap metal, and small amounts of paints, and automotive oil/lubricant containers.

(xiv) Hazardous Materials

Approximately 15 drums of rigid polyurethane foam and A-PMDI (Diphenylmethane Diisocyanate) are located in the central portion of the shop occupied by Revolution Spray Foam.

(xv) Potable and Non-Potable Water Sources

Water is supplied to the Site by the domestic wells located to the north of the house and east of the barn.

(xvi) Waste Management

General waste and recycling produced on Site is serviced via municipal services.

(xvii) Underground Utilities

Additional records or drawings of underground utilities were not available at the time of this report.

(xviii) Interior Building Features

The house is currently heated by propane and was historically heated with electric heating. The workshop is heated with an oil fueled furnace. The barns are not heated.

Interior building materials include plaster walls in the house and metal cladding in the barns and shop. The basement located in the house is partly finished, with concrete flooring, ceramic tiles in the bathroom and carpet in the living space. The first floor of the house consists of wood and carpet flooring. Walls and ceilings consist of plaster. A water softener, hot water tank and furnace are located in the southern extent of the basement.

The interior building materials in the barns include concrete and dirt floors and metal clad ceilings and walls. Washout drains run along the centre of the barns to an interceptor in the eastern barn and one in the southern barn. The drains were used to wash out animal waste where the overflow would travel towards the cisterns located west of the barns. These have not been used since the barn ceased as a quarantine facility. Lighting throughout the buildings consists of fluorescent light tubes and halogen lights in the shop.

(xix) Exterior Features

Surface water from the Site is expected to infiltrate through a grassed areas surrounding the buildings, or to flow towards the topographical depression located at the southeastern extent of the Site.

Exterior building materials include brick on the house and metal cladding on the shop and barns.

The Site is serviced with hydro and domestic wells located to the north of the house and to the east of the barn for potable water. Septic systems service the house and the washroom located adjacent the historic apartment in the eastern barn.

(xx) Surrounding Properties

No potentially contaminating activities were identified on the surrounding properties during the Site visit. No significant changes to the surrounding properties were identified since the previous Phase One ESA Update in 2019.

8. Review and Evaluation of Information

(i) Current and Past Site Uses

The current and past Site uses are summarized in the following table:

Table 3: Site Uses

Site		
Address	***Property Use***	***Years Occupied***
5435 Old Brock Road	Buildit Construction	2014 - Present
	Revolution Spray Foam Inc.	2017 - Present
	Revolution Industries	2019 – Present
	S. Larkin Development Inc., Larkin Homes	2008- Present
	B & C Equipment Sales, owned by Ken Burton	1975- 2008
	Province of Ontario- Toronto Zoo, quarantine facility	~1970- 1975
	Piggery	Late 1960's
5455 Old Brock Road	Hayes Landscaping	1996- Present
5475 Old Brock Road	Residential	1982- Present

(ii) Potentially Contaminating Activities

The following PCA as defined in the amended O. Reg. 153/04 was identified in the Study Area since the completion of the previous Phase One ESA Update in 2019:

- Chemical Manufacturing, Processing and Bulk Storage
- Gasoline and Associated Products Storage in Fixed Tanks
- Metal Fabrication

Table 4: Potentially Contaminating Activities 2016 to Present – Risk to Site

Address Direction and Distance from Site	Potentially Contaminating Activity	Description	Years Occupied	PCA – Risk to Site
5435, 5455 & 5475 Old Brock Road (Site)	Gasoline and Associated Products Storage in Fixed Tanks	One diesel AST located in the area occupied by Hayes Landscaping, and one heating oil AST located inside the northwestern corner of the shop.	2019 - Present	Low, diesel AST - historic PHC staining had been remediated in this area. Shallow soil samples were obtained from the ground surface in the area of AST in December of 2018. Samples obtained met MECP Table 2 SCS for industrial/ commercial property use with coarse textured soil. The AST is currently empty and has been unused for at least the last year. No current evidence of stains or leaks were observed. Heating oil AST in good condition with no surficial staining.
	Chemical Manufacturing, Processing and Bulk Storage	Approximately 15 drums of rigid polyurethane foam and A-PMDI (Diphenylmethane Diisocyanate) located in the central portion of the shop occupied by Revolution Spray Foam.	2019 – Present	Low, drums not opened on-Site, no staining was observed on the floor in the vicinity of the drums, concrete flooring appeared in good condition no floor drains in the vicinity of the drums.
	Metal Fabrication	Revolution Industries occupies the central portion of the shop and manufactures miniature forklifts. Machinery on-Site includes a welding machine, a mill a lathe and a CNC machine.	2019 – Present	Low, all operations within the shop on concrete flooring, small operations, no staining observed in the area of the machinery.

9. Conclusions and Recommendations

Potentially contaminating activities (PCAs) identified in the 2016 Phase One ESA were considered to not pose an environmental risk to the property. Three PCAs were identified in the current Phase One ESA Update. PCAs were located on the Site and include gasoline and associated products storage tanks, chemical manufacturing, processing and bulk storage and metal fabrication. Based on observations of the operations the PCAs were judged to represent a low environmental risk to the Site. G2S recommends implementing a program to provide safe, immediate, clean-up of floor spills to prevent any potential contaminants from entering the subsurface soil and groundwater.

The need for further investigation (i.e. a Phase Two ESA) has not been identified at this time.

Given the age of the buildings on Site, there is the potential for the presence hazardous materials in building materials, including asbestos containing materials (ACMs), polychlorinated biphenyls (PCBs), mercury, ozone-depleting substances (ODSs), and lead based paints. Should renovation or demolition be planned for the buildings on Site, a designated substances survey should be performed in accordance with Ministry of Labour regulations.

10. Qualifications of the Assessor

This Phase One ESA Update was conducted by Ms. Elyse Naylor, B.A. Ms. Naylor is responsible for the successful completion of field work and reporting. Ms. Naylor has over 5 years of consulting experience and has completed numerous projects on behalf of private and public sector clients for industrial, commercial and residential sites.

This Phase One ESA Update was reviewed by Jacky So, P.Eng. Jacky So is a Senior Engineer for G2S Environmental. Mr. So obtained his Bachelor of Applied Science degree in Environmental Engineering in 2002 from the University of Waterloo in Waterloo, Ontario and received his license with the Professional Engineers Ontario in 2007. Mr. So has over 18 years of professional consulting experience in environmental site assessments and remediation. Mr. So has acted as project manager on several large scale remediation projects in the Greater Toronto Area. His main responsibilities as project manager included contract administrations, cost and timeline control, coordination of interdisciplinary project teams, communication with the clients, attending technical and public meetings, providing technical advice to the project team, conducting technical evaluations and studies. Mr. So is a Qualified Person as defined in Ontario Regulation 153/04 for signing off on Phase One and Two ESAs, remediation reports and filing of Records of Site Condition (RSCs).

11. References and Supporting Documentation

1. Canadian Standards Association. November 2001. *Z768-0 Phase I Environmental Site Assessment.*
2. Occupational Health and Safety Act - Ministry of Labour (MOL).
3. Hazardous Waste Information Network (HWIN, 1986 – 2005), www.hwin.ca.
4. Ministry of the Environment, Brownfields Environmental Site Registry, www.ene.gov.on.ca/environet/BESR/index.
5. National Pollutant Release Inventory, www.ec.gc.ca.
6. Ontario's Environmental Registry, www.ebr.gov.on.ca.
7. *"Phase I Environmental Site Assessment, 5435, 5455 & 5475 Old Brock Road, Claremont, Ontario",* prepared by G2S Environmental Consulting Inc., dated January 6, 2016.
8. *"Soil Investigation, 5455 Old Brock Road, Claremont, Ontario",* prepared by G2S Environmental Consulting Inc., dated January 31, 2019.
9. *"Preliminary Geotechnical/ Hydrogeological Report, Proposed Commercial/Industrial Development Claremont North Business Park Development - 5435, 5455 and 5475 Old Brock Road Pickering Ontario."* prepared by Stantec Consulting Ltd. dated January 17, 2019.
10. *"Natural Heritage Evaluation Report and Oak Ridges Moraine Conformity Evaluation- 5435, 5455 and 5475 Old Brock Road Pickering Ontario"* prepared by Stantec Consulting Ltd. dated January 17, 2019.
11. "2018 Aerial Photograph," Google Earth, Digital Globe, 2021.
12. *"Phase One Environmental Site Assessment Update, 5435, 5455 & 5475 Old Brock Road, Claremont, Ontario",* prepared by G2S Environmental Consulting Inc., dated February 7, 2019

12. Limitations

This Phase One Environmental Site Assessment (ESA) Update has been prepared for the sole benefit of S. Larkin Developments Inc. and is intended to provide a Phase One ESA Update of the Site, 5435, 5455 and 5475 Old Brock Road in Claremont, Ontario. The Phase One ESA Update may not be used by any other person or entity without the expressed written consent of S. Larkin Developments Inc. and G2S Consulting Inc. (G2S). Any use which a third party makes of this Phase One ESA Update, or any reliance on decisions made based on it, is the responsibility of such third parties. G2S accepts no responsibility for damages, if any suffered by any third party as a result of decisions made or actions based on this Phase One ESA Update.

The findings in this Phase One ESA Update are limited to the conditions at the Site at the time of this investigation (June/July 2021), and supplemented by a historical review and data obtained by G2S as described herein as well as information provided by the Site representative as reported herein. Conclusions presented in this Phase One ESA Update should not be construed as legal advice.

If Site conditions or applicable standards change or if any additional information becomes available at a future date, changes to the findings, conclusions and recommendations in this Phase One ESA Update may be necessary.

13. Closing Remarks

We trust this Phase One ESA is satisfactory for your purposes. Should you have any questions, please contact this office.

