PHASE I ENVIRONMENTAL SITE ASSESSMENT

SKYSERVICE AIRLINES INC.
HANGAR 6 AND 6A
LESTER B PEARSON INTERNATIONAL AIRPORT
6932 VANGUARD DRIVE
MISSISSAUGA, ONTARIO

WATTERS ENVIRONMENTAL GROUP INC.

CONFIDENTIAL

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Prepared for:

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July 2007
Reference No. 07-0122

CONFIDENTIAL

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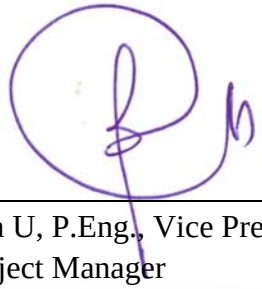

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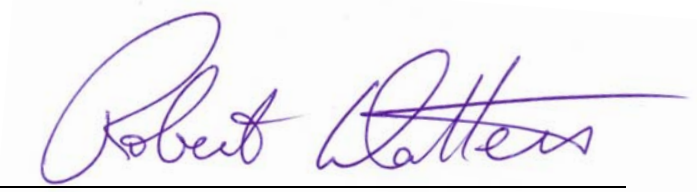
Project Manager



Robert Watters, Ph.D., President & CEO
Project Director

July 2007
Reference No. 07-0122

EXECUTIVE SUMMARY

Watters Environmental Group Inc. (Watters Environmental) was retained by Gibralt Capital Corporation Second City Capital Partners (Gibralt Capital) to conduct a Phase I Environmental Site Assessment (Phase I ESA) of a commercial property located at 6932 Vanguard Drive (also known as 2450 Derry Road), in Mississauga, Ontario (hereafter referred to in this report as the "Site"). The property at the Site is reportedly owned by Transport Canada and managed by the Greater Toronto Airport Authority (GTAA). The Site contains two hangars (i.e., Hangar 6 and 6A) (the "Site buildings"), and is currently occupied by Skyservice Airlines Inc. (Skyservice) for use as an office, warehouse and aircraft maintenance facility.

The purpose of the Phase I ESA was to provide Gibralt Capital with an evaluation of known and potential environmental issues at the Site. Watters Environmental understands that Gibralt Capital is considering acquiring the Site buildings and operations at the Site, and will continue to lease the land from Transport Canada.

The Phase I ESA involved a walk-through site reconnaissance, a review of information in publicly-available databases, observations of activities on properties within 200 metres (660 feet) from the Site, a review of historical documents related to the Site and surrounding land use activities, and preparation of a report summarizing Watters Environmental's findings and recommendations.

Based on the Phase I ESA completed, it is Watters Environmental's opinion that there are no significant environmental contaminant issues at the Site. An Environmental Audit completed by the GTAA identified elevated petroleum hydrocarbons (PHC) in surface soils at the southwest corner of Hangar 6. Deeper soils had PHC levels below applicable criteria at that time. Watters Environmental is of the opinion that this matter is not significant, and represents a pre-existing baseline condition for the Site. If a formal environmental baseline is required prior to Gibralt Capital's occupation, a soil and groundwater quality investigation would be required.

To address potential operational/management issues, Watters Environmental recommends the following:

- A secondary containment system be provided for the diesel aboveground storage tank located outside on the asphalt-paved surface at the south side of Hangar 6A;

- The requirements for a Certificate of Approval (C-of-A) (Air & Noise) be confirmed for the natural gas-fired heating equipment and propane-fired generator set at the Site, and that it be obtained, if required;

- The requirements for a C-of-A (Industrial Sewage) be confirmed for the oil/water separator at the Site and that it be obtained, if required; and

- Prior to undertaking any renovations in the Hangar 6, the areas planned for renovation (if any) be evaluated for the presence of possible asbestos-containing materials (ACMs), polychlorinated biphenyl (PCB)-containing equipment (such as in light ballasts) and lead-based paints. If any are found to be present, appropriate management plans should be implemented to ensure that these materials are handled and disposed of in accordance with applicable regulations.

ENVIRONMENTAL CONTAMINANT ISSUE SUMMARY TABLE

Client	Gibralt Capital Corporation Second City Capital Partners
Site Location	Hangar 6 and 6A Lester B Pearson International Airport 6932 Vanguard, Mississauga, Ontario
Site Use	Office, warehouse and aircraft maintenance facility.
Purpose of Phase I ESA	To identify any actual or potential environmental contaminant issues at the Site.

Components of Phase I ESA	**Issues Ranking**			**Potential Environmental Contaminant Issues**	**Recommended Action at this time**
	Low	**Mod**	**High**		
Historical Records Review					
- On-Site	X			None identified	None
- Surrounding Land Use	X			None identified	None
Environmental Database Review	X			None identified	None
Operations-Related Environmental Issues					
Above and Underground Storage Tanks (ASTs and USTs)					
- ASTs	X			A 500-gallon diesel AST, with associated fuel dispensing equipment, is located on an asphalt-paved surface east of Hangar 6A.	Provide secondary containment for the diesel AST.
- USTs	X			None identified	None
Chemical Storage & Handling	X			None identified	None
Solid (Non-Hazardous) Waste & Liquid Waste	X			None identified	None
Registerable / Hazardous Waste	X			None identified	None
Spills, Releases & Emergency Response	X			None identified	None

ENVIRONMENTAL CONTAMINANT ISSUE SUMMARY TABLE (Continued)

Components of Phase I ESA	Issues Ranking			Potential Environmental Contaminant Issues	Recommended Action at this time
	Low	Mod	High		
Air Emissions	X			A Certificate of Approval (C-of-A) (Air & Noise) may be required for the natural gas-fired heating equipment and propane-fired emergency generator at the Site.	Confirm the requirements of a C-of-A (Air & Noise) for the natural gas-fired heating equipment and propane-fired emergency generator at the Site and obtain it, if required.
Water & Wastewater / Storm Water - Water Supply	X			None identified	None
- Wastewater	X			A C-of-A (Industrial Sewage) may be required for the oil/water separator at the Site.	Confirm the requirements of a C-of-A (industrial sewage) for the oil/water separator at the Site and obtain it, if required.
- Storm Water	X			None identified	None
Workplace Hazardous Material Information System	X			None identified	None
Pits, Sumps and Lagoons	X			None identified	None
Radioactive Materials	X			None identified	None
Dry Cleaning Operations	X			None identified	None
Property-Related Environmental Issues					
Asbestos	X			Possible ACMs present at the Site, based on date of construction of Hangar 6 (approximately 1969).	Sample and test for ACMs if future renovations or demolition activities are planned at Hangar 6.
Polychlorinated Biphenyl-Containing Equipment	X			Light ballasts at the Site may contain PCBs, based on the date of construction of the Hangar 6 (approximately 1969).	Inspect light ballasts for PCBs if future renovations or demolition activities are planned at Hangar 6.

ENVIRONMENTAL CONTAMINANT ISSUE SUMMARY TABLE (Continued)

Components of Phase I ESA	Issues Ranking			Potential Environmental Contaminant Issues	Recommended Action at this time
	Low	Mod	High		
Lead in Paints	X			Lead-based paints may be present at the Site, based on the date of construction of Hangar 6 (approximately 1969).	Sample and test for lead-based paints prior to renovation or demolition of Hangar 6.
Urea Formaldehyde Foam Insulation	X			None identified	None
Ozone-Depleting Substances	X			None identified	None
Radon	X			None identified	None
Pesticides/Herbicides	X			None identified	None
Soil Fill	X			None identified	None
Nearby / Adjacent Properties	X			None identified	None
Others	X			An Environmental Audit completed by the GTAA identified elevated petroleum hydrocarbons (PHC) in surface soils at the southwest corner of Hangar 6. Deeper soils had PHC levels below applicable criteria at that time. Watters Environmental is of the opinion that this matter is not significant, and represents a pre-existing baseline condition for the Site.	None
Overall Assessment of Environmental Contaminant Issues				**LOW**	

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LIST OF APPENDICES

1.0 INTRODUCTION

Watters Environmental Group Inc. (Watters Environmental) was retained by Gibralt Capital Corporation Second City Capital Partners (Gibralt Capital) to conduct a Phase I Environmental Site Assessment (Phase I ESA) of a commercial property located at 6932 Vanguard Drive (also known as 2450 Derry Road), in Mississauga, Ontario (hereafter referred to in this report as the "Site") (Figures 1 and 2, Photograph 1). The property at the Site is reportedly owned by Transport Canada and managed by the Greater Toronto Airport Authority (GTAA). The Site contains two hangars (i.e., Hangar 6 and 6A) (the "Site buildings"), and is currently occupied by Skyservice Airlines Inc. (Skyservice) for use as an office, warehouse and aircraft maintenance facility. A description of the Site is provided in Section 2.0.

The purpose of the Phase I ESA was to provide Gibralt Capital with an evaluation of known and potential environmental issues at the Site. Watters Environmental understands that Gibralt Capital is considering acquiring the Site buildings and operations at the Site, and continuing to lease the land from Transport Canada.

Watters Environmental's Phase I ESA involved the following:

- A review of available previous environmental reports prepared for the Site;
- A historical review of the Site and surrounding lands;
- A review of available regulatory databases pertaining to the Site and surrounding area;
- A walk-through reconnaissance of the Site;
- Observations of activities on properties within 200 metres (660 feet) from the Site;
- Interviews with available persons knowledgeable about past and present activities at the Site; and
- Preparation of a report summarizing Watters Environmental's findings and recommendations.

The scope of work for the Phase I ESA did not include:

- Conducting a Chain-of-Title review;
- Conducting any intrusive investigations (including sampling, testing or monitoring) or preparing detailed cost estimates associated with addressing any environmental issues identified during the Phase I ESA;
- Preparing a scaled Site layout drawing;
- An assessment of biological features or related aspects of the natural environment; or
- An assessment of permits or licenses that may be required for re-development of the Site or expansion of the Site buildings.

Watters Environmental conducted this work according to its standard Phase I ESA procedures, which generally reflect the requirements of the following document:

- "*Phase I Environmental Site Assessment*", Canadian Standards Association (CSA) standard CSA Z768-01, dated November 2001.

Watters Environmental's findings from a review of available historical documentation regarding the historical uses of the Site and surrounding area are provided in Section 3.0. Watters Environmental's findings from a review of information provided in available regulatory databases are presented in Section 4.0.

Seble Afework, P.Eng., of Watters Environmental, visited the Site on July 13, 2007 to conduct a walk-through reconnaissance of the Site, evaluate potential on-Site issues, and determine whether any surrounding land uses could impact the environmental condition of the Site. During the Site reconnaissance, Watters Environmental interviewed Ms. Jackie Smalec (Chief Financial Officer) and Mr. Ryan Carter (Emergency Response Coordinator), both of Skyservice. Ms. Smalec and Mr. Carter are hereafter referred to in this report as the "Site representatives". The Site representatives accompanied Watters Environmental during the Site reconnaissance. Findings of the Site reconnaissance appear in Section 5.0.

Conclusions and recommendations of the Phase I ESA are provided in Section 6.0. Figures and photographs, illustrating the Site characteristics and environmental issues discussed in the report, are provided in the respective figure and photograph section of the report. The qualifications and limitations of the Phase I ESA are provided in Section 7.0.

Appendix A contains a copy of the previous environmental reports completed for the Sites. Appendix B contains a report from EcoLog Environmental Risk Information Service Ltd. (EcoLog ERIS), which summarizes the findings of an environmental database review for the Sites and surrounding areas. Appendix C contains an overview of major selected regulatory requirements for operations at the Sites. Appendix D contains qualifications of Watters Environmental and key personnel involved with this ESA.

2.0 BACKGROUND INFORMATION

2.1 SITE LOCATION AND USE

For the purpose of this report, the portion Vanguard Drive that is adjacent to the Site is presumed to be running in an east-to-west direction, although it is actually running in a northeast-to-southwest direction.

The Site is located on the south side of Vanguard Drive, in an area of mixed commercial and industrial land uses. The Site is bordered to the north by Vanguard Drive, followed by Derry Road; to the east by North Lounge and Skycharter hangars; to the south by Millard Air and Air Transat Hangars; and to the west by Vedette Drive (Figure 3). The municipal address for the Site is: 2450 Derry Road, Mississauga, Ontario L5S 1B2, Canada.

An aerial view of the Site and surrounding lands is presented in Figure 2.

The property at the Site is reportedly owned by Transport Canada and managed by the GTAA. The Site is occupied by Skyservice for use as an office, warehouse and aircraft maintenance facility. According to the Site representatives, the Site buildings have been occupied by Skyservice since 2002.

2.2 SITE DESCRIPTION

The Site is an irregular-shaped property, approximately 2.0 hectares (5.0 acres) in area, and contains two buildings (the "Site buildings"). The Site buildings are described as follows:

Hangar 6

Hangar 6 contains a two-storey office building with a single-story hangar, which has a footprint area of approximately 2,800 square metres (30,000 square feet). Hangar 6 covers approximately 15% of the total Site area. According to the Site representatives, Hangar 6 was constructed in approximately 1969, and the two-storey office building located on the east side of the Hangar was fully renovated in February 2007.

Hangar 6 was constructed of a poured concrete slab-on-grade foundation (i.e., no basement or underground structures), a steel frame, a flat tar roof and aluminum siding exterior, with the exception of the two-storey office building which has brick exterior.

At the time of the Site reconnaissance, Hangar 6 was divided into two parts: (i) an eastern portion with a two-storey office building and (ii) a western portion with a single-storey hangar currently used as a warehouse (for storage of aircraft parts and supplies and several metal s cabinets for storage of new products used for aircraft maintenance) and offices.

Hangar 6A

Hangar 6A contains a single-story Hangar, which has a footprint area of approximately 5,000 square metres (53,800 square feet). Hangar 6A covers approximately 25% of the total Site area. According to the Site representatives, Hangar 6A was constructed in December 2000.

Hangar 6A was constructed of a poured concrete slab-on-grade foundation (i.e., no basement or underground structures), a steel frame, aluminum siding exterior and a peek metal roof.

At the time of the Site reconnaissance, Hangar 6A contained a single-storey hangar used for aircraft maintenance with offices at the west end of the hangar.

Watters Environmental observed that the majority of the Site exterior area appeared to be paved with an asphalt surface. A concrete apron was observed east of Hangar 6A. The exterior asphalt paved areas and concrete apron appeared to be in good condition (i.e., no major cracking, heaving or staining). Chain-linked fence was observed along the perimeter of the Site.

A propane-fired emergency generator and propane tank are located adjacent to the south side of Hangar 6A on a gravel surface within a chain-linked fence area (Photograph 2).

Aircraft heaters are fuelled on-Site from an approximately 500-gallon steel aboveground storage tank (AST) that is located on an asphalt-paved surface north of Hangar 6A since approximately 2001.

The Site has several propane-fuelled forklifts used for obtaining materials from the Site buildings. The forklifts are fuelled on-Site from propane tanks stored within a cage located adjacent to the north side of Hangar 6A. Watters Environmental did not observe any additional fuelling activities at the Site during the Site reconnaissance.

A layout of the Site is presented in Figure 4.

2.3 UTILITIES AND MECHANICAL SYSTEMS

Drinking water for the Site is provided by the City of Mississauga municipal water supply. According to the Site representatives, sanitary wastewater from the Site is discharged to the municipal sanitary sewer system. Storm water from the flat portion of the roof of the Site buildings is discharged to the municipal storm sewer system via internal piping within the buildings, and storm water from the peaked portion of the roof of the Site buildings is discharged to the ground surface surrounding the Site buildings. Storm water landing on the asphalt surface of the Site is conveyed via overland flow to off-Site catch basins connected to the municipal storm sewer system, or is conveyed via overland flow to an off-Site ditch at the south end of the Site.

The office portion of Hangar 6 is heated and cooled by six natural gas-fired heating, ventilating and air conditioning (HVAC) units. The hangar portion of Hangar 6 is heated by several natural gas-fired radiant tube heaters and one natural gas-fired HVAC unit for the offices located at the north end of the hangar. Hangar 6A is heated by several natural gas-fired radiant tube heaters Domestic hot water for the Site is provided by two natural gas-fired hot water tanks.

Electrical service is supplied to the Site by Mississauga-Hydro via a utility-owned transformer located in a concrete building within a gravel-surfaced area enclosed by a chain-linked fence at the northwest end of the Site.

Lighting for the Site buildings is provided by a mixture of fluorescent and incandescent light fixtures. Floor surfaces within the Site buildings are a combination of carpet, vinyl tile, ceramic and finished concrete.

2.4 PHYSICAL SETTING

The Site is located in an area of Mississauga that is relatively flat, with an elevation of approximately 170 metres above mean sea level. The topography of the surrounding areas are also relatively flat. Surface water runoff from the Site discharges off-Site catch basins connected to the municipal storm sewer system or is conveyed via overland flow to an off-Site ditch at the south end of the Site.

Spring Creek is located approximately 400 metres west of the Site. Based on the general topography of the area and location of Spring Creek, Watters Environmental anticipates that, regionally, the near-surface groundwater flows to the south (relative to true north, it is anticipated that groundwater flows to the southeast).

Based on published geological reports, and on Watters Environmental's previous experience in this area of Mississauga groundwater is expected to be present at a depth of less than 6 metres below ground surface.

Geology in the vicinity of the Site is expected to be clayey silt till (Ontario Ministry of Northern Development and Mines Map 2556). These deposits are expected to have a low permeability with respect to groundwater flow and contaminant migration. Bedrock in the vicinity of the Site is expected to be shale, limestone, dolostone and siltstone of the Queenston Formation (Ontario Ministry of Northern Development and Mines Map 2544).

2.5 PREVIOUS ENVIRONMENTAL REPORTS

The following previous environmental reports were provided to Watters Environmental by Gibralt Capital, and are included in Appendix A:

- "*Geotechnical Engineering Report, Hangar No. 6 Addition, Lester B. Pearson International Airport, Toronto, Ontario*", report prepared by Terraprobe Limited (Terraprobe), for All Canada Express, and dated July 28, 1997 (the "Terraprobe Geotechnical Report"); and

- "*Phase I Environmental Site Assessment Report, Hangar 6, Lester B. Pearson International Airport, Mississauga*" report prepared by Dillon Consulting Limited (Dillon), for Skyservice F.B.O Inc, and dated March 2, 2000 (the "Dillon Phase I ESA Report"). Watters Environmental notes that only the front portion of the report was available for review (i.e., the photographs and appendices were not included).

Terraprobe Geotechnical Report

Watters Environmental also completed a cursory review of the Terraprobe Geotechnical Report from an environmental perspective and notes that there was no information in the Terraprobe Geotechnical Report to suggest the presence of any significant environmental contaminant issues associated with gross soil quality, or significant quantities of fill material present at the Site.

Dillon Phase I ESA Report

Based on a review of the Dillon Phase I ESA Report, Watters Environmental notes the following:

- Dillon indicated that Hangar 6 was constructed in approximately 1969 on a former vacant land;

- Dillon indicated that, a review of a GTAA Environmental Audit dated October 1997 identified levels of petroleum hydrocarbons (PHC) above the applicable regulatory criteria in the surface soil samples taken in two locations near the southwest corner of the Hangar 6 building. Elevated PHC levels, not exceeding the applicable criteria at that time, were also detected in one test pit located near the southwest corner of Hangar 6. The GTAA Environmental Audit was not available for Watters Environmental review. In addition, Watters Environmental notes that there was no documentation on any remediation or clean-up program for the PHC impacted soil identified at the southwest corner of Hangar 6 available for review;

- Dillon indicated that, according to a Phase I ESA, report prepared by AGRA Earth & Environmental Limited (AGRA) for part of Area 8, Lester B. Pearson International Airport dated November 1994 (AGRA Phase I ESA Report) a 1000-litre waste oil AST was located on an asphalt-paved surface on the northwest corner of Hangar 6. The waste oil AST was apparently installed in 1994 and removed in 1994. The AGRA Phase I ESA was not available for Watters Environmental review. Watters Environmental did observe any staining at on the asphalt-paved surface at this location at the time of the Site reconnaissance.

- Dillon indicated that a review of an Asbestos Survey completed by Trow Consulting Engineers Ltd. (Trow) identified friable asbestos containing materials (ACMs) in the floor tiles in some of offices located at the east end of Hangar 6. The Trow Asbestos Survey Report was not available for Watters Environmental review. In addition, according to the Site representatives, the offices at the east end of Hangar 6 were fully renovated in February 2007 and ACMs were likely removed at that time; and

- Dillion recommended an asbestos survey and appropriate management plan for the handling and disposal of ACM be implemented in accordance with the applicable regulation.

Summary

Based on a review of the Dillon Phase I ESA Report, Watters Environmental considers the PHC impacted soil identified in the southwest corner of Hangar 6 in the GTAA Environmental Audit a pre-existing condition and part of the baseline condition of the Site. Watters Environmental bases this opinion on the fact that no documentation on the removal and/or remediation of the PHC impacted soil at the Site was available for review.

3.0 HISTORICAL RECORDS REVIEW

A historical review was conducted to assess the presence of potential environmental contaminant impacts originating from historical operations at the Site and surrounding lands. Watters Environmental completed the historical review by examining information from the following sources:

- Aerial photographs, available from the National Air Photo Library, in Ottawa, Ontario, for the years 1963, 1996 and 1999;
- A recent aerial photograph (i.e., within the last 3 years) available from Google Earth (www.earth.google.com);
- Street directories, located at the Metropolitan Toronto Reference Library, in Toronto, Ontario, for the years 1990, 1995, and 2000;
- Property Underwriters' Report dated October 8, 2003, for the Site, available from CGI Information Systems and Management Consultants Inc. (CGI);and
- Information provided by the Site representatives.

No Fire Insurance Plans were available for the Site or the immediately surrounding areas from CGI Information Systems and Management Consultants Inc. (CGI). If such information were available for the Site, CGI would normally be the source for obtaining such information.

Site History

According to the historical aerial photographs reviewed, the following information was noted with regards to the Site:

Date of Photograph	Approximate Scale of Photograph	Comments
1963	1:12,000	The Site appears to be vacant and undeveloped land.

Date of Photograph	Approximate Scale of Photograph	Comments
1996	1:15,000	The Site appears to be occupied by a building similar to the present day Hangar 6 and associated parking and concrete apron.
1999	1:7,000	The Site appears to be similar to that observed in the 1996 aerial photograph.
2005 to 2007	Unknown	The Site appears to be similar to that observed in the 1999 aerial photograph with the exception of a building similar to the present day Hangar 6A located at west end of the Site.

According to the historical street directories reviewed, the following information was noted with regards to major occupants for the Site:

From	To	Occupants
1990	1995	2450 Derry Road – Maxwell Aero Maintenance Ltd.

According to the Property Underwriters' Report reviewed, the following information was noted with regards to the Site:

- In 2003 Hangar 6 was occupied by Skyservice Airlines Inc. Hangar 6 is heated with natural gas-fired HVAC units and radiant tube heaters.

According to the Site representatives, the following information was noted with regards to the Site:

- Hangar 6 was constructed in approximately 1969 and the two-storey office building located on the east side of the Hangar was fully renovated in February 2007; and
- Hangar 6A was constructed in December 2000.

Surrounding Land Use History

According to the historical aerial photographs reviewed, the following information was noted with regards to major land use surrounding the Site:

Date of Photograph	Approximate Scale of Photograph	Comments
1963	1:12,000	The properties north of the Site appear to be occupied by a roadway similar to the present Derry Road, followed by vacant, undeveloped land. The properties east and west of the Site appear to be occupied by vacant, undeveloped land. The properties south of the Site appear to be occupied by a building similar to the present day Millard Air hangar, followed by a building similar to the present day Chartright hangar. The properties southeast of the Site appear to be occupied by buildings similar to the present day aircraft hangars.
1996	1:15,000	The properties surrounding the Site appear to be similar to those observed in the 1963 aerial photograph with the following exceptions: The properties north of the Site appears to be occupied by a roadway similar to the present day Vanguard Drive, followed by buildings similar to the present day multi-tenant commercial buildings across Derry Road; the properties west of the Site appear to be occupied by buildings similar to the present day North Lounge and Skycharter hangars; followed by Vanguard drive; the properties south of the Site appear to be occupied by buildings similar to the present day Millard Air and Air Transat hangars; the properties southwest of the Site appears to be occupied by a building similar to the present day Aerocentre Landmark Aviation hangar and the properties west of the Site appear to be occupied by a roadway similar to the present day Vedette Drive, followed by a Esso tanker truck fuelling station.
1999	1:7,000	The properties surrounding the Site appear to be similar to those observed in the 1996.
2005 to 2007	Unknown	The Site appears to be similar to that observed in the 1999 aerial photograph.

According to the historical street directories reviewed, the following information was noted with regards to major occupants surrounding the Sites:

From	To	Occupants
2000	2000	2405 Derry Road East – R. M Jet Maintenance Inc.
2000	2000	2420 Derry Road East – Kelowna Fight Craft
1990	1995	7014 Torbram Road – Toronto Dominium Bank
2000	2000	7014 Torbram Road – Cross Country Donuts

Summary

Based on the historical review completed, it is Watters Environmental's opinion that there are no significant environmental contaminant issues at the Site associated with historical on-Site or surrounding land use activities.

4.0 ENVIRONMENTAL DATABASE REVIEW

A regulatory database review was completed by EcoLog ERIS, an environmental database and information service company. The EcoLog ERIS report, including a detailed description of the databases, is presented in Appendix A.

Site Regulatory Review

According to the environmental databases reviewed, the following information was listed for the Site:

Company Name and Address	Database	Listing	Opinion of Environmental Significance to the Site
Government Canada Transport, Hangar 6 2450 Derry Road East	Ontario Regulation 347 Waste Generators Summary (1986-2005)	Listed as a generator of petroleum distillates and waste oils and lubricants from 1986 to 1997.	Low. Based on the fact that the company is no longer an occupant and the fact that the wastes were likely disposed of on a regular basis.
Air Niagara Express Inc. Hangar 6 2450 Derry Road East	Ontario Regulation 347 Waste Generators Summary (1986-2005)	Listed as a generator of petroleum distillates from 1986 to 1995.	Low. Based on the fact that the company is no longer an occupant and the fact that the wastes were likely disposed of on a regular basis.
Maxwell Aero Maintenance Limited Hangar 6 2450 Derry Road East	Ontario Regulation 347 Waste Generators Summary (1986-2005)	Listed as a generator of waste oils and lubricants from 1998 to 2001.	Low. Based on the fact that the company is no longer an occupant and the fact that the wastes were likely disposed of on a regular basis.

Company Name and Address	Database	Listing	Opinion of Environmental Significance to the Site
All Cargo Airlines Ltd. Hangar 6 2450 Derry Road East	Ontario Regulation 347 Waste Generators Summary (1986-2005)	Listed as a generator of petroleum distillates and waste oils and lubricants from 1996 to 2001.	Low. Based on the fact that the company is no longer an occupant and the fact that the wastes were likely disposed of on a regular basis.
Samaritan Air Services Ltd. Hangar 6 2450 Derry Road East	Ontario Regulation 347 Waste Generators Summary (1986-2005)	Listed as a generator of petroleum distillates and light fuels from 1994to 1996.	Low. Based on the fact that the company is no longer an occupant and the fact that the wastes were likely disposed of on a regular basis.
Sky Service FBO-MTNC Hangar 6 2450 Derry Road East	Ontario Regulation 347 Waste Generators Summary (1986-2005)	Listed as a generator of acid waste, alkaline wastes, other specified inorganics, petroleum distillates, light fuels, oil skimming & sludge's, waste & oil lubricants from 2001 to 2004.	Low. Based on the type of operation and the fact that the wastes were likely stored inside the hangar on a finished concrete floor and disposed of on a regular basis.
Skyservice Airlines Inc. Hangar 6 2450 Derry Road East	Ontario Regulation 347 Waste Generators Summary (1986-2005)	Listed as a generator of acid waste, alkaline wastes, paint/pigment/coating residues other specified inorganics, inorganic and organic laboratory chemicals, aliphatic solvents, polymeric resins, petroleum distillates, light fuels, oil skimming & sludge's, waste & oil lubricants in 2005.	Low. Based on the type of operation and the fact that the wastes were likely stored inside the hangar on a finished concrete floor and disposed of on a regular basis.

Surrounding Land Regulatory Review

According to the environmental databases reviewed, the following information was listed for the properties within a 250-metre search radius of the Site:

Property Name and Address	Location Relative to the Site	Database	Listing	Opinion of Environmental Significance to the Site
Millardair Ltd. Hangar 5 2450 Derry Road East	Located south of and inferred downgradient of the Site.	Ontario Regulation 347 Waste Generators Summary (1986-2005)	Listed as a generator of alkaline wastes, polymeric resins, oil skimming and sludge's and/or waste oil & lubricants 1992 to 2004.	Low. Based on the inferred downgradient location and fact that the wastes were likely disposed of on a regular basis
Shell Canada Products Ltd.(currently occupied by ESSO) 2450 Derry Road East	Located approximately 100 metres southwest of and inferred transgradient of the Site (across Vedette Drive).	Ontario Regulation 347 Waste Generators Summary (1986-2005)	Listed as a generator light fuels from 1992 to 2001.	Low. Based on the distance and inferred transgradient location from the Site across Vedette Drive.
Canada 3000 Airlines Ltd. Hangar 5A 2450 Derry Road East	Located south of and inferred downgradient of the Site.	Ontario Regulation 347 Waste Generators Summary (1986-2005)	Listed as a generator of petroleum distillates and/or waste oil & lubricants from 1989 to 1995.	Low. Based on the inferred downgradient location and fact that the wastes were likely disposed of on a regular basis

Property Name and Address	Location Relative to the Site	Database	Listing	Opinion of Environmental Significance to the Site
Airwave Transport Ltd. 5 2450 Derry Road East	Located south of and inferred downgradient of the Site.	Ontario Regulation 347 Waste Generators Summary (1986-2005)	Listed as a generator of acid waste, alkaline wastes, petroleum distillates and waste oil & lubricants from 1999 to 2001.	Low. Based on the inferred downgradient location and fact that the wastes were likely disposed of on a regular basis
World Aviation Centre 2450 Derry Road East	Located approximately 160 metres east and inferred transgradient of the Site.	Ontario Regulation 347 Waste Generators Summary (1986-2005)	Listed as a generator of light fuels from 1997 to 2001.	Low. Based on the distance and the inferred transgradient of the Site.
Air Transat Hangar 4 2450 Derry Road East	Located south of and inferred downgradient of the Site.	Ontario Regulation 347 Waste Generators Summary (1986-2005)	Listed as a generator of petroleum distillates, waste oil & lubricants, aliphatic solvents and oil skimming & sludge's from 2002 to 2005.	Low. Based on the inferred downgradient location and fact that the wastes were likely disposed of on a regular basis
Shell Canada Products Ltd. (currently occupied by ESSO) 2450 Derry Road East	Located approximately 100 metres southwest of and inferred transgradient of the Site (across Vedette Drive).	Occurrence Reporting Information System (1988-2002)	Listed as having releases ranging from 60 liters to 350 litres due to equipment failure or container overflow in 1988, 1989, 1997, 2000 or 2001.	Low. Based on the distance and inferred transgradient location from the Site across Vedette Drive.

In addition to the information provided above, the EcoLog ERIS report identified additional listings in the EcoLog ERIS Historical Searches, Ontario Regulation 347 Waste Generators Summary, Occurrence and Reporting Information System Watters Environmental notes that, based on the operations, distances and/or inferred directions from the Site, none of these listings were identified as being a potential environmental concern to the Site and, as such, it is Watters Environmental's opinion that they have a low potential to impact the environmental condition of the Site.

Summary

Based on a review of the environmental database information presented in the EcoLog ERIS report, there is no information in the above-noted databases that would suggest issues of potentially significant environmental contaminant concern at the Site.

5.0 ON-SITE ENVIRONMENTAL ASSESSMENT FINDINGS

5.1 OPERATIONS-RELATED ENVIRONMENTAL ISSUES

5.1.1 Above and Underground Storage Tanks

Aboveground Storage Tanks

Watters Environmental observed a 500-gallon steel AST east of Hangar 6A (Photograph 3). At the time of the Site reconnaissance, the AST was equipped with fuel dispensing equipment, and was placed on an asphalt paved surface surrounded by concrete curbs. The Site representatives informed Watters Environmental that the AST was installed in approximately 2001, and is used for fuelling aircraft heaters. Watters Environmental did not observe any staining or evidence of leakage on the asphalt-paved surface in the vicinity of the AST. The asphalt-paved area in the vicinity of the AST appeared to be in good condition (i.e., no major cracking or heaving).