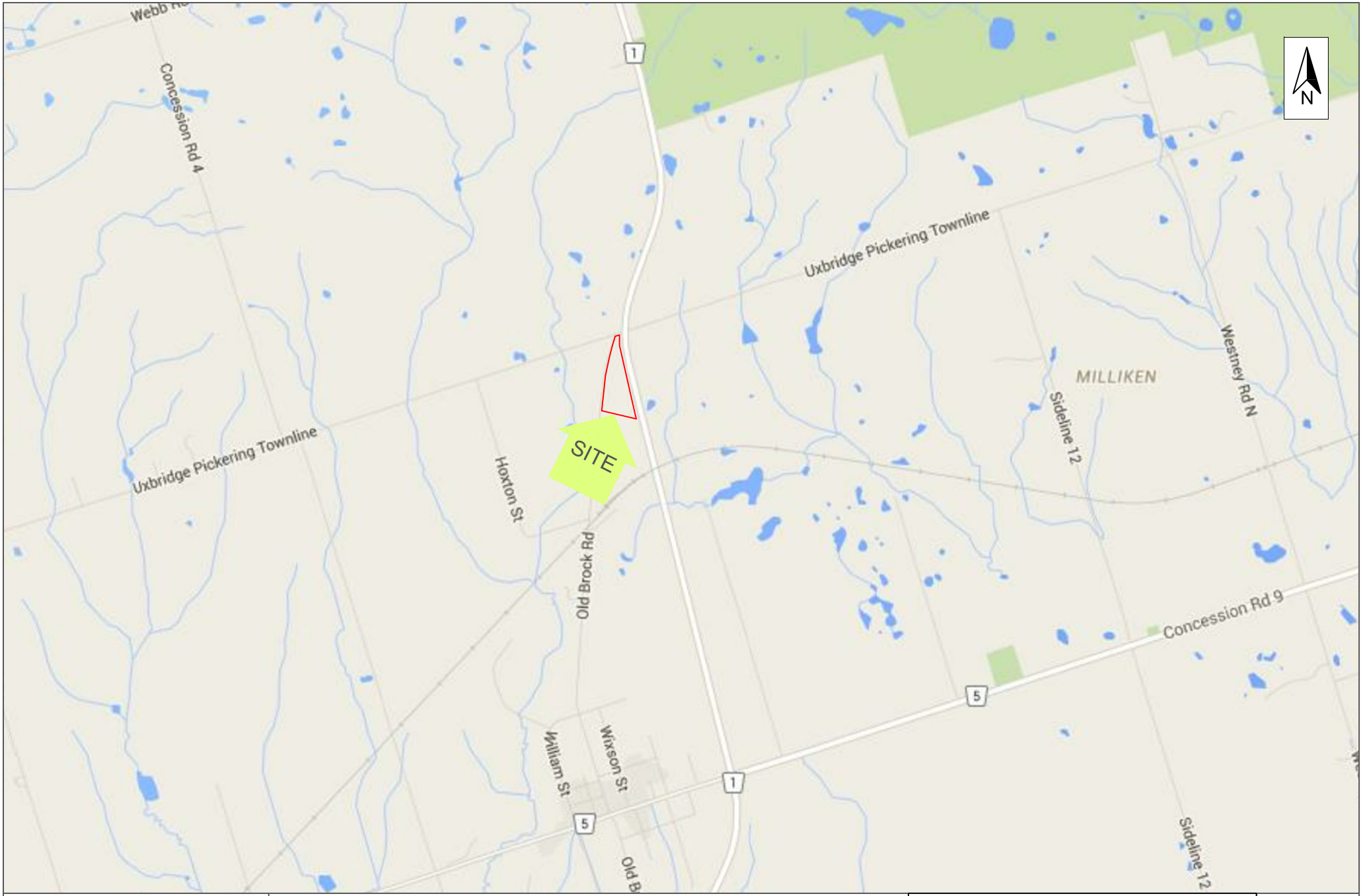
Yours truly,

G2S Consulting Inc.

Elyse Naylor, B.A.
Senior Environmental Technologist

Jacky So, P. Eng.
Senior Project Manager

Appendix A:
Drawings



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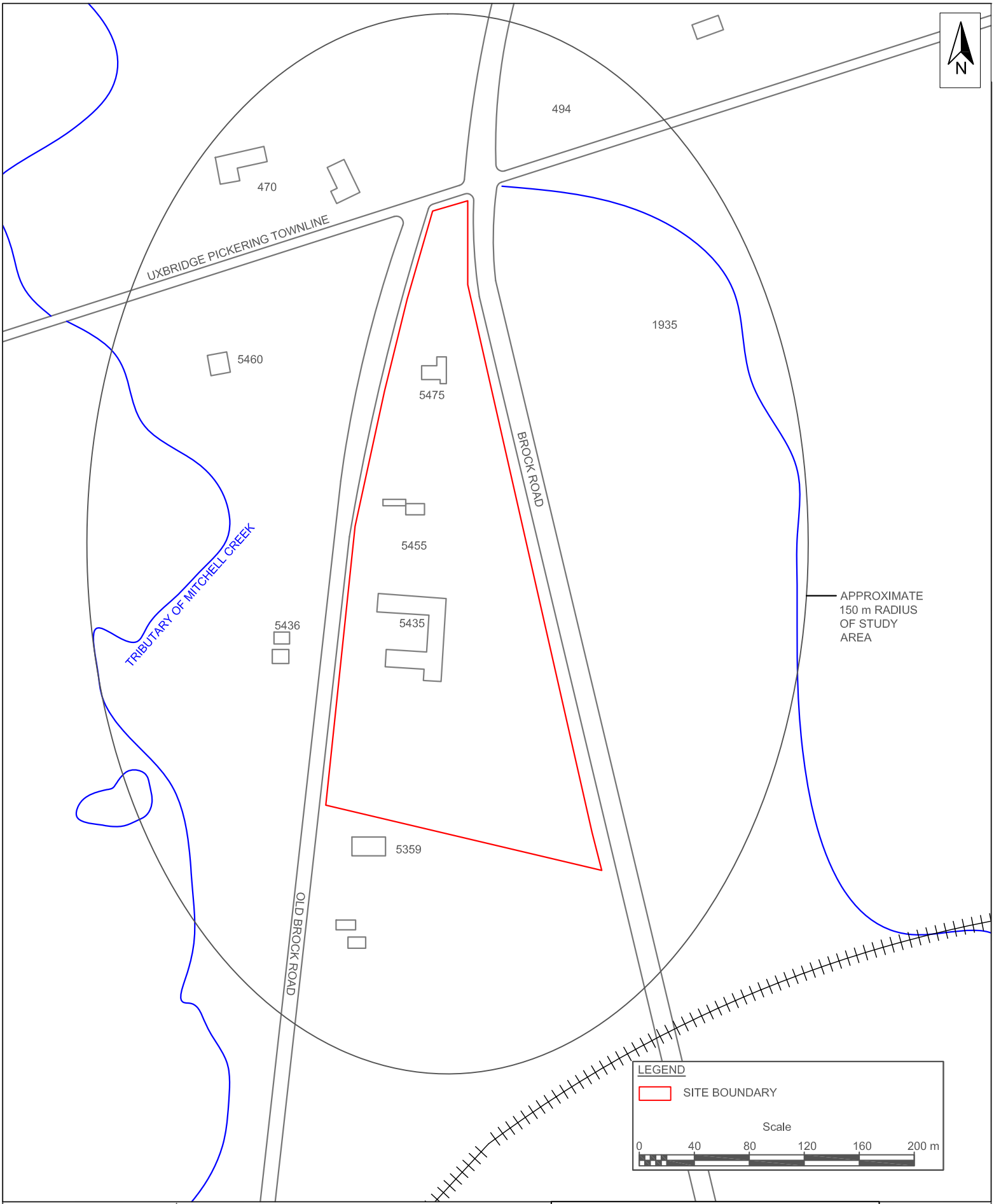
Project No.:	G2S15515F
Date:	JULY 2021
Drawn by:	EN/JS
File name:	5435OLDBROCK.DWG

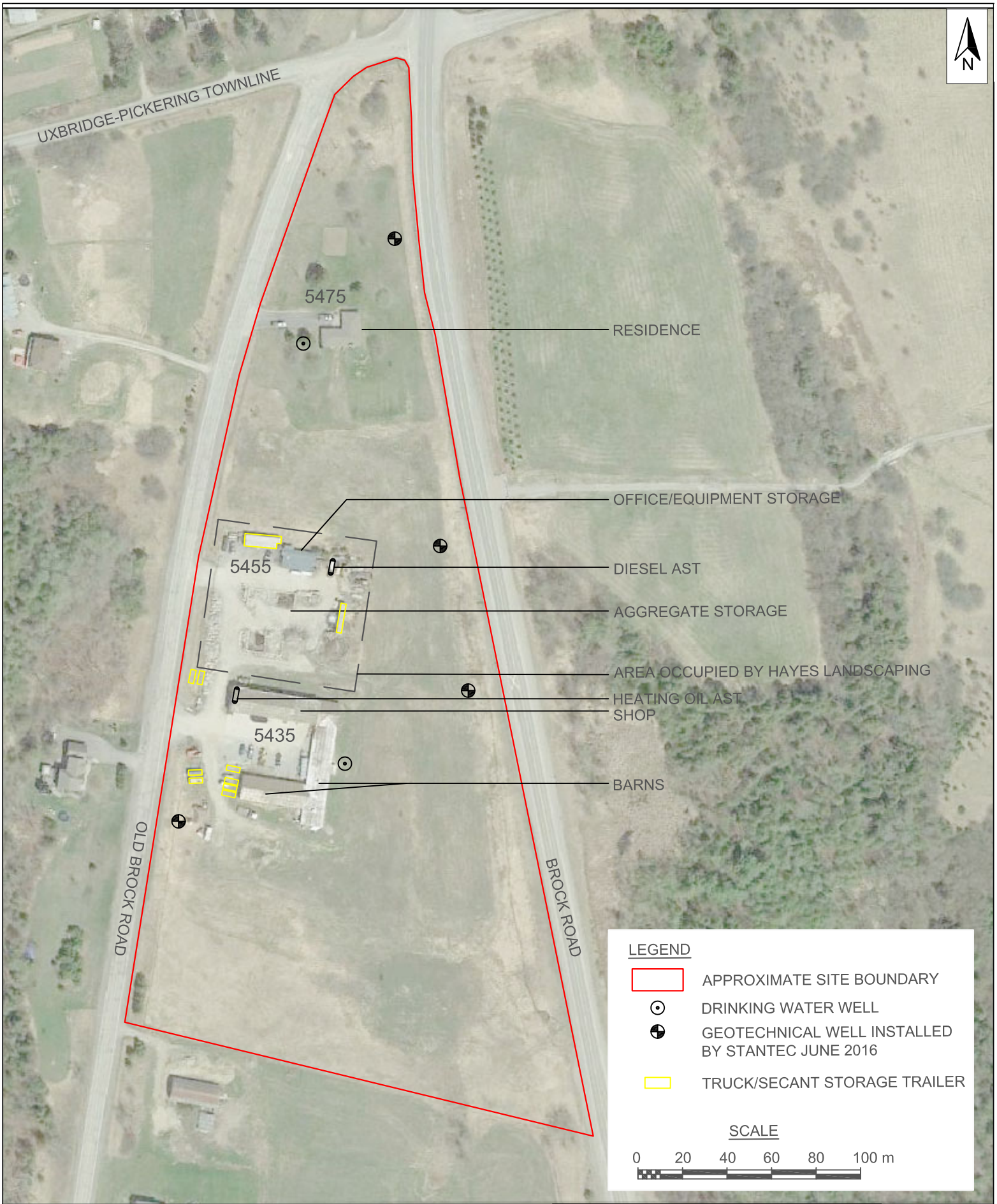
5435, 5455 & 5475 OLD BROCK ROAD
SITE LOCATION PLAN

CLAREMONT ONTARIO

Drawing No. 1



Scale: AS SHOWN Project No.: G2S15515F Date: JULY 2021 Drawn by: EN/JS File name: 5435OLDBROCK.DWG	5435, 5455 & 5475 OLD BROCK ROAD STUDY AREA CLAREMONT ONTARIO	G2S	Drawing No. 2