As noted in Section 2.5, Dillon indicated that, according to the AGRA Phase I ESA Report, a 1000-litre waste oil AST was located on an asphalt-paved surface on the northwest corner of Hangar 6. The waste oil AST was apparently installed in 1970 and removed in 1994. Watters Environmental did observe any staining at on the asphalt-paved surface at this location at the time of the Site reconnaissance.

Watters Environmental did not observe any other ASTs at the Site during the Site reconnaissance. The Site representatives advised Watters Environmental that there are no ASTs at the Site, and that none were present historically. There was also no evidence from the historical records review to suggest the former presence of any other ASTs at the Site.

Underground Storage Tanks

Watters Environmental did not observe any fill or vent pipes, depressions or asphalt cuts during the Site reconnaissance that would suggest the presence of underground storage tanks (USTs) on the Site.

As indicated in Section 4.0, a review of available environmental databases indicated that the Site is not registered for petroleum storage tanks. There was also no evidence from the historical records review to suggest the former presence of USTs at the Site.

5.1.2 Chemical Storage and Handling

Liquid Chemicals

Watters Environmental observed the following liquid chemicals stored at the Site:

- A 500-gallon diesel AST located adjacent to the east of Hangar 6A. Watters Environmental did not observe any significant staining on the asphalt-paved surface within the vicinity of the AST;
- Three, 45-gallon drums of waste oil placed on spill tray located at the southeast corner of Hangar 6A (Photograph 4). Although Watters Environmental observed minor oil staining on the finished concrete floor in the vicinity of these drums, the finished concrete floor was in good condition (i.e., no pitting or cracking);
- One, solvent sink (i.e., parts washers), likely containing petroleum distillate solvents, located on the finished concrete floor at the south end of Hangar 6A; and
- Several metal storage cabinets for storage of new products used for aircraft maintenance such as oil, lubricants, paint and varsol located in Hangar 6 and 6A.

Compressed Gas Storage

Watters Environmental observed several propane tanks (used for powering forklifts) that were stored within a cage located adjacent to the north side of Hangar 6A.

Watters Environmental did not observe the storage of any additional compresses gas at the Site during the Site reconnaissance.

5.1.3 Solid (Non-Hazardous) and Liquid Waste

In general, the Site appeared to be well maintained. Watters Environmental did not observe deposits of solid waste (landfilling) at the Site during the Site reconnaissance.

Based on discussions with the Site representatives, and on observations made by Watters Environmental during the Site reconnaissance, Watters Environmental understands that Site activities generate non-hazardous domestic-type solid waste from the warehouse and office

operations. Non-hazardous wastes are stored outside in a metal container located at the west end of Hangar 6, which is emptied and removed from the Site by Turtle Island twice a week.

Recyclable materials such as aluminum cans, paper, glass, plastics and cardboard are generated from general warehouse, office and aircraft maintenance activities at the Site. With the exception of cardboard these materials are not recycled, and are disposed of with the non-hazardous wastes. The cardboard is stored in a metal container located adjacent to the northeast side of Hangar 6A, which is also emptied and removed from the Site by Turtle Island twice a week.

5.1.4 Registrable / Hazardous Waste

Based on discussions with the Site representatives, the Site is registered with the Ministry of the Environment (MOE) (Generator Registration Number ON1815001) for generation of the following wastes:

Waste Classification	Waste Description
112-C	Acid Waste – Heavy Metals (solid)
121-C	Alkaline Wastes – Heavy Metals (solid)
145-L	Paint/Pigment/Coating Residues
146-C/ 146-R	Other Specified Inorganics (solid))
148-I	Inorganic Laboratory Chemicals (liquid)
212-L	Aliphatic Solvents (liquid)
213-I	Petroleum Distillates (liquid)
221-I	Light Fuels (liquid)
232-B	Polymeric Resins (liquid)
251-I	Oil Skimmings & Sludges (liquid)

Waste Classification	Waste Description
252-I/252-L	Waste Oils & Lubricants (liquid)
263-A	Organic Laboratory Chemicals (liquid)

According to the Site representatives, the registerable and hazardous wastes that are generated at the Site are normally stored at the south end of Hangar 6. Watters Environmental observed only the following wastes at the Site at the time of the Site reconnaissance:

- Three 45-gallon drums of waste oil placed on spill tray located on the finished concrete floor at the southeast corner of Hangar 6A; and

- One, solvent sink (i.e., parts washers), likely containing petroleum distillate solvents, located on the finished concrete floor at the south end of Hangar 6A.

Regulation 347 made under the Ontario *Environmental Protection Act* (EPA) outlines the specific regulatory requirements of waste generation, handling and disposal in Ontario. A waste generator is required to report to the MOE any registered waste that has been stored on a property longer than three months (Section 18(10) of Regulation 347 made under the EPA). Based on discussions with the Site representatives, and on observations made at the Site during the Site reconnaissance, Watters Environmental understands that registrable wastes are not stored on Site more than 3 months.

5.1.5 Spills, Releases and Emergency Response

The Site representatives advised Watters Environmental that no spills or releases have occurred at the Site. Watters Environmental did not observe evidence of spills, accidental releases or widespread staining on the ground surface that would indicate the occurrence of major environmental events that may significantly impact the environmental quality of the subsurface at the Site.

5.1.6 Air Emissions

Based on observations made by Watters Environmental during the Site reconnaissance, and on discussions with the Site representatives, Watters Environmental understands that the following air emission sources are present at the Site that may discharge a contaminant into the atmosphere:

- Seven natural gas-fired HVAC units located on the roof of hangar 6 (unknown fuel input rating);
- Several natural gas-fired radiant tube heaters located in hangar 6 (unknown fuel input rating);
- Several natural gas-fired radiant tube heaters located in hangar 6A (unknown fuel input rating);
- Two natural gas-fired domestic hot water heaters located at the Site (unknown fuel input); and
- One propane-fired emergency generator located adjacent to the south side of Hangar 6A within a chain linked fence (unknown fuel input).

Watters Environmental was informed by the Site representatives that there are no air emission permits or licenses, and no inventory of air emission sources. There has also not been any air emission source testing or monitoring.

Since the maximum fuel input capacity of the natural gas-fired heating equipment at the Site likely exceeds the 1,500,000 British Thermal Units per hour (BTU/h) exemption limit indicated in Regulation 346 (see Section C-4 in Appendix C), it is Watters Environmental's' opinion that a Certificate-of-Approval (C-of-A) (Air & Noise) for this heating equipment would likely be required. In addition, a C-of-A is also likely required for the propane-fired emergency generator.

The Site representatives advised Watters Environmental that no complaints have been raised by neighbouring properties or regulatory agencies concerning noise, odours or air emissions at the Site. Watters Environmental did not observe any significant issues concerning noise, odours or air emissions at the Site at the time of the Site reconnaissance.

5.1.7 Water, Wastewater and Storm Water

As noted in Section 2.3, water for the Site is obtained from the City of Mississauga municipal service. As such, Watters Environmental does not anticipate any environmental issues regarding water intaking at the Site.

The Site is serviced by municipal sewers and water, which are utilized for domestic-type purposes and aircraft cleaning and maintenance.

Watters Environmental was advised by the Site representatives that, although wastewater discharges from the Site have not been tested to ensure compliance with the City of Mississauga Sewer Use By-Law No. 90-90 (the "Sewer Use By-Law"), no environmental issues, complaints or orders have been raised by the City of Mississauga regarding wastewater discharges from the Site. Based on present activities conducted at the Site, Watters Environmental does not anticipate any significant issues regarding the quality of wastewater discharges at the Site.

As noted in Section 2.3, storm water from the flat portion of the roof of the Site buildings is discharged to the municipal storm sewer system via internal piping within the buildings, and storm water from the peaked portion of the roof of the Site buildings is discharged to the ground surface surrounding the buildings. Storm water landing on the asphalt surface of the Site is conveyed via overland flow to off-Site catch basins connected to the municipal storm sewer system or is conveyed via overland flow to an off-Site ditch at the south end of the Site.

Watters Environmental observed two floor drains along the width of Hangar 6A. These floor drains are connected to an oil/water separator located at the south side of the building. According to the Site representatives this oil/water separator discharges to a second oil/water separator located on the adjacent property to the South (Millard Air hangar) prior to being discharged to the municipal storm water.

Watters Environmental was informed by the Site representatives that there are no permits or licenses for the oil/water separator at the Site. It is Watters Environmental's opinion that a C-of-A (Industrial Sewage) for the oil/water separator would likely be required under the Ontario *Water Resources Act* (OWRA).

Watters Environmental did not observe outdoor waste storage, raw material piles or areas of chemical staining that could result in the impairment of storm water runoff from the Site. Watters Environmental does not anticipate that storm water quality leaving the Site represents a significant environmental issue.

5.1.8 Workplace Hazardous Material Information System

The Site representatives informed Watters Environmental that all Site personnel are trained in Workplace Hazardous Material Information System (WHMIS). According to the Site representatives the Material Safety Data Sheets (MSDSs) for products used at the Site are managed through an MSDS database system that is accessible to all Site personnel.

5.1.9 Pits, Sumps and Lagoons

Pits and Sumps

Watters Environmental did not observe any sumps or pits at the Site during the Site reconnaissance. There was also no information from the historical review completed to indicate the former presence of any pits or sumps at the Site.

Lagoons

The Site representatives advised Watters Environmental that there are currently no lagoons or other impoundments at the Site, and that none were present historically. Watters Environmental did not observe any lagoons or impoundments during the Site reconnaissance. There was also no information from the historical review completed to indicate the former presence of lagoons or impoundments at the Site.

5.1.10 Radioactive Materials

The Site representatives reported to Watters Environmental that there were no radioactive materials or equipment at the Site. Watters Environmental did not observe any radioactive materials or equipment at the Site that would require annual licensing by the Canadian Nuclear Safety Commission during the Site reconnaissance.

5.1.11 Dry Cleaning Operations

The Site representatives advised Watters Environmental that there are no dry cleaning operations at the Site, and that none were present historically at the Site. Watters Environmental did not observe any dry cleaning operations at the Site during Watters Environmental's Site reconnaissance. There was also no evidence from the historical records review to suggest that historical dry cleaning operations were present at the Site.

5.2 PROPERTY-RELATED ENVIRONMENTAL ISSUES

5.2.1 Asbestos

As noted in Section 2.5, Dillon indicated that based on a review of a Trow Asbestos Survey Report, friable asbestos containing materials (ACMs) in the floor tiles in some of offices located at the east end of Hangar 6. The Trow Asbestos Survey Report was not available for Watters Environmental review. In addition, according to the Site representatives, the offices at the east end of Hangar 6 were fully renovated in February 2007 and ACMs (if any) were likely removed at that time.

Based on the age of the Site buildings (approximately 1969 and 2001, respectively, for Hangars 6 and 6A), Watters Environmental anticipates that friable asbestos-containing materials (ACMs) may be present within Hangar 6, since the use of friable ACMs was not discontinued until the early 1980s. Watters Environmental did not observe potentially friable ACMs at the Site during the Site reconnaissance.

Watters Environmental observed potentially non-friable ACMs at the Site, which include ceiling tiles, vinyl tiles and drywall compound. Where observed, the potential non-friable ACMs appeared to be in good condition.

5.2.2 Polychlorinated Biphenyl-Containing Equipment

As noted in Section 2.3, electrical service is supplied to the Site by Mississauga-Hydro via a utility-owned transformer located in a concrete building within a chain link fenced gravel-surfaced area at the northwest side of the Site. Watters Environmental also observed the presence of fluorescent light fixtures at the Sites. Based on the age of the Site buildings (approximately 1969 and 2001, respectively, for Hangars 6 and 6A), light ballasts at in Hangar 6 may contain polychlorinated biphenyls (PCBs), since the use of PCBs in electrical equipment

was not discontinued until the early 1980s. PCBs in light ballasts may become an issue if they are leaking or if they are taken out of service. Watters Environmental did not observe any leaking light ballasts at the Sites during the Site reconnaissance.

As mentioned in Section 4.0, the Inventory of PCB Storage Sites (a provincial database) and the National PCB Inventory (a federal database) did not list the Sites as a registered PCB waste storage site.

5.2.3 Lead in Paints

Some of the interior walls of the Site buildings contain painted surfaces. Given the age of the Site buildings (approximately 1969 and 2001, respectively, for Hangars 6 and 6A), it is Watters Environmental's opinion that lead-based paints may be present in Hangar 6, since the use of lead-based paint was not discontinued until the late 1970s. Observations made by Watters Environmental during the Site reconnaissance indicated that paint surfaces appeared to be in good condition (i.e., not peeling or flaking). Based on this information, Watters Environmental does not anticipate significant environmental issues at the Site regarding lead-based paints.

5.2.4 Urea Formaldehyde Foam Insulation

Watters Environmental was advised by the Site representatives that they are not aware of the presence of urea formaldehyde foam insulation (UFFI) at the Site. Watters Environmental did not observe any visual indicators (such as drill holes in building surfaces) for the possible presence of UFFI at the Site.

5.2.5 Ozone-Depleting Substances

Based on discussions with the Site representatives, and on observations made by Watters Environmental during the Site reconnaissance, Watters Environmental understands that the Site contains seven HVAC units that may contain R-11 or R-22 refrigerants, both known ozone-depleting-substances (ODSs). The Site representatives advised Watters Environmental that the on-Site HVAC equipment is serviced by a certified outside contractor, and that ODSs are not stored at the Site. Watters Environmental did not observe the storage of ODSs at the Site during the Site reconnaissance

5.2.6 Radon

According to a document entitled, "*Health and Environment – Partners for Life*", prepared by Health Canada and dated 1997, Health Canada has recommended that the annual radon exposure limit for the general public is 70 becquerels per cubic metre (Bq/m^3) and that the upper limit of the average annual concentration of radon is 800 Bq/m^3. Based on the results of a national survey measuring radon concentrations conducted by Health Canada in the late 1970s, the average indoor radon level for the City of Toronto is 12 Bq/m^3. Given this, and the fact that the Site buildings have no basement or underground structure, Watters Environmental does not expect radon gas to be a significant environmental issue at the Site.

5.2.7 Pesticides and Herbicides

Watters environmental did not observe any landscaped areas at the Site. Based on the fact that no landscaped areas were observed at the Site, Watters Environmental does not anticipate that pesticides or herbicides would be used at the Site. Watters Environmental did not observe the storage of herbicides or pesticides during the Site reconnaissance.

5.2.8 Soil Fill

Based on observations made at the time of the Site reconnaissance, Watters Environmental does not expect a significant amount of fill material to be present at the Site. The Site is generally graded even with the surrounding properties. There was no evidence from the historical records review to suggest that significant amounts of fill material would be present at the Site.

5.3 REVIEW OF NEARBY / ADJACENT PROPERTIES

Watters Environmental reviewed the current land uses of neighbouring properties from publicly accessible locations to assess potential environmental contaminant impacts to the Site that may arise from off-Site operations. As noted in Section 2.1, properties in the general area surrounding the Site are mixed commercial and industrial land uses.

Properties surrounding the Site are summarized as follows (Figure 3):

<u>North of the Site (Inferred Upgradient)</u>

Adjacent to the north is Vanguard Drive, followed Derry Road and multi-tenant commercial buildings. Northeast of the Site, across Vanguard Drive and Derry Road, is a multi-tenant

commercial building, followed by a restaurant, Torbram Road and a multi-tenant commercial building. Northwest of the Site across Vanguard Drive and Derry Road is an office building.

East of the Site (Inferred Transgradient)

Adjacent to the east of the Site are the North Lounge and Skycharter hangars, followed by Vanguard Drive.

South of the Site (Inferred Downgradient)

Adjacent to the south of the Site are the Millard Air and Air Transat hangars, followed by the Chartright hangar. Southeast of the Site are two aircraft hangars. Southwest of the Site, across Vedette Drive, are the ESSO tanker truck fuelling station and Aerocentre Landmark Aviation hangar. Watters Environmental noted seven vent pipes on the western portion of the ESSO property, assumed to be associated with seven USTs. The USTs were located at least 100 metres from the Site property boundary.

West of the Site (Inferred Transgradient)

Adjacent to the west of the Site is Vedette Drive, followed by vacant land.

Summary

Based on observations of the surrounding properties from publicly accessible locations, it is Watters Environmental's opinion that there are no significant environmental contaminant issues at the Site associated with current surrounding land use activities.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the Phase I ESA completed, it is Watters Environmental's opinion that there are no significant environmental contaminant issues at the Site. An Environmental Audit completed by the GTAA identified elevated PHC in surface soils at the southwest corner of Hangar 6. Deeper soils had PHC levels below applicable criteria at that time. Watters Environmental is of the opinion that this matter is not significant, and represents a pre-existing baseline condition for the Site. If a formal environmental baseline is required prior to Gibralt Capital's occupation, a soil and groundwater quality investigation would be required.

To address potential operational/management issues, Watters Environmental recommends the following:

- A secondary containment system be provided for the diesel aboveground storage tank located outside on the asphalt-paved surface at the south side of Hangar 6A;
- The requirements for a C-of-A (Air & Noise) be confirmed for the natural gas-fired heating equipment and propane-fired generator set at the Site, and that it be obtained, if required;
- The requirements for a C-of-A (Industrial Sewage) be confirmed for the oil/water separator at the Site and that it be obtained, if required; and
- Prior to undertaking any renovations in the Hangar 6, the areas planned for renovation (if any) be evaluated for the presence of possible ACMs, PCB-containing equipment (such as in light ballasts) and lead-based paints. If any are found to be present, appropriate management plans should be implemented to ensure that these materials are handled and disposed of in accordance with applicable regulations.

7.0 QUALIFICATIONS AND LIMITATIONS

Watters Environmental has prepared this report for the exclusive use of Gibralt Capital in evaluating the environmental condition of the Site at the time of the Site reconnaissance. Watters Environmental will not be responsible for the use of this report by any other party, or reliance on or any decision to be made based on it without the prior written consent of Watters Environmental. Watters Environmental accepts no responsibility for damages, if any, by any other party as a result of decisions or actions based on this report.

This report presents an overview of issues of environmental concern, reflecting Watters Environmental's professional judgment using information reasonably available at the Site at the time of the Site reconnaissance. Watters Environmental has prepared this report using information understood to be factual and correct and shall not be responsible for conditions arising from information or facts that were concealed or not fully disclosed to Watters Environmental at the time of the Site reconnaissance. Opinions presented in this report concerning regulatory compliance do not represent a legal opinion concerning the environmental condition or compliance of the Site. The scope of work completed by Watters Environmental did not involve a review or evaluation of health and safety issues at the Site. This report is complete only as an entire document, and no section is intended to be used separately.

In completing the scope of work, Watters Environmental did not conduct any intrusive investigations including sampling, testing or monitoring. Detailed cost estimates associated with environmental issues discussed in this report or activities required to bring the Site into environmental compliance were not required for this report to meet its objectives or agreed upon scope of work.

It is important to note that conducting a Phase I ESA does not eliminate the possibility that negative environmental conditions and/or variations of conditions not described in this report are present on the Site.

FIGURES

Inferred Near-Surface Groundwater Flow Direction at the Site

Site Location

Gibralt Capital Corporation

Skyservice Airlines Inc.
Hangar 6 and 6A Lester B Pearson International Airport
6932 Vanguard Drive, Mississauga, Ontario

SOURCE: MapArt Publishing (Golden Horseshoe, 2005)

SCALE
1 : 16,000

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Project No.
07-0122

Figure 1:
Site Location Map

Inferred Near-Surface Groundwater Flow Direction at the Site

N

Site Location

Gibralt Capital Corporation

Skyservice Airlines Inc.
Hangar 6 and 6A Lester B Pearson International Airport
6932 Vanguard Drive, Mississauga, Ontario

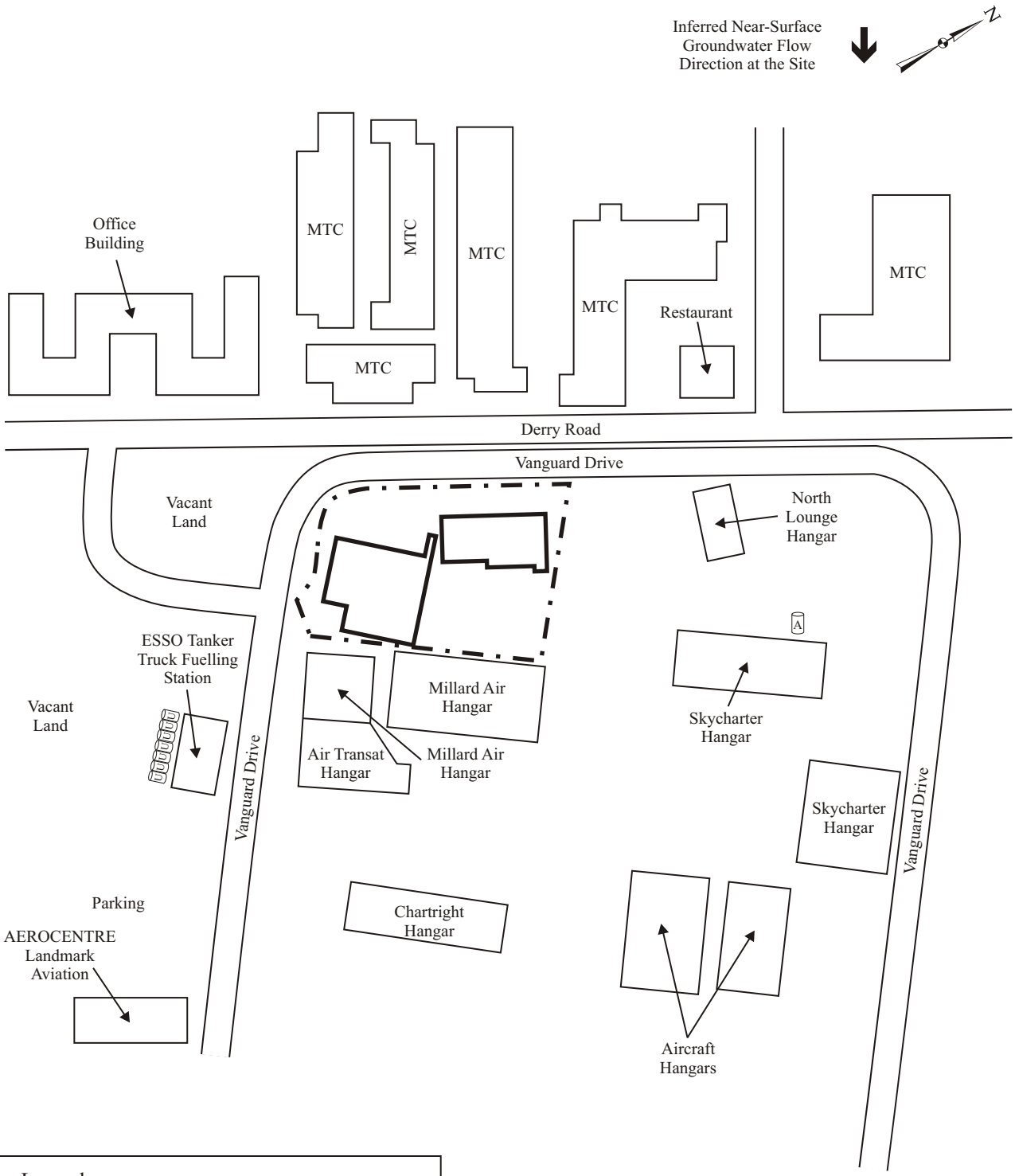
SOURCE: http://earth.google.com

SCALE:
Not Available

CONFIDENTIAL

Project No.
07-0122

Figure 2:
Aerial View of the Site



Legend:

- Approximate Site Boundary
- Site Building
- U — Underground Storage Tank (UST)
- A — Aboveground Storage Tank (AST)
- MTC — Multi-Tenant Commercial Building

Gibralt Capital Corporation

Skyservice Airlines Inc.
Hangar 6 and 6A Lester B Pearson International Airport
6932 Vanguard Drive, Mississauga, Ontario

NOT TO SCALE

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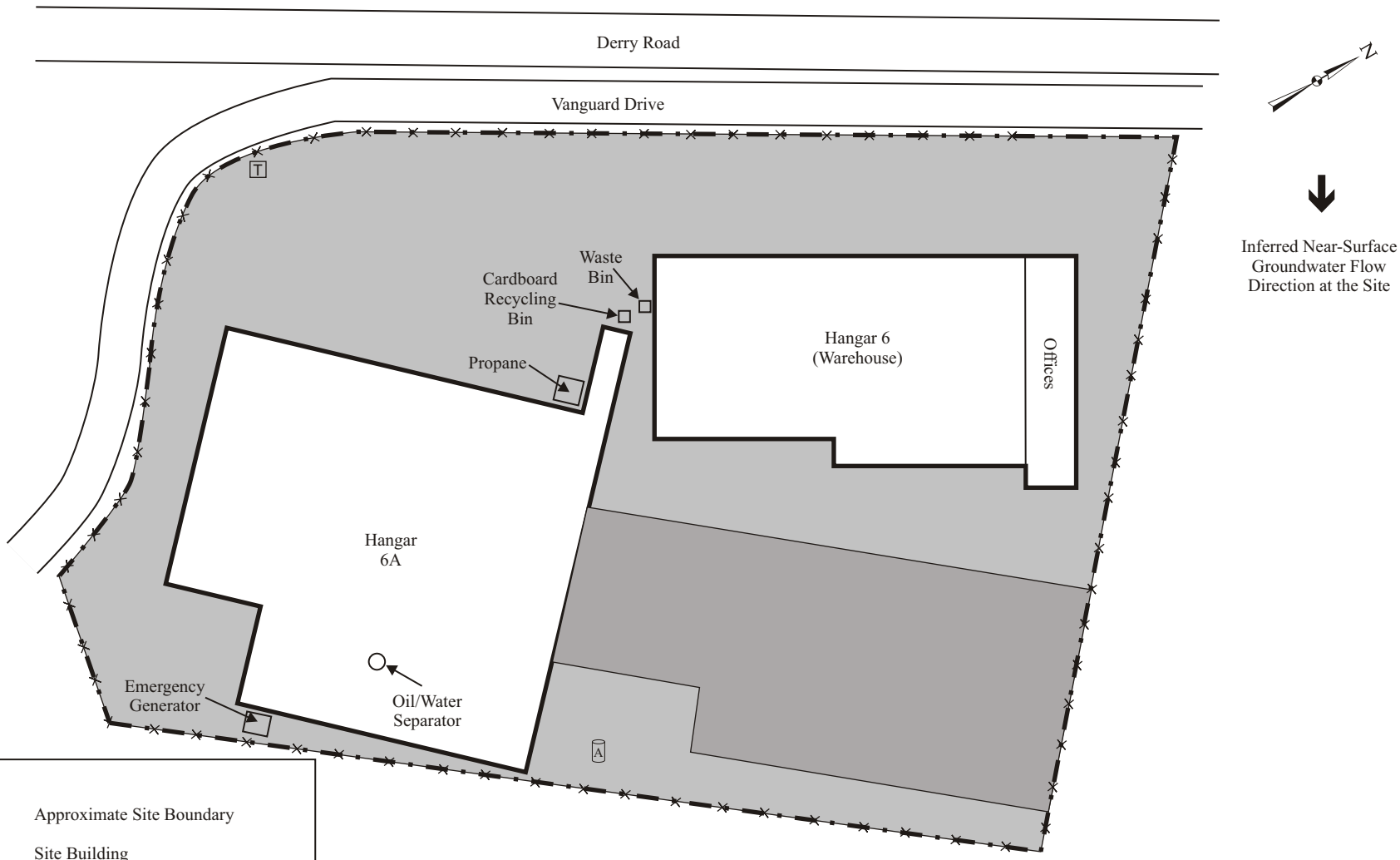
Project No.
07-0122

Figure 3:
Surrounding Land Use Map



Gibralt Capital Corporation

Skyservice Airlines Inc.
Hangar 6 and 6A Lester B Pearson International Airport
6932 Vanguard Drive, Mississauga, Ontario

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07-0122

Figure 4:
Site Layout

PHOTOGRAPHS

Photograph 1: View of the Site, looking south.

Photograph 2: View of the Propane-fired emergency generator and propane tank looking west.

Photograph 3: View of an approximately 500-gallon diesel AST, looking north

Photograph 4: View of 45-gallon drums for waste oil storage at the southeast corner of Hangar 6A.

APPENDIX A

Previous Environmental Reports Completed for the Site

Terraprobe
Consulting Geotechnical Engineers & Hydrogeologists
Construction & Materials Inspection & Testing

GEOTECHNICAL ENGINEERING REPORT

HANGAR NO. 6 ADDITION
LESTER B. PEARSON INTERNATIONAL AIRPORT
TORONTO, ONTARIO

PREPARED FOR : All Canada Express
c/o Hatch Mott MacDonald
2800 Speakman Drive
Sheridan Science & Technology Park
Mississauga, Ontario
L5K 2R7

Attention: Mr. Christopher Solecki, P.Eng.
Manager, Airports and Aviation Group

OUR FILE NO. 97255

July 28, 1997

DISTRIBUTION:

2 copies - All Canada Express Ltd.
1 copy - Hatch Mott MacDonald
1 copy - Terraprobe Limited, Brampton

1.0 INTRODUCTION

This report presents the results of a geotechnical subsurface investigation that was carried out in advance of upgrading works that are proposed at Hangar 6 of the Lester B. Pearson International Airport (L.B.P.I.A.) complex. The purpose of the investigation was to establish the nature of the existing ground conditions in the vicinity of the proposed development and based on that information, provide pertinent geotechnical design recommendations for the proposed Hangar and related apron upgrades.

The work presented within was completed in general accordance with our proposal letter to All Canada Express Ltd. dated June 11, 1997.

2.0 SITE AND PROJECT DESCRIPTION

The site is located immediately south Derry Road and west of Airport Road, within the L.B.P.I.A. complex as shown on the attached Figure 1. The site is currently occupied by a by a single two-bay Hangar building with a two storey office/shop lean-to on the east side of the Hangar. An asphalt apron area is located to the south and west of the Hangar building, with a grass covered area located along the west side of the Hangar. The ground surface of the site slopes gradually towards the south.

The asphalt apron area is quite heavily cracked throughout with alligator, transverse and longitudinal cracks. The density, width and spacing of the cracks is more severe within the west half of the apron as opposed to that within the main apron area immediately south of the existing Hangar. During a site reconnaissance visit on June 19, 1997, standing water was present on top of the asphalt apron at the approximate mid-point of the south limit of the apron, which is also the apparent low point of the apron. The asphalt apron within this area was ravelled and has been subjected to previous patching works.

The concrete slab on grade floor of the existing Hangar building appears to be in good condition with only minor hairline pattern cracking noted.

It is our understanding that the proposed works consist of upgrading the existing Hangar, floor slab and asphalt apron to facilitate maintenance of B727-200 and A320 aircraft. Specifically this will involve the following:

- Constructing of an addition with increased vertical clearance along the south side of the existing Hangar
- Upgrading of the floor slab within the existing Hangar under those areas to travelled by the aircraft main gear
- Upgrading of the existing asphalt apron to support the proposed Aircraft
- Possible construction of a new apron area along the west side of the existing Hangar

The later three items are to be designed for loadings generated by fully fueled B727-200 aircraft with zero payload.

3.0 SUBSURFACE INVESTIGATION AND RESULTS

A field subsurface investigation of the site was conducted under the direction of one of our technicians on July 10 and 11, 1997. The work consisted of drilling and sampling of twenty-one (21) exploratory boreholes at the locations shown on the attached Figure 2 and summarized below:

Boreholes 1 to 4	Investigation of Existing Concrete Floor Slab (Borehole depths varied form 0.1 m to 3.5 m)
Boreholes 5 to 9	Investigation of Proposed Hangar Addition (Borehole depths varied from 6.6 m to 15.4 m)
Boreholes 10 to 17	Investigation of Existing Asphalt Apron (Borehole depths varied from 2.0 m and 3.5 m)
Boreholes 18 to 21	Investigation of Possible New Asphalt Apron Area (Borehole depths varied from 2.0 m and 3.5 m)

The borings were put down using 100 mm diameter continuous flight solid stem augers powered by a truck mounted power auger machine. During drilling, Standard Penetration Tests (SPT) with associated split spoon sampling were conducted at regular intervals of depth. The results and depths of these Penetration Tests are reported as "N" values on the borehole logs. Prior to drilling at Boreholes 1 to 4, 150 mm diameter concrete cores were removed to determine the thickness of the existing concrete and at two locations (Boreholes 97-2 and 3), to permit drilling and sampling of the underlying soils.