Scale: AS SHOWN Project No.: G2S15515F Date: JULY 2021 Drawn by: EN/JS File name: 5435OLDBROCK.DWG	5435, 5455 & 5475 OLD BROCK ROAD SITE PLAN CLAREMONT ONTARIO	G2S	Drawing No. 3

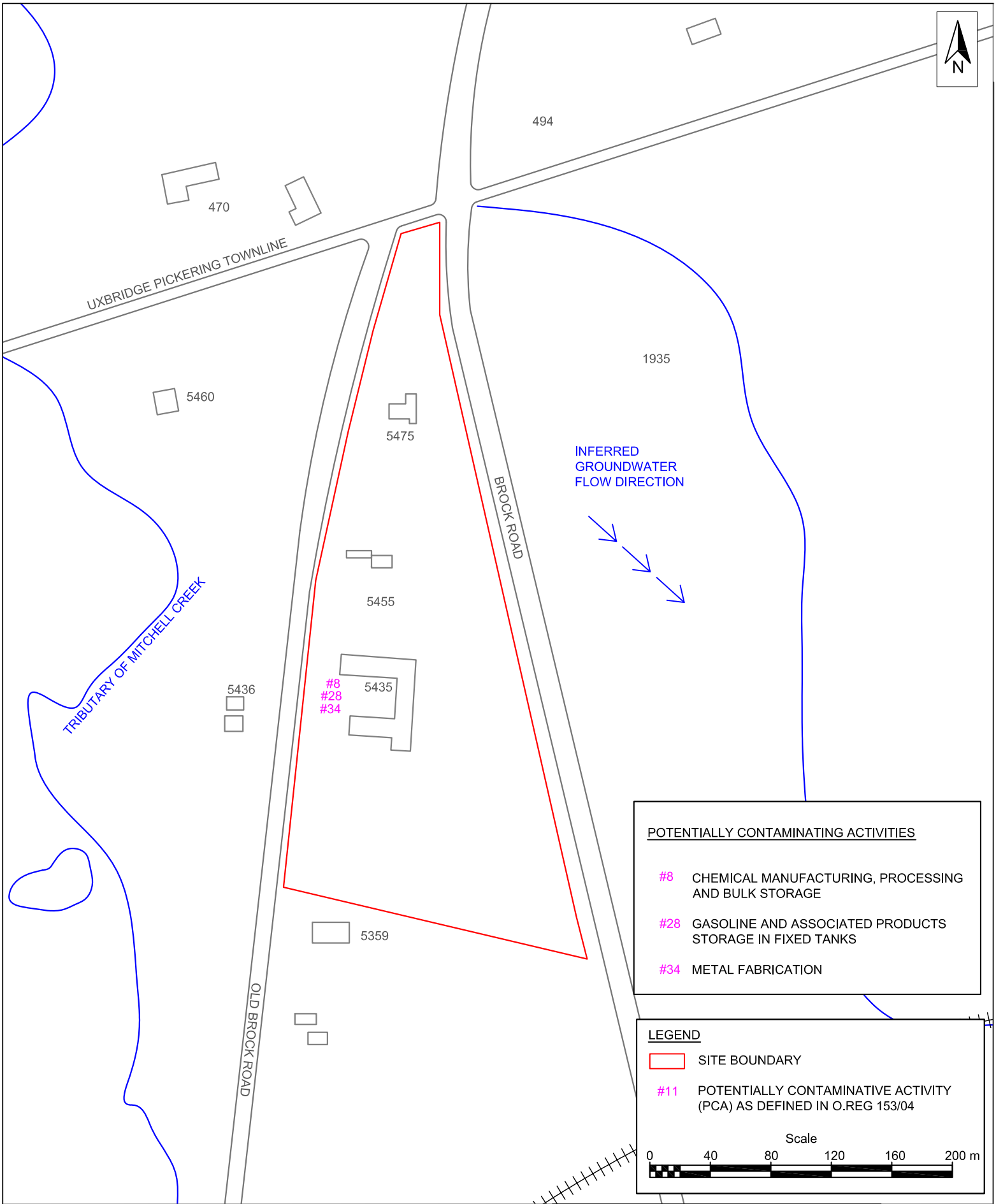
Scale:	N.T.S.
Project No.:	G2S15515F
Date:	JULY 2021
Drawn by:	EN/JS
File name:	5435OLDBROCK.DWG

5435, 5455 & 5475 OLD BROCK ROAD

2018 AERIAL PHOTOGRAPH

CLAREMONT ONTARIO

Drawing No. 4



Scale: AS SHOWN
Project No.: G2S15515F
Date: JULY 2021
Drawn by: EN/JS
File name: 5435OLDBROCK.DWG

5435, 5455 & 5475 OLD BROCK ROAD

POTENTIALLY CONTAMINATING ACTIVITIES

COLLINGWOOD ONTARIO

Drawing No. 5

Appendix B:
Site Photos

Picture and Description	
	
Photo #1: Inside the Hayes Landscape building.	**Photo #2:** Aggregate storage area.
	
Photo #3: Diesel AST located east of the Hayes Landscaping building.	**Photo #4:** Residence located on the north portion of the Site.
	
Photo #5: South side of the shop.	**Photo #6:** Heating oil AST located in the northwest corner of the shop.

Picture and Description	
	
Photo #7: Minor areas of staining within the shop.	**Photo #8:** Drum storage in bays, 3, 4 and 5 of the shop as part of Revolution Spray Foam Inc.
	
Photo #9: Small containers of paint, cleaners, oils and lubricants located within the barn.	**Photo #10:** South side of the barn.
	
Photo #11: Storage secants.	**Photo #12:** Truck trailers used for storage.

Appendix C:
Environmental Source Information

HUNTSMAN
BUILDING SOLUTIONS

HEATLOK® SOYA HFO™
TECHNICAL DATA SHEET

Heatlok Soya HFO / Polarfoam Soya HFO are two component, low GWP, closed cell, spray applied, rigid polyurethane foam systems. This foam product has been tested by an independent recognized laboratory and is the first product that surpasses the requirements outlined in **the most recent and stringent standard CAN/ULC S705.1-15** "Standard for thermal insulation – Spray applied rigid polyurethane foam, medium density – Material Specification". Heatlok Soya HFO/ Polarfoam Soya HFO material complies with the requirements of the National Building Code of Canada and is listed by the National Research Council Canada under CCMC Listing 14078-L, since 2017 as an insulation product. This product is commonly used as a thermal insulation product, air barrier, vapour retarder for interior, exterior applications above and below grade. Heatlok Soya HFO / Polarfoam Soya HFO uses recycled plastic materials, rapidly renewable soy oils, and 4th generation blowing agent with zero ozone depleting potential and < 1 global warming potential. This product meets all the requirements of the Paris, Kyoto and Montreal protocols. Heatlok Soya HFO/ Polarfoam Soya HFO is applied exclusively by CALIBER QAP licensed installers and contractors in accordance with the standard CAN/ULC S705.2.

PHYSICAL PROPERTIES - CCMC 14078-L - CAN/ULC S705.1-15			
ASTM D 1622-14	Apparent Core Density	2.21 lb/ft^3	35.49 kg/m^3
CAN/ULC S770-09	Long Term Thermal Resistance LTTR 100 mm 75 mm 50 mm	 R-24 R-17 R-11	 4.14 RSI 3.00 RSI 1.94 RSI
ASTM D 1621-16	Compressive Strength (@ 10% deflection)	24.8 lb./in^2	171 kPa
ASTM D 1623-09	Tensile Strength	58.16 lb./in^2	401 kPa
ASTM D 6226-15	Open Cell Content	5 %	
ASTM D 2842-12	Water Absorption by volume	.64 %	
ASTM E 96-A-16	Water Vapour Permeance (50 mm thick, top skin removed)	0.89 perm	51 ng/Pa.s.m^2
ASTM E 2178-13	Air Permeance @ 75 Pa (30.7 mm thick, top skin removed)	0.0021 L/(s•m ^{2})	
CAN/ULC S102-18	Flame Spread Index Corner wall test CAN/ULC S127 (included in CAN/ULC S102) Required and Declared Value (building code)	245	
ASTM D 2126-15	Dimensional Stability (28 days) (% volume change, sample without any substrate) @ -20°C @ +80°C @ +70°C & 97±3%R.H.	 -0.1 -0.3 +8.5	
CAN/ULC S774-09 (R2014)	Time of Occupancy (VOC)	1 day	
ASTM C 1338-14	Fungi Resistance	No Fungal Growth	

PHYSICAL PROPERTIES – Additional Testing			
CAN/ULC S770-03	Long Term Thermal Resistance LTTR 100 mm 75 mm 50 mm	 R-25 R-19 R-12	 4.24 RSI 3.26 RSI 2.03 RSI
UL Greenguard	Interior Air Quality	Certified Gold	
CAN/ULC S101	UL LISTED design wall FW FO7. EW24, 150mm (NBC 2010-15 art: 3.2.3.8)	Pass	
CAN/ULC S101	UL LISTED design wall FWFO7. EW25, 204mm (NBC 2010 -15 art: 3.2.3.8)	Pass	
K124/02/95* (ISO/TS 11665-13)	Radon gas resistance coefficient (for 50mm) Radon gas diffusion coefficient	17410.10^6 s/m 1,3.10^{-10} m^2/s	

*829 times better than a 0.15mm polyethylene sheet at a thickness of 50mm.