Upon completion of drilling, boreholes were backfilled with soil cuttings and the surface made good using either concrete or asphalt as appropriate.

The location of the boreholes shown on the attached Figure 2 were established in the field by Terraprobe relative to existing on-site features and are considered accurate to within ± 1 m.

Samples obtained from the boreholes were inspected in the field immediately upon retrieval for type, texture, colour and odour. The samples obtained were sealed in airtight plastic containers and transferred to Terraprobe's laboratory where the samples were examined by a senior geotechnical engineer to verify the accuracy of the initial soil descriptions and to select appropriate samples for laboratory testing.

Geotechnical laboratory testing consisted of the determination of the natural moisture content on a number of samples and a total of 10 grain size analyses and two Atterberg limits on select samples. The results of these analyses are summarized on the attached Borehole logs with complete grain size distribution curves presented on the attached Figures 3A through 3K.

The laboratory testing also consisted of compressive strength testing on the concrete core samples retrieved from Boreholes 1, 3 and 4. The results of this testing was as follows: Borehole 1 63.8 Mpa; Borehole 3 46.1 Mpa; Borehole 4 38.8 Mpa

4.0 SUBSURFACE CONDITIONS

4.1 General

The results of the subsurface conditions within each of the individual boreholes are presented on the attached Borehole Logs. The conditions encountered within these boreholes indicate that the subsurface conditions at the site below the imposed asphalt apron and Hangar floor slab, consist primarily of stiff to hard silty clay to a depth in the order on 4.5 to 6 m, overlying a layer of clayey silt interbedded with some more cohesionless silty sand material which in turn is underlain by a very dense silt and sand till at a depth in the order of 10 m which appears to extend to bedrock. Bedrock at the site, which is presumed to shale, appears to be present at a depth in the order of 15m. There was no observed visual or olfactory indication of any hydrocarbon contamination in any of the boreholes completed during the investigation.

A brief summary of the prevalent subsurface conditions within each of the main site area is presented within in accordance with the following:

Section 4.2	Hangar Floor
Section 4.3	Hangar Addition
Section 4.4	Asphalt Apron
Section 4.5	West Grassed Area

The summary presented in the following sections is intended to correlate the available borehole data to assist in interpretation of the subsurface conditions at the site. However, the details recorded on the borehole logs must be used to reference the specific conditions at the borehole locations. It should also be noted that the soil conditions have only been confirmed at the borehole locations and conditions will vary between and beyond the boreholes.

4.2 Hangar Floor

Investigated with Boreholes 1 to 4, the subsurface conditions at this location consist primarily of a layer of concrete overlying sand fill which in turn overlies native silty clay till. The thickness of concrete at the borehole locations varied from 110 mm to 145 mm. The results of three Compressive Strength measurements gave results which varied from 38.8 to 63.8 MPa.

The thickness of the underlying sand fill was measured at 0.4 m in Borehole 2 and 0.7 m at Borehole 3. SPT 'N' values of 12 and 18 were obtained within the sand fill, indicating a compact degree of compactness.

Native silty clay till with a trace to some sand and trace gravel was encountered below the sand fill within Boreholes 2 and 3. The results of a grain size analysis performed on a sample of this material is presented on Figure 3A. Based on the results of this garin size analysis and visual assessment of the material, it is classified as "CL" under the unified soil classification system.

SPT 'N' values within the silty clay till of Boreholes 2 and 3 varied from 23 to 39, indicating a very stiff to hard consistency. Natural water contents within the silty clay samples retrieved from these boreholes varied from 12 to 28 %.

All boreholes were dry upon completion of drilling. However, localised pockets of water may be present within the upper sand fill perched on top of the silty clay layer.

4.3 Hangar Addition

Investigated with Boreholes 5 to 9, the subsurface conditions at this location consist of an upper asphalt pavement structure, overlying silty clay till to a depth in the order of 4.5 to 6 m underlain by interbedded clayey silt and silty sand which is in turn underlain by a very dense silt and sand till that was present at a depth of 10 m within

Borehole 7. This latter layer appears to extend to bedrock that was present at a depth of 15.4 m in Borehole 7.

Asphalt Pavement

The total thickness of the asphalt pavement varied from 320 mm to 370 mm which comprises roughly of 75 mm of asphalt, overlying 100mm of granular base over 150mm of Granular Subbase.

Silty Clay Till

Silty clay till with a trace to some sand and trace gravel was encountered below the pavement structure in all boreholes drilled in this area. In Borehole 9 this layer extended to the maximum depth investigated of 6.6m whereas in the remainder of the Boreholes it extended to depths of between 4.0 and 7.0 m. The results of two grain size analyses performed on samples of this layer obtained from Borehole 7 are presented on the attached Figures 3B and 3C and indicate a slightly higher clay content with depth. The results of two Atterberg limit determinations gave liquid limits of 29 and 52 %, plastic limits of 13 and 25, with associated plasticity indices of 16 and 27%. Based on these results the layer is described as silty clay with low to intermediate plasticity (CL-CI).

SPT 'N' values within this layer varied from 10 to 45 and is described as stiff to hard. However, the SPT 'N' values recorded above a depth of 4m are significantly greater than those recorded within the silty clay till below this depth.

Silty Sand

An interglacial layer of silty sand with some clay and a trace of gravel was encountered below the overlying silty clay till within Boreholes 6 and 7. This layer extended to the maximum depth investigated of 6.6m in Borehole 6 and its total thickness was therefore not determined. The estimated total thickness of this layer within Borehole 7 was 1.5m. While the layer consists primarily of silty sand with

some clay, it appears to consist of interbedded layers of cohesionless and more clay rich layers. SPT 'N' values of 21 and 26 were recorded in this layer indicating a compact degree of compactness. Some caving of this material was noted in Borehole 6.

Clayey Silt

A layer of clayey silt with some sand and trace to some gravel was encountered below the overlying silty clay till in Boreholes 5 and 8 and extended to the maximum depth investigated at these locations of 6.6m. A 1.5m thick layer of clayey silt was also encountered in Borehole 7 below the silty sand layer at a depth of 8.5m.

SPT 'N' values in this layer varied between 14 and 22 were obtained in this layer and it is described as stiff to very stiff.

Silt and Sand Till

A layer of silt and sand till with a trace to some clay and a trace of gravel was encountered at a depth of 10m in Borehole 7 and extended to bedrock at a depth of 15.4m. The results of a grain size analyses performed on a sample of this layer is presented on the attached Figures 3D.

SPT tests within this layer typically resulted in about 100 mm of advancement of the split spoon sampler per 50 blows with the SPT hammer which indicates an equivalent SPT 'N' value in the order of 150 and is described as very dense.

Groundwater

No free water was noted in any of the boreholes upon completion of drilling. Based on the observed change in soil colour from an oxidized brown to grey at a depth in the order of 4.0 to 5.5 m below existing grade, the long term water elevation of the site is expected to be at this depth also. However, it should be noted that seasonal variations in the level of the groundwater are expected.

4.4 Asphalt Apron

The pavement structure and underlying subgrade soils encountered within Boreholes 10 to 17 are summarized in the attached Table 1 and indicates the following:

Element	Main Apron (Boreholes 10 to 13)	West Apron (Boreholes 14 to 17)
Asphalt	70 to 80 mm	80 mm
Granular Base	50 to 100 mm	70 to 90 mm
Granular Subbase	190 to 250 mm	170 to 260 mm
GBE[1]	347 to 417 mm	343 to 423 mm

The results of this assessment indicates quite similar pavement structures between the main and west apron areas with average GBE's in the order of 400 mm. However, the observed subgrade soils immediately below the pavement granular materials within the main apron to the south of the existing Hangar consist primarily of native and\or recompacted native silty clay till, whereas a layer of fill consisting of a mixture of topsoil, clay and sand with a total thickness of between 0.5m and 1.0m was observed to be present within the boreholes put down within the west apron.

The results of two grain size analyses performed on samples of the granular base materials as presented on the attached Figures 3E and 3F, indicates that it conforms to the general requirements of OPSS Granular A. Similarly, the results of two grain size analyses performed on samples of the lower granular subbase materials as presented on the attached Figures 3G and 3H, indicates that it conforms to the general requirements of OPSS Granular B. Please note that comparison of these grain size curves with the gradation requirements for granular base and subbase as outlined in Transport Canada Standard AK-68-24 indicates that they do not satisfy these requirements.

[1]Granular Base Equivalency

The results of a grain size analyses performed on a sample of the underlying native silty clay till subgrade is presented on the attached Figure 3J.

Measured water contents within the subgrade soils of the main apron (Boreholes 10 to 13) are generally less than 20%, whereas those within the west apron are generally greater than 20, which probably is a reflection of the higher organic content of soils in this area of the site.

Standing water was encountered within the granular materials at Boreholes 13 and 14, which tend to indicate poor and\or blocked pavement drainage. Otherwise, the remainder of the boreholes were dry upon completion of drilling.

4.5 West Grassed Area

Investigated with Boreholes 18 to 21, the subsurface conditions within this area of the site consist of a thin layer of topsoil, overlying a layer of fill which contains topsoil which inturn overlies native silty clay till and\or recompacted inorganic silty clay fill. The thickness of the observed topsoil varied from 20 to 70mm, whereas the thickness of the fill with topsoil varied from 0.5 to 0.8 m.

The silty clay till in this area extended to the maximum depth investigated in all of the boreholes of 3.5m. In many respects this layer is similar to that encountered elsewhere on the site. The results of a grain size analyses performed on a sample of this layer is presented on the attached Figures 3K.

5.0 DISCUSSION AND RECOMMENDATIONS

5.1 General

The results of the subsurface investigation indicates that the soils at the site are generally favourable for support of the proposed Hangar addition and related apron areas. However, the thickness of the existing Hangar floor slab and asphalt apron are insufficient to support the proposed B727-200 aircraft and will require total reconstruction. Appropriate geotechnical design recommendations for each of these elements and the proposed new asphalt apron are presented in the following sections in accordance with the following:

5.2 Hangar Floor Slabs

5.3 Hangar Addition Foundations

5.4 Asphalt Apron

The following discussion and recommendations are based on the factual data obtained from this investigation and are intended for use by the design engineer only. Contractors bidding on or conducting work associated with this project, should make their own assessment of the factual data to assess its effect and adequacy to evaluate their proposed construction methods and scheduling.

5.2 Hangar Floor Slabs

Based on the coring and drilling results of the existing Hangar floor slab, it consists primarily of 125 mm of concrete on top of 300 mm of sand fill on top of the native silty clay till subgrade. Assessment of this floor using the following parameters indicates that it is insufficient to support the loading of B727-200 aircraft.

Concrete flexural strength	4.8 Mpa (700 psi)
Subgrade CBR	10
Modulus of Subgrade Reaction (k)	54 kPa per m (200 psi per in)

In order to support the proposed B727-200 aircraft loads, the following slab on grade floor slab is recommended under those areas of the Hangar to be travelled by the aircraft main gear:

300 mm 35 Mpa Concrete

300 Granular A basecourse

The above design assumes that the underlying subgrade is stripped of all existing organic and\or soft zones to expose native, undisturbed silty clay till subgrade. The subgrade should be proof rolled and compacted to achieve at least 95% of its Standard Proctor Maximum Dry Density (SPMDD).

The ability of the existing floor withstand other imposed loads beyond those areas scheduled for reconstruction may be based on the aforementioned design parameters.

5.3 Hangar Addition Foundations

Based on the observed subsurface conditions within the area of the proposed Hangar addition (Boreholes 5 to 9 of Appendix A), the use of conventional spread footings or large diameter caissons to a depth 11 to 12 m below existing grade are considered most appropriate.

Conventional spread footings up to 3.0m in size and not deeper than 2.0m below existing grade may be designed for an allowable bearing pressure of 350 kPa, provided they are formed wholly within native, undisturbed silty clay till with an undrained shear strength of at least 200 kPa as confirmed using a pocket penetrometer during excavation. Expected total settlements at these loads should not exceed 20mm with differential settlement limited to half of this amount.

In light of the frost susceptible nature of the on site soils, all footings should be provided with a minimum of 1.2m of soil or equivalent cover.

Vertical caissons up to 1.5m in diameter which terminate not less than 1.0m into the underlying very dense silt and sand till may be designed for an allowable end bearing pressure of 1000 kPa and allowable shaft skin friction of 25 kPa. However, to mobilise these allowable capacities, it will very important to ensure that the base of the caisson is clean and dry in advance of concreting. Total caisson settlements, excluding elastic pile compression, should be of a similar magnitude to that indicated for the spread footing alternative.

Lateral movements and structural requirements of installed caissons to resist lateral loads may be based on an assumed horizontal Modulus of subgrade reaction of 120 MN/m^3.

Excavations for the spread footing alternative should be relatively straightforward as they are expected to be completed within dry and stable soils. Caisson excavations are also expected to be relatively straightforward and to remain stable and mostly free of water provided they are backfilled a short time after excavation. However, some localised seepage and sloughing may occur if silty sand materials similar to that observed within Boreholes 6 and 7 are encountered. Accordingly, the contractor completing these excavations should have temporary casing on hand when completing the works should it prove necessary to maintain the integrity of the excavation.

All footing and caisson excavations should be inspected by a person experienced in the geotechnical aspects of foundation design and construction, to ensure that the required bearing stratums outlined within have been reached and the footing prepared and concrete placed following generally accepted procedures.

Please note that the manned entry of all personnel into excavations must be completed in accordance with the Occupational Health and Safety Act and Regulations for construction projects in Ontario.

5.4 Asphalt Apron

Based on an assumed Subgrade Bearing Strength of 65 kN which is believed applicable to a properly prepared subgrade formed in the low plasticity silty clay soils present at the site, a pavement structure with a GBE of 100 cm is required to support the proposed aircraft loadings. The existing asphalt apron with an estimated GBE in the order of 400mm is significantly below the required GBE and grossly unsuitable for support of B727-200 aircraft. Also, in light of the overall thin nature of the underlying granular layers, observed presence of undesirable organic rich soils in the western half of the apron and poor pavement drainage, it is considered to be unsuitable for upgrading with an overlay and total reconstruction is recommended. Suitable pavement structures for both OPSS and Transport Canada based materials are presented below and may be adopted either for reconstruction of the existing apron area or for new construction of an apron to the west of the existing Hangar.

Construction with OPSS Materials

Asphalt	HL3 Surface Course	50 mm	
	HL 8 Basecourse	150 mm (2 * 75mm lifts)	
		200 mm	200 mm
Granular 'A' Base Course			300 mm
Granular 'B' Sub-Base			450 mm
		Total	950 mm
		GBE	1,001 mm

Construction with Transport Canada Materials(AK-68-24)

Asphalt			
	Surface Course	50 mm	
	Lower Course	150 mm (2 * 75mm lifts)	
		200 mm	200 mm
Granular Base Course			300 mm
Granular Sub-Base			300 mm
		Total	800 mm
		GBE	1,000 mm

If acceptable, the use of OPSS materials are recommended because of their local availability. Granular materials should be compacted to 100 % of its SPMDD. Asphalt materials should be compacted to achieve at least 97 % of its Maximum Marshall Density.

Subject to further on-site quality control testing, the granular materials under the existing asphalt apron are anticipated to be suitable for use as OPSS Granular 'B' base course provided they do not become mixed with the underlying subgrade soils. However, they are not expected to satisfy Transport Canada's gradation requirements for sub-base(or base).

The long-term performance of the pavement structure is highly dependent upon the subgrade support conditions. Accordingly it is recommended that all existing organic materials and\or soft fill within the footprint of all proposed apron areas be removed to expose native and\or well compacted silty clay till. Particular attention should be paid to this detail within the existing west apron area and within the proposed new apron area to the west of the Hangar. Where required, local inorganic silty clay till may be utilised to obtain the required final grade, provided it is placed in thin lifts not exceeding 150 mm and compacted to a minimum of 95 percent SPMDD. Particular attention should also be given to subgrade preparation above any utility trenches that may be encountered under the existing apron or proposed as part of the upcoming work.

The pavement structure should be provided with an appropriate sub-drain system which will effectively remove any water which enters the pavement structure.

Stringent construction control procedures should be maintained during subgrade preparation to ensure that uniform subgrade moisture and density conditions are achieved as much as is practically possible. Also, immediately prior to placement of

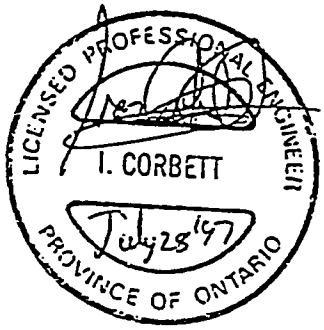
the granular courses, the subgrade should be proof rolled with a heavy rubber tired vehicle (such as a grader) to help detect any soft spots that may be present..

6.0 CLOSURE

We trust that this report is sufficient for your present requirements. If you have any questions or require clarification on any matters, please do not hesitate to contact us.

Respectfully submitted,

Terraprobe Limited



Ivan Corbett, P.Eng.

Janice Nunney, B.Eng.Sc.

Brampton Office

IC\ic

Project 97\255-a.rpt

TABLES

Terraprobe Limited

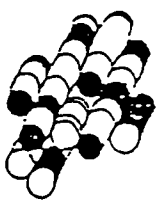


Table 1
L.B.P. I.A - Hanger 6 Addition
Summary of Observed Asphalt Apron Structure

Borehole	Asphalt Thickness (mm)	Granular Base Thickness (mm)	Granular Subbase Thickness (mm)	Subgrade Soil	GBE (mm)
MAIN APRON					
10	80	90	250	silty clay till (N=18)	417
11	70	60	220	silty clay till (N=18)	347
12	80	50	190	silty clay till (N=6)	337
13	70	100	200	silty clay till (N=13)	373
WEST APRON					
14	80	70	170	clay & topsoil (N=7)	343
15	80	90	260	clay & topsoil (N=7)	423
16	80	90	240	clay & topsoil (N=13)	410
17	80	70	250	clay & topsoil (N=9)	397

GBE Granular Base Equivalency

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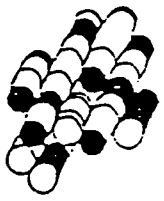
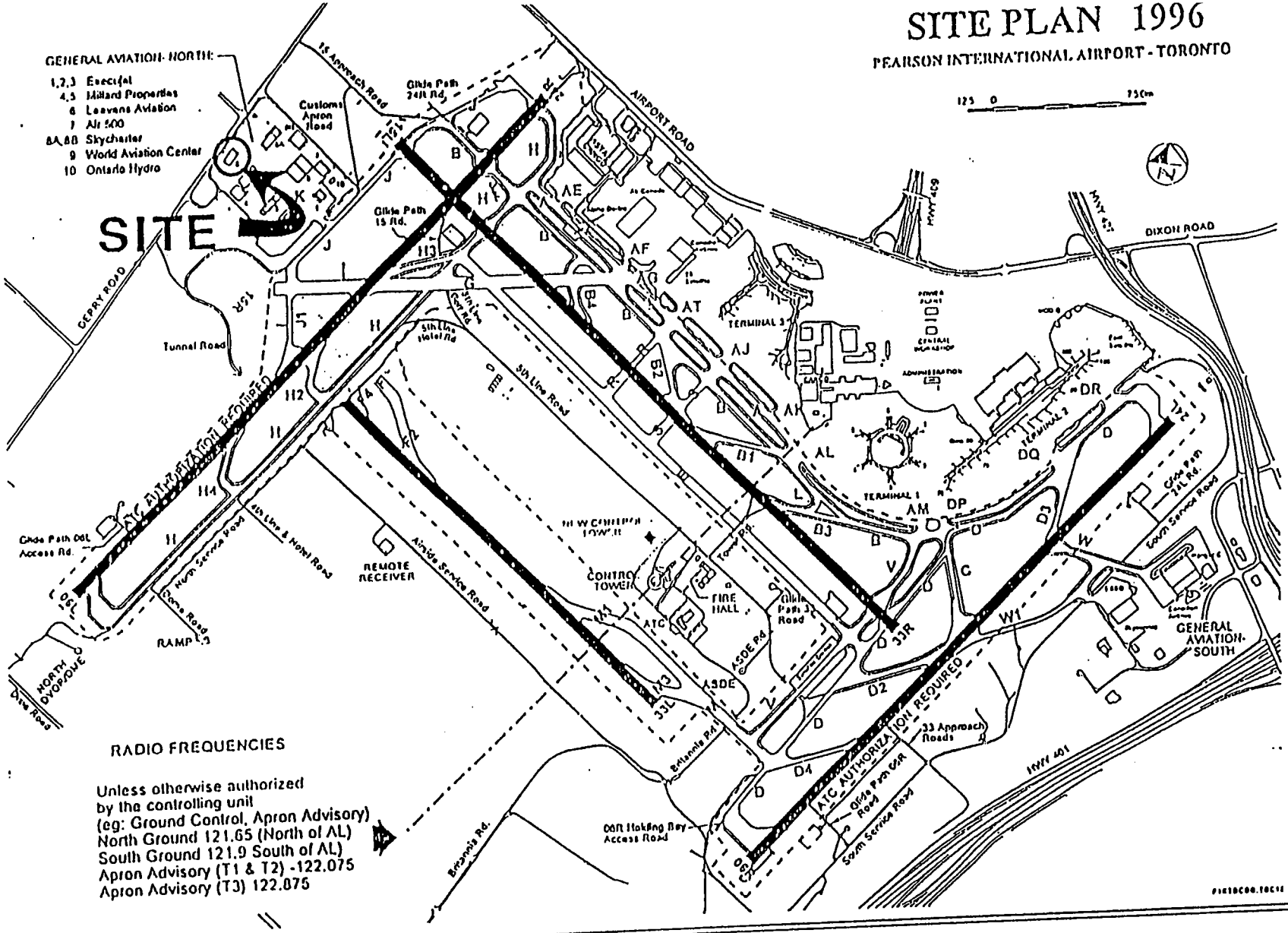
FIGURES

Terraprobe Limited



SITE PLAN 1996

PEARSON INTERNATIONAL AIRPORT - TORONTO

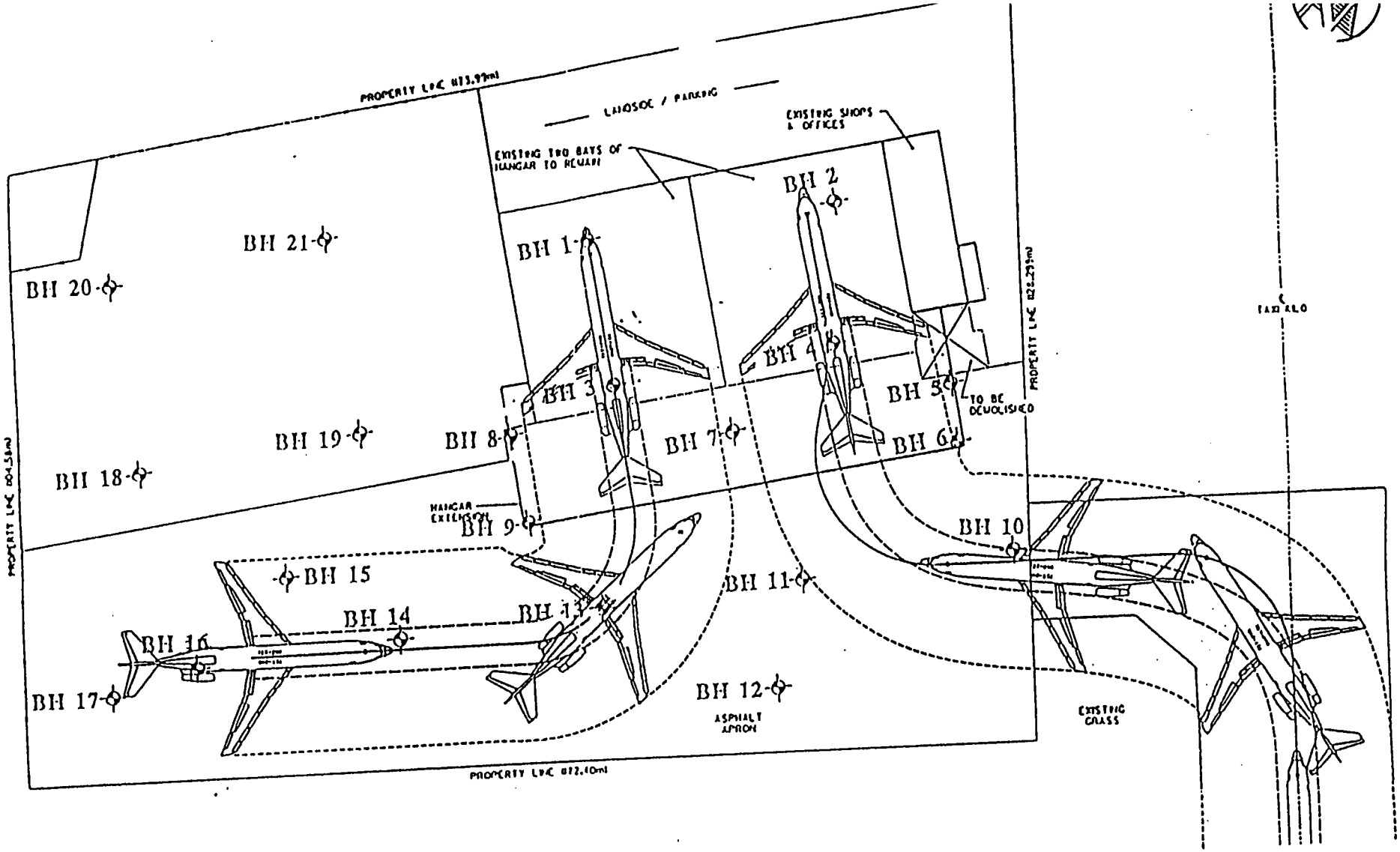


SITE LOCATION PLAN

FIGURE 1

File No. 97255

TERRAPROBE



BOREHOLE LOCATION PLAN

FIGURE 2

File No. 97255

TERRAPROBE

Terraprobe

HYDROMETER ANALYSIS
TEST REPORT

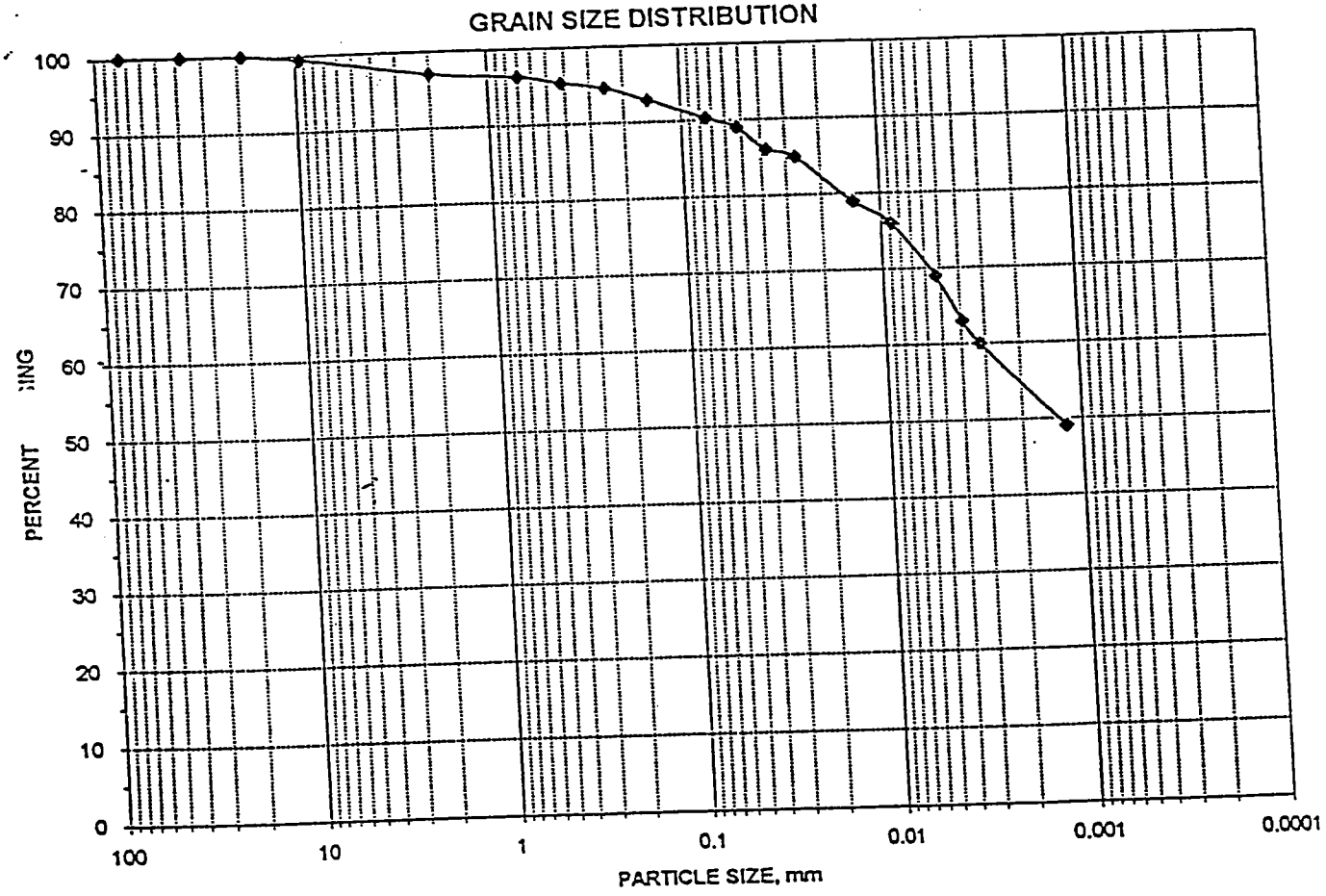
PROJECT : Hangar 6 Addition
LOCATION: Pearson Airport, Ont.
CLIENT : Hatch - Mott Mac Donald

FILE No.: 97255

SA DATE : July 11,1997
BH: 2
SA No. 1
SA DEPTH: 0.3-0.8 m

SAMPLE DESCRIPTION: SILTY CLAY, trace sand,trace gravel (TILL)

GRAIN SIZE DISTRIBUTION



M.I.T. SYSTEM	COARSE MEDIUM FINE GRAVEL SIZE	COARSE MEDIUM FINE SAND SIZE	SILT SIZE CLAY SIZE FINE GRAINED

UNIFIED STEM	COARSE FINE GRAVEL SIZE	COARSE MEDIUM FINE SAND SIZE	SILT OR CLAY SIZE FINE GRAINED

Figure 3A

Terraprobe

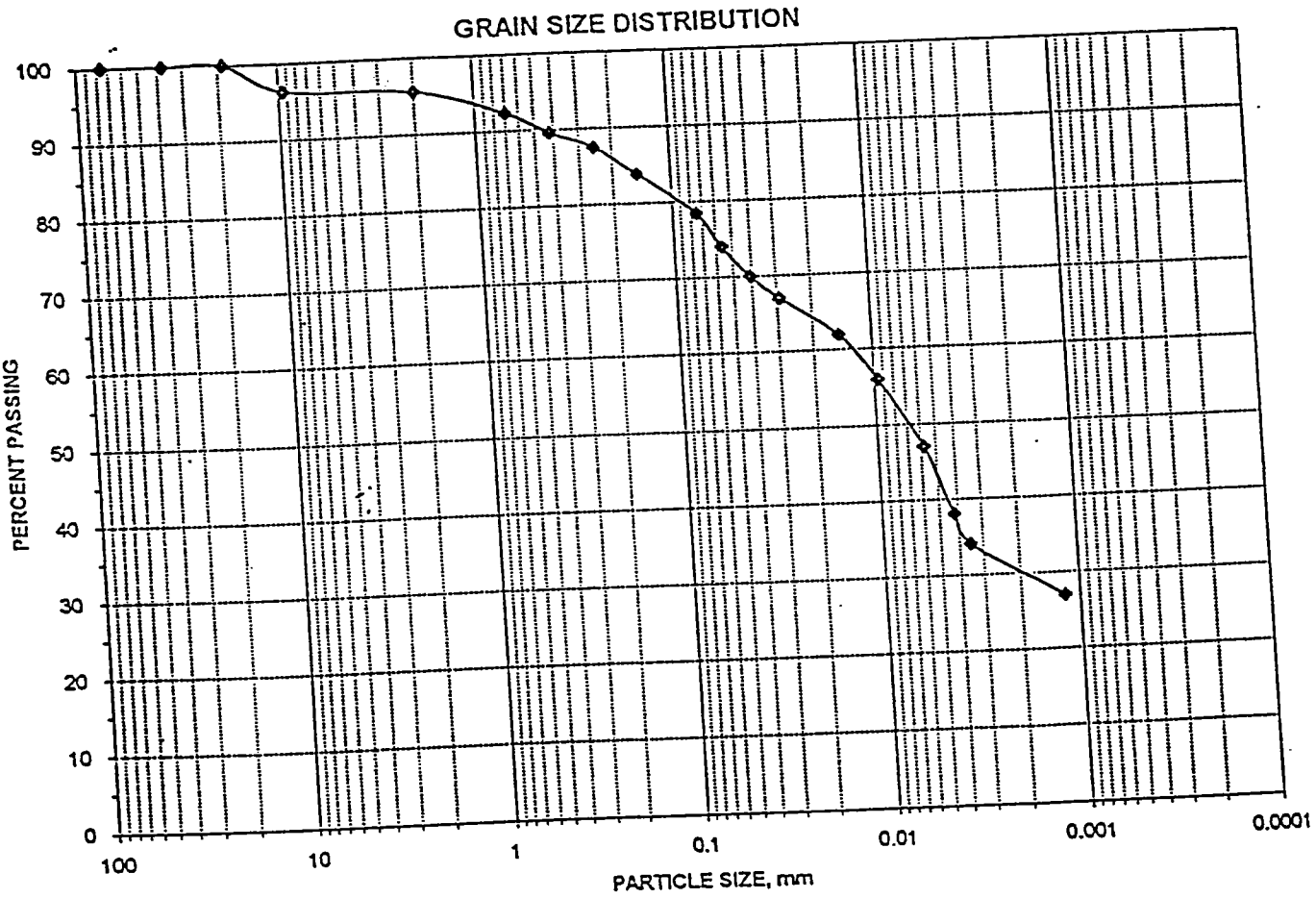
HYDROMETER ANALYSIS
TEST REPORT

JECT : Hangar 6 Addition
ATION: Pearson Airport, Ont.
IENT : Hatch - Mott Mac Donald

FILE No.: 97255

SA DATE : July 11,1997
BH: 7
SA No. 2
SA DEPTH: 0.8-1.2 m

MPLE DESCRIPTION: SILTY CLAY, some sand, trace gravel (TILL)



M.I.T. SYSTEM	COARSE MEDIUM FINE GRAVEL SIZE	COARSE MEDIUM FINE SAND SIZE	SILT SIZE / FINE GRAINED	CLAY SIZE

ED / EM	COARSE FINE GRAVEL SIZE	COARSE MEDIUM FINE SAND SIZE	SILT OR CLAY SIZE FINE GRAINED

Figure 38

Terraprobe

HYDROMETER ANALYSIS TEST REPORT

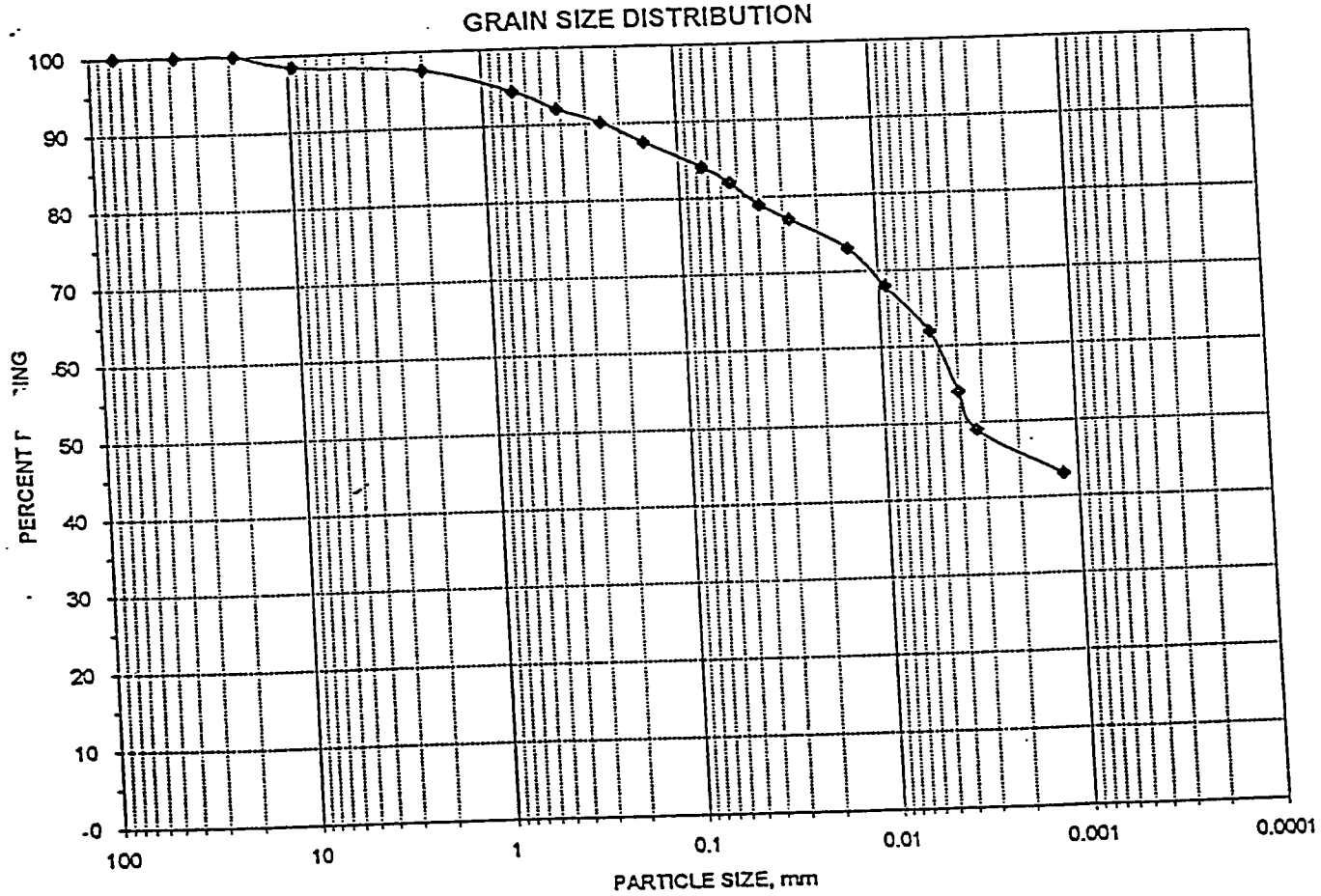
ROJECT : Hangar 6 Addition
)CATION: Pearson Airport, Ont.
CLIENT : Hatch - Mott Mac Donald

FILE No.: 97255

SA DATE : July 11,1997
BH: 7
SA No. 7
SA DEPTH: 6.1-6.6 m

AMPLE DESCRIPTION: SILTY CLAY, some sand, trace gravel

GRAIN SIZE DISTRIBUTION



M.I.T. SYSTEM	COARSE MEDIUM FINE GRAVEL SIZE	COARSE MEDIUM FINE SAND SIZE	SILT SIZE CLAY SIZE FINE GRAINED

FIED TEM	COARSE FINE GRAVEL SIZE	COARSE MEDIUM FINE SAND SIZE	SILT OR CLAY SIZE FINE GRAINED

Figure 3C

Terraprobe

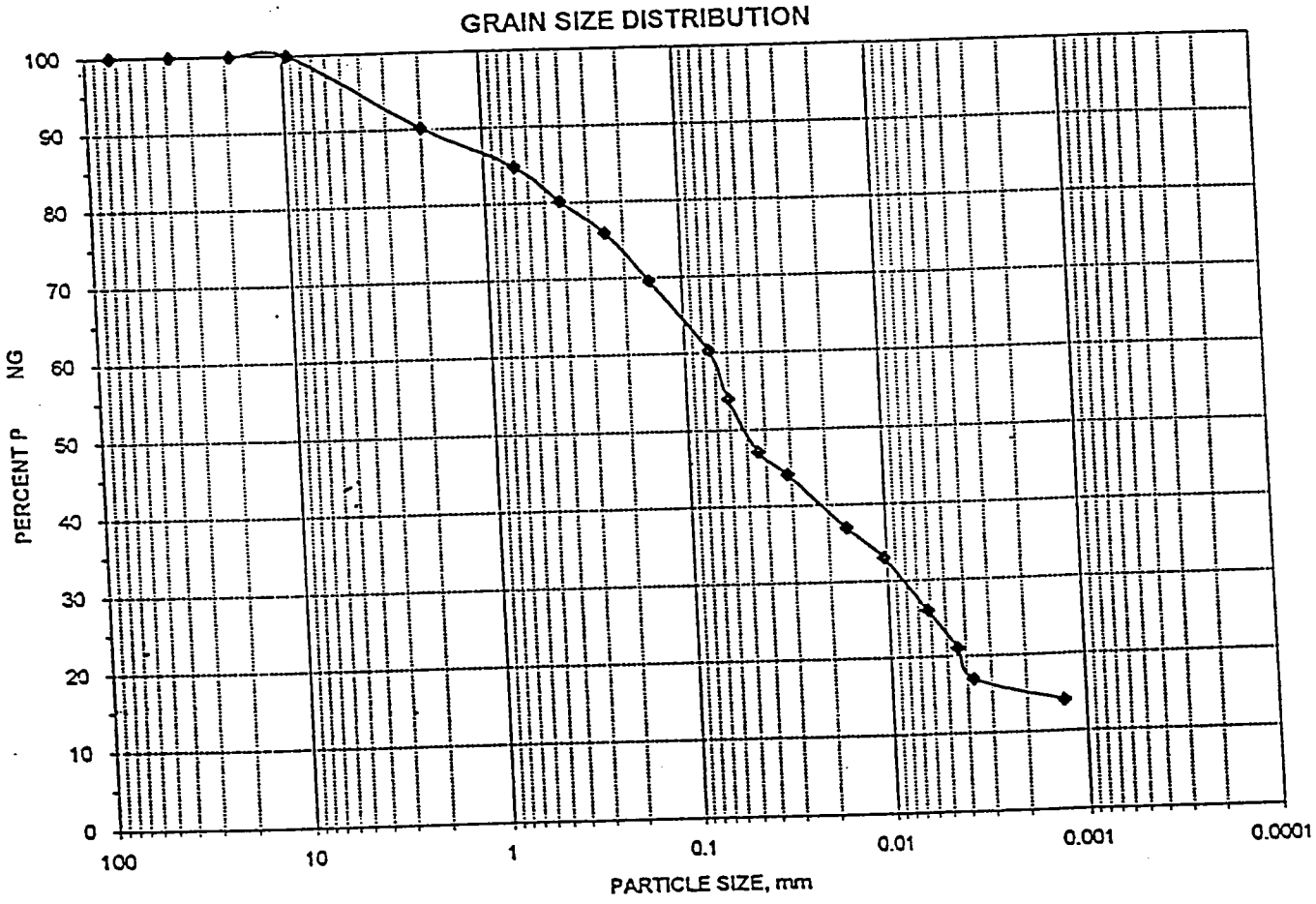
HYDROMETER ANALYSIS
TEST REPORT

PROJECT : Hangar 6 Addition
LOCATION: Pearson Airport, Ont.
CLIENT : Hatch - Mott Mac Donald

FILE No.: 97255

SA DATE : July 11,1997
BH: 7
SA No. 10
SA DEPTH: 10.7-11.1 m

SAMPLE DESCRIPTION: SANDY SILT, trace gravel



M.I.T. SYSTEM	COARSE MEDIUM FINE GRAVEL SIZE	COARSE MEDIUM FINE SAND SIZE	SILT SIZE CLAY SIZE FINE GRAINED

IFIED YSTEM	COARSE FINE GRAVEL SIZE	COARSE MEDIUM FINE SAND SIZE	SILT OR CLAY SIZE FINE GRAINED

Figure 30

Terraprobe

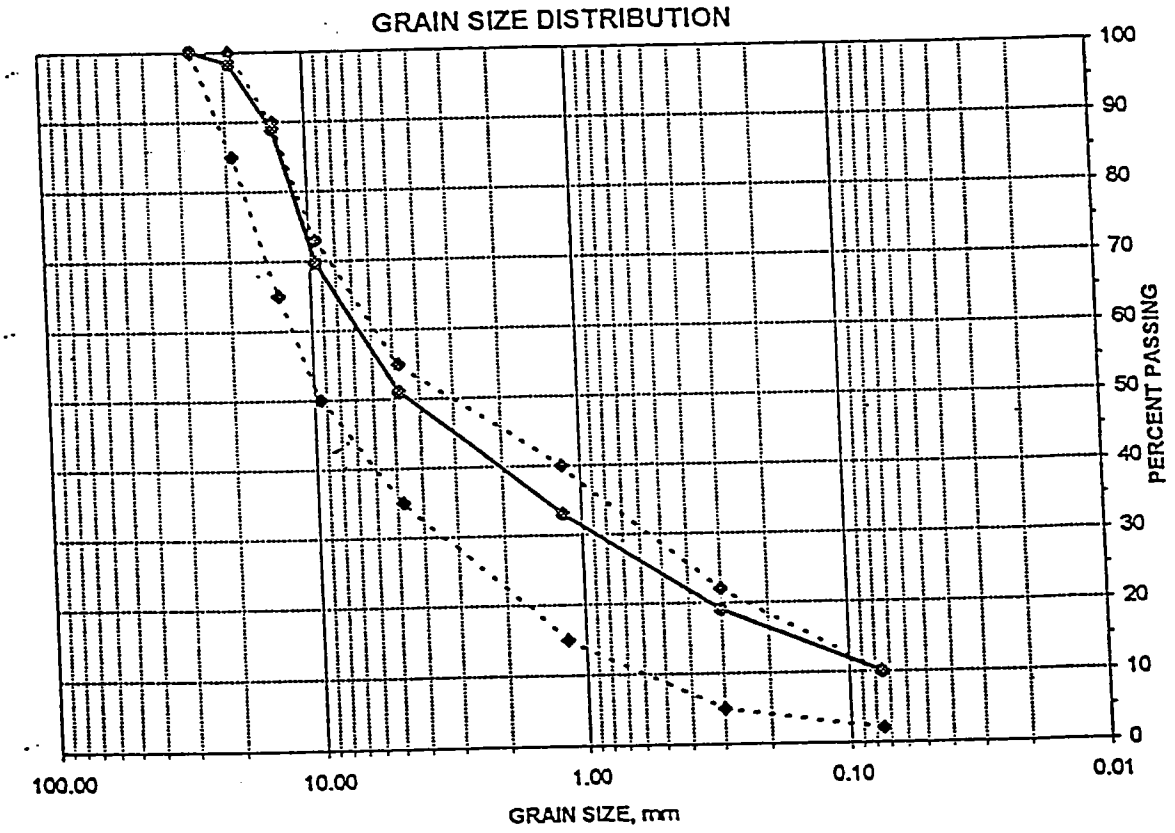
SIEVE GRADATION ANALYSIS
TEST RESULTS

PROJECT : Hangar 6 Addition
LOCATION: Pearson Airport
CLIENT : Hatch - Mott Mac Donald

FILE NO.: 97255
LAB NO.: 2670g

SAMPLE DATE: July 11,1997
SAMPLED BY : Janice Nunney

SAMPLE MATERIAL: Gran. 'A'
SAMPLE SOURCE : Borehole 11



SIEVE SIZE mm	PERCENT PASSING		SAMPLE	GRANULAR 'A' OPSS FORM 1010 MARCH 1994
	SPECIFIED MIN.	SPECIFIED MAX.		
26.5	100	100	100	NOTES:
19.0	85	100	98	
13.2	65	90	89	Location:
9.5	50	73	70	
4.75	35	55	51	
1.18	15	40	33	* Denotes not meeting specifications
0.300	5	22	19	** Where the aggregate is from a Quarry or slag source
0.075	2	10	10	

Figure 3E

Terraprobe

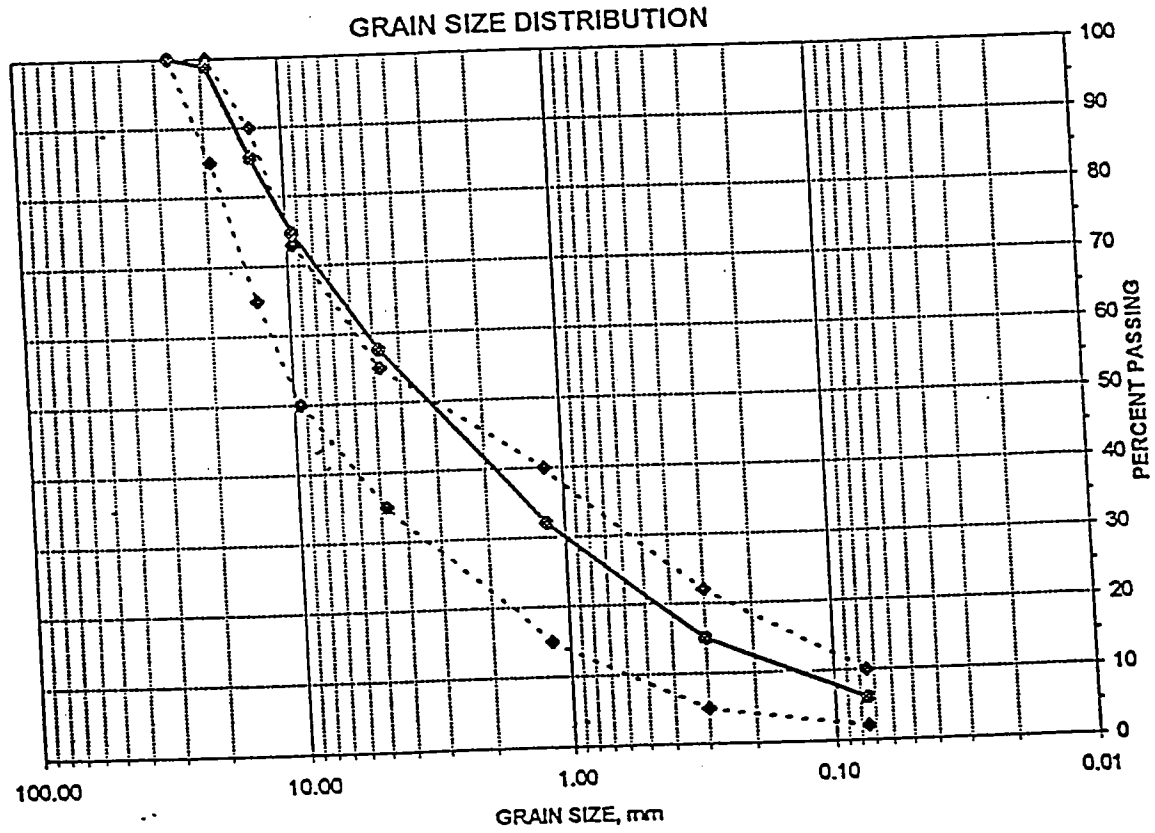
SIEVE GRADATION ANALYSIS
TEST RESULTS

PROJECT : Hangar 6 Addition
LOCATION: Pearson Airport
CLIENT : Hatch - Mott Mac Donald

FILE NO.: 97255
LAB NO.: 2670h

SAMPLE DATE: July 11,1997
SAMPLED BY : Janice Nunney

SAMPLE MATERIAL: Gran. 'A'
SAMPLE SOURCE : Borehole 16



SIEVE SIZE mm	PERCENT PASSING		SAMPLE	GRANULAR 'A' OPSS FORM 1010 MARCH 1994
	SPECIFIED MIN.	SPECIFIED MAX.		
26.5	100	100	100	NOTES:
19.0	85	100	99	
13.2	65	90	86	Location:
9.5	50	73	75*	
4.75	35	55	58*	
1.18	15	40	32	* Denotes not meeting specifications
0.300	5	22	15	** Where the aggregate is from a Quarry or slag source
0.075	2	10	6	

Figure 3 F

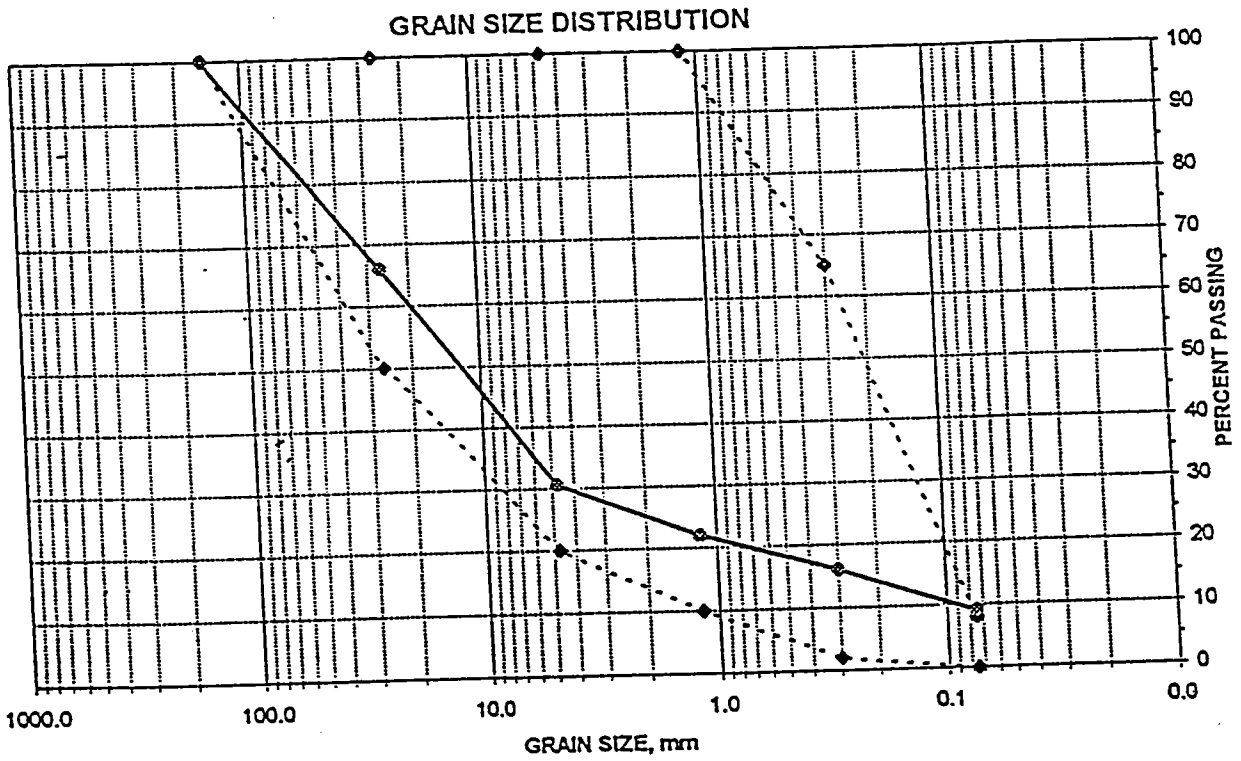
Terraprobe

SIEVE GRADATION ANALYSIS
TEST RESULTS

PROJECT : Hangar 6 Addition
LOCATION: Pearson Airport
CLIENT : Hatch - Mott Mac Donald

FILE NO. : 97255
LAB NO.: 2670i
SAMPLE DATE: July 11,1997
SAMPLED BY: Janice Nunney

SAMPLE MATERIAL: Gran.'B'
SAMPLE SOURCE: Borehole 11



SIEVE SIZE mm	PERCENT PASSING			GRANULAR 'B' OPSS TYPE 1
	SPECIFIED		SAMPLE	
	MIN.	MAX.		
150.0	100	100	100	NOTES:
26.5	50	100	66	
4.75	20	100	31	
1.180	10	100	22	
0.300	2	65	16	
0.075	0	8	9*	*denotes not meeting specifications

Figure 3G

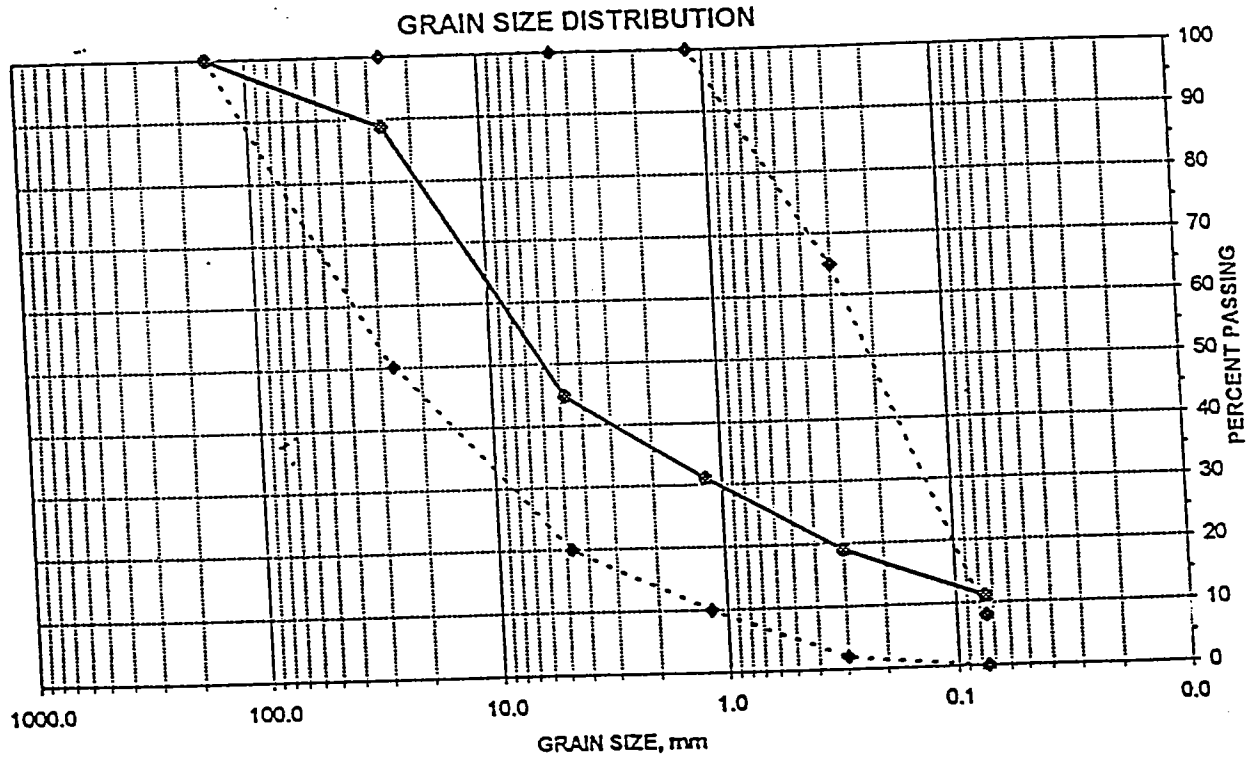
Terraprobe

SIEVE GRADATION ANALYSIS
TEST RESULTS

ROJECT : Hangar 6 Addition
OCATION: Pearson Airport
LIENT : Hatch - Mott Mac Donald

FILE NO. : 97255
LAB NO.: 2670j
SAMPLE DATE: July 11,1997
SAMPLED BY: Janice Nunney

SAMPLE MATERIAL: Gran.'B'
SAMPLE SOURCE: Borehole 16



SIEVE SIZE mm	PERCENT PASSING			GRANULAR 'B' OPSS TYPE 1
	SPECIFIED		SAMPLE	
	MIN.	MAX.		
150.0	100	100	100	NOTES:
26.5	50	100	89	
4.75	20	100	45	
1.180	10	100	31	
0.300	2	65	19	
0.075	0	8	11*	*denotes not meeting specifications

Figure 3 H

Terraprobe

HYDROMETER ANALYSIS
TEST REPORT

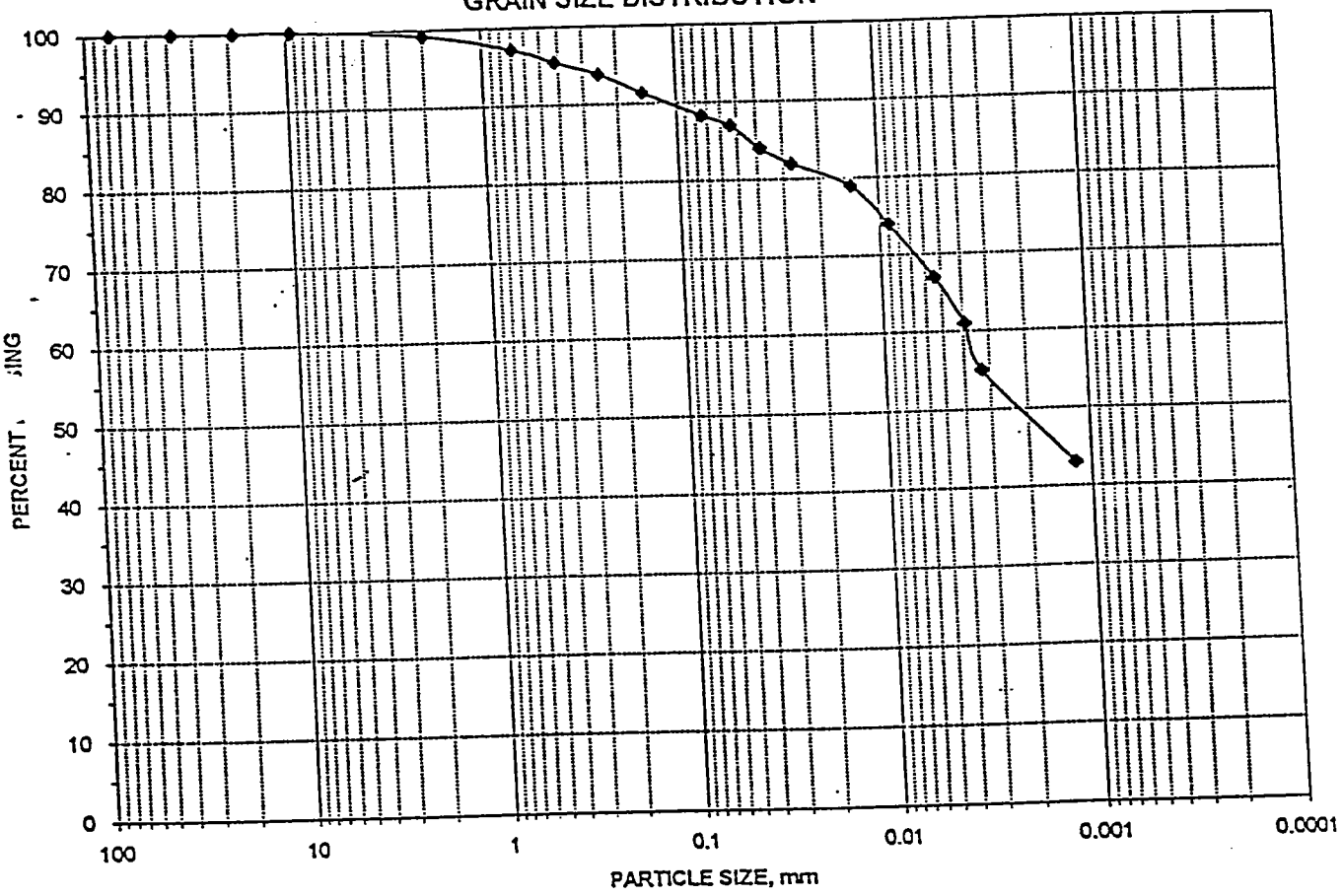
PROJECT : Hangar 6 Addition
LOCATION: Pearson Airport, Ont.
CLIENT : Hatch - Mott Mac Donald