RECYCLED & RENEWABLE CONTENT	
Recycled Content	18 %
Renewable Materials Content	4 %

REACTIVITY PROFILE			
Cream Time	Gel Time	Tack Free Time	End of Rise
0 – 1 second	3 seconds	5 – 6 seconds	5 – 6 seconds

LIQUID COMPONENT PROPERTIES *		
PROPERTY	**ISOCYANATE**	**RESIN**
Colour	Brown	Heatlok Soya HFO: Blue Polarfoam Soya HFO: Orange
Viscosity @ 25°C	150 – 350 cps	200 – 300 cps
Specific Gravity	1.20 – 1.24	1.19 – 1.21
Shelf Life*	6 months	6 months
Mixing Ratio (volume)	100	100
Vapour Pressure @ 25°C	10^{-7} psi	8 – 9 psi
Components system storage temperature recommendation	15 @ 25°C (59 @ 77°F)	15 @ 25°C (59 @ 77°F)

*See SDS for more information.

RECOMMENDED PROCESSING PROCEDURES		
Mixing Ratio A/B (volume)	1/1	
Mixing Dynamic Pressure (minimum)	5516 kPa	800 psi
Moisture Content of Substrate (wood)	< 19%	< 19%
Maximum Thickness Per Pass	50 mm	2”
Maximum Thickness of Successive Passes	100 mm	4”
Minimum cooling time period before applying over 100 mm (4”) thick application	30 min	
Maximum Thickness in 24 h	200 mm	8”
PRODUCT VERSION	**VERSION APPLICATION TEMPERATURES (AIR, SUBSTRATE, & CURING)**	**LIQUID TEMPERATURE AT THE GUN**
Summer Version	30 @ 10°C (50 @ 86°F)	35 @ 46°C (95 @ 115°F)
Winter Version	10 @ -10°C (50 @ 14°F)	38 @ 49°C (100 @ 120°F)

General Information: It is recommended that the foam be covered with an approved thermal barrier in accordance with the applicable building code when used in buildings and covered by a UV coating when used outside. This product should not be used when the continuous service temperature of the substrate is outside the range of -60°C to 80°C (-76°F to 180°F). Do not apply excessive thickness in one application it may cause spontaneous combustion of the foam hours after the application. Respect the recommended procedures. Heatlok Soya HFO is green in color. Polarfoam Soya HFO is orange in color.

Disclaimer: The information herein is to assist customers in determining whether our products are suitable for their applications. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute a warranty, expressed or implied, including any warranty of merchantability or fitness, nor is protection from any law or patent inferred. All patent rights are reserved. The foam product is combustible and must be protected in accordance with applicable codes. Protect from direct flame and spark contact, around hot work for example. The exclusive remedy for all proven claims is replacement of our materials.

870, Curé-Boivin
Boisbriand,QC, J7G 2A7
Téléphone: 450 437 0123 (866 437 0223)
www.huntsmanbuildingsolutions.com /fr-CA

HUNTSMAN
BUILDING SOLUTIONS

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BUILDING SOLUTIONS

HEATLOK® SOYA HFO
SAFETY DATA SHEET – B-SIDE

Compliant SDS for GHS: HazCom 2012 / United States; WHMIS 2015 / Canada.

SECTION 1: IDENTIFICATION	
Supplier/Manufacturer: Huntsman Building Solutions. 870 Curé-Boivin Boisbriand, QC, Canada. J7G 2A7 Tel: 450-437-0123 Toll free: 1-866-437-0223 Fax: 450-437-2338 E-mail: info@huntsmanbuilds.com www.huntsmanbuildingsolutions.com	GHS Product Identifier: Heatlok Soya HFO Chemical Name: Polyurethane Resin B-side Product type: Liquid Identified Use: Component B of a Spray-Applied Polyurethane System
Emergency Telephone (24/7): CANUTEC 613-996-6666 or *666 (cellular).	

SECTION 2: HAZARDS IDENTIFICATION	
OSHA / HCS Status	This material is classified hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the Substance or Mixture	SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION (Fertility) - Category 1A TOXIC TO REPRODUCTION (Unborn child) - Category 1A AQUATIC HAZARD (ACUTE) - Category 3 AQUATIC HAZARD (LONG-TERM) - Category 3
GHS LABEL ELEMENTS INCLUDING PRECAUTIONARY STATEMENTS	
Hazard Pictograms	
Signal Word	DANGER
Hazard Statements	H319 - Causes serious eye irritation. H315 - Causes skin irritation. H360 - May damage fertility or the unborn child. H412 - Harmful to aquatic life with long lasting effects.
PRECAUTIONARY STATEMENTS	
Prevention	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing. P273 - Avoid release to the environment. P264 - Wash hands thoroughly after handling.
Response	P308 + P313 - IF exposed or concerned: Get medical attention. P302 + P352 + P362 + P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. P332 + P313 - If skin irritation occurs: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
Storage	P405 - Store locked up.
Disposal	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
HAZARDS NOT OTHERWISE CLASSIFIED (HNOC)	
Physical Hazards Not Otherwise Classified (PHNOC)	None known.
Health Hazards Not Otherwise Classified (HHNOC)	None known.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS	
Substance/Mixture	Mixture.
Chemical Name	Polyurethane Resin B-side.

CAS NUMBER/OTHER IDENTIFIERS		
CAS Number	Not applicable.	
Product Code	Not available.	
INGREDIENTS	CAS #	%
tris(2-Chloro-1-methylethyl) phosphate	13674-84-5	≥10 - ≤25
Ethanediol	107-21-1	≥1 - ≤3
2,2 – Oxibisethanol	111-46-6	≥1 - ≤3
Glycerol	56-81-5	≥1 - ≤3
1,1,3,3-Tetramethylguanidine	80-70-6	≥1 - ≤3
Dibutyltin dilaurate	77-58-7	≥0.1 - <5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.
Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: FIRST AID MEASURES	
DESCRIPTION OF NECESSARY FIRST AID MEASURES	
Eye Contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Skin Contact	Flush contaminated skin with plenty of water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person.
MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED	
POTENTIAL ACUTE HEALTH EFFECTS	
Eye Contact	Causes serious eye irritation.
Inhalation	No known significant effects or critical hazards.
Skin Contact	Causes skin irritation.
Ingestion	No known significant effects or critical hazards.
OVER-EXPOSURE SIGNS/SYMPTOMS	
Eye Contact	Adverse symptoms may include the following: pain or irritation, watering, redness.
Inhalation	Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations.
Skin Contact	Adverse symptoms may include the following: irritation, redness, reduced fetal weight, increase in fetal deaths, skeletal malformations.
Ingestion	Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations.
INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF NECESSARY	
Notes to Physician	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific Treatments	No specific treatment.
Protection of First-aiders	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may

	be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

SECTION 5: FIRE FIGHTING MEASURES	
Suitable Extinguishing Media	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable Extinguishing Media	None known.
Specific Hazards Arising from the Chemical	This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous Thermal Decomposition Products	Thermal decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides, tin oxides, halogenated compounds, traces of ammonia, phosphorus oxides, aldehydes and ketones, low molecular weight organic products, hydrogen chloride gas, hydrogen fluoride, noxious and toxic fumes.
Special Protective Actions for Fire Fighters	No special measures are required.
Special Protective Equipment for Fire Fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: ACCIDENTAL RELEASE MEASURES	
PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES	
For Non-emergency Personnel	No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For Emergency Responders	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental Precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP	
Spill	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7: HANDLING AND STORAGE	
PRECAUTIONS FOR SAFE HANDLING	
Protective Measures	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on General Occupational Hygiene	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.
Conditions for Safe Storage Including any Incompatibilities	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Storage Temperature	15 – 25°C (59 – 77°F) (minimum – maximum).
Storage Life	6 Months.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION	
CONTROL PARAMETERS - UNITED STATES	
OCCUPATIONAL EXPOSURE LIMITS	
Ingredient Name	Exposure **Limits**
Ethanediol	**ACGIH TLV (United States, 3/2015).**

	C: 100 mg/m³ Form: Aerosol.
2,2′ -Oxybisethanol	**AIHA WEEL (United States, 10/2011).** TWA: 10 mg/m³ 8 hours.
Glycerol	**OSHA PEL (United States, 2/2013).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction. TWA: 15 mg/m³ 8 hours. Form: Total dust.
Dibutyltin dilaurate	**ACGIH TLV (United States, 3/2015). Absorbed through skin.** TWA: 0.1 mg/m³, (as Sn) 8 hours. STEL: 0.2 mg/m³, (as Sn) 15 minutes. **NIOSH REL (United States, 10/2013). Absorbed through skin.** TWA: 0.1 mg/m³, (as Sn) 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 0.1 mg/m³, (as Sn) 8 hours.

CONTROL PARAMETERS - CANADA

OCCUPATIONAL EXPOSURE LIMITS		**TWA (8 HOURS)**			**STEL (15 MINS)**			**CEILING**			
Ingredients Name	List name	ppm	mg/m³	Other	ppm	mg/m³	Other	ppm	mg/m³	Other	Notations
Ethanediol	US ACGIH 3/2015	-	-	-	-	-	-	-	100	-	[a]
	AB 4/2009	-	-	-	-	-	-	-	100	-	
	BC 5/2015	-	-	-	-	-	-	-	100	-	[a]
		-	10	-	-	20	-		-	-	[b]
		-	-	-	-	-	-	50	-	-	[c]
	ON 7/2015	-	-	-	-	-	-	-	100	-	[a]
	QC 1/2014	-	-	-	50	127	-	-	-	-	[d]
2,2′ –Oxybisethanol	US AIHA 10/2011	-	10	-	-	-	-	-	-	-	
Glycerol	AB 4/2009	-	10	-	-	-	-	-	-	-	[e]
	BC 5/2015	-	10	-	-	-	-	-	-	-	[e]
		-	3	-	-	-	-	-	-	-	[f]
	QC 1/2014	-	10	-	-	-	-	-	-	-	[e]

[3]Skin sensitization.
Form: [a] Aerosol. [b] Particulate. [c]Vapor. [d] Vapor and mist. [e] Mist. [f] Respirable mist. [g] Inhalable fraction.

Appropriate Engineering Controls	If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Environmental Exposure Controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.
INDIVIDUAL PROTECTION MEASURES	
Hygiene Measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/Face Protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
Hand Protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Body Protection	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other Skin Protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid.
Color	Heatlok Soya HFO: Blue
Odor	Not available.