FILE No.: 97255

SA DATE : July 11,1997
BH: 14
SA No. 2
SA DEPTH: 0.8-1.2 m

SAMPLE DESCRIPTION: SILTY CLAY, trace sand, occasional gravel

GRAIN SIZE DISTRIBUTION



M.I.T. SYSTEM	COARSE MEDIUM FINE GRAVEL SIZE	COARSE MEDIUM FINE SAND SIZE	SILT SIZE CLAY SIZE FINE GRAINED

'NIFIED YSTEM	COARSE FINE GRAVEL SIZE	COARSE MEDIUM FINE SAND SIZE	SILT OR CLAY SIZE FINE GRAINED

Figure 3 J

Terraprobe

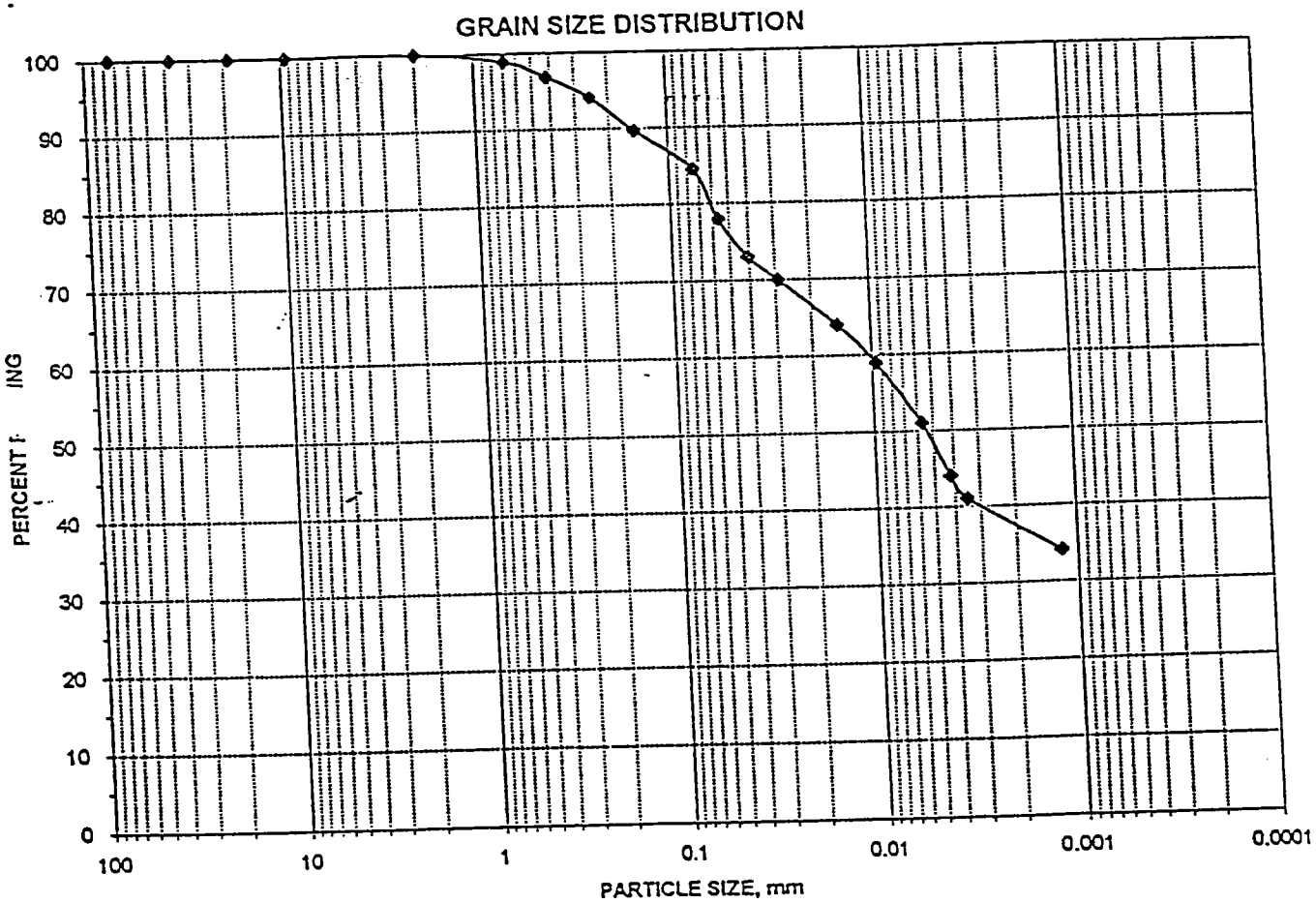
HYDROMETER ANALYSIS
TEST REPORT

PROJECT : Hangar 6 Addition
LOCATION: Pearson Airport, Ont.
CLIENT : Hatch - Mott Mac Donald

FILE No.: 97255

SA DATE : July 11,1997
BH: 20
SA No. 2
SA DEPTH: 0.8-1.2 m

SAMPLE DESCRIPTION: SILTY CLAY,some sand



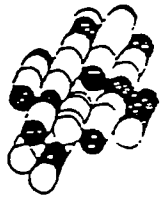
M.I.T. SYSTEM	COARSE MEDIUM FINE GRAVEL SIZE	COARSE MEDIUM FINE SAND SIZE	SILT SIZE / CLAY SIZE FINE GRAINED

'NIFIED SYSTEM	COARSE FINE GRAVEL SIZE	COARSE MEDIUM FINE SAND SIZE	SILT OR CLAY SIZE FINE GRAINED

Figure 3K

APPENDIX "A"

Terraprobe Limited



Terraprobe

LOG OF BOREHOLE 1

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 11, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

SOIL PROFILE			SAMPLES			ELEVATION SCALE	PENETRATION RESISTANCE PLOT 20 40 60 80 100 / SHEAR STRENGTH kPa: O UNCONFINED, + FIELD VANE, • QUICK TRIAXIAL, X LAB VANE, 20 40 60 80 100	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) 10 20 30	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
ELEV / DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	'N' VALUES					
	Concrete Surface									Compressive Strength of Concrete is 63.6 MPa
0.0	140mm Concrete									
0.2	End of Borehole									

NOTES:

Terraprobe

LOG OF BOREHOLE 2

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 11, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	SOIL PROFILE: DESCRIPTION	STRAT PLOT	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUES	ELEVATION SCALE	PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH kPa (O UNCONFINED, ● QUICK TRIAXIAL, + FIELD VANE, × LAB VANE) (20 40 60 80 100)	PLASTIC LIMIT w_p / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
	Concrete Surface									
0.0	110mm Concrete									
0.1	Compact Brown moist SAND FILL		1	SS	12			o		GR SN SL CL 2 8 35 55
0.5	Stiff Brown moist SILTY CLAY trace to some sand, trace gravel (TILL)		2	SS	27			o		
			3	SS	25					
	hard		4	SS	39					
	very stiff		5	SS	26					
3.5	End of Borehole									

NOTES:
Borehole was open and dry on completion of drilling.

Terraprobe

LOG OF BOREHOLE

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 11, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	DESCRIPTION	STRAT PLOT	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUES	ELEVATION SCALE	PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH kPa: O UNCONFINED, – FIELD VANE, • QUICK TRIAXIAL, < LAB VANE (20 40 60 80 100)	PLASTIC LIMIT w_p / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
	Concrete Surface									
0.0	135mm Concrete									Compressive Strength of Concrete is 46.1 MPa
0.1	Compact Brown moist SAND FILL		1	SS	18					
0.8	Very Stiff Brown moist SILTY CLAY trace to some sand, trace gravel (TILL)		2	SS	23			o		
			3	SS	26			o		
	hard		4	SS	32					
			5	SS	39					
3.5	End of Borehole									

NOTES:
Borehole was open and dry on completion of drilling.

Terraprobe

LOG OF BOREHOLE 4

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 11, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	DESCRIPTION	STRAT PLOT	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUES	ELEVATION SCALE	PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH kPa: O UNCONFINED, + FIELD VANE, • QUICK TRIAXIAL, > LAB VANE (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
	Concrete Surface									
0.0	110mm Concrete									Compressive Strength of Concrete is 38.6 MPa
0.1	End of Borehole									

NOTES:

Terraprobe

LOG OF BOREHOLE 5

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 10, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	DESCRIPTION	STRAT PLOT	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: 'N' VALUES	ELEVATION SCALE	PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH kPa (○ UNCONFINED, + FIELD VANE, ● QUICK TRIAXIAL, × LAB VANE) (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
	Asphalt Surface									
0.0	70mm Asphalt									
0.1	130mm Granular Base 120mm Granular Subbase									
0.3	Hard Brown damp SILTY CLAY trace to some sand (TILL)		1	SS	14			c o		
			2	SS	32					
	trace gravel		3	SS	34					
	very stiff		4	SS	29					
			5	SS	24					
4.0	Stiff to Very Stiff Grey CLAYEY SILT some sand, trace to some gravel		6	SS	14					
			7	SS	17					
6.6	End of Borehole									

NOTES:
Borehole was caving at 6.1m and water level at 6.1m depth on completion of drilling.

Terraprobe

LOG OF BOREHOLE 6

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 10, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	SOIL PROFILE: DESCRIPTION	STRAT PLOT	SAMPLES: NUMBER	TYPE	"N" VALUES	ELEVATION SCALE
	Asphalt Surface					
0.0	90mm Asphalt					
0.1	100mm Granular Base 170mm Granular Subbase					
0.4	Very Stiff to Hard Brown damp SILTY CLAY trace to some sand (TILL)		1	SS	15	
			2	SS	31	
			3	SS	30	
	trace gravel, moist		4	SS	43	
			5	SS	23	
	stiff, grey		6	SS	14	
5.5	Compact Grey SILTY SAND some clay, trace gravel		7	SS	26	
6.6	End of Borehole					

PENETRATION RESISTANCE PLOT 20 40 60 80 100
SHEAR STRENGTH kPa
O UNCONFINED + FIELD VANE
● QUICK TRIAXIAL × LAB VANE
20 40 60 80 100

PLASTIC LIMIT w_P | NATURAL MOISTURE CONTENT w | LIQUID LIMIT w_L
WATER CONTENT (%)
10 20 30

ORGANIC VAPOUR (ppm)

STANDPIPE INSTALLATION OR REMARKS

NOTES:
Borehole was caving at 6.1m depth and dry on completion of drilling.

Terraprobe

LOG OF BOREHOLE 7

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 10, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	DESCRIPTION	STRAT PLOT	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUES	ELEVATION SCALE	PENETRATION RESISTANCE PLOT / SHEAR STRENGTH kPa (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
	Asphalt Surface									
0.0	70mm Asphalt									
0.1	90mm Granular Base 160mm Granular Subbase									
0.3	Very Stiff to Hard Brown moist --- trace gravel		1	SS	14					
			2	SS	26					GR SN SL CL 4 22 44 30
			3	SS	27					
	SILTY CLAY trace to some sand (TILL)		4	SS	27					
			5	SS	45					
	--- grey, stiff		6	SS	15					
			7	SS	14				52.1	GR SN SL CL 1 5 35 49
7.0	Compact Grey SILTY SAND some clay, trace gravel		8	SS	21					

NOTES:
Borehole was open and dry on completion of drilling.

Terraprobe

LOG OF BOREHOLE 7

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 10, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	DESCRIPTION	STRAT PLOT	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUES	ELEVATION SCALE
	SILTY SAND					
8.5	Very Stiff CLAYEY SILT some sand, trace to some gravel		9	SS	22	
10.0	Very Dense Grey Dry SILT AND SAND trace to some clay, trace gravel (TILL)		10	SS	50 /13cm	
			11	SS	50 /10cm	
			12	SS	50 /10cm	
	- some shale fragments		13	SS	50 /15cm	
15.4	End of Borehole upon Split Spoon Refusal (PROBABLE BEDROCK)					

PENETRATION RESISTANCE PLOT: 20 40 60 80 100
SHEAR STRENGTH kPa
O UNCONFINED + FIELD VANE
● QUICK TRIAXIAL × LAB VANE
20 40 60 80 100

PLASTIC LIMIT w_P | NATURAL MOISTURE CONTENT w | LIQUID LIMIT w_L
WATER CONTENT (%)
10 20 30

ORGANIC VAPOUR (ppm)

STANDPIPE INSTALLATION OR REMARKS

GR SN SL CL
4 36 45 15

NOTES:
Borehole was open and dry on completion of drilling.

Terraprobe

LOG OF BOREHOLE 6

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 10, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	DESCRIPTION	STRAT PLOT	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUES	ELEVATION SCALE
	Asphalt Surface					
0.0	110mm Asphalt					
0.1	90mm Granular Base 150mm Granular Subbase					
0.3	Firm to Stiff Brown moist SILTY CLAY FILL some sand, some gravel		1	SS	16	
			2	SS	6	
1.4	Very Stiff SILTY CLAY trace to some sand, trace gravel (TILL)		3	SS	22	
			4	SS	26	
			5	SS	27	
	grey (No Sample Recovery)		6	SS	17	
5.5	Stiff grey CLAYEY SILT some sand, trace to some gravel		7	SS	15	
6.6	End of Borehole					

PENETRATION RESISTANCE PLOT 20 40 60 80 100
SHEAR STRENGTH kPa
○ UNCONFINED + FIELD VANE
● QUICK TRIAXIAL × LAB VANE
20 40 60 80 100

PLASTIC LIMIT w_P | NATURAL MOISTURE CONTENT w | LIQUID LIMIT w_L
WATER CONTENT (%)
10 20 30

ORGANIC VAPOUR (ppm)

STANDPIPE INSTALLATION OR REMARKS

NOTES:
Borehole was open and dry on completion of drilling.

Terraprobe

LOG OF BOREHOLE 3

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 10, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

SOIL PROFILE			SAMPLES			ELEVATION SCALE	PENETRATION RESISTANCE PLOT 20 40 60 80 100 / SHEAR STRENGTH kPa ○ UNCONFINED ● QUICK TRIAXIAL + FIELD VANE × LAB VANE 20 40 60 80 100	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L WATER CONTENT (%) 10 20 30	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
ELEV / DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	'N' VALUES					
	Asphalt Surface									
0.0	90mm Asphalt									
0.1	130mm Granular Base									
	250mm Granular Subbase									
0.6	30mm Topsoil									
0.5	Very Stiff Brown moist		1	SS	10					
			2	SS	25					
			3	SS	23					
	SILTY CLAY trace gravel, trace to some sand (TILL)		4	SS	21					
			5	SS	24					
	stiff, grey		6	SS	13					
			7	SS	13					
6.6	End of Borehole									

NOTES:
Borehole was open and dry on completion of drilling.

Terraprobe

LOG OF BOREHOLE 16

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 10, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	DESCRIPTION	STRAT PLOT	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES "N" VALUES	ELEVATION SCALE	PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH kPa (o UNCONFINED, + FIELD VANE, • QUICK TRIAXIAL, x LAB VANE) (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
	Asphalt Surface									
0.0	80mm Asphalt									
0.1	90mm Granular Base 250mm Granular Subbase									
0.4	Very Stiff to Hard Brown moist trace gravel		1	SS	18			o		
			2	SS	25			o		
	SILTY CLAY trace to some sand (TILL)		3	SS	23					
			4	SS	34					
			5	SS	29					
3.5	End of Borehole									

NOTES:
Borehole was open and dry on completion of drilling.

Terraprobe

LOG OF BOREHOLE 11

PROJECT: Hangar 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 11, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	SOIL PROFILE: DESCRIPTION	STRAT PLOT	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: 'N' VALUES	ELEVATION SCALE	PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH kPa: O UNCONFINED, ● QUICK TRIAXIAL, △ FIELD VANE, × LAB VANE (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
	Asphalt Surface									
0.0	70mm Asphalt									
0.1	60mm Granular Base 220mm Granular Subbase									
0.3	Very Stiff Brown moist SILTY CLAY trace to some sand, trace gravel (TILL)		1	SS	18			o		
			2	SS	20			c		
			3	SS	22					
2.0	End of Borehole									

NOTES:
Borehole was open and dry on completion of drilling.

Terraprobe

LOG OF BOREHOLE 12

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 11, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	DESCRIPTION	STRAT PLOT	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES "N" VALUES	ELEVATION SCALE	PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH kPa (O UNCONFINED, + FIELD VANE, ● QUICK TRIAXIAL, × LAB VANE) (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
	Asphalt Surface									
0.0	80mm Asphalt									
0.1	50mm Granular Base 190mm Granular Subbase									
0.3	Firm to Very Stiff Brown moist SILTY CLAY trace gravel, trace to some sand (TILL)		1	SS	6					
			2	SS	21					
			3	SS	28					
2.0	End of Borehole									

NOTES:
Borehole was open and dry on completion of drilling.

Terraprobe

LOG OF BOREHOLE 13

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 11, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	SOIL PROFILE: DESCRIPTION	STRAT PLOT	SAMPLES: NUMBER	TYPE	"N" VALUES	ELEVATION SCALE	PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH kPa: ○ UNCONFINED, ● QUICK TRIAXIAL, + FIELD VANE, × LAB VANE (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
	Asphalt Surface									
0.0	70mm Asphalt									▽
0.1	100mm Granular Base									
	200mm Granular Subbase									
0.4	Stiff to Hard Brown moist SILTY CLAY trace to some sand, trace gravel (TILL)		1	SS	13			w ○		
			2	SS	20			w ○		
			3	SS	16					
			4	SS	40					
			5	SS	20					
3.5	End of Borehole									

NOTES:
Borehole was caving at 2.1m and water level at 0.1m depth on completion of drilling.

Terraprobe

LOG OF BOREHOLE

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 11, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	SOIL PROFILE: DESCRIPTION	STRAT PLOT	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUES	ELEVATION SCALE	PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH kPa (O UNCONFINED, ● QUICK TRIAXIAL, + FIELD VANE, × LAB VANE) (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
	Asphalt Surface									
0.0	80mm Asphalt									
0.1	70mm Granular Base 170mm Granular Subbase									
0.3	FILL - mix of topsoil, clay, sand and gravel		1	SS	7			o		
0.8	Very Stiff moist Brown SILTY CLAY trace to some sand, trace gravel (TILL)		2	SS	20			o		▽
			3	SS	22					
2.0	End of Borehole									

NOTES:
Borehole was open and water level at 0.1m depth on completion of drilling.

Terraprobe

LOG OF BOREHOLE 15

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 11, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	SOIL PROFILE: DESCRIPTION	STRAT PLOT	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUES	ELEVATION SCALE	PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH kPa (O UNCONFINED, + FIELD VANE, • QUICK TRIAXIAL, × LAB VANE) (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
	Asphalt Surface									
0.0	80mm Asphalt									
0.1	90mm Granular Base 260mm Granular Subbase									
0.4	FILL - mix of topsoil, clay, sand and gravel		1	SS	7			o		
			2	SS	16			o		
1.0	Very Stiff moist Brown SILTY CLAY trace to some sand, trace gravel (TILL)		3	SS	17					
2.0	End of Borehole									

NOTES:
Borehole was open and dry on completion of drilling.

Terraprobe

LOG OF BOREHOLE

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 11, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

SOIL PROFILE			SAMPLES			ELEVATION SCALE	PENETRATION RESISTANCE PLOT 20 40 60 80 100 / SHEAR STRENGTH kPa: O UNCONFINED, + FIELD VANE, • QUICK TRIAXIAL, × LAB VANE, 20 40 60 80 100	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) 10 20 30	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE	"N" VALUES					
	Asphalt Surface									
0.0	80mm Asphalt									
0.11	90mm Granular Base 240mm Granular Subbase									
0.4	FILL - mix of topsoil clay, sand and gravel		1	SS	13			o		
0.9	Hard Brown moist SILTY CLAY trace to some sand, trace gravel (TILL)		2	SS	11			o		
			3	SS	14					
			4	SS	20					
			5	SS	41					
3.5	End of Borehole									

NOTES:
Borehole was open and dry on completion of drilling.

Terraprobe

LOG OF BOREHOLE

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 11, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	SOIL PROFILE: DESCRIPTION	STRAT PLOT	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUES	ELEVATION SCALE	PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH kPa: O UNCONFINED, + FIELD VANE, ● QUICK TRIAXIAL, × LAB VANE (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
	Asphalt Surface									
0.0	80mm Asphalt									
0.1	70mm Granular Base 250mm Granular Subbase									
0.4	FILL - mix of topsoil clay, sand and gravel		1	SS	9			o		
			2	SS	11			o		
1.4	Stiff Brown/Grey moist SILTY CLAY TILL trace to some sand, trace gravel		3	SS	10					
2.0	End of Borehole									

NOTES:
Borehole was open and dry on completion of drilling.

Terraprobe

LOG OF BOREHOLE 18

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 10, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	DESCRIPTION	STRAT PLOT	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES "N" VALUES	ELEVATION SCALE
	Asphalt Surface					
0.0	70mm Topsoil					
0.1	FILL - mix of topsoil, clay and sand		1	SS	11	
0.6	Firm Brown moist FILL - silty clay, some sand some gravel		2	SS	7	
1.4	very stiff to hard Brown SILTY CLAY trace gravel, trace to some sand (TILL)		3	SS	18	
			4	SS	31	
			5	SS	26	
3.5	End of Borehole					

PENETRATION RESISTANCE PLOT: 20 40 60 80 100
SHEAR STRENGTH kPa: O UNCONFINED + FIELD VANE; • QUICK TRIAXIAL × LAB VANE; 20 40 60 80 100
PLASTIC LIMIT w_P | NATURAL MOISTURE CONTENT w | LIQUID LIMIT w_L
WATER CONTENT (%): 10 20 30
ORGANIC VAPOUR (ppm)
STANDPIPE INSTALLATION OR REMARKS

NOTES:
Borehole was open and dry on completion of drilling.

Terraprobe

LOG OF BOREHOLE 19

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 10, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	SOIL PROFILE: DESCRIPTION	STRAT PLOT	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUES	ELEVATION SCALE	PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH kPa (O UNCONFINED, ● QUICK TRIAXIAL, + FIELD VANE, × LAB VANE) (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
	Asphalt Surface									
0.0	70mm Topsoil									
0.1	FILL - mix of topsoil, sand and clay		1	SS	18			o		
0.6	Very Stiff Brown moist SILTY CLAY trace to some sand, trace gravel (TILL)		2	SS	13					
			3	SS	18					
2.0	End of Borehole									

NOTES:
Borehole was open and dry on completion of drilling.

Terraprobe

LOG OF BOREHOLE

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 10, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	SOIL PROFILE: DESCRIPTION	STRAT PLOT	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUES	ELEVATION SCALE	PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH kPa (○ UNCONFINED, ● QUICK TRIAXIAL, – FIELD VANE, × LAB VANE)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
	Asphalt Surface									
0.0	20mm Topsoil FILL - mix of topsoil sand and gravel		1	SS	10			○		
0.8	Firm Brown moist FILL - silty clay, some sand trace gravel		2	SS	7			○		GR SN SL CL 0 16 47 37
1.4	SILTY CLAY TILL trace to some sand, trace gravel		3	SS	25					
2.0	End of Borehole									

NOTES:
Borehole was open and dry on completion of drilling.

Sheet 1 of 1

Terraprobe

LOG OF BOREHOLE 2

PROJECT: Hanger 6 Addition
LOCATION: Lester B. Pearson Airport
CLIENT: Hatch Molt MacDonald

DATE: July 10, 1997
EQUIPMENT: D-50 Truckmount
ELEVATION DATUM: n/a
FILE: 97255

ELEV / DEPTH	DESCRIPTION	STRAT PLOT	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUES	ELEVATION SCALE	PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH kPa (O UNCONFINED, + FIELD VANE, • QUICK TRIAXIAL, × LAB VANE) (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	ORGANIC VAPOUR (ppm)	STANDPIPE INSTALLATION OR REMARKS
	Asphalt Surface									
0.0	20mm Topsoil FILL - mix of topsoil sand and clay		1	SS	15			o		
0.8	Stiff to Hard Brown moist SILTY CLAY trace to some sand, trace gravel (TILL)		2	SS	10					
			3	SS	19			o		
			4	SS	35					
			5	SS	35					
3.5	End of Borehole									

NOTES:
Borehole was open and dry on completion of drilling.

Phase I Environmental Site Assessment

Hangar No. 6, Lester B. Pearson International Airport, Mississauga

March 2, 2000

Sky Service F.B.O. Inc.

007290-1000

Submitted By

Dillon Consulting Limited

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EXECUTIVE SUMMARY

Dillon Consulting Limited (Dillon) was retained by Ms. Pamela Horton of Smith Lyons Barristers & Solicitors (SLBS) on behalf of Sky Service F.B.O. Inc. (SS) to complete a Phase I Environmental Site Assessment (ESA) at a site located at Lester B. Pearson International Airport in Mississauga, Ontario. The objective of the ESA was to determine the likelihood of major liabilities that may exist as a result of material contamination at the property described as Hangar No. 6, municipally known as 6932 Vanguard Drive (formerly 2450 Derry Road East). Transport Canada has assigned the property to The Greater Toronto Airport Authority (GTAA), and the property in turn is currently leased to Northern Alliance Development, Inc. (NADI). Currently, AllCanada Express Ltd. (ACE) is the only tenant. They occupy some of the office space and the eastern half of the hangar. ACE uses the hangar for storage.

It could not be determined if the property was subjected to any administrative proceedings or notices in the past regarding possible liability or violation of any environmental laws, including discharge violations, within the time frame allowed for this assessment. Therefore, deficiencies related to these proceedings are not discussed.

Upon review of the historical and current uses of the property, followed by a physical inspection of the property, the following was noted:

- *Before development, the property was fallow land.*
- *The subject property was developed around 1969. It is presumed that the subject site and the adjacent properties located in the General Aviation area have been used only for aviation related purposes since their development.*
- *No information was available to verify the location or existence of sludge pits on the adjacent sites to the west and southwest, identified in the AGRA report.*
- *The Ministry of Environment indicated that there are no Active Orders outstanding and that no Approvals have ever been issued for the property.*

- *The Regional Municipality of Peel records indicated that there are no active or closed waste disposal sites or hazardous waste sites on or in the vicinity of the area.*

- *Technical Standards and Safety Authority (TSSA) did not have any records of any licenses, registrations and closures for the subject or adjacent properties.*

- *There is potential that above and under ground storage tanks exist on the adjacent properties. There is also a possibility that fuel spills might have occurred in the past, particularly during the fuelling of airplanes.*

- *Two large ASTs exist near Hangar No. 8A. According to the AGRA report, the tanks are bermed and there is an underground spill collection tank.*

- *According to the AGRA report, there may be or have been a UST along the north wall of Hangar No. 5.*

- *Due to the apparent nature of the Shell Aviation property southwest of the subject site, it is likely that USTs exist.*

- *A review of the Ontario Inventory of PCB Storage Sites revealed the presence of two minor PCB storage sites (within a distance of 1 kilometre) at Maksteel, 7615 Torbram Rd. and McDonnell Douglas Canada Ltd, 6373 Airport Rd.*

- *There may be asbestos containing materials on the site. Materials that potentially may contain asbestos include suspended ceiling tiles, insulation on walls and ceiling and floor tiles. A Bill 208 Survey prepared by Trow concluded that some of the floor tiles contain asbestos. Should future renovations involving these materials be undertaken, the contractors completing these renovations should be advised that regulations respecting asbestos need to be met (O.Reg. 837 and 838), which includes the use of personal protective equipment.*

- *Some fluorescent light ballasts likely contain PCBs. No liability is associated with the continued use of these ballasts; however, the mass removal of these ballasts from service will require the appropriate storage, if they are confirmed to contain PCBs.*

- *It could not be readily determined if the two transformers on site had PCB containing oils. The presence of PCBs in the transformer should be confirmed.*

- *The building was constructed before the use of lead based paint was stopped. Therefore, lead based paint may be present.*

- *CFCs might be present in the air conditioning units and refrigerators in the building. If any of these items do contain CFCs, they can only be serviced by individuals certified in handling ozone depleting substances.*

- *Inside the hangar there are various containers full of fluids, oil and general maintenance and cleaning products. There is no secondary containment system. These should be removed before a new tenant takes occupancy. Future storage of hazardous/flammable liquids must be done in conformance with the National Fire Code of Canada.*

- *No one on the premises was aware of an oil/water separator, however, access hatches to what appears to be an oil/water separator were found during the site visit. It is unknown whether this separator discharges in the storm or sanitary sewer. The GTAA report recommended that a dye test be conducted to confirm the discharge route. It is also recommended that the separator be checked for leaks, cleaned and maintained periodically to ensure that effluent meets applicable laws and regulations (Region of Peel Sewer Use By-Law 90-90, CCME Code of Practice, GTAA lease). The waste collected from the separator should be disposed in accordance with applicable regulations and guidelines.*

- *Along the western wall of the building there are about 21 drums, scrap wood, tires and other miscellaneous materials. They should be removed for salvage or disposal before a new tenant takes possession of the property.*

- *Based on the Environmental Audit done by the GTAA, there is evidence of petroleum hydrocarbon contamination in surface soil samples taken in two locations near the southwest corner of the building. There are also elevated hydrocarbon levels at depth (not exceeding*

any criteria) in about the same area. It is interpreted that these results suggest historical dripping/leakage from on site activities.

- *According to the AGRA report, there was a minor aviation spill on the apron in about 1993.*
- *According to the AGRA report, subsurface impacts to the soil and groundwater near the General Aviation area (which consists of the subject site) appear to be minor.*
- *Some areas of wall and ceiling insulation in the hangar appear black and mouldy. A number of suspended ceiling tiles in the offices are water damaged and might contain mould.*

1.0 INTRODUCTION

Dillon Consulting Limited (Dillon) was retained by Ms. Pamela Horton of Smith Lyons Barristers & Solicitors (SLBS) on behalf of Sky Service F.B.O. Inc. (SS) to complete a Phase I Environmental Site Assessment (ESA) at a site located at Lester B. Pearson International Airport in Mississauga, Ontario. The objective of the ESA was to determine the likelihood of major liabilities that may exist as a result of material contamination at the property described as Hangar No. 6, municipally known as 6932 Vanguard Drive (formerly 2450 Derry Road East). Transport Canada has assigned the property to The Greater Toronto Airport Authority (GTAA), and the property in turn is currently leased to Northern Alliance Development, Inc. (NADI). Currently, AllCanada Express Ltd. (ACE) is the only tenant. They occupy some of the office space and the eastern half of the hangar. ACE uses the hangar for storage.

The terms and conditions of retainer set forth at the end of this report apply to all environmental work performed by Dillon Consulting Limited (Dillon) and are incorporated into all Dillon reports. The acceptance and use of this environmental report by any party shall only be with the complete acceptance of those limitations.

2.0 SCOPE OF WORK

The scope of work for this study is based on the requirements of the Canadian Standards Association Phase I Environmental Site Assessment Information Product, Z768-94, April 1994. The ESA included:

- a review of the historical and current operations at and immediately adjacent to the property, based on standard information sources;

- a review of compliance with the pertinent federal, provincial and municipal environmental regulations for this property;

- a site visit to observe first-hand, the environmental conditions at this property. The site was viewed from adjacent public thoroughfares, accessible areas of property and the interior of the building.

- completion of a Phase I Environmental Assessment Report. The report presents all findings and an evaluation of the environmental significance of these findings.

This assessment addresses both historical and current operations on-site and on sites immediately adjacent to the subject property. It is based on a visual inspection of current property conditions, and a search of available historical records from government and other agencies.

For the purpose of this report, Randy McGill of GTAA has authorized the use of certain reports regarding the subject property. Information prior to 1994 was not available. The following documents are referenced in this report:

- Bill 208 Survey, Hudson General Hangars #6, #7, #9 and Passenger Terminal, prepared by Trow Consulting Engineers Ltd., December 1993.
- Condition Survey of Hudson General Hangars, prepared by Trow Consulting Engineers Ltd., December 1993.
- Phase I Environmental Site Assessment, Part of Area 8, Lester B. Pearson International Airport, prepared by AGRA Earth & Environmental Limited, November 1994. This report also references an Environmental Audit undertaken by C2HM Hill Engineering Ltd. in 1992.
- excerpt from Environmental Baseline Study - LBPIA, Volume II for Transport Canada, Dames & Moore Canada, date approximated around 1995.
- Environmental Audit of Hangar No. 6, prepared by GTAA, November 1997.

The site was inspected by Aneta Zimnicki, B.A.Sc., Environmental Scientist with Dillon, on February 21, 2000. At the time of the site inspection, there was about 20 cm of snow on the ground and 50% of the property was snow covered. The objective for the site reconnaissance was to view the building exteriors from adjacent thoroughfares and accessible areas of the property; the interior of the building including occupied spaces, and mechanical service rooms; and, to inspect the remainder of the property.