Odor Threshold	Not available.
pH	Not available.
Melting Point	Not available.
Boiling Point	Not available.
Flash Point	Closed Cup: >93°C (>200°F) [Pensky-Martens].
Evaporation Rate	Not available.
Flammability (Solid, Gas)	Not available.
Lower and Upper Explosive (Flammable) Limits	Not available.
Vapor Pressure	Not available.
Vapor Density	Not available.
Specific Gravity @ 25°C (77°F)	1.19 - 1.23
Solubility	Moderately soluble in water.
Partition Coefficient: N-Octanol/Water	Not available.
Auto-Ignition Temperature	Not available.
Decomposition Temperature	Not available.
Viscosity @ 25°C (77°F) (cps)	250-350
Volatility	Not available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical Stability	The product is stable.
Possibility of Hazardous Reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to Avoid	Avoid exposure to moisture and high temperatures to protect product quality.
Incompatible Materials	Reactive or incompatible with the following materials: oxidizing materials. Avoid unintended contact with isocyanates.
Hazardous Decomposition Products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS - ACUTE TOXICITY

Product / Ingredient Name	Endpoint	Species	Result	Exposure
tris(2-Chloro-1-methylethyl) phosphate	LC50 Inhalation Dusts and mists	Rat	17.8 mg/l	1 hour
	LC50 Inhalation Dusts and mists	Rat	5 mg/l	4 hours
	LD50 Dermal	Rabbit	1230 mg/kg	-
	LD50 Oral	Rat	1500 mg/kg	-
Ethanediol	LD50 Oral	Rat	4700 mg/kg	-
2,2′ -Oxybisethanol	LD50 Dermal	Rabbit	11890 mg/kg	-
	LD50 Oral	Rat	12000 mg/kg	-
Glycerol	LD50 Oral	Rat	12600 mg/kg	-

IRRITATION / CORROSION

Product / Ingredient Name	Result	Species	Score	Exposure	Observation
Ethanediol	Eyes Mild irritant	Rabbit	-	24 h 500 mg	-
	Eyes - Mild irritant	Rabbit	-	1 h 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	6 h 1440 mg	-
	Skin - Mild irritant	Rabbit	-	555 mg	-
2,2′ –Oxybisethanol	Eyes - Mild irritant	Rabbit	-	50 mg	-
	Skin - Mild irritant	Human	-	72 h 112 mg Intermittent	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
Glycerol	Eyes - Mild irritant	Rabbit	-	24 h. 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 h. 500 mg	-

Dibutyltin dilaurate	Eyes - Moderate irritant	Rabbit	-	24 h. 100 mg	-
	Skin - Severe irritant	Rabbit	-	500 mg	-

SENSITIZATION

There is no data available.

MUTAGENICITY

There is no data available.

CARCINOGENICITY

Product / Ingredient Name	OSHA	IARC	NTP	ACGIH	EPA	NIOSH
Ethanediol	-	-	-	A4	-	None.

REPRODUCTIVE TOXICITY

There is no data available.

TERATOGENICITY

There is no data available.

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)

There is no data available.

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE)

Product / Ingredient Name	Category	Route of exposure	Target organs
Dibutyltin dilaurate	Category 2	Not determined.	Not determined,

ASPIRATION HAZARD

There is no data available.

INFORMATION ON THE LIKELY ROUTES OF EXPOSURE

Dermal contact. Eye contact. Inhalation. Ingestion.

POTENTIAL ACUTE HEALTH EFFECTS

Eye Contact	Causes serious eye irritation.
Inhalation	No known significant effects or critical hazards.
Skin Contact	Causes skin irritation.
Ingestion	No known significant effects or critical hazards.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS

Eye Contact	Adverse symptoms may include the following: pain or irritation, watering, redness.
Inhalation	Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations.
Skin Contact	Adverse symptoms may include the following: irritation, redness, reduced fetal weight, in fetal deaths, skeletal malformations.
Ingestion	Adverse symptoms may include the following: reduced fetal weight, increase in fetal deaths, skeletal malformations.

DELAYED AND IMMEDIATE EFFECTS AND ALSO CHRONIC EFFECTS FROM SHORT AND LONG TERM EXPOSURE

SHORT TERM EXPOSURE

Potential Immediate Effects	No known significant effects or critical hazards.
Potential Delayed Effects	No known significant effects or critical hazards.

LONG TERM EXPOSURE

Potential Immediate Effects	No known significant effects or critical hazards.
Potential Delayed Effects	No known significant effects or critical hazards.

POTENTIAL CHRONIC HEALTH EFFECTS

General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	May damage the unborn child.
Developmental Effects	No known significant effects or critical hazards.
Fertility Effects	May damage fertility.

NUMERICAL MEASURES OF TOXICITY - ACUTE TOXICITY ESTIMATES

Route	ATE Value

Oral	4136.2 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY

Product / Ingredient Name	Result	Species	Exposure
Ethanediol	Acute LC50 100000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 10000000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 8050000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
2,2′ -Oxybisethanol	Acute LC50 32000 ppm Fresh water	Fish - Pimephales promelas	96 hours
Dibutyltin dilaurate	Chronic EC10 >2 mg/l Fresh water	Algae - Scenedesmus subspicatus	96 hours

PERSISTENCE AND DEGRADABILITY

Product / Ingredient Name	Aquatic Half-life	Photolysis	Biodegradability
Ethanediol	-	-	Readily

BIOACCUMULATIVE POTENTIAL

Product / Ingredient Name	$LogP_{ow}$	BCF	Potential
tris(2-Chloro-1-methylethyl) phosphate	2.68	0.8 to 2.8	low
Ethanediol	-1.36	-	low
2,2′ -Oxybisethanol	-1.98	100	low
Glycerol	-1.76	-	low
1,1,3,3-Tetramethylguanidine	0.41	-	low
Dibutyltin dilaurate	4.44	2.91	low

MOBILITY IN SOIL

Soil/Water Partition Coefficient (K_{oc})	There is no data available.
Other Adverse Effects	No known significant effects or critical hazards.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal Methods	The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORTATION INFORMATION

DOT

UN Number	Not regulated.
UN Proper Shipping Name	-
Transport Hazard Class(es)	-
Packing Group	-
Environmental Hazard	No.
Additional Information	-

TDG

UN Number	Not regulated.
UN Proper Shipping Name	-
Transport Hazard Class(es)	-
Packing group	-
Environmental hazard	No.
Additional information	-

IMDG

UN Number	Not regulated.
UN Proper Shipping Name	-
Transport Hazard Class(es)	-
Packing Group	-
Environmental Hazard	No.
Additional Information	-
IATA	
UN Number	Not regulated.
UN Proper Shipping Name	-
Transport Hazard Class(es)	-
Packing Group	-
Environmental Hazard	No.
Additional Information	-

AERG: Not applicable.

Special Precautions for User	**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code	Not available.

SECTION 15: REGULATORY INFORMATION

United States	
U.S. Federal Regulations	**TSCA 8(a) PAIR**: Octamethylcyclotetrasiloxane. **United States inventory (TSCA 8b)**: All components are listed or exempted.
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)	Listed.
Clean Air Act Section 602 Class I Substances	Not listed.
Clean Air Act Section 602 Class II Substances	Not listed.
DEA List I Chemicals (Precursor Chemicals)	Not listed.
DEA List II Chemicals (Essential Chemicals)	Not listed.
SARA 302/304	No products were found.
SARA 304 RQ	Not applicable.
SARA 311/312	
Classification	SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION (Fertility) - Category 1A TOXIC TO REPRODUCTION (Unborn child) - Category 1A

COMPOSITION/INFORMATION ON INGREDIENTS

Product / Ingredient Name	%	Fire Hazard	Sudden Release of Pressure	Reactive	Immediate (Acute) Health Hazard	Delayed (Chronic) Health Hazard
tris(2-Chloro-1-methylethyl) phosphate	≥10 - ≤25	No.	No.	No.	Yes.	No.
Ethanediol	≥1 - ≤3	No.	No.	No.	Yes.	No.
2,2′ -Oxybisethanol	≥1 - ≤3	No.	No.	No.	Yes.	No.
Glycerol	≥1 - ≤3	No.	No.	No.	Yes.	No.
1,1,3,3-Tetramethylguanidine	≥1 - <3	Yes	No.	No.	Yes.	No.
Dibutyltin dilaurate	≥0.1 - <5	No.	No.	No.	Yes.	Yes.

SARA 313

	Product Name	CAS #	%
Form R - Reporting requirements	Ethanediol	107-21-1	≥1 - ≤3

Supplier notification	Ethanediol	107-21-1	≥1 - ≤3

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

STATE REGULATIONS

Massachusetts	The following components are listed: Ethanediol; Glycerol.
New York	The following components are listed: Ethanediol.
New Jersey	The following components are listed: Ethanediol; Glycerol.
Pennsylvania	The following components are listed: Ethanediol; 2,2′ -Oxybisethanol; Glycerol.

California Prop. 65

Product / Ingredient Name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Ethanediol	No.	Yes.	No.	No.

CANADA

CANADIAN LISTS

Canadian NPRI	The following components are listed: Ethanediol.
CEPA Toxic Substances	None of the components are listed.
Canada Inventory	All components are listed or exempted.

SECTION 16: OTHER INFORMATION

PROCEDURE USED TO DERIVE THE CLASSIFICATION

Classification	Justification
SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION (Fertility) - Category 1A TOXIC TO REPRODUCTION (Unborn child) - Category 1A AQUATIC HAZARD (ACUTE) - Category 3 AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method. Calculation method. Calculation method. Calculation method. Calculation method. Calculation method.

HISTORY

Prepared by	Demilec Inc.– Technical Department.
Preparation Date (y-m-d)	Not applicable.
Current Issue Date (y-m-d)	2020-12-30

KEY TO ABBREVIATIONS

ATE	Acute Toxicity Estimate
BCF	Bioconcentration Factor
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
IMDG	International Maritime Dangerous Goods
LogPow	Logarithm of the octanol/water partition coefficient
MARPOL 73/78	International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN	United Nations

Notice to reader: To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Isocyanate Component A

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name	:	Isocyanate Component A)
Substance name	:	Isocyanic acid, polymethylenepolyphenylene ester

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture	:	Component of a Polyurethane System.
Uses advised against	:	Professional use of aprotic polar solvents for cleaning., Consumer spray applications., Consumer products requiring heating above 40°C.

1.3 Details of the supplier of the safety data sheet

Company	:	870 Curé-Boivin
Address	:	Boisbriand, QC J7G 2A7
Telephone	:	866-437-0223
E-mail address of person responsible for the SDS	:	info@huntsmanbuilds.com

1.4 Emergency telephone number

Emergency telephone number	:	In USA, call Chemtrec at (800) 424-9300. In Canada, call Canutec at (613) 966-6666

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H332: Harmful if inhaled.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Respiratory sensitisation, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Carcinogenicity, Category 2	H351: Suspected of causing cancer.
Specific target organ toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements :

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements : **Prevention:**

P201	Obtain special instructions before use.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing

protection.

Response:

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Additional Labelling:

EUH204 Contains isocyanates. May produce an allergic reaction.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name : Isocyanic acid, polymethylenepolyphenylene ester

CAS-No. : 9016-87-9

EC-No. : Polymer

Hazardous components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)
Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9 Polymer	>= 90 - <= 100

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area.
Do not leave the victim unattended.
Get medical attention immediately if symptoms occur.
Show this safety data sheet to the doctor in attendance.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.
It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
If potential for exposure exists refer to Section 8 for specific personal protective equipment.
First Aid responders should pay attention to self-protection and use the recommended protective clothing

If inhaled	:	If breathed in, move person into fresh air. Call a physician or poison control centre immediately. Keep patient warm and at rest. Keep respiratory tract clear. If breathing is difficult, give oxygen. If breathing is irregular or stopped, administer artificial respiration. If unconscious, place in recovery position and seek medical advice. Consult a physician immediately if symptoms such as shortness of breath or asthma are observed. A hyper-reactive response to even minimal concentrations of diisocyanates may develop in sensitised persons. The exposed person may need to be kept under medical surveillance for 48 hours. LC50 (rat) : ca. 490 mg/m³ (4 hours) : using experimentally produced respirable aerosol having aerodynamic diameter <5microns. Methods used to generate the exposure concentrations in the animal studies use extreme laboratory conditions and does not represent actual exposure conditions of the material in the workplace, storage, transportation or expected use on the market due to the very low vapor pressure. Therefore, these test results cannot be used to for hazard classification of the material. Rather, an acute toxicity estimate is calculated based on weight of evidence and expert judgement and is used to justify a modified classification for acute inhalation toxicity.
In case of skin contact	:	In case of contact, immediately flush skin with soap and plenty of water. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before reuse. Thoroughly clean shoes before reuse. Call a physician if irritation develops or persists. An MDI study has demonstrated that a polyglycol-based skin cleanser (such as D-Tam™, PEG-400) or corn oil may be more effective than soap and water.
In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If easy to do, remove contact lens, if worn. Protect unharmed eye. Keep eye wide open while rinsing. Seek medical advice.
If swallowed	:	Gently wipe or rinse the inside of the mouth with water. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Keep respiratory tract clear. Keep at rest. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person.

Take victim immediately to hospital.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Severe allergic skin reactions, bronchiospasm and anaphylactic shock

Risks : This product is a respiratory irritant and potential respiratory sensitiser: repeated inhalation of vapour or aerosol at levels above the occupational exposure limit could cause respiratory sensitisation.
Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with dryness of the throat, tightness of chest and difficulty in breathing.
The onset of the respiratory symptoms may be delayed for several hours after exposure.
A hyper-reactive response to even minimal concentrations of MDI may develop in sensitised persons.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours.

The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Foam
Carbon dioxide (CO2)
Dry powder

Unsuitable extinguishing media : Water may be used if no other available and then in copious quantities. Reaction between water and hot isocyanate may be vigorous.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
The pressure in sealed containers can increase under the influence of heat.
Exposure to decomposition products may be a hazard to health.

Hazardous combustion products : Combustion products may include: carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and HCN. In the event of extreme heat (>500 degrees C), aniline is suspected of

being formed.

No hazardous combustion products are known

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Specific extinguishing methods	:	Cool containers/tanks with water spray.
Further information	:	Standard procedure for chemical fires. Due to reaction with water producing CO2-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Prevent fire extinguishing water from contaminating surface water or the ground water system. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Immediately evacuate personnel to safe areas. Use personal protective equipment. If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Refer to protective measures listed in sections 7 and 8. Only qualified personnel equipped with suitable protective equipment may intervene. For additional precautions and advice on safe handling, see section 7. Never return spills in original containers for re-use. Make sure that there is a sufficient amount of neutralizing/ absorbent material near the storage area. The danger areas must be delimited and identified using relevant warning and safety signs. Treat recovered material as described in the section "Disposal considerations". For disposal considerations see section 13.

6.2 Environmental precautions

Environmental precautions : Do not allow uncontrolled discharge of product into the environment.
Do not allow material to contaminate ground water system.
Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
Local authorities should be advised if significant spillages cannot be contained.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Clean-up methods - small spillage
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Clean contaminated surface thoroughly.
Sweep up or vacuum up spillage and collect in suitable container for disposal.
Neutralize small spillages with decontaminant.
The compositions of liquid decontaminants are given in Section 16.
Remove and dispose of residues.
Clean-up methods - large spillage
If the product is in its solid form:
Spilled MDI flakes should be picked up carefully.
The area should be vacuum cleaned to remove remaining dust particles completely.
If the product is in its liquid form:
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Leave to react for at least 30 minutes.
Shovel into open-top drums for further decontamination.
Wash the spillage area with water.
Test atmosphere for MDI vapour.
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8., For disposal considerations see section 13., The compositions of liquid decontaminants are given in Section 16.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures : Ensure that eyewash stations and safety showers are close to the workstation location.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : For personal protection see section 8.
Avoid formation of aerosol.
Do not breathe vapours or spray mist.

Do not breathe vapours/dust.
Do not swallow.
Do not get in eyes or mouth or on skin.
Do not get on skin or clothing.
Avoid exposure - obtain special instructions before use.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Keep container closed when not in use.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Industrial use of aprotic polar solvents for cleaning can release hazardous primary aromatic amines (>0.1%)

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labelled containers. Observe label precautions. Protect from moisture. Electrical installations / working materials must comply with the technological safety standards. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Advice on common storage	:	For incompatible materials please refer to Section 10 of this SDS.
Further information on storage stability	:	Stable under normal conditions.

7.3 Specific end use(s)

Specific use(s)	:	No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
Chemical splash goggles.
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.
Please follow all applicable local/national requirements when selecting protective measures for a specific workplace.
Ensure that eyewash stations and safety showers are close to the workstation location.

Hand protection
Remarks : Protective gloves should be worn when handling freshly made polyurethane products to avoid contact with trace residual materials which may be hazardous in contact with skin.

Use chemical resistant gloves classified under Standard EN374: protective gloves against chemicals and microorganisms. Examples of glove materials that might provide suitable protection include: Butyl rubber, Chlorinated polyethylene, Polyethylene, Ethyl vinyl alcohol copolymers laminated (“EVAL”), Polychloroprene (Neoprene*), Nitrile/butadiene rubber (“nitrile” or “NBR”), Polyvinyl chloride (“PVC” or “vinyl”), Fluoroelastomer (Viton*).

When prolonged or frequently repeated contact may occur, a glove with protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN374) is recommended.

When only brief contact is expected, a glove with protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN374) is recommended.
Notice: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all requisite workplace factors such as, but not limited to : other chemicals that may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), as well as instructions/specifications provided by the glove supplier The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. By industrial use of aprotic polar solvents for cleaning : Butyl rubber (0.7mm), Nitrile rubber (0.4mm), Chloroprene (0.5mm)

Skin and body protection : Impervious clothing

		Choose body protection according to the amount and concentration of the dangerous substance at the work place. Recommended: Overall (preferably heavy cotton) or Tyvek-Pro Tech 'C' , Tyvek Pro 'F' disposable coverall.
Respiratory protection	:	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. In emergency, non-routine and unknown exposure situations, including confined space entries, a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA)or a full facepiece pressure demand supplied air respirator (SAR) with auxiliary self-contained air supply, should be used.
Protective measures	:	Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Ensure that eye flushing systems and safety showers are located close to the working place.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	brown, clear
Odour	:	slight, musty
Odour Threshold	:	No data is available on the product itself.
pH	:	substance/mixture reacts with water
Melting point	:	5 °C Method: Melting / Freezing Temperature
Boiling point	:	No data is available on the product itself.
Flash point	:	230 °C Method: closed cup
Evaporation rate	:	No data is available on the product itself.
Flammability (solid, gas)	:	No data is available on the product itself.
Burning rate	:	No data is available on the product itself.

Upper explosion limit / Upper flammability limit	:	No data is available on the product itself.
Lower explosion limit / Lower flammability limit	:	No data is available on the product itself.
Vapour pressure	:	0,00031 Pa (20 °C) Method: Vapour Pressure
Relative vapour density	:	8,5 Method: see user defined free text
Relative density	:	1,23 (20 °C)
Density	:	1,23 g/cm3 (25 °C)
Solubility(ies)		
Water solubility	:	No data is available on the product itself.
Solubility in other solvents	:	No data is available on the product itself.
Partition coefficient: n-octanol/water	:	No data is available on the product itself.
Auto-ignition temperature	:	No data is available on the product itself.
Decomposition temperature	:	No data is available on the product itself.
Viscosity		
Viscosity, dynamic	:	195 mPa.s (25 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other information

Self-ignition	:	> 600 °C Method: Auto-Ignition Temperature (Liquids and Gases)

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Reaction with water (moisture) produces CO2-gas. Exothermic reaction with materials containing active hydrogen groups. The reaction becomes progressively more vigorous and can

be violent at higher temperatures if the miscibility of the reaction partners is good or is supported by stirring or by the presence of solvents.
MDI is insoluble with, and heavier than water and sinks to the bottom but reacts slowly at the interface.
A solid water-insoluble layer of polyurea is formed at the interface by liberating carbon dioxide gas.

10.4 Conditions to avoid

Conditions to avoid : Extremes of temperature and direct sunlight.
Exposure to air or moisture over prolonged periods.

10.5 Incompatible materials

Materials to avoid : Acids
Amines
Bases
Metals
water

10.6 Hazardous decomposition products

Combustion products may include: carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and HCN. In the event of extreme heat (>500 degrees C), aniline is suspected of being formed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity - Product : LD50 (Rat, male): > 10 000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity - Product : Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.
Remarks: Methods used to generate the exposure concentrations in the animal studies use extreme laboratory conditions and does not represent actual exposure conditions of the material in the workplace, storage, transportation or expected use on the market due to the very low vapor pressure. Therefore, these test results cannot be used to for hazard classification of the material. Rather, an acute toxicity estimate is calculated based on weight of evidence and expert judgement and is used to justify a modified classification for acute inhalation toxicity.