3.0 FINDINGS AND CONCLUSIONS

3.1 Site Location

The municipal address of the site is 6932 Vanguard Drive, Mississauga, Ontario (formerly 2450 Derry Road East). The site is located on the northwest corner of the North General Aviation area of Lester B. Pearson International Airport. The closest main intersection is Torbram Road and Derry Road East. The building on site is referred to as Hangar No. 6. **Figure 1** shows the site location.

The following land use/neighbours are located on adjacent lands:

- Vanguard Drive and Derry Road East to the immediate north, low-rise office buildings on the north side of Derry Road East;
- Airplane Restaurant across Vanguard Drive to the east;
- Shell Aviation across Vanguard Drive to the southeast;
- Millard Air on adjacent property to the south;
- Sky Charter on adjacent property to the southwest; and,
- World Aviation Center on adjacent property to the west.

Figure 2 shows the locations of the adjacent properties.

3.2 General Description

The property is 219,677 sq. ft. (about 5 acres) in size, and relatively flat. About three quarters of the property is paved. The north paved area is used for parking and the south paved area is used as an apron. The northwest quadrant of the property is grass. There is a low berm that trends from the northwest to northeast corner of the grassy area. Fencing separates the site from the adjacent properties to the north, west and south. Partial fencing exists to the east. A grassy ditch about 1 m wide and 0.5 m deep is located along the southern edge of the property. No catch basins were seen either in the paved or unpaved parts of the site.

Along the west wall of the building there is scrap wood, tires and other miscellaneous materials stored. There were small patches of grass observed along this wall. They all appear to be stained a

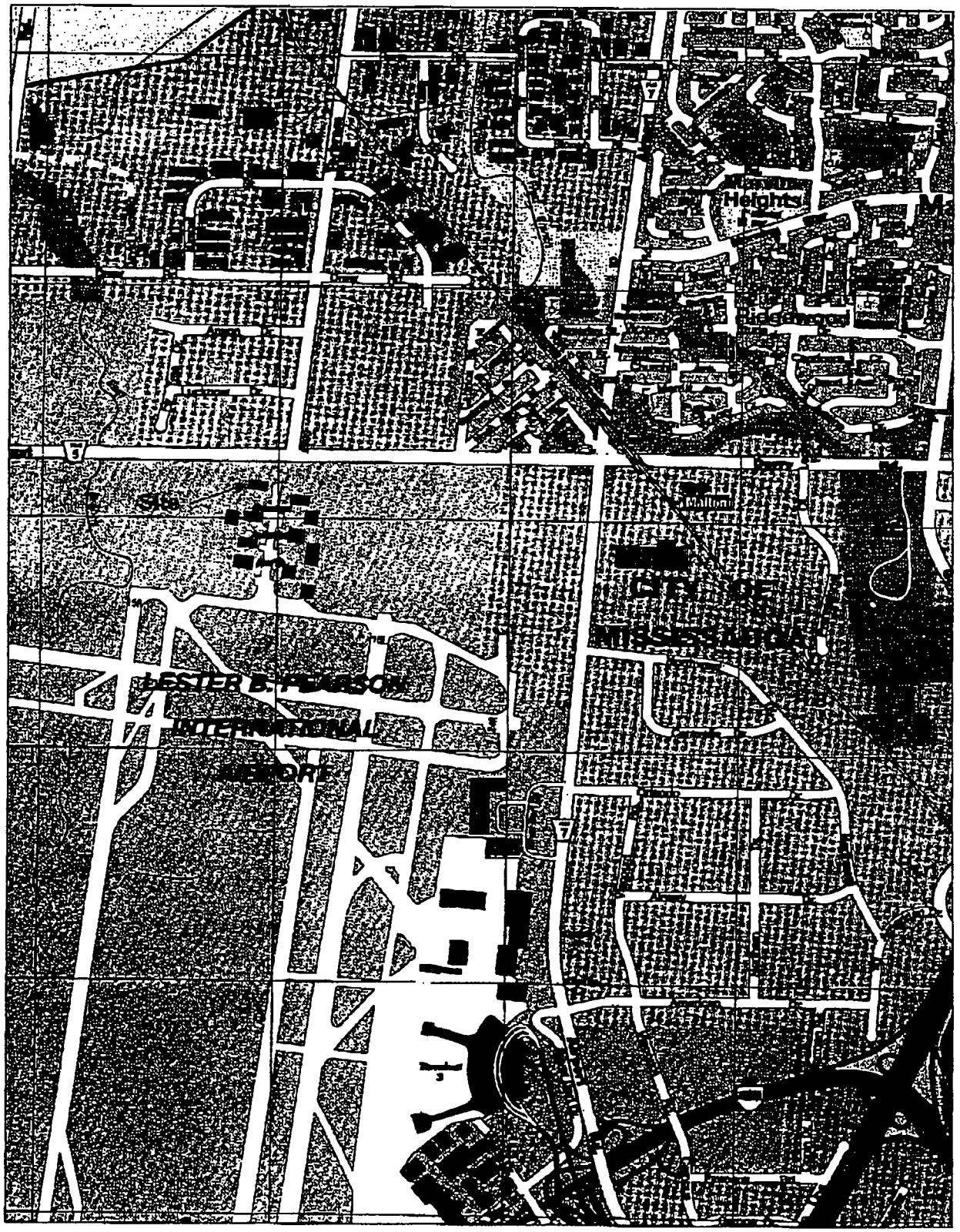


Fig. 1	PHASE 1 - ENVIRONMENTAL SITE ASSESSMENT SITE LOCATION	DILLON CONSULTING
Proj. No. 007290-1000		
March 1, 2000	HANGAR NO. 6, LESTER B. PEARSON INTERNATIONAL AIRPORT MISSISSAUGA, ONTARIO	
Not to Scale		

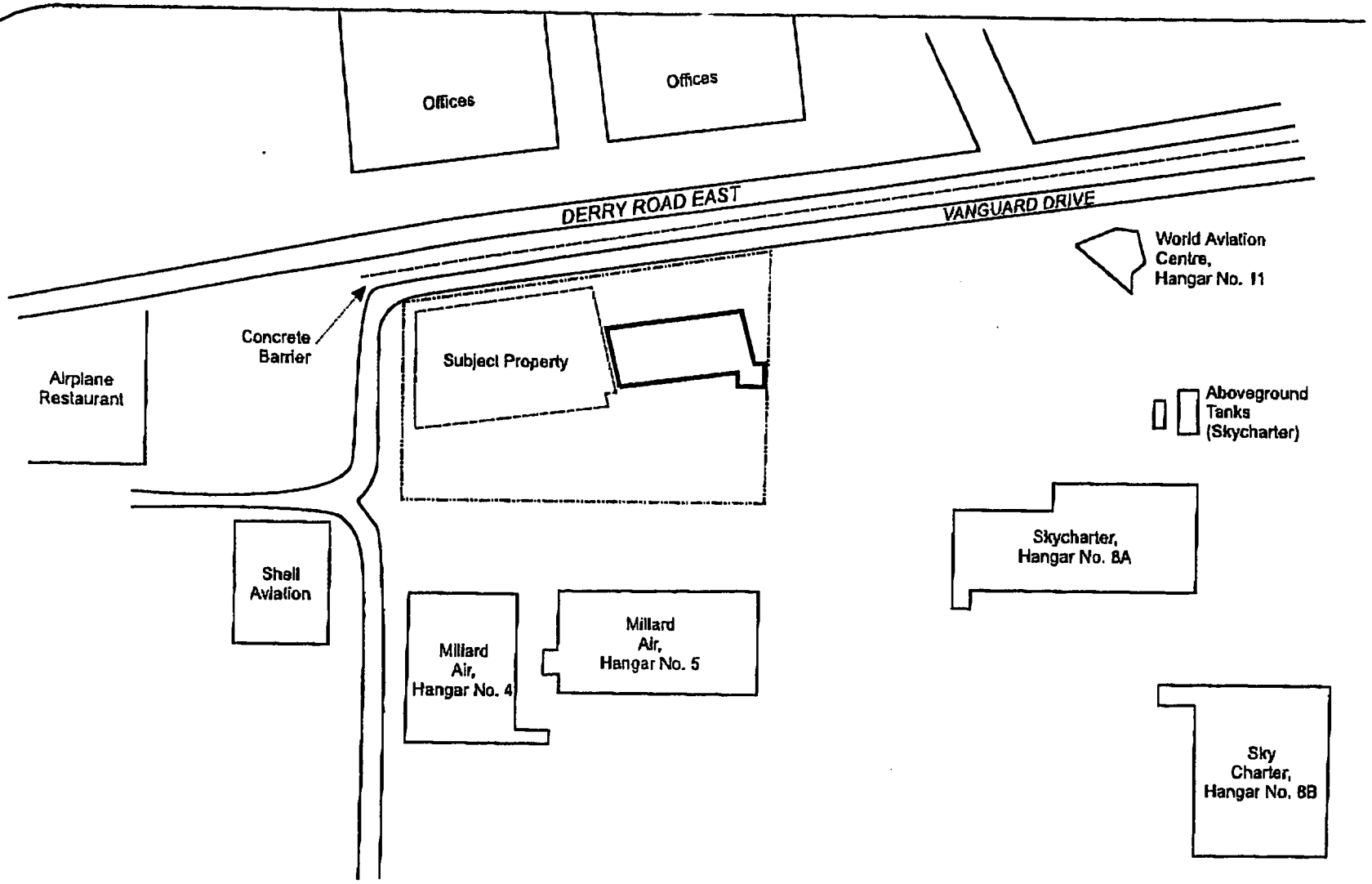


Fig. 2	PHASE 1 - ENVIRONMENTAL SITE ASSESSMENT ADJACENT PROPERTIES	
Proj. No. 007290-1000		
March 1, 2000	HANGAR NO. 6 LESTER B. PEARSON INTERNATIONAL AIRPORT MISSISSAUGA, ONTARIO	DILLON CONSULTING
Not to Scale		

rust colour (see Photograph No.1, Appendix C) About 21 drums are also stored in this area. Some drums are tipped over (see Photograph No.2); however, evidence of spills was not observed because the area was snow covered. Four snow plows are also parked along this wall. On the day of the inspection, there were small airplanes parked on the grassy area not far from the southwest corner of the building.

In the northwest corner of the property, a small area where the natural gas meters and regulators are located is fenced off. This area could not be approached for closer examination because of snow mounds.

The visual inspection exterior of the building was limited because of the snow cover, particularly on on the grassy area. Consequently, evidence of vegetation stress and soil staining was not observed. Additionally, during the site visit, a movie was being filmed. The parking lot was full of trailers and a proper inspection of the parking area could not be completed.

On site there is a 2800 m^2 (30,000 sq. ft.) building. On the east side of the building there is a two storey office area constructed of concrete blocks. The first level is occupied and the second level is vacant, except for two rooms. All ground-level flooring in the building is concrete.

The remainder of the building is hangar area. This area is a single storey steel structure with metal cladding. There are two large roll-up doors on the south side of the hangar area. A wall made of metal cladding divides the hangar into two equal areas.

The eastern hangar is occupied. Mechanical and airplane parts, tires, carts and chemicals (fluids, oil and general maintenance and cleaning products) are stored in this area. In the southwest corner, there is a storage area bounded by a 3 metre high wood wall. This room is about 5 m by 15 m and has no ceiling.

The western hangar is currently vacant. There is currently a 1500 liter (approximately) sized container, about 1/4 full of waste oil in the southwest corner. A small airplane and some chemicals (fluids, oil and general maintenance products) are also in the hangar. Along the north wall of the hangar, there is a one storey office area that is generally constructed of plywood.

In the centre of each hangar is a floor drain approximately 7 metres long. According to the Environmental Baseline Study (EBS) and the GTTA report, an oil/water separator exists on the property. Three concrete access hatches are present in the southeast corner of the eastern hangar (see Photograph No.3); however, they could not be readily lifted by hand. No one on the premises was aware of the oil/water separator.

Figure 3 shows a plan of the site.

3.3 Site Physiography

A review of geological and hydrogeological mapping and Ministry of Environment water well records for the area indicates that the site is located in the South Slope physiographic region as defined by Chapman and Putnam, 1984. The site is located on a beveled till plain north of the glacial Lake Iroquois shoreline, east of the Niagara Escarpment. The superficial soil in the area is the Halton Till.

Bedrock is on the order of 12 to 15 metres below the surface (approx. 150 metres above sea level), and the bedrock surface dips uniformly to the east. Bedrock consists of the grey limestones and shales of the Georgian Bay Formation, which underlies much of the Greater Toronto Area.

Shallow groundwater flow is expected to be toward Etobicoke Creek which runs near the western and south-western edge of the site. Shallow groundwater flow may also be influenced by underground utilities and other buried sturctures. The backfill in utility trenches, for example, typically has a higher permeability than the surrounding native soils in the area resulting in the possibility of preferential shallow groundwater flow.

Regional groundwater flow is likely southward, toward Lake Ontario. Hydrogeologic mapping indicates that well yields in the overburden, shallow and deep bedrock are all typically very low, generally less than 10 litres per minute. There are a few water wells on record in the area, but because the area has full municipal services, these are likely no longer in use.

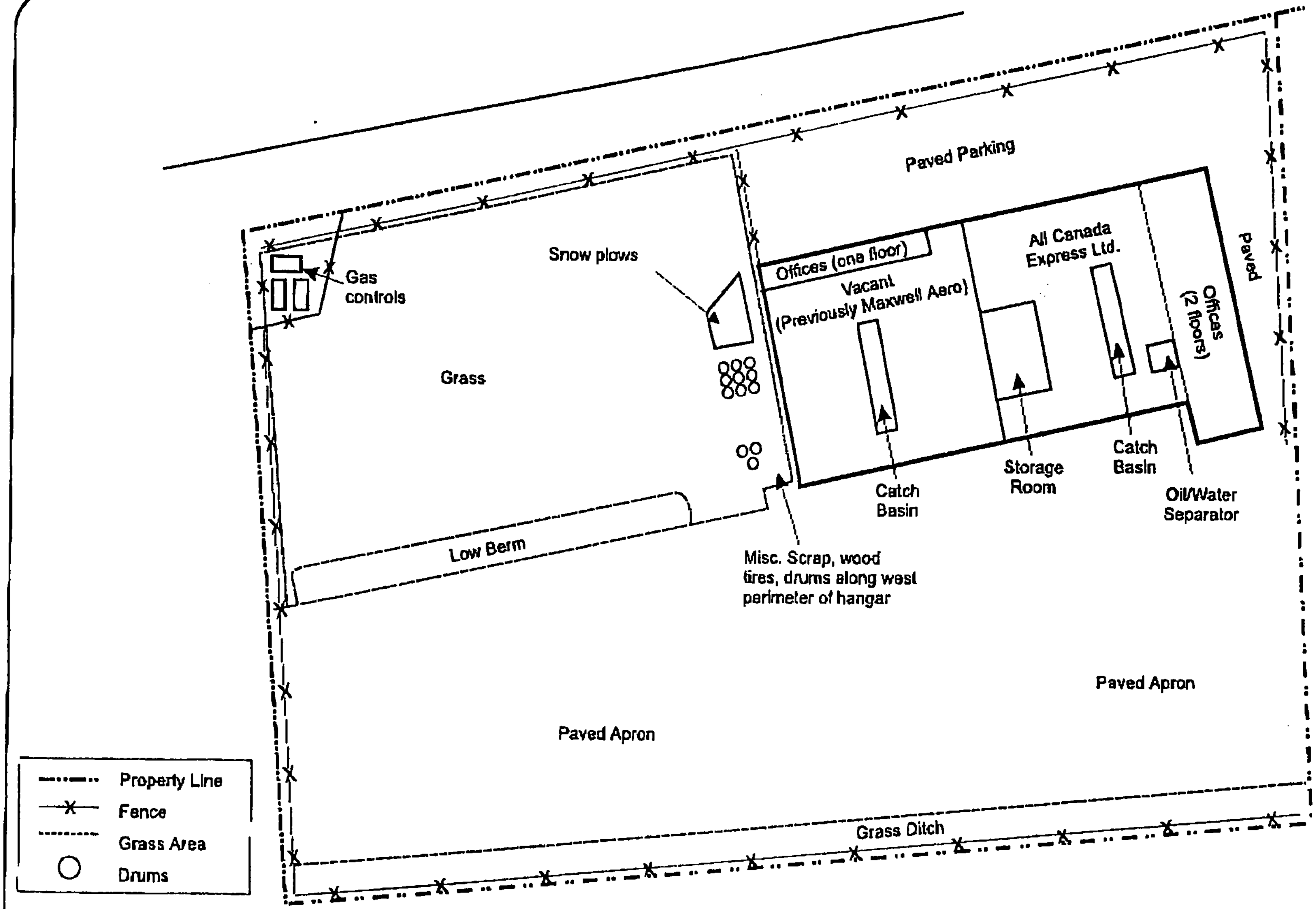


Fig. 3	PHASE 1 - ENVIRONMENTAL SITE ASSESSMENT SITE LAYOUT
Proj. No. 007290-1000	
March 1, 2000	HANGAR NO. 6 LESTER B. PEARSON INTERNATIONAL AIRPORT MISSISSAUGA, ONTARIO
Not to Scale	

DILLON CONSULTING

According to the AGRA report, subsurface impacts to the soil and groundwater near the General Aviation area (which consists of the subject site) appear to be minor.

3.4 Environmental Information

Access to the building was provided by Mr. Robert Smith of NAPI. Mr. Smith was interviewed regarding his knowledge of the property during his association with the site. Mr. Smith was not aware of any;

- existing underground or above-ground tank registrations;
- environmental fines or notices;
- spills of hazardous or potentially hazardous materials.

Request for information concerning any administrative proceedings or notices regarding possible liability or violation of environmental laws, including municipal discharge violations, have been sent to the Ministry of Environment and the Regional Municipality of Peel, Environmental Controls Section; however, a response is not expected for 90 days.

A request for an index review report was filed by SLBS with the Ministry of Environment. The report indicated that there are no Active Orders outstanding and that no Approvals have ever been issued for the property.

A request for information was filed by SLBS with the Regional Municipality of Peel, Waste Management Division. The Municipality's records indicated that there have never been any waste disposal sites or hazardous wastes located on or in the vicinity of the subject property.

A request for information was also filed by SLBS with Technical Services and Safety Authority (TSSA) for information pertaining to past underground storage tank (UST) licenses, registrations and closures. TSSA did not have any records of any licenses, registrations and closures for the subject or adjacent properties.

Copies of these requests for information from government authorities are presented in Appendix A.

3.5 Current Property Use

The eastern hangar is occupied by ACE, who use this area for storage.

The western hangar is currently vacant. It was previously occupied by Maxwell Aero (MA). A small airplane and some chemicals (fluids, oil and general maintenance products) are in the hangar. According to Robert Smith of NAPI, these items belong to Sky Service (SS). Mr. Smith stated that all other items including the tote of waste oil, the scrap materials and drums along the western wall of the hangar and the small airplanes parked on the grassy area belong by MA.

The first level of the office area located on the east side of the building is occupied by NADI and ACE. The second level is vacant, except for two rooms, which are used by ACE.

3.6 Past Property Uses

Historical information was acquired from:

- a title search provided by SLBS;
- Larry Alpin, Senior Property Representative at GTAA;
- Aerial Photographs from 1960, 1965, 1970, 1974, 1978, 1984 and 1991 (1991 Photo is shown in Appendix B); and,
- the reports mentioned in section 2.0.

An attempt was made to complete a comprehensive list of lease holders and tenants, however, the sources of information were not complete or unclear, particularly records of tenants. Table 1 summarizes the various tenants and lease holders over the years since the property was developed. The last column lists the source of information.

Table 1
Current and Past Tenants and Lease Holders for Hangar No. 6

Year	Tenant/Lease Holder	Source of Information
1997	Northern Alliance Development, Inc.	title search provided by SLBS
1994	Aerospace Realties (1986) Ltd. (tenant)	Environmental Baseline Study, Dames&Moore
1986 1984	Hudson General Aviation Services Inc.(tenant) Hudson General Aviation Services Inc. (tenant)	Environmental Baseline Study, Dames&Moore Phase I ESA, AGRA
1978	Innotech Aviation Limited (tenant)	Phase I ESA, AGRA
1970 1969	Leavens Bros. Limited Leavens Aviation Inc.	Phase I ESA, AGRA Larry Alpin

Aerial photographs obtained from 1960 and 1965 show the subject site as undeveloped and unpaved.

The 1970 and 1974 aerial photographs show the building on the site as it is today. The property does not appear to be paved on either photograph.

The aerial photographs from 1978, 1984 and 1991 show the building on the site as it is today. The property appears to be paved.

The aerial photographs suggest that the property was developed between 1965 and 1970. It is most likely that the property was developed in 1969, as Larry Alpin's records have indicated. According to all the information reviewed and considering the property's proximity to the airport, it is presumed that the property has been used only for aviation purposes since it has been developed.

3.7 Current and Past Uses of Adjacent Properties

Adjacent sites include:

- Vanguard Drive and Derry Road East to the immediate north, low-rise office buildings on the north side of Derry Road East;
- Airplane Restaurant across Vanguard Drive to the east;
- Shell Aviation across Vanguard Drive to the southeast;

- Millard Air on adjacent property to the south, known as Hangars No. 4 and 5;
- Sky Charter on adjacent property to the southwest, known as Hangars No. 8A and 8B; and,
- World Aviation Center on adjacent property to the west, known as Hangar No. 11 or the Passenger Terminal.

Historical information for these sites was interpreted from Aerial Photographs from 1960, 1965, 1970, 1974, 1978, 1984 and 1991 (1991 Photo is shown in Appendix B).

A structure on the property currently known as Hangar No. 11 appears on the aerial photograph from 1960. This structure does not seem to be in the same place as the Passenger Terminal building that exists today. Also on the 1960 photograph are two mounds of earth in the current location of Hangars No. 8A and 8B. The remaining adjacent properties are fallow land.

The structure that was seen on the Hangar No. 11 property and the two earth mounds are not visible in the aerial photograph from 1965. Hangar No. 5 appears to have been built in this photograph. The remaining adjacent properties are still fallow land.

Hangars No. 5 and 8A are visible on the aerial photographs taken after 1970. There is also a small structure in the southeast quadrant of the Hangar No. 11 property. This structure is interpreted to be an above ground storage tank. The remaining adjacent properties are fallow land.

Hangars No. 5, 8A, 8B and 11 are seen on the aerial photographs from 1978 and 1984. The area to the southwest of the subject site that is currently occupied by Shell Aviation seems to be paved. It is not clear on the photographs whether a structure exists in this area. The remaining adjacent properties are fallow land.

Hangars No. 4, 5, 8A, 8B and 11 are seen on the aerial photograph from 1991. The Shell Aviation area seems to have structures on it. To the north of the subject property, across Derry Road East, the office building that exist today is seen in the photograph. The only remaining adjacent property that still appears to be undeveloped is to the west of the subject site.

The aerial photographs suggest that the adjacent properties located in the General Aviation area have been used only for aviation purposes since they have been developed.

According to the AGRA report, in about 1942, an aircraft manufacturing plant, Victory Aircraft Ltd., located over 1 km east of the subject site, operated sludge pits on the adjacent sites to the west and southwest (currently occupied by Hangars No. 8A and 11). No photographs taken circa 1942 were available to verify the location or existence of the sludge pits.

3.8 Reconnaissance of Adjacent Properties

Most of the adjacent properties are used for aviation related purposes. Therefore, there is potential that above and under ground storage tanks exist. There is also a possibility that fuel spills may have occurred in the past, particularly during the fuelling of airplanes. Fuelling usually occurs on paved areas, which limits the risk of contamination of soil and groundwater.

During the site visit, two large above ground storage tanks (AST) were observed near Hangar No. 8A. According to the AGRA report, aviation fuel and unleaded gasoline are stored in these tanks. The two ASTs are bermed and there is an underground spill collection tank.

Also during the site visit, about 6 drums were noted at the northwest corner of Hangar No. 5. The AGRA report refers to an underground storage tank (UST) along the north wall of Hangar No. 5 that either currently exists or existed in the past.

The Shell Aviation property southwest of the subject site appears to be a fuelling station. No ASTs were seen during the visit. The apparent use of the property as a fuelling facility suggests that there is a high likelihood there are USTs on site.

TSSA has no records of any registrations or removals of tanks for any of the adjacent properties.

On site activities at the Airplane Restaurant, west of the subject site, will not likely impact the subject site.

3.9 Environmental Record Sources

A review of the following documents indicated that no waste disposal sites, industrial coal tar sites or coal gasification plants had ever been on-site.

- Waste Disposal Site Inventory - Ontario MOEE, June, 1991;
- Inventory of Industrial Sites Producing or Using Coal Tar and Related Tars in Ontario - Ontario MOEE, November, 1988; and
- Inventory of Coal Gasification Plant Waste Sites in Ontario - Ontario MOEE, June 1988.

A review of the Waste Disposal Site Inventory revealed no active or inactive landfill sites in the vicinity.

A review of the Inventory of Industrial Sites Producing or Using Coal Tar and Related Tars in Ontario revealed no listings in the site vicinity.

A review of the Ontario Inventory of PCB Storage Sites - Ontario MOEE, October 1995, revealed the presence of two minor PCB storage sites within a distance of 1 kilometre. These area at the following locations:

- Maksteel, 7615 Torbram Rd.
- McDonnell Douglas Canada Ltd, 6373 Airport Rd.

A minor site is one that contains liquid PCB waste in quantities less than 1,000 kgs or any quantity of solid PCB waste.

3.10 Asbestos Containing Materials (ACM)

If asbestos is present in a building, Ontario Regulation 838/90 requires that a complete inventory of the type, condition and location of asbestos-containing materials (ACM) be made available at the site.

In the offices at the east end of the building, floor tiles are present in the hall and bathroom on the second floor, and on the first floor in the storage room and portion of the ACE parts office (approx. $20m^2$). There are also floor tiles present in some offices in the western hangar. In the Bill 208 Survey prepared by Trow, the following information was presented:

Table 2
Results from Asbestos Survey completed by Trow Consulting Engineers Ltd.

Location	% Asbestos	Approximate Quantity	Dillon's comments
office south of lunchroom	5% chrysotile	225 sq.ft.	room is probably now the ACE parts office
2nd floor corridor	2% chrysotile	600 sq.ft.	
2nd floor offices	<1% chrysotile	-	no floor tiles were seen in any of the offices on 2nd floor; only in the bathroom

Suspended ceiling tiles are present throughout most of the offices.

In the hangar portion of the building, there is insulation on the upper part of the walls and on the ceiling. The insulation on the wall appears to be fibreglass. The insulation on the ceiling could not be examined closely.

The age of the building suggest that there is a possibility that asbestos might be present in the building materials. Sampling of the suspected materials is recommended to confirm the absence of asbestos.

3.11 Polychlorinated Biphenyls (PCBs)

PCBs were banned from use in fluorescent light fixtures in 1978. Flourescent light fixtures are present through the offices. Two ballasts were inspected. The serial number on the ballasts indicate that one probably contains PCBs. The PCB content of the other ballast could not be determined. The AGRA report inspected four ballasts. Three of the ballasts were determined to likely contain PCBs and one did not contain PCBs.

Two transformers were noted to be on site. They are located along the east wall of the hangar occupied by ACE. The labels on the transformers could not provide enough information to determine whether the transformers contain PCBs. Due to the age of the building, these transformers may contain PCBs.

No PCB containing materials were observed to be stored on the premises.

3.12 Urea-formaldehyde Insulation (UFFI)

No UFFI was observed within the building. An intrusive sampling of wall and ceiling spaces would be needed to confirm the absence of UFFI.

3.13 Man-Made Mineral Fibres

Man-made mineral fibres (MMMF) in the form of fibrous glass thermal pipe insulation and wall insulation was observed within the building. In 1994, the U.S. Health and Human Services announced that fibrous glass would be listed as "reasonably anticipated to be a carcinogen" in their Seventh Annual Report on Carcinogens.

We list the finding of fibrous glass insulation in the building for consideration in future site assessments, should a position be established on the risks of exposure to low levels of fibrous glass insulation.

3.14 Lead in Paint

Due to the age of the building, lead-based paints may be present. Leaded paint was banned for use in the late 1970's.

3.15 Above Ground Storage Tanks (ASTs)

According to the AGRA report, a 1000 L waste oil AST was present near the northwest corner of Hangar No. 6. This tank apparently was put in place in 1970 and removed in 1994. No soil was excavated when the tank was removed.

3.16 Underground Storage Tanks (USTs)

Mr. Smith was not aware of any underground storage tanks on-site.

Enbridge Consumers Gas was contacted to confirm the history of natural gas supply to this site. A response is not expected for 15 days. According to TSSA records, fuel oil USTs have been removed from some of the hangars located in the General Aviation area. This suggests that gas was not always supplied to the General Aviation area, and that there is a possibility that Hangar No. 6 might have had a fuel oil UST in the past.

There are no emergency diesel generators or associated fuel storage tanks currently located on-site.

3.17 Bill 208 - Designated Substances

A brief review of building components was conducted to assess the potential for "designated substances" identified in Bill 208, Article 18(a). The presence of asbestos, lead in paint, and PCB containing materials have been previously addressed.

The following comments related to the potential for the other designated substances in the building are offered:

- acrylonitrile - not observed;
- arsenic - not observed;
- benzene - not observed;
- coke oven emissions - not observed;
- ethylene oxide - not observed;
- isocyanates - not observed;
- mercury - may be present in thermostat switches;
- silica - any cementious material could contain silica; analysis required to establish type; and
- vinyl chloride - not observed.

Generally, it is not suspected that the above substances are present in sufficient quantities to exceed exposure limits.

3.18 Chloroflourocarbons and Hydrochloroflourocarbons

As of January, 1994, under the "Montreal Protocol" all ozone depleting substances; including CFCs, used as refrigerants or coolants are subject to specific maintenance requirements. If any of these items do contain CFCs, they can only be serviced by individuals certified in handling ozone depleting substances.

Three air conditioning units are located in the office area of the building. In addition, one was seen in the storage room. One large and two small refrigerators were also seen in the office area. CFCs might be present in these items if they were manufactured prior to 1994.

3.19 Hazardous Materials Management

Inside the western hangar over 40 containers full of fluids, oil and general maintenance and cleaning products. There is no secondary containment system. There is also a yellow cabinet marked flammable along the east wall. Hazardous materials are transferred to the Canadian Airlines Hangar at the airport.

Inside the eastern hangar is a tote 1/4 full of waste oil, and about 5 containers full of fluids, oil and general maintenance products. There is no secondary containment system. Outside, along the western wall of the building scrap wood, tires and other miscellaneous materials were observed. About 21 drums are also stored in this area. According to Mr. Smith of NADI, these materials, except the containers full of fluids, oil and general maintenance products, belong to MA, the previous tenant. Historically, the area along the western wall has been used for storage of equipment, waste and chemicals according to the past reports.

An Environmental Audit of Hangar No. 6 was done by the GTAA in October 1997. Surface soil samples were taken and test pits were dug near the western wall of the hangar (see Appendix D for sample locations). Laboratory results indicated the MOEE's surface soil criteria for total petroleum hydrocarbons (for industrial/commercial land use, nonpotable groundwater condition) were exceeded

for surface soil samples taken near the door and near the tire storage. The MOEE criterion was exceeded at a depth of one inch (near the door). Although the criteria were not exceeded in samples from the test pits, there were relatively high hydrocarbon levels present in the soil to a depth of 4'4" in TP1 (near the door). The audit concluded that elevated hydrocarbon levels appeared to be in a localized area surrounding TP1. A metals analysis was conducted on a sample collected from TP5. The analysis showed that CCME Interim Canadian Environmental Quality Criteria for Contaminated Sites were met. Appendix D is an excerpt from the Environmental Audit report showing the laboratory results.

According to the AGRA report, there was a minor aviation fuel spill on the apron in about 1993.

3.20 Solid Waste

ACE collects metal scrap for recycling by Peel Scrap Metal. Wood pallets are reused. There is no other recycling done at Hangar No. 6.

The miscellaneous waste (except the drums) belonging to MA (as stated by Mr. Smith), located along the west side of the building does not represent an environmental liability, but rather a house-keeping matter.

3.21 Certificates of Approval

Under the Environmental Protection Act, the Ministry of Environment requires that a Certificate of Approval (C of A) be obtained for operations that result in the discharge of contaminants, including heat and combustible gases, to the environment. C of As cannot be obtained for equipment that was installed prior to June 30, 1988, the date this legislation became effective.