LC50 (Rat, male and female): 0,49 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The component/mixture is moderately toxic after short term inhalation.

Acute dermal toxicity - Product	:	LD50 (Rabbit, male and female): > 9 400 mg/kg Method: OECD Test Guideline 402
Acute toxicity (other routes of administration)	:	No data available

Skin corrosion/irritation

Product:

Species: Rabbit
Assessment: Irritating to skin.
Method: OECD Test Guideline 404
Result: Skin irritation

Serious eye damage/eye irritation

Product:

Species: Rabbit
Assessment: Mild eye irritant
Method: OECD Test Guideline 405
Result: Irritation to eyes, reversing within 7 days

Respiratory or skin sensitisation

Product:

Exposure routes: Skin
Species: Guinea pig
Method: OECD Test Guideline 406
Result: May cause sensitisation by skin contact.

Exposure routes: Respiratory Tract
Species: Rat
Result: May cause sensitisation by inhalation.

Assessment:	May cause an allergic skin reaction., May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity

Product:

Genotoxicity in vitro	:	Concentration: 200 ug/plate Metabolic activation: with and without metabolic activation Method: Directive 67/548/EEC, Annex, B.13/14 Result: negative

Product:

Genotoxicity in vivo	:	Application Route: Inhalation Result: Not classified due to inconclusive data.
		Application Route: Inhalation

Exposure time: 3 Weeks
Dose: 113 mg/m3
Method: OECD Test Guideline 474
Result: negative

Product:

Germ cell mutagenicity-Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

Product:

Remarks: Rats have been exposed for two years to a respirable aerosol of polymeric MDI which resulted in a chronic pulmonary irritation at high concentrations. Only at the top level (6 mg/m3), there was a significant incidence of a benign tumour of the lung (adenoma) and one malignant tumour (adenocarcinoma). There were no lung tumours at 1 mg/m3 and no effects at 0.2 mg/m3. Overall, the tumour incidence, both benign and malignant, and the number of animals with the tumours were not different from controls. The increased incidence of lung tumours is associated with prolonged respiratory irritation and the concurrent accumulation of yellow material in the lung, which occurred throughout the study. In the absence of prolonged exposure to high concentrations leading to chronic irritation and lung damage, it is highly unlikely that tumour formation will occur.

Remarks: Industrial use of aprotic polar solvents for cleaning can release hazardous primary aromatic amines (>0.1%)
Based on animal studies, primary aromatic amines are considered as potential carcinogen to humans. Some of those chemicals are proven carcinogens to humans
Provided the recommended personal protective equipment and hygiene measures are applied, no adverse effects to human health are to be expected

Species: Rat, male and female
Application Route: Inhalation
Exposure time: 24 month(s)
Dose: 1 mg/m³
Frequency of Treatment: 5 daily
Method: OECD Test Guideline 453
Result: positive

Species: Rat, male and female
Application Route: Inhalation
Exposure time: 24 month(s)
Dose: 1 mg/m³
Frequency of Treatment: 5 daily
Method: OECD Test Guideline 453
Result: positive

Components:

Isocyanic acid, polymethylenepolyphenylene ester**:**
Carcinogenicity - Assessment : Suspected human carcinogens

Reproductive toxicity

Product:

Effects on fertility : Species: Rat, male and female
Application Route: Inhalation
Method: OECD Test Guideline 414
Remarks: No significant adverse effects were reported

Product:

Effects on foetal development : Species: Rat, male and female
Application Route: Inhalation
General Toxicity Maternal: 4 mg/m³
Method: OECD Test Guideline 414
Result: No teratogenic effects

Product:

Reproductive toxicity - Assessment : No toxicity to reproduction
No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

STOT - single exposure

Product:

Exposure routes: Inhalation
Target Organs: Respiratory Tract
Assessment: May cause respiratory irritation.

STOT - repeated exposure

Product:

Exposure routes: Inhalation
Target Organs: Respiratory Tract
Assessment: May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Product:

Species: Rat, male and female
NOEC: 0,2
Exposure time: 17 520 hNumber of exposures: 5 d
Method: OECD Test Guideline 453

Repeated dose toxicity - Assessment : No data available

Aspiration toxicity

No data available

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution
No data available

Neurological effects
No data available

Further information
Ingestion: No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	:	LC50 (Brachydanio rerio (zebrafish)): > 1 000 mg/l Exposure time: 96 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 203 LC0 : > 1 000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 1 000 mg/l Exposure time: 24 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): > 1 640 mg/l Exposure time: 72 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: >= 10 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: semi-static test Test substance: Fresh water Method: OECD Test Guideline 211
Toxicity to microorganisms	:	EC50 (activated sludge): > 100 mg/l Exposure time: 3 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 209
Toxicity to soil dwelling organisms	:	EC50: > 1 000 mg/kg Exposure time: 336 h Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207

Components:

Isocyanic acid, polymethylenepolyphenylene ester**:**

Toxicity to fish	:	LC50 (Brachydanio rerio (zebrafish)): > 1 000 mg/l Exposure time: 96 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 203 LC0 : > 1 000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 1 000 mg/l Exposure time: 24 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): > 1 640 mg/l Exposure time: 72 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 (activated sludge): > 100 mg/l Exposure time: 3 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 209
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: >= 10 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)

Test Type: semi-static test
Test substance: Fresh water
Method: OECD Test Guideline 211

Toxicity to soil dwelling organisms : EC50: > 1 000 mg/kg
Exposure time: 336 h
Species: Eisenia fetida (earthworms)
Method: OECD Test Guideline 207

12.2 Persistence and degradability

Product:

Biodegradability : Inoculum: Domestic sewage
Concentration: 30 mg/l
Result: Not biodegradable
Biodegradation: 0 %
Exposure time: 28 d
Method: Inherent Biodegradability: Modified MITI Test (II)

Components:

Isocyanic acid, polymethylenepolyphenylene ester**:**

Biodegradability : Inoculum: Domestic sewage
Concentration: 30 mg/l
Result: Not biodegradable
Biodegradation: 0 %
Exposure time: 28 d
Method: Inherent Biodegradability: Modified MITI Test (II)

Stability in water : Degradation half life (DT50): 0,8 d (25 °C)
Method: No information available.
Remarks: Fresh water

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 200
Remarks: Bioaccumulation is unlikely.

Components:

Isocyanic acid, polymethylenepolyphenylene ester**:**

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 200
Remarks: Bioaccumulation is unlikely.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or

very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14: Transport information

IATA
Not regulated as a dangerous good

IMDG
Not regulated as a dangerous good

ADR
Not regulated as a dangerous good

RID
Not regulated as a dangerous good

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered:

Number on list 3
Diphenylmethanediisocyanate, polymeric
(Number on list 56)
4,4'-methylenediphenyl diisocyanate
(Number on list 56)
2,4'-methylenediphenyl diisocyanate
(Number on list 56)

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Occupational Illnesses (R-461-3, France) : 62

Other regulations:
Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : All substances listed as active on the TSCA inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), ENCS (Japan), KECI (Korea), NZIOC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (United States of America (USA))

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.
Product falls under the EU-polymer definition.

SECTION 16: Other information

Further information

Other information	:	Liquid decontaminants (percentages by weight or volume) : Decontaminant 1 : *- sodium carbonate : 5 - 10 % *- liquid detergent : 0.2 - 2 % *- water : to make up to 100 % Decontaminant 2 : *- concentrated ammonia solution : 3 - 8 % *- liquid detergent : 0.2 - 2 % *- water : to make up to 100 % Decontaminant 1 reacts slower with diisocyanates but is more environmentally friendly than decontaminant 2. Decontaminant 2 contains ammonia. Ammonia presents health hazards. (See supplier safety information.)

The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN BUILDING SOLUTIONS EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN BUILDING SOLUTIONS PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE.

Search Records of Site Condition

Record of Site Condition Search Results

RSC #	RSC Type	Property Municipal Address	Site Municipality	QP	Ministry District	Date Filed
225868	Phase 1 and 2 RSC	2663 BROCK ROAD, PICKERING, ON L1V 2P8	Pickering	AMANDA PARK	York-Durham District Office	2019/08/12
223967	Phase 1 and 2 RSC	2480 BROCK ROAD, PICKERING, ON L1X 2T8, 2490 BROCK ROAD, PICKERING, ON L1X 2T8, 2510 BROCK ROAD, PICKERING, ON L1X 2T8	Pickering	ELENI GIRMA BEYENE	York-Durham District Office	2017/12/05
216947	Phase 1 and 2 RSC	2580 BROCK ROAD, PICKERING, ON L1V 2P8	Pickering	VICTOR WOOD	York-Durham District Office	2015/03/09
216288	Phase 1 and 2 RSC	2725 BROCK ROAD, PICKERING, ON L1V 2P8, 2705 BROCK ROAD, PICKERING, ON L1V 2P8	Pickering	WILLIAM LEWIS	York-Durham District Office	2015/02/10
212586	Phase 1 RSC	2675 BROCK ROAD, PICKERING, ONTARIO L1V 2P8	Pickering	Robert Ostry	York-Durham District Office	2014/05/27
210851	Phase 1 RSC	2699 BROCK ROAD, PICKERING, ONTARIO L1V 2P8	Pickering	Robert Ostry	York-Durham District Office	2013/11/28

6 items found, displaying all items.

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Search Records of Site Condition

Record of Site Condition Search Results

RSC #	RSC Type	Property Municipal Address	Site Municipality	QP	Ministry District	Date Filed
227934	Phase 1 and 2 RSC	4969-4973 OLD BROCK ROAD, PICKERING, ON L1Y 1A9	Pickering	DAVID LIU	York-Durham District Office	2021/04/09

One item found.

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Search Records of Site Condition

Records of site condition

A record of site condition (RSC) sets out the environmental condition of a property at a particular point in time, based on environmental site assessments conducted by a qualified person. An RSC must be filed in this registry before property use changes in certain ways.

This part of the registry includes RSCs filed since July 1, 2011. Qualified persons, outside the Government of Ontario, submitted this information.

The records are provided for **informational purposes only** – and are **not** intended to provide specific advice or recommendations. The Government of Ontario is not responsible for the accuracy of the information in this registry.

If you have dealings with any property, consider conducting your own due diligence with respect to the environmental condition of the property, in addition to reviewing information in this registry.

RSC Search Guidelines

Please enter one or more search criteria to limit the search results for a record of site condition. Leaving one of the fields empty will mean that criteria will be ignored for the purpose of the search. You must specify at least one search criteria.

No records found matching criteria chosen

Search Records of Site Condition

RSC Number	
Site Street	uxbridge pickering townl
Site Municipality	PICKERING
Site Postal Code	
Site PIN	
QP's First Name	
QP's Last Name	
Filing Owner	
Ministry District	
Filing Date (From) (yyyy/mm/dd)	
Filing Date (To)(yyyy/mm/dd)	

Elyse Naylor

From: Public Information Services <publicinformationservices@tssa.org>
Sent: July 19, 2021 10:02 AM
To: Elyse Naylor
Subject: RE: TSSA Search Request

Please refrain from sending documents to head office and only submit your requests electronically via email along with credit card payment. We are all working remotely and mailing in applications with cheques will lengthen the overall processing time.

NO RECORD FOUND

Hello Elyse,

Thank you for your request for confirmation of public information.

- We confirm that there are no records in our database of any fuel storage tanks at the subject addresses:

For a further search in our archives please complete our release of public information form found at https://www.tssa.org/en/about-tssa/release-of-public-information.aspx?_mid_=392 and email the completed form to publicinformationservices@tssa.org along with a fee of $56.50 (including HST) per location. The fee is payable with credit card (Visa or MasterCard).

Although TSSA believes the information provided pursuant to your request is accurate, please note that TSSA does not warrant this information in any way whatsoever.

Kind regards,

Saara

Public Information Agent
Facilities and Business Services
345 Carlingview Drive
Toronto, Ontario M9W 6N9
Tel: +1-416-734-6222 | Fax: +1-416-734-3568 | E-Mail: publicinformationservices@tssa.org
www.tssa.org

From: Elyse Naylor <elysen@g2sconsulting.com>
Sent: July 19, 2021 10:00 AM
To: Public Information Services <publicinformationservices@tssa.org>
Subject: TSSA Search Request

Hello!

Could I have the following located in Claremont (Pickering) Ontario seared for TSSA records:

5359, 5435,5436, 5460, 5475, 5455 Old Brock Road

470, 494 Uxbridge Pickering Townline

1935 Brock Road

Thank you!

Elyse Naylor B.A.
Senior Environmental Technologist

G2S Consulting Inc.

37 Sandiford Drive, Suite 411
Stouffville Ontario
L4A 3Z2
Office: 905-766-4054
Fax: 905-642-5999
Cell: 416-276-5460
elysen@g2sconsulting.com
www.g2sconsulting.com

Offices in Burlington and Stouffville

Appendix D:
Phase One Questionnaire

PHASE ONE ESA QUESTIONNAIRE

G2S Consulting Inc.
37 Sandiford Drive, Suite 411, Stouffville, ON L4A 3Z2
P 905.766.4054 F 905.642.5999
G2Sconsulting.com

Site Address: 5434, 5475 & 5455 Old Brock Road, Claremont, Ontario	
Project #: G2S15515F	
Owner: S. Larkin Developments Inc.	Occupant: Multiple
Interviewee: Shaun Larkin, President	Relation to Site: Owner.
Property and Building Description and Size: 10.81 acres, 1 residential dwelling, 1 shop and 2 attached storage barns.	

1. Has the property or an adjacent property(s) currently or previously been used for an industrial or commercial use? If yes, please specify activities and time frames.

Interviewee	Observed During Site Visit
Yes No Unknown	(Yes) No

NOTES: metal fabrication works
- Commercial use by Buildit Construction, Spray Foam Inc., Revolution Industries.

2. Are there or have there been in the past, any damaged or discarded automotive or industrial batteries, pesticides, paints, or other chemicals in the aggregate, stored on or used at the property or on any of the adjacent properties? If yes, please specify location.

Interviewee	Observed During Site Visit
Yes No Unknown	Yes No

NOTES: Misc. latex and alkyd paints, barn roof coatings stored on site. → Not bulk storage.
~10 Drums of Polyurethane Foam → ADPMI.

3. Are there currently, or have there been in the past, any industrial containers of chemicals located on the property or on any of the adjacent properties? If yes, please specify location.

Interviewee	Observed During Site Visit
Yes **No** Unknown	(Yes) No

NOTES: - 10 Drums - see above.

4. Are you aware or do you have any prior knowledge that fill material has been brought onto the property that originated from an unknown origin or contaminated site? If yes, please specify location.

Interviewee	Observed During Site Visit
Yes **No** Unknown	Yes No

NOTES:

1. Has the property or any of the adjacent properties been used for the any of the following industries/activities/storage/related activities, either currently or historically (please mark where applicable):

AREA OF CONCERN	YES	NO	COMMENT
Chemicals		X	
Electrical Equipment		X	
Metal Smelting and/or Processing		X	
Mining		X	
Milling	X		Small C&C machine for metal
Petroleum and Natural Gas Drilling/Production/Processing/Retailing and/or Distribution (Including Gasoline Station)		X	
Transportation		X	
Junkyard, waste disposal/landfill/waste treatment and/or Processing, Recycling		X	
Wood, Pulp and Paper Products	X		Nominal lumber storage
Appliance Equipment and/or Engine Repair/Reconditioning/Salvage	X		Repairs to owned vehicles/tractors
Ash Deposit from boilers and/or other Thermal Facilities		X	
Asphalt Tar Manufacturing		X	
Coal Gasification		X	
Medical/Chemical/Radiological and/or Biological Labs		X	
Rifle and/or Pistol Firing Ranges		X	
Road Salt Storage Facilities		X	
Dry Cleaning Facilities		X	
Commercial Printing Facilities and/or Photo Developing Laboratory		X	
Site which have been or are likely to have been contaminated by substances migrating from other properties.		X	

6. Are there currently, or have there been in the past, any pits, ponds, or lagoons located on the property in connection with waste treatment or waste disposal? If yes, please specify location.

Interviewee	Observed During Site Visit
Yes **No** Unknown	Yes (No)

NOTES:

7. Is there currently any, or has there been in the past, stained soil on the property? If yes, please specify location.

Interviewee	Observed During Site Visit
Yes No Unknown	(Yes) No

NOTES: small area under 175B Michigan Loader
↳ Area ~ 0.1 m^2

8. Are there currently, or have there been in the past, any registered or unregistered storage tanks (above or underground) located on the property? If yes, please specify location.

Interviewee	Observed During Site Visit
Yes No Unknown	(Yes) No

NOTES: Landscpaper yard 2000 gallon diesel tank double wall pressurized.
↳ Empty + unused, good condition, no staining.
- Heating oil AST in shop - good condition no staining.

9. Are there currently, or have there been in the past, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the property? If yes, please specify location.

Interviewee	Observed During Site Visit
Yes **No** Unknown	Yes (No)

NOTES:

10. Is there currently, or have there been in the past, evidence of leaks, spills or staining by substances other than water, or foul odours, associated with any flooring, drains, walls, ceilings, or exposed grounds on the property? If yes, please specify location.

Interviewee	Observed During Site Visit
Yes **No** Unknown	(Yes) No

NOTES: - Small areas of staining located throughout the shop -
↳ minor + surficial, concrete in good condition - no cracks or drains.

11. If the property is served by a private well or non-public water system, is there evidence or do you have prior knowledge that contaminants have been identified in the well or system that exceed guidelines applicable to the water system? If yes, please specify location.

Interviewee	Observed During Site Visit
Yes **No** Unknown	Yes (No)

NOTES:

12. If the property served by a private well or non-public water system, have there been in the past, any well designated as contaminated by any government environmental/health agency? If yes, please specify location.

Interviewee	Observed During Site Visit
Yes **No** Unknown	Yes (No)

NOTES:

13. Are you aware of any environmental liens or governmental notification relating to past or recurrent violations of environmental laws with respect to the property or any facility located on the property? If yes, please specify.

Interviewee	Observed During Site Visit
Yes **No** Unknown	Yes (No)

NOTES:

14. Are you aware of current or past existence of hazardous substances or petroleum products with respect to the property or any facility located on the property? If yes, please specify.

Interviewee	Observed During Site Visit
Yes **No** Unknown	(Yes) No

NOTES: - Drums of spray foam see Question #2.
- Two ASTs - See Question #8.

15. Are you aware of any current or past existence of environmental violations with respect to the property or any facility located on the property? If yes, please specify.

Interviewee	Observed During Site Visit
Yes **No** Unknown	Yes (No)

NOTES:

16. Are you aware of any environmental site assessment of the property or facility that indicated the presence of hazardous substances or petroleum products on, or contamination of, the property or recommended further assessment of the property? If yes, please specify.

Interviewee	Observed During Site Visit
Yes **No** Unknown	Yes (No)

NOTES:

17. Are you aware of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substance or petroleum products involving the property by any owner or occupant of the property? If yes, please specify.

Interviewee	Observed During Site Visit
Yes **No** Unknown	Yes (No)

NOTES:

18. Does the property discharge wastewater (not including sanitary waste or storm water) onto or adjacent to the property and/or into a storm water system? If yes, please specify.

Interviewee	Observed During Site Visit
Yes **No** Unknown	Yes (No)

NOTES:

19. Are you aware of any hazardous substances or petroleum products, unidentified waste materials, tires, automotive or industrial batteries, or any other waste materials that have been dumped above grade, buried and/or burned on the property? If yes, please specify.

Interviewee	Observed During Site Visit
Yes **No** Unknown	Yes (No)

NOTES:

20. Is there, or has there been in the past, a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of PCBs? If yes, please specify.

Interviewee	Observed During Site Visit
Yes **No** Unknown	Yes (No)

NOTES:

21. Are there currently any site operating records available for the property? (please provide documents if obtainable):

SITE OPERATING RECORD	YES	NO	N/A
Regulatory Permits and Records		X	
Material Safety Data Sheets	X		
Underground Utility Drawings		X	
Chemical Inventory and Storage		X	
Storage Tanks		X	
Environmental Monitoring Data		X	
Waste Management Records		X	
Process, Production and Maintenance Documents		X	
Spills and Discharges		X	
Emergency Response and Contingency Plans		X	
Environmental Audit Reports		X	
Facility Site Plans		X	

Date: June 30, 2021

Signature of Assessor:---Elyse Naylor---

Name of Assessor:---Elyse Naylor---

Signature of Interviewee:---Shaun Larkin---

Name of Interviewee: Shaun Larkin