No equipment was observed at the subject property that may require a C of A.

Under Regulation 346, if the total input rate for all natural gas heating equipment for the each of the buildings exceeds 1.5 MBtu/hour, a C of A is required. In addition , if the cumulative total input rate of pre-1988 heating equipment plus post-1988 heating equipment exceeds 1.5 MBtu/hr, a C of A is required for the new heating equipment.

No C of A is required for the natural gas heating system. The building does exceed a total input of 1.5 MBtu/hour, due to its size.

3.22 Potential for Migration of Released Materials

The area is municipally serviced (i.e. water supply and sewers) and any surface spills would likely be directed to the municipal sewer system. Therefore, the likelihood of the off-site movement of contaminants in the subsurface from a surface spill is low.

3.23 Mould

According to Fungal Contamination in Public Buildings: A Guide to Recognition and Management published by the Federal-Provincial Committee of Environmental and Occupational Health, June 1995, it is recognized that fungi (eg. moulds, yeasts, mushrooms) can cause a spectrum of human illness.

There is a potential for the presence of toxic mould in some material seen in the building. Some areas of wall and ceiling insulation in the hangar appear black and mouldy (see Photographs No. 4 and 5). A number of suspended ceiling tiles in the offices are water damaged and might contain mould.

4.0 ENVIRONMENTAL ISSUES SUMMARY

It could not be determined if the property was subjected to any administrative proceedings or notices in the past regarding possible liability or violation of any environmental laws, including discharge violations, within the time frame allowed for this assessment. Therefore, deficiencies related to these proceedings are not discussed.

Upon review of the historical and current uses of the property, followed by a physical inspection of the property, the following was noted:

- Before development, the property was fallow land.

- The subject property was developed around 1969. It is presumed that the subject site and the adjacent properties located in the General Aviation area have been used only for aviation related purposes since their development.

- No information was available to verify the location or existence of sludge pits on the adjacent sites to the west and southwest, identified in the AGRA report.

- The Ministry of Environment indicated that there are no Active Orders outstanding and that no Approvals have ever been issued for the property.

- The Regional Municipality of Peel records indicated that there are no active or closed waste disposal sites or hazardous waste sites on or in the vicinity of the area.

- TSSA did not have any records of any licenses, registrations and closures for the subject or adjacent properties.

- There is potential that above and under ground storage tanks exist on the adjacent properties. There is also a possibility that fuel spills might have occurred in the past, particularly during the fuelling of airplanes.

- Two large ASTs exist near Hangar No. 8A. According to the AGRA report, the tanks are bermed and there is an underground spill collection tank.

- According to the AGRA report, there may be or have been a UST along the north wall of Hangar No. 5.

- Due to the apparent nature of the Shell Aviation property southwest of the subject site, it is likely that USTs exist.

- A review of the Ontario Inventory of PCB Storage Sites revealed the presence of two minor PCB storage sites (within a distance of 1 kilometre) at Maksteel, 7615 Torbram Rd. and McDonnell Douglas Canada Ltd, 6373 Airport Rd.

- There may be ACMs on the site. Materials that potentially may contain asbestos include suspended ceiling tiles, insulation on walls and ceiling and floor tiles. The Bill 208 Survey prepared by Trow concluded that some of the floor tiles contain asbestos. Should future renovations involving these materials be undertaken, the contractors completing these renovations should be advised that regulations respecting asbestos need to be met (O.Reg. 837 and 838), which includes the use of personal protective equipment.

- Some fluorescent light ballasts likely contain PCBs. No liability is associated with the continued use of these ballasts; however, the mass removal of these ballasts from service will require the appropriate storage, if they are confirmed to contain PCBs.

- It could not be readily determined if the two transformers on site had PCB containing oils. The presence of PCBs in the transformer should be confirmed.

- The building was constructed before the use of lead based paint was stopped. Therefore, lead based paint may be present.

- CFCs might be present in the air conditioning units and refrigerators in the building. If any of these items do contain CFCs, they can only be serviced by individuals certified in handling ozone depleting substances.

- Inside the hangar there are various containers full of fluids, oil and general maintenance and cleaning products. There is no secondary containment system. These should be removed before a new tenant takes occupancy. Future storage of hazardous/flammable liquids must be done in conformance with the National Fire Code of Canada.

- No one on the premises was aware of an oil/water separator, however, access hatches to what appears to be an oil/water separator were found during the site visit. It is unknown whether this separator discharges in the storm or sanitary sewer. The GTAA report recommended that a dye test be conducted to confirm the discharge route. It is also recommended that the separator be checked for leaks, cleaned and maintained periodically to ensure that effluent meets applicable laws and regulations (Region of Peel Sewer Use

By-Law 90-90, CCME Code of Practice, GTAA lease). The waste collected from the separator should be disposed in accordance with applicable regulations and guidelines.

- Along the western wall of the building there are about 21 drums, scrap wood, tires and other miscellaneous materials. They should be removed for salvage or disposal before a new tenant takes possession of the property.

- Based on the Environmental Audit done by the GTAA, there is evidence of petroleum hydrocarbon contamination in surface soil samples taken in two locations near the southwest corner of the building. There are also elevated hydrocarbon levels at depth (not exceeding any criteria) in about the same area. It is interpreted that these results suggest historical dripping/leakage from on site activities.

- According to the AGRA report, there was a minor aviation spill on the apron in about 1993.

- According to the AGRA report, subsurface impacts to the soil and groundwater near the General Aviation area (which consists of the subject site) appear to be minor.

- Some areas of wall and ceiling insulation in the hangar appear black and mouldy. A number of suspended ceiling tiles in the offices are water damaged and might contain mould.

5.0 DISCLAIMER AND LIMITING CONDITIONS

This report was prepared exclusively for the purposes, project and site location(s) outlined in the report. The report is based on information provided to, or obtained by Dillon Consulting Limited ("Dillon") as indicated in the report, and applies solely to site conditions existing at the time of the site investigation(s). Although a reasonable investigation was conducted by Dillon, Dillon's investigation was by no means exhaustive and can not be construed as a certification of absence of any contaminants from the site. Rather, Dillon's report represents a reasonable review of available information within an agreed work scope, schedule and budget. It is therefore possible that currently unrecognized contamination or potentially hazardous materials may exist at the site, and that the

levels of contamination or hazardous materials may vary across the site. Further review and updating of the report may be required as local and site conditions, and the regulatory and planning frameworks, change over time.

This report was prepared by Dillon for the sole benefit of our Client, and our Client's lending institution. The material in the report reflects Dillon's best judgement in light of the information available to it at the time of preparation. Any use which a third party (i.e. a party other than our Client or our Client's lending institution) makes of this report, or any reliance on decisions made based on it, are the responsibilities of such third parties. Dillon accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

APPENDIX B

EcoLog Environmental Risk Information Services Ltd. Report

Pinpointing Your Environmental Risks

Environmental Risk Information Service

ECOLOG ERIS

Project Site: **Toronto**
6932 Vanguard Drive
Mississauga, ON

Client: **Ben U**
Watters Environmental Group Inc.
1700 Langstaff Road
Suite 1003
Concord, ON L4K 3S3

ERIS Project No: **20070705045**

Report Type: **Basic Report - 0.25km Search Radius**

Prepared By: **Tanya Ilavsky**
tilavsky@ecologeris.com

Date: **July 13, 2007**

12 Concorde Place, Suite 800 Toronto, Ontario M3C 4J2
Phone: (416) 510-5204 Fax: (416) 510-5133 Toll Free: 1-877-512-5204
www.ecologERIS.com **info@ecologERIS.com**

Table of Contents

Order Number: 20070705045
Site Name: Toronto
Site Address: 6932 Vanguard Drive Mississauga, ON
Report Type: Basic Report, 0.25 km Search Radius

Report Summary

Order Number: 20070705045
Site Name: Toronto
Site Address 6932 Vanguard Drive Mississauga, ON
Report Type: Basic Report, 0.25 km Search Radius

Number of Mappable Records Surrounding the Site

Database		Selected	On-site	Within 0.25	0.25km to 2.00km	Total
AAGR	Abandoned Aggregate Inventory	N	0	0	0	0
AGR	Aggregate Inventory	N	0	0	0	0
AMIS	Abandoned Mine Information System	N	0	0	0	0
ANDR	Anderson's Waste Disposal Sites	Y	0	0	0	0
AUWR	Automobile Wrecking & Supplies	N	0	0	6	6
CA	Certificates of Approval	N	0	0	67	67
CFOT	Commercial Fuel Oil Tanks	Y	0	0	0	0
CHEM	Chemical Register	N	0	0	5	5
COAL	Coal Gasification Plants	Y	0	0	0	0
CONV	Compliance and Convictions	Y	0	0	0	0
DRL	Drill Hole Database	N	0	0	0	0
EBR	Environmental Registry	N	0	0	71	71
EEM	Environmental Effects Monitoring	N	0	0	0	0
EHS	ERIS Historical Searches	N	0	2	79	81
EIIS	Environmental Issues Information System	N	0	0	0	0
FCON	Federal Convictions	N	0	0	0	0
FCS	Contaminated Sites on Federal Land	N	0	0	0	0
FOFT	Fisheries & Oceans Fuel Storage Tanks	N	0	0	0	0
GEN	Ontario Regulation 347 Waste Generators Summary	Y	11	35	976	1011
IAFT	Indian & Northern Affairs Fuel Tanks	N	0	0	0	0
MINE	Canadian Mine Locations	N	0	0	0	0
MNR	Mineral Occurrences	N	0	0	0	0
NATE	National Analysis of Trends in Emergencies System (NATES)	N	0	0	0	0
NCPL	Non-Compliance Reports	N	0	0	0	0
NDFT	National Defence & Canadian Forces Fuel Storage Tanks	N	0	0	0	0
NDSP	National Defence & Canadian Forces Spills	N	0	0	0	0
NDWD	National Defence & Canadian Forces Waste Disposal Sites	N	0	0	0	0
NEES	National Environmental Emergencies System (NEES)	N	0	0	0	0
NPCB	National PCB Inventory	Y	0	0	7	7
NPRI	National Pollutant Release Inventory	N	0	0	102	102
OGW	Oil and Gas Wells	N	0	0	0	0
OOGW	Ontario Oil and Gas Wells	N	0	0	0	0
OPCB	Inventory of PCB Storage Sites	Y	0	0	10	10
ORD	Orders	N	0	0	0	0
ORIS	Occurrence Reporting Information System	Y	0	11	119	130
PAP	Canadian Pulp and Paper	N	0	0	4	4
PCFT	Parks Canada Fuel Storage Tanks	N	0	0	0	0
PES	Pesticide Register	N	0	0	10	10
PRT	Private and Retail Fuel Storage Tanks	Y	0	1	37	38
REC	Ontario Regulation 347 Waste Receivers Summary	Y	0	0	2	2
RSC	Record of Site Condition	Y	0	0	1	1
RST	Retail Fuel Storage Tanks	Y	0	0	10	10

Report Summary

Order Number: 20070705045
Site Name: Toronto
Site Address 6932 Vanguard Drive Mississauga, ON
Report Type: Basic Report, 0.25 km Search Radius

Database		Selected	On-site	Within 0.25	0.25km to 2.00km	Total
SCT	Scott's Manufacturing Directory	N	0	0	999	999
SRDS	Wastewater Discharger Registration Database	N	0	0	0	0
TANK	Anderson's Storage Tanks	Y	0	0	0	0
TCFT	Transport Canada Fuel Storage Tanks	N	0	0	0	0
WDS	Waste Disposal Sites - MOE CA Inventory	Y	0	0	1	1
WDSH	Waste Disposal Sites - MOE 1991 Historical Approval Inventory	Y	0	0	0	0
WWIS	Water Well Information System	N	0	0	46	46
		TOTAL	11	49	2,552	2,601

The databases chosen by the client as per the submitted order form are denoted in the 'Selected' column in the above table. Counts have been provided outside the primary buffer area for cursory examination only. These records have not been examined or verified, therefore, they are subject to change.

SITE DIAGRAM

ECOLOG ERIS
Pinpointing Your Environmental Risks
12 Concorde Pl, Suite 800 North York, ON M3C 4J2
416-510-5204

Project Property: Toronto
6932 Vanguard Drive
Mississauga, ON

ERIS Project #: 20070705045

Date: JUL-13-2007

LEGEND

- Project Property
- Database Location

Points of Interest
- Chimney
- Silo

Pipe & Transmission Lines
- Pipeline
- Transmission Line
- Transmission Tower
- Transformer Station

Rail
- Railway - Main
- Railway - Sidetrack
- Railway - Abandoned
- Bridge
- Tunnel

Transportation - Other
- Embankment
- Trail
- Runway

Hydrographic Features
- Permanent Waterway
- Intermittent Waterway
- Open Reservoir
- Dyke/Levee
- Dam
- Breakwall
- Wetland

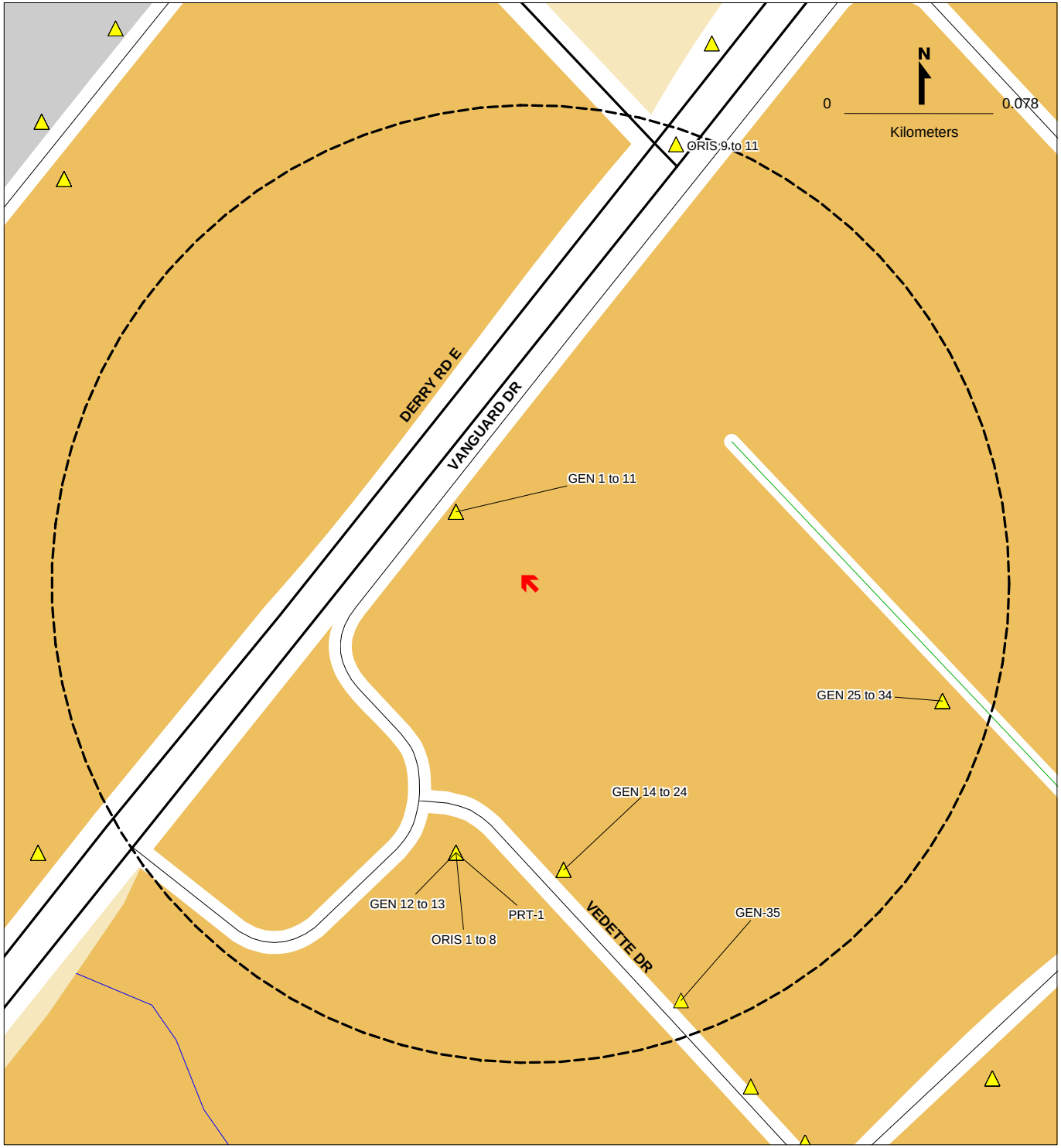
Landuse Classifications
- Open Area
- Residential
- Commercial
- Resource and Industrial
- Government and Institutional
- Parks and Recreational
- Waterbody

Recreation
- Golf Course/Driving Range
- Park/Sports Field
- Other Recreation Area
- Sports/Race Track
- Cemetery
- Campground

Vegetation
- Wooded Area
- Orchard
- Vineyard

Industrial Resources
- Conveyor
- Crane: Moveable
- Crane: Stationary
- Tank
- Rock Cut
- Auto Wrecker
- Lumber Yard
- Pit

This diagram is to be used solely for relative street location purposes.
It may not accurately portray street or site positions.



Site Report

Order Number: 20070705045
Site Name: Toronto
Site Address 6932 Vanguard Drive Mississauga, ON
Report Type: Basic Report, 0.25 km Search Radius

FOR COMPLETE INFORMATION, REFER TO DETAIL REPORT

Ontario Regulation 347 Waste Generators Summary

Map Key	Company Name	Address	City	Postal Code
GEN-1	GVT. OF CAN. - TRANSPORT CANADA	2450 DERRY ROAD, EAST, HANGAR #6	MISSISSAUGA	L5S 1B2
GEN-2	GVT. OF CAN. - TRANSPORT CANADA	2450 DERRY ROAD, EAST, HANGAR #6	MISSISSAUGA	L5S 1B2
GEN-3	TRANSPORT CANADA(OUT OF BUSINESS)	2450 DERRY ROAD EAST HANGAR #6	MISSISSAUGA	L5S 1B2
GEN-4	AIR NIAGARA EXPRESS INC. 02-167	PEARSON INTERNATIONAL AIRPORT 2450 DERRY ROAD EAST HANGAR #6	MISSISSAUGA	L5S 1B2
GEN-5	AIR NIAGARA EXPRESS INC.	HANGAR #6 2450 DERRY ROAD EAST	MISSISSAUGA	L5S 1B2
GEN-6	AIR NIAGARA EXPRESS INC.	PEARSON INTERNATIONAL AIRPORT 2450 DERRY ROAD EAST HANGAR #6	MISSISSAUGA	L5S 1B2
GEN-7	GVT. OF CAN. (OUT OF BUS) 18-178	2450 DERRY ROAD EAST HANGAR #6	MISSISSAUGA	L5S 1B2
GEN-8	SKY SERVICE, FBO-MTNC	2450 DERRY ROAD EAST HANGER 6	MISSISSAUGA	L5S 1B2
GEN-9	MAXWELL AERO MAINTENANCE LIMITED	2450 DERRY ROAD EAST HANGER #6	MISSISSAUGA	L5S 1B2
GEN-10	ALL CARGO AIRLINES LTD.	2450 DERRY ROAD EAST, HANGER 6 LESTER B. PEARSON AIRPORT	MISSISSAUGA	L5S 1B2
GEN-11	SAMARITAN AIR SERVICE LTD.	2450 DERRY ROAD EAST, HANGER 6	MISSISSAUGA	L5S 1B2

Detail Report

Order Number: 20070705045
Site Name: Toronto
Site Address: 6932 Vanguard Drive Mississauga ON
Report Type: Basic Report, 0.25 km Search Radius

If information is required for sites located beyond the selected address, please contact your ERIS representative.

Ontario Regulation 347 Waste Generators Summary

Occurrence Reporting Information System

Private and Retail Fuel Storage Tanks

Ontario Regulation 347 Waste Generators Summary

Map Key	Company	Address	SIC Code	SIC Description	Waste Code	Waste Description
GEN-1	GVT. OF CAN. - TRANSPORT CANADA	2450 DERRY ROAD, EAST, HANGAR #6 MISSISSAUGA L5S 1B2	3211	AIRCRAFT & PARTS IND.	213 252	PETROLEUM DISTILLATES WASTE OILS & LUBRICANTS
			Generator #:	ON0175120		
			Approval Yrs:	86,87,88,89		
GEN-2	GVT. OF CAN. - TRANSPORT CANADA	2450 DERRY ROAD, EAST, HANGAR #6 MISSISSAUGA L5S 1B2	3211	AIRCRAFT & PARTS IND	213 252	PETROLEUM DISTILLATES WASTE OILS & LUBRICANTS
			Generator #:	ON0175120		
			Approval Yrs:	90		
GEN-3	TRANSPORT CANADA(OUT OF BUSINESS)	2450 DERRY ROAD EAST HANGAR #6 MISSISSAUGA L5S 1B2	3211	AIRCRAFT & PARTS IND.	213 252	PETROLEUM DISTILLATES WASTE OILS & LUBRICANTS
			Generator #:	ON0175120		
			Approval Yrs:	98		
GEN-4	AIR NIAGARA EXPRESS INC. 02-167	PEARSON INTERNATIONAL AIRPORT 2450 DERRY ROAD EAST HANGAR #6 MISSISSAUGA L5S 1B2	4523	AIRCRAFT SEVICING	213	PETROLEUM DISTILLATES
			Generator #:	ON0813700		
			Approval Yrs:	94,95		
GEN-5	AIR NIAGARA EXPRESS INC.	HANGAR #6 2450 DERRY ROAD EAST MISSISSAUGA L5S 1B2	4523	AIRCRAFT SEVICING	213	PETROLEUM DISTILLATES
			Generator #:	ON0813700		
			Approval Yrs:	99,00,01		
GEN-6	AIR NIAGARA EXPRESS INC.	PEARSON INTERNATIONAL AIRPORT 2450 DERRY ROAD EAST HANGAR #6 MISSISSAUGA L5S 1B2	4523	AIRCRAFT SEVICING	213	PETROLEUM DISTILLATES
			Generator #:	ON0813700		
			Approval Yrs:	86,87,88,89,90		
GEN-7	GVT. OF CAN. (OUT OF BUS) 18-178	2450 DERRY ROAD EAST HANGAR #6 MISSISSAUGA L5S 1B2	3211	AIRCRAFT & PARTS IND	213 252	PETROLEUM DISTILLATES WASTE OILS & LUBRICANTS
			Generator #:	ON0175120		
			Approval Yrs:	92,93,94,95,96,97		

Ontario Regulation 347 Waste Generators Summary

Map Key	Company	Address	SIC Code	SIC Description	Waste Code	Waste Description
GEN-8	SKY SERVICE, FBO-MTNC	2450 DERRY ROAD EAST HANGER 6 MISSISSAUGA L5S 1B2	4512	NON-SCHED. A.T.-CHAR.	112	ACID WASTE - HEAVY METALS
			Generator #:	ON1815001	121	ALKALINE WASTES - HEAVY METALS
			Approval Yrs:	01,02,03,04	146	OTHER SPECIFIED INORGANICS
					213	PETROLEUM DISTILLATES
					221	LIGHT FUELS
					251	OIL SKIMMINGS & SLUDGES
					252	WASTE OILS & LUBRICANTS
GEN-9	MAXWELL AERO MAINTENANCE LIMITED	2450 DERRY ROAD EAST HANGER #6 MISSISSAUGA L5S 1B2	4523	AIRCRAFT SEVICING	252	WASTE OILS & LUBRICANTS
			Generator #:	ON2409400		
			Approval Yrs:	98,99,00,01		
GEN-10	ALL CARGO AIRLINES LTD.	2450 DERRY ROAD EAST, HANGER 6 LESTER B. PEARSON AIRPORT MISSISSAUGA L5S 1B2	4513	NON-SCHED. A.T.-SPEC.	213	PETROLEUM DISTILLATES
			Generator #:	ON2136800	252	WASTE OILS & LUBRICANTS
			Approval Yrs:	96,97,98,99,00,01		
GEN-11	SAMARITAN AIR SERVICE LTD.	2450 DERRY ROAD EAST, HANGER 6 MISSISSAUGA L5S 1B2	3211	AIRCRAFT & PARTS IND	213	PETROLEUM DISTILLATES
			Generator #:	ON1777601	221	LIGHT FUELS
			Approval Yrs:	94,95,96		
GEN-12	SHELL CANADA PRODUCTS LTD.	2450 DERRY ROAD EAST MISSISSAUGA L5S 1B2	5111	PETROLEUM PROD., WH.	221	LIGHT FUELS
			Generator #:	ON0005125		
			Approval Yrs:	92,93,97		
GEN-13	SHELL CANADA PRODUCTS LIMITED	2450 DERRY ROAD EAST MISSISSAUGA L5S 1B2	5111	PETROLEUM PROD., WH.	221	LIGHT FUELS
			Generator #:	ON0005125		
			Approval Yrs:	98,99,00,01		
GEN-14	MILLARDAIR LTD., HANGAR 5, PEARSON	INT'L AIRPORT 2450 DERRY ROAD MISSISSAUGA L4T 3B6	4511	SCHED. AIR TRANSPORT	252	WASTE OILS & LUBRICANTS
			Generator #:	ON1174600		
			Approval Yrs:	89		

Ontario Regulation 347 Waste Generators Summary

Map Key	Company	Address	SIC Code	SIC Description	Waste Code	Waste Description
GEN-15	CANADA 3000 AIRLINES LTD.	2450 DERRY RD, E. HANGAR 5A MISSISSAUGA C/O 27 FASKEN DRIVE TORONTO L5S 1B2	4511	SCHED. AIR TRANSPORT	213	PETROLEUM DISTILLATES
			Generator #:	ON1186600		
			Approval Yrs:	89		
GEN-16	Quantum Aviation Ltd.	2450 Derry Road East Hanger #5 Bay #3 Mississauga L5S 1B2				
			Generator #:	ON2301186		
			Approval Yrs:	03,04		
GEN-17	MILLARD AIR	2450 DERRY ROAD MISSISSAUGA L5S 1B2			122	ALKALINE WASTES - OTHER METALS
			Generator #:	ON8693977	232	POLYMERIC RESINS
			Approval Yrs:	02,03,04	251	OIL SKIMMINGS & SLUDGES
GEN-18	AIRWAVE TRANSPORT LTD.	2450 DERRY ROAD EAST, HANGAR 5 MISSISSAUGA L5S 1B2	3211	AIRCRAFT & PARTS IND.	112	ACID WASTE - HEAVY METALS
			Generator #:	ON2197100	121	ALKALINE WASTES - HEAVY METALS
			Approval Yrs:	99,00,01	213	PETROLEUM DISTILLATES
					252	WASTE OILS & LUBRICANTS
GEN-19	CANADA 3000 AIRLINES LTD. 09-259	2450 DERRY RD, E. HANGAR 5A MISSISSAUGA C/O 27 FASKEN DRIVE TORONTO L5S 1B2	4511	SCHED. AIR TRANSPORT	213	PETROLEUM DISTILLATES
			Generator #:	ON1186600	252	WASTE OILS & LUBRICANTS
			Approval Yrs:	94,95		
GEN-20	SAMARITAN (OUT OF BUSINESS)	2450 DERRY ROAD EAST HANGER 5 BAY 3 MISSISSAUGA L5S 1B2	3211	AIRCRAFT & PARTS IND	213	PETROLEUM DISTILLATES
			Generator #:	ON1777600	221	LIGHT FUELS
			Approval Yrs:	93,94,95,96,97,98		
GEN-21	CANADA 3000 AIRLINES LTD. 09-259	2450 DERRY ROAD EAST, HANGAR 5A MISSISSAUGA L5S 1B2	4511	SCHED. AIR TRANSPORT	213	PETROLEUM DISTILLATES
			Generator #:	ON1186600	252	WASTE OILS & LUBRICANTS
			Approval Yrs:	92,93,96,97		
GEN-22	MILLARDAIR LIMITED	PEARSON INTERNATIONAL AIRPORT HANGAR 5 MISSISSAUGA L4T 3B6	4511	SCHED. AIR TRANSPORT	252	WASTE OILS & LUBRICANTS
			Generator #:	ON1174600		
			Approval Yrs:	99,00,01,03,04		

Ontario Regulation 347 Waste Generators Summary

Map Key	Company	Address	SIC Code	SIC Description	Waste Code	Waste Description
GEN-23	MILLARDAIR LTD., HANGAR 5, PEARSON	PEARSON INTERNATIONAL AIRPORT HANGAR 5 MISSISSAUGA L4T 3B6	4511	SCHED. AIR TRANSPORT **Generator #:** ON1174600 **Approval Yrs:** 92,93,97,98	252	WASTE OILS & LUBRICANTS
GEN-24	MILLARDAIR LTD., HANGAR 5, PEARSON27-558	INT'L AIRPORT 2450 DERRY ROAD MISSISSAUGA L4T 3B6	4511	SCHED. AIR TRANSPORT **Generator #:** ON1174600 **Approval Yrs:** 94,95,96	252	WASTE OILS & LUBRICANTS
GEN-25	INNOTECH AVIATION LTD.	2450 DERRY RD. MISSISSAUGA L5S 1B2	3211	AIRCRAFT & PARTS IND. **Generator #:** ON0102400 **Approval Yrs:** 86,87,88,89	213	PETROLEUM DISTILLATES
GEN-26	quantum aviation ltd	2450 Derry rd east Hanger #5 Mississauga L5S 1B2	811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance **Generator #:** ON3785794 **Approval Yrs:** 05	252	WASTE OILS & LUBRICANTS
GEN-27	SKYSERVICE AIRLINES INC	2450 DERRY ROAD EAST HANGER 6 & 6A MISSISSAUGA L5S 1B2	621912	Air Ambulance Services **Generator #:** ON1815001 **Approval Yrs:** 05	112 121 145 146 148 212 213 221 232 251 252 263	ACID WASTE - HEAVY METALS ALKALINE WASTES - HEAVY METALS PAINT/PIGMENT/COATING RESIDUES OTHER SPECIFIED INORGANICS INORGANIC LABORATORY CHEMICALS ALIPHATIC SOLVENTS PETROLEUM DISTILLATES LIGHT FUELS POLYMERIC RESINS OIL SKIMMINGS & SLUDGES WASTE OILS & LUBRICANTS ORGANIC LABORATORY CHEMICALS

Ontario Regulation 347 Waste Generators Summary

Map Key	Company	Address	SIC Code	SIC Description	Waste Code	Waste Description
GEN-28	skyservce f.b.o.	2450 derry rd mississauga l5s1b2			221	LIGHT FUELS
			Generator #:	ON3445863	122	ALKALINE WASTES - OTHER METALS
			Approval Yrs:	02,03,04,05	145	PAINT/PIGMENT/COATING RESIDUES
					148	INORGANIC LABORATORY CHEMICALS
					213	PETROLEUM DISTILLATES
					231	LATEX WASTES
					251	OIL SKIMMINGS & SLUDGES
					252	WASTE OILS & LUBRICANTS
					263	ORGANIC LABORATORY CHEMICALS
					331	WASTE COMPRESSED GASES
GEN-29	WORLD AVIATION CENTRE, THE	2450 DERRY ROAD EAST MISSISSAUGA L5S 1B2	4523	AIRCRAFT SEVICING	221	LIGHT FUELS
			Generator #:	ON2263800		
			Approval Yrs:	97,98,99,00,01		
GEN-30	TORONTOJET CENTRE (OUT OF BUSINESS)	2450 DERRY ROAD EAST HANGARS 6, 7 & 9 MISSISSAUGA L5S 1B2	4512	NON-SCHED. A.T.-CHAR.	213	PETROLEUM DISTILLATES
			Generator #:	ON1980500	221	LIGHT FUELS
			Approval Yrs:	95,96,97,98	251	OIL SKIMMINGS & SLUDGES
					252	WASTE OILS & LUBRICANTS
GEN-31	HUDSON GE(OUT OF BUSINESS)ICE 20-014	2450 DERRY ROAD EAST MISSISSAUGA L5S 1B2	0008	EXEMPT		
			Generator #:	ON0244500		
			Approval Yrs:	92,93,94		
GEN-32	INNOTECH AVIATION LTD. 21-221	2450 DERRY RD. MISSISSAUGA L5S 1B2	3211	AIRCRAFT & PARTS IND	213	PETROLEUM DISTILLATES
			Generator #:	ON0102400		
			Approval Yrs:	92,93,94,95,96,97		
GEN-33	HUDSON GENERAL FLIGHT SERVICE	2450 DERRY ROAD EAST MISSISSAUGA L5S 1B2	0008	EXEMPT		
			Generator #:	ON0244500		
			Approval Yrs:	86,87,88,89,90		

Ontario Regulation 347 Waste Generators Summary

Map Key	Company	Address	SIC Code	SIC Description	Waste Code	Waste Description
GEN-34	INNOTECH AVIATION LIMITED	2450 DERRY ROAD MISSISSAUGA L5S 1B2	3211	AIRCRAFT & PARTS IND.	213	PETROLEUM DISTILLATES
			Generator #:	ON0102400		
			Approval Yrs:	98		
GEN-35	Air Transat	2450 Derry Road East c/o Millard Air Hangar 4 Mississauga L5S 1B2			252	WASTE OILS & LUBRICANTS
			Generator #:	ON4003726	212	ALIPHATIC SOLVENTS
			Approval Yrs:	02,03,04,05	221	LIGHT FUELS
					251	OIL SKIMMINGS & SLUDGES
n/a	SHELL CANADA PRODUCTS LTD.	PEARSON INTERNATIONAL AIRPORT DERRY ROAD MISSISSAUGA L5S 1B2	5111	PETROLEUM PROD., WH.	221	LIGHT FUELS
			Generator #:	ON0005125		
			Approval Yrs:	86,87,88,89,90		
n/a	SHELL CANADA PRODUCTS LTD. 34-145	PEARSON INTERNATIONAL AIRPORT DERRY ROAD MISSISSAUGA L5S 1B2	5111	PETROLEUM PROD., WH.	221	LIGHT FUELS
			Generator #:	ON0005125		
			Approval Yrs:	94,95,96		

Occurrence Reporting Information System

Map Key	Company	Address	Spill ID	Medium	Environmental Impact	Date of Occurrence	Nature of Impact
ORIS-1	SHELL CANADA PRODUCTS LTD.	TORONTO INTERNATIONAL AIRPORT SERVICE STATION MISSISSAUGA CITY	5255	LAND		2/3/1988	
			Synopsis:	SHELL SKY CHARTER - 125L AVIATION GAS TO GRD.			
			Cause:	OTHER CAUSE (N.O.S.) OTHER			
ORIS-2	SHELL CANADA PRODUCTS LTD.	2450 DERRY RD. KEY-LOCK STATION MISSISSAUGA CITY	18080	LAND		5/5/1989	
			Synopsis:	SHELL - JET A1 FUEL TO GROUND WHEN ONT.HYDRO TRUCK PULLED OUT TOO SOON			
			Cause:	VALVE/FITTING LEAK OR FAILURE NEGLIGENCE (APPARENT)			
ORIS-3	SHELL CANADA PRODUCTS LTD.	PEARSON INT'L AIRPORT KEY-LOCK STATION PEEL R.M.	19620	LAND		6/3/1989	
			Synopsis:	SHELL CANADA -60 L. JET "A" FUEL TO INTER- CEPTORS AT KEY-LOCK.			
			Cause:	CONTAINER OVERFLOW ERROR			
ORIS-4	AIRCRAFT	SHELL AEROCENTRE AT PEARSON INT. AIRPORT. (N.O.S.) MISSISSAUGA CITY	141497	LAND	NOT ANTICIPATED	6/2/1997	
			Synopsis:	SHELL AEROCENTRE-4 L JET FUEL TO ASPHALT FROM AIR-CRAFT, ERROR, CLEANED UP			
			Cause:	VALVE/FITTING LEAK OR FAILURE ERROR			
ORIS-5	SHELL CANADA PRODUCTS LTD.	SHELL CARD LOCK STATION A PEARSON AIRPORT, 2450 DERRY RD. EAST KEY-LOCK STATION MISSISSAUGA CITY	76636	LAND	NOT ANTICIPATED	9/22/1992	
			Synopsis:	SHELL - 350 L OF JET 'A' AVIATION FUEL TO PAVEMENTAND INTERCEPTOR.			
			Cause:	CONTAINER OVERFLOW EQUIPMENT FAILURE			
ORIS-6	SHELL CANADA PRODUCTS LTD.	NORTH END OF PEARSON INT'L AIRPORT, SHELL HANGARS 1,2,3 (2450 DERRY RD) SHELL AEROCENTRE, PEARSON INTERNATIONAL AIRPORT, 2450 DERRY RD, MISSISSAUGA MISSISSAUGA CITY	176756	LAND	NOT ANTICIPATED	1/17/2000	
			Synopsis:	SHELL AEROCENTRE-PEARSON:50 L JET-A1 TO RAMP/TAR- MAC.CONTAINED.CLEANING.			
			Cause:	CONTAINER OVERFLOW ERROR			
ORIS-7	SHELL CANADA PRODUCTS LTD.	PEARSON INTERNATIONAL AIRPORT SHELL AEROCENTRE, PEARSON INTERNATIONAL AIRPORT, 2450 DERRY RD, MISSISSAUGA MISSISSAUGA CITY	210315	Land	Not Anticipated	2001/08/30	
			Synopsis:	SHELL AEROCENTRE-PEARSON -30 KG OF JET FUEL TO RAMP, CONTAINED, CLEANED.			
			Cause:	VALVE/FITTING LEAK OR FAILURE EQUIPMENT FAILURE			

Occurrence Reporting Information System

Map Key	Company	Address	Spill ID	Medium	Environmental Impact	Date of Occurrence	Nature of Impact
ORIS-8	SHELL CANADA PRODUCTS LTD.	NORTH END OF PEARSON INT'L AIRPORT, SHELL HANGARS 1,2,3 (2450 DERRY RD) SHELL AEROCENTRE, PEARSON INTERNATIONAL AIRPORT, 2450 DERRY RD, MISSISSAUGA MISSISSAUGA CITY	203525	Land	Not Anticipated	2001/06/15	
			Synopsis:	SHELL AEROCENTRE-PEARSON -90 KG OF JET FUEL TO RAMP, CONTAINED, CLEANED.			
			Cause:	CONTAINER OVERFLOW ERROR			
ORIS-9	UNKNOWN	TORBRAM ROAD,NORTH OF DERRY MISSISSAUGA CITY	23061	LAND		8/2/1989	
			Synopsis:	PAINT SPILLED TO ROAD.			
			Cause:	UNKNOWN UNKNOWN			
ORIS-10	MISSISSAUGA HYDRO	DERRY TRANSFORMER STATION (TOMKEN RD. SOUTH OF DERRY RD.) TRANSFORMER MISSISSAUGA CITY	48992	LAND	POSSIBLE	4/12/1991	Soil contamination
			Synopsis:	MISSISSAUGA HYDRO- 2430 LTRANSFORMER OIL <2PPM PCBLEAKED ONTO GRAVEL AREA.			
			Cause:	COOLING SYSTEM LEAK EQUIPMENT FAILURE			
ORIS-11	MOTOR VEHICLE	DERRY RD/TORBRAM MOTOR VEHICLE (OPERATING FLUID) MISSISSAUGA CITY	89085	LAND	NOT ANTICIPATED	7/29/1993	
			Synopsis:	20 LTR GASOLINE TO ROAD IN FATAL MVA. CONTAINED AND CLEANED BY FD.			
			Cause:	OTHER TRANSPORTATION ACCIDENT ERROR			

Private and Retail Fuel Storage Tanks

Map Key	Company	Address	Location ID	Type	Expiry Date	Capacity (L)	Licence #	Facility Description
PRT-1	SHELL CANADA PRODUCTS LTD DAVE REID	2450 DERRY RD E MISSISSAUGA L5S 1B2	9012	private		386500.00	0001041142	PRIVATE FUEL OUTLET

Appendix: Ontario Database Descriptions

EcoLog Environmental Risk Information Services Ltd can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to EcoLog ERIS at the time of update. **Note:** Databases denoted with "*" indicates that the database will no longer be updated. See the individual database descriptions for more information.

Federal Government Source Databases: **Diagram Identifier:**

Environmental Effects Monitoring 1992-2004 **EEM**

The Environmental Effects Monitoring program assesses the effects of effluent from industrial or other sources on fish, fish habitat and human usage of fisheries resources. Since 1992, pulp and paper mills have been required to conduct EEM studies under the Pulp and Paper Effluent Regulations. This database provides information on the mill name, geographical location and sub-lethal toxicity data.

Environmental Issues Inventory System 1992-2001 **EIIS**

The Environmental Issues Inventory System was developed through the implementation of the Environmental Issues and Remediation Plan. This plan was established to determine the location and severity of contaminated sites on inhabited First Nation reserves, and where necessary, to remediate those that posed a risk to health and safety; and to prevent future environmental problems. The EIIS provides information on the reserve under investigation, inventory number, name of site, environmental issue, site action (Remediation, Site Assessment), and date investigation completed.

Federal Convictions 1988-Jan 2002 **FCON**

Environment Canada maintains a database referred to as the "Environmental Registry" that details prosecutions under the Canadian Environmental Protection Act (CEPA) and the Fisheries Act (FA). Information is provided on the company name, location, charge date, offence and penalty.

Contaminated Sites on Federal Land June 2000-2005 **FCS**

The Treasury Board of Canada Secretariat maintains an inventory of all known contaminated sites held by various Federal departments and agencies. This inventory does not include properties owned by Crown corporations, but does contain non-federal sites for which the Government of Canada has accepted some or all financial responsibility. All sites have been classified through a system developed by the Canadian Council of Ministers of the Environment. The database provides information on company name, location, site ID #, property use, classification, current status, contaminant type and plan of action for site remediation.

Fisheries & Oceans Fuel Tanks 1964-Sept 2003 **FOFT**

Fisheries & Oceans Canada maintains an inventory of all aboveground & underground fuel storage tanks located on Fisheries & Oceans property or controlled by DFO. Our inventory provides information on the site name, location, tank owner, tank operator, facility type, storage tank location, tank contents & capacity, and date of tank installation.

Indian & Northern Affairs Fuel Tanks 1950-Aug 2003 **IAFT**

The Department of Indian & Northern Affairs Canada (INAC) maintains an inventory of all aboveground & underground fuel storage tanks located on both federal and crown land. Our inventory provides information on the reserve name, location, facility type, site/facility name, tank type, material & ID number, tank contents & capacity, and date of tank installation.

National Analysis of Trends in Emergencies System (NATES) 1974-1994* **NATE**

In 1974 Environment Canada established the National Analysis of Trends in Emergencies System (NATES) database, for the voluntary reporting of significant spill incidents. The data was to be used to assist in directing the work of the emergencies program. NATES ran from 1974 to 1994. Extensive information is available within this database including company names, place where the spill occurred, date of spill, cause, reason and source of spill, damage incurred, and amount, concentration, and volume of materials released.

National Defence & Canadian Forces Fuel Tanks Up to May 2001 **NDFT**

The Department of National Defence and the Canadian Forces maintains an inventory of all aboveground & underground fuel storage tanks located on DND lands. Our inventory provides information on the base name, location, tank type & capacity, tank contents, tank class, date of tank installation, date tank last used, and status of tank as of May 2001. Please note that due to the September 2001 terrorist attack, new National Security protocols have prohibited any release of updates to this database.

National Defence & Canadian Forces Spills March 1999-Feb 2005 **NDSP**

The Department of National Defence and the Canadian Forces maintains an inventory of spills to land and water. All spill sites have been classified under the "Transportation of Dangerous Goods Act - 1992". Our inventory provides information on the facility name, location, spill ID #, spill date, type of spill, as well as the quantity of substance spilled & recovered.

National Defence & Canadian Forces Waste Disposal Sites 2001, 2003 **NDWD**

The Department of National Defence and the Canadian Forces maintains an inventory of waste disposal sites located on DND lands. Where available, our inventory provides information on the base name, location, type of waste received, area of site, depth of site, year site opened/closed and status.

National Environmental Emergencies System (NEES) 1974-2003 **NEES**

In 2000, the Emergencies program implemented NEES, a reporting system for spills of hazardous substances. For the most part, this system only captured data from the Atlantic Provinces, some from Quebec and Ontario and a portion from British Columbia. Data for Alberta, Saskatchewan, Manitoba and the Territories was not captured. However, NEES is also a repository for all previous Environment Canada spill datasets. NEES is composed of the historic datasets – or Trends – which dates from approximately 1974 to present. **NEES Trends** is a compilation of historic databases, which were merged and includes data from NATES (National Analysis of Trends in Emergencies System), ARTS (Atlantic Regional Trends System), and NEES. In 2001, the Emergencies Program determined that variations in reporting regimes and requirements between federal and provincial agencies made national spill reporting and trend analysis difficult to achieve. As a consequence, the department has focused efforts on capturing data on spills of substances which fall under its legislative authority only (CEPA and FA). As such, the NEES database will be decommissioned in December 2004.

National PCB Inventory 1988-June 2004 **NPCB**

Environment Canada's National PCB inventory includes information on in-use PCB containing equipment in Canada including federal, provincial and private facilities. All federal out-of-service PCB containing equipment and all PCB waste owned by the federal government or by federally regulated industries such as airlines, railway companies, broadcasting companies, telephone and telecommunications companies, pipeline companies, etc. are also listed. Although it is not Environment Canada's mandate to collect data on non-federal PCB waste, the National PCB inventory includes some information on provincial and private PCB waste and storage sites.

National Pollutant Release Inventory 1993-2005 **NPRI**

Environment Canada has defined the National Pollutant Release Inventory ("NPRI") as a federal government initiative designed to collect comprehensive national data regarding releases to air, water, or land, and waste transfers of 178 specified substances.

Parks Canada Fuel Storage Tanks **1920-Jan 2005** **PCFT**

Canadian Heritage maintains an inventory of all known fuel storage tanks operated by Parks Canada, in both National Parks and at National Historic Sites. The database details information on site name, location, tank install/removal date, capacity, fuel type, facility type, tank design and owner/operator.

Transport Canada Fuel Storage Tanks **1970- May 2003** **TCFT**

Within the provinces of BC, MB, NB, NF, ON, PE, and QC; Transport Canada currently owns and operates 90 fuel storage tanks. Our inventory provides information on the site name, location, tank age, capacity and fuel type.

Provincial Government Source Databases:

Abandoned Aggregate Inventory **Up to Sept 2002** **AAGR**

The MAAP Program maintains a database of all abandoned pits and quarries. Please note that the database is only referenced by lot and concession and city/town location. The database provides information regarding the location, type, size, land use, status and general comments.

Aggregate Inventory **Up to May 2005** **AGR**

The Ontario Ministry of Natural Resources maintains a database of all active pits and quarries. Please note that the database is only referenced by lot\concession and city/town location. The databases provides information regarding the registered owner/operator, location, status, licence type, and maximum tonnage.

Abandoned Mines Information System **1800- 2005** **AMIS**

The Abandoned Mines Information System contains data on known abandoned and inactive mines located on both Crown and privately held lands. The information was provided by the Ministry of Northern Development and Mines (MNDM), with the following disclaimer: "the database provided has been compiled from various sources, and the Ministry of Northern Development and Mines makes no representation and takes no responsibility that such information is accurate, current or complete". Reported information includes official mine name, status, background information, mine start/end date, primary commodity, mine features, hazards and remediation.

Certificates of Approval **1985-Sept 2002** **CA**

This database contains the following types of approvals: Certificates of Approval (Air) issued under Section 9 of the Ontario EPA; Certificates of Approval (Industrial Wastewater) issued under Section 53 of the Ontario Water Resources Act ("OWRA"); and Certificates of Approval (Municipal/Provincial Sewage and Waterworks) issued under Sections 52 and 53 of the OWRA.

Coal Gasification Plants **1987, 1988*** **COAL**

This inventory of all known and historical coal gasification plants was collected by the Ministry of Environment. It identifies industrial sites that produced and continue to produce or use coal tar and other related tars. Detailed information is available and includes: facility type, size, landuse, soil condition, site operators/occupants, site description, and potential environmental impacts. This information is effective to 1988, but the program has since been discontinued.

Compliance and Convictions **1989-2003** **CONV**

This database summarizes the fines and convictions handed down by the Ontario courts beginning in 1989. Companies and individuals named here have been found guilty of environmental offenses in Ontario courts of law.

Drill Holes **1886-2005** **DRL**

The Ontario Drill Hole Database contains information on more than 113,000 percussion, overburden, sonic and diamond drill holes from assessment files on record with the department of Mines and Minerals. Please note that limited data is available for southern Ontario, as it was the last area to be completed. The database was created when surveys submitted to the Ministry were converted in the Assessment File Research Image Database (AFRI) project. However, the degree of accuracy (coordinates) as to the exact location of drill holes is dependent upon the source document submitted to the MNDM. Levels of accuracy used to locate holes are: centering on the mining claim; a sketch of the mining claim; a 1:50,000 map; a detailed company map; or from submitted a "Report of Work".

Environmental Registry **1994-July 2003*** **EBR**

The Environmental Registry lists proposals, decisions and exceptions regarding policies, Acts, instruments, or regulations that could significantly affect the environment. Through the Registry, provincial ministries notify the public of upcoming proposals and invite their comments. For example, if a local business is requesting a permit, licence, or certificate of approval to release substances into the air or water; these are notified on the registry.

Ontario Regulation 347 Waste Generators Summary **1986-2005** **GEN**

Regulation 347 of the Ontario EPA defines a waste generation site as any site, equipment and/or operation involved in the production, collection, handling and/or storage of regulated wastes. A generator of regulated waste is required to register the waste generation site and each waste produced, collected, handled, or stored at the site. This database contains the registration number, company name and address of registered generators including the types of hazardous wastes generated. This information is a summary of all years from 1986 including the most currently available data. Some records may contain, within the company name, the phrase "See & Use…" followed by a series of letters and numbers. This occurs when one company is amalgamated with or taken over by another registered company. The number listed as "See & Use", refers to the new ownership and the other identification number refers to the original ownership. This phrase serves as a link between the 2 companies until operations have been fully transferred.

Mineral Occurrences **1846-Oct 2004** **MNR**

In the early 70's, the Ministry of Northern Development and Mines created an inventory of approximately 19,000 mineral occurrences in Ontario, in regard to metallic and industrial minerals, as well as some information on building stones and aggregate deposits. Please note that the "Horizontal Positional Accuracy" is approximately +/- 200 m. Many reference elements for each record were derived from field sketches using pace or chain/tape measurements against claim posts or topographic features in the area. The primary limiting factor for the level of positional accuracy is the scale of the source material. The testing of horizontal accuracy of the source materials was accomplished by comparing the planimetric (X and Y) coordinates of that point with the coordinates of the same point as defined from a source of higher accuracy.

Non-Compliance Reports **1992(water only), 1994-2005** **NCPL**

The Ministry of the Environment provides information about non-compliant discharges of contaminants to air and water that exceed legal allowable limits, from regulated industrial and municipal facilities. A reported non-compliance failure may be in regard to a Control Order, Certificate of Approval, Sectoral Regulation or specific regulation/act.

Ontario Oil and Gas Wells **1800-Oct 2006** **OOGW**

In 1998, the MNR handed over to the Ontario Oil, Gas and Salt Resources Corporation, the responsibility of maintaining a database of oil and gas wells drilled in Ontario. Information available for all wells in the ERIS database include well owner/operator, location, permit start date, well cap date, licence number, status, depth and the primary target (rock unit) of the well being drilled.

Ontario Inventory of PCB Storage Sites **1987-Oct 2004** **OPCB**

The Ontario Ministry of Environment, Waste Management Branch, maintains an inventory of PCB storage sites within the province. Ontario Regulation 11/82 (Waste Management - PCB) and Regulation 347 (Generator Waste Management) under the Ontario EPA requires the registration of inactive PCB storage equipment and/or disposal sites of PCB waste with the Ontario Ministry of Environment. This database contains information on: 1) waste quantities; 2) major and minor sites storing liquid or solid waste; and 3) a waste storage inventory.

Ministry Orders **1995-1996** **ORD**

Control Orders/Documents are enforcement actions issued by the Ministry of the Environment to deal with environmental violations. They clarify and allocate individual/joint liability when issuing clean-up orders for contaminated sites.

Occurrence Reporting Information System **1988-2002** **ORIS**

This database identifies sources, effects/actions and approximate locations of spills and occurrences within Ontario. The locations identified on the locator diagram refer to the facility responsible for the spill. The actual location of the spill can be derived from the descriptions provided in the detailed report.

Pesticide Register **1988-Oct 2006** **PES**

The Ontario Ministry of Environment maintains a database of all manufacturers and vendors of registered pesticides.

Private and Retail Fuel Storage Tanks **1989-1996*** **PRT**

The Fuels Safety Branch of the Ontario Ministry of Consumer and Commercial Relations maintained a database of all registered private fuel storage tanks and licensed retail fuel outlets. This database includes an inventory of locations that have gasoline, oil, waste oil, natural gas and/or propane storage tanks on their property. The MCCR no longer collects this information. This information is now collected by the Technical Standards and Safety Authority.

Ontario Regulation 347 Waste Receivers Summary **1986-2005** **REC**

Part V of the Ontario Environmental Protection Act ("EPA") regulates the disposal of regulated waste through an operating waste management system or a waste disposal site operated or used pursuant to the terms and conditions of a Certificate of Approval or a Provisional Certificate of Approval. Regulation 347 of the Ontario EPA defines a waste receiving site as any site or facility to which waste is transferred by a waste carrier. A receiver of regulated waste is required to register the waste receiving facility. This database represents registered receivers of regulated wastes, identified by registration number, company name and address. This information is a summary of all years from 1986 including the most currently available data.

Record of Site Condition **1997-Sept 2001** **RSC**

The Record of Site Condition (RSC) provides a summary of the final environmental condition of a site, once an environmental site assessment and/or restoration approach has been undertaken. The database provides information on the site restoration approach used (Background, Generic, Site Specific Risk Assessment), location of contaminated site, whether contamination extends past 1.5m from the surface thereby requiring "stratified restoration", soil type, and the date when RSC was submitted/acknowledged/ responded to by the Ministry of the Environment. A site restoration approach involves the use of soil and groundwater quality criteria, which have been developed to provide protection against adverse effects to human/ecological health and the natural environment. These criteria may be applied to agricultural, residential/parkland, industrial/commercial land uses; as well as potable (source of drinking water) and nonpotable groundwater use.

Wastewater Discharger Registration Database **1990-1998** **SRDS**

Information under this heading is combination of the following 2 programs. The Municipal/Industrial Strategy for Abatement (MISA) division of the Ontario Ministry of Environment maintained a database of all direct dischargers of toxic pollutants within nine sectors including: Electric Power Generation; Mining; Petroleum Refining; Organic Chemicals; Inorganic Chemicals; Pulp & Paper; Metal Casting; Iron & Steel; and Quarries. All sampling information is now collected and stored within the Sample Result Data Store (SRDS).

Waste Disposal Sites - MOE CA Inventory **1970-Sept 2002** **WDS**

The Ontario Ministry of Environment, Waste Management Branch, maintains an inventory of known open (active or inactive) and closed disposal sites in the Province of Ontario. Active sites maintain a Certificate of Approval, are approved to receive and are receiving waste. Inactive sites maintain Certificate(s) of Approval but are not receiving waste. Closed sites are not receiving waste. The data contained within this database was compiled from the MOE's Certificate of Approval database. Locations of these sites may be cross-referenced to the Anderson database described under ERIS's Private Source Database section, by the CA number.

Waste Disposal Sites - MOE 1991 Historical Approval Inventory **Up to Oct 1990*** **WDSH**

In June 1991, the Ontario Ministry of Environment, Waste Management Branch, published the "June 1991 Waste Disposal Site Inventory", of all known active and closed waste disposal sites as of October 30st, 1990. For each "active" site as of October 31st 1990, information is provided on site location, site/CA number, waste type, site status and site classification. For each "closed" site as of October 31st 1990, information is provided on site location, site/CA number, closure date and site classification. Locations of these sites may be cross-referenced to the Anderson database described under ERIS's Private Source Database section, by the CA number.

Water Well Information System **1955-2006** **WWIS**

This database describes locations and characteristics of water wells found within Ontario in accordance with Regulation 903. Geographic coordinates are reliable according to the given percentage. Wells that are identified with lot and concession only are available upon request and would be provided as a separate report.

Private Source Databases:

Anderson's Waste Disposal Sites **1930-2004** **ANDR**

The information provided in this database was collected by examining various historical documents which aimed to characterize the likely position of former waste disposal sites from 1860 to present. The research initiative behind the creation of this database was to identify those sites that are missing from the *Ontario MOE Waste Disposal Site Inventory*, as well as to provide revisions and corrections to the positions and descriptions of sites currently listed in the MOE inventory. In addition to historic waste disposal facilities, the database also identifies certain auto wreckers and scrap yards that have been extrapolated from documentary sources. *Please note that the data is not warranted to be complete, exhaustive or authoritive. The information was collected for research purposes only.*

Automobile Wrecking & Supplies **2001-Feb 2007** **AUWR**

This database provides an inventory of all known locations that are involved in the scrap metal, automobile wrecking/recycling, and automobile parts & supplies industry. Information is provided on the company name, location and business type.

Commercial Fuel Oil Tanks **1948-Sept 2006** **CFOT**

Since May 2002, Ontario developed a new act where it became mandatory for fuel oil tanks to be registered with TSSA. This data would include all commercial underground fuel oil tanks in Ontario with fields such as location, registration number, tank material, age of tank and tank size.

Chemical Register **1992, 1999-Feb 2007** **CHEM**

This database includes information from both a one time study conducted in 1992 and private source and is a listing of facilities that manufacture or distribute chemicals. The production of these chemical substances may involve one or more chemical reactions and/or chemical separation processes (i.e. fractionation, solvent extraction, crystallization, etc.).

ERIS Historical Searches **1999-2006** **EHS**

EcoLog ERIS has compiled a database of all environmental risk reports completed since March 1999. Available fields for this database include: site location, date of report, type of report, and search radius. As per all other databases, the ERIS database can be referenced on both the map and "Statistical Profile" page.

Canadian Mine Locations **1998-2006** **MINE**

This information is collected from the Canadian & American Mines Handbook. The Mines database is a national database that provides over 290 listings on mines (listed as public companies) dealing primarily with precious metals and hard rocks. Listed are mines that are currently in operation, closed, suspended, or are still being developed (advanced projects). Their locations are provided as geographic coordinates (x, y and/or longitude, latitude). As of 2002, data pertaining to Canadian smelters and refineries has been appended to this database.

Oil and Gas Wells **Oct 2001-May 2007** **OGW**

The Nickle's Energy Group (publisher of the Daily Oil Bulletin) collects information on drilling activity including operator and well statistics. The well information database includes name, location, class, status and depth. The main Nickles' database is updated on a daily basis, however, this database is updated on a monthly basis. More information is available at www.nickles.com.

Canadian Pulp and Paper **1999, 2002, 2004, 2005** **PAP**

This information is part of the Pulp and Paper Canada Directory. The Directory provides a comprehensive listing of the locations of pulp and paper mills and the products that they produce.

Retail Fuel Storage Tanks **2000-Feb 2007** **RST**

This database includes an inventory of retail fuel outlet locations (including marinas) that have on their property gasoline, oil, waste oil, natural gas and / or propane storage tanks. Information is provided on company name, location and type of business.

Scott's Manufacturing Directory **1992-Jan 2007** **SCT**

Scott's Directories is a data bank containing information on over 70,000 manufacturers in Ontario. Even though Scott's listings are voluntary, it is the most comprehensive database of Ontario manufacturers available. Information concerning a company's address, plant size, and main products are included in this database. This database begins with 1992 information and is updated annually.

Anderson's Storage Tanks **1915-1953*** **TANK**

The information provided in this database was collected by examining various historical documents, which identified the location of former storage tanks, containing substances such as fuel, water, gas, oil, and other various types of miscellaneous products. Information is available in regard to business operating at tank site, tank location, permit year, permit & installation type, no. of tanks installed & configuration and tank capacity. *Data contained within this database pertains only to the city of Toronto and is not warranted to be complete, exhaustive or authoritative. The information was collected for research purposes only.*

APPENDIX C

Environmental Regulatory Overview

ENVIRONMENTAL REGULATORY OVERVIEW

ENVIRONMENTAL REGULATORY OVERVIEW

C-1 ABOVEGROUND AND UNDERGROUND STORAGE TANKS

As of June 27, 2001, fuel storage in Ontario is regulated by the *Technical Standards and Safety Act*, Ontario Regulation (O. Reg.) 213/01 for Fuel Oil (Fuel Oil Regulation) and O. Reg. 217/01 for Liquid Fuels (Liquid Fuels Regulation) and, where the *Technical Standards and Safety Act* and its regulations are not applicable, the Ontario Fire Code.

In general, the Liquid Fuels Regulation (which replaces the former Gasoline Handling Regulation, O. Reg. 521/93) in conjunction with the Liquid Fuels Handling Code, as adopted by the Technical Standards and Safety Authority – Fuel Safety Branch (TSSA) (which replaces the former Gasoline Handling Code), applies to facilities where gasoline or an associated product is handled, loaded or dispensed to be used as a fuel in motor vehicles or as a fuel oil (i.e., O. Reg. 217/01, s. 2 (1)). In addition, the Fuel Oil Regulation (which replaces the former Fuel Oil Code, O. Reg. 329/90), in conjunction with the current Canadian Standards Association (CSA) code (CSA-B139-00) Installation Code for Oil-Burning Equipment (which replaces the former CSA B139-M89), applies to the installation, testing maintenance, repair, removal, replacement, inspection and use of appliances, equipment, components and accessories where fuel oil is to be used as a fuel (i.e., O.Reg. 213/01, s. 2 (1)). The Fuel Oil Regulation also applies to the maintenance, modification and specified upgrading of existing equipment and to all new equipment (i.e., O. Reg. 213/01, s. 2 (2)). Numerous specific regulations and codes exist for the installation and construction of storage tanks, monitoring equipment and associated connections.

Generally speaking, the *Technical Standards and Safety Act* sets out the requirements, duties and powers of the TSSA, while each of the specific fuels applications have their own regulations under the Act. These regulations set out the specific fuel applications and adopt the appropriate technical code for each fuel application. However, when necessary, exceptions to the National Codes (e.g., Ontario Fire Code) are set out in the Liquid Fuels Handling Code Adoption Document (CAD), which has been adopted into the Liquid Fuels Handling Regulation. Unless otherwise specified in the CAD, the new codes are effective October 1, 2001. According to discussions with the TSSA, in Ontario, aboveground storage tanks (ASTs) for retail purposes

only and all underground storage tanks (USTs) installed under the Liquid Fuels Regulation require registration with the TSSA.

The Liquid Fuels Handling Code has the following key requirements for ASTs:

- Secondary containment is required for ASTs of a capacity of 5,000 litres or greater (Section 3.3.1.1.3);
- The containment dike for an AST shall have a capacity to contain at least 110% of the capacity of the tank, or where the dike contains more than one tank, it shall contain the capacity of the largest tank plus 10% of the aggregate capacity of all other tanks, or 100% of the largest tank, whichever is greater (Section 3.3.1.2.1); and
- ASTs installed without dikes shall be equipped with an overfill protection device and shall have a spill containment device (Section 3.3.2.2).

The Liquid Fuels Handling Code has the following key requirements for USTs:

- Where an UST is not used up to 180 days, the owner or operator shall ensure that (i) monthly inspections are conducted (Section 2.4.1.1), (ii) all product is removed from the tank (Section 2.4.1.3), all dispensing or transfer equipment to the tank and fill and gauge pipe covers are locked (Section 2.4.1.3), (iii) any corrosion protection system(s) are maintained in operation (Section 2.4.1.3), and (iv) water infiltration is monitored monthly (Section 2.4.1.3);
- Where an UST is out of service for 2 years, the owner of the tank and equipment and / or the owner of the property on which the tank is located shall remove the tank and all connected piping and associated equipment for that tank from the ground (Section 2.4.1.6); and
- As of October 1, 2001 all newly installed USTs and ancillary piping must be double walled with interstitial space monitoring.

C-2 WASTE GENERATION, STORAGE AND DISPOSAL

Regulatory control of subject and hazardous wastes (both liquid and solid) in Ontario is the responsibility of the Ministry of the Environment (MOE).

Regulation 347 made under the Ontario *Environmental Protection Act* (EPA) outlines the specific regulatory requirements of waste generation, handling and disposal in Ontario. Section 18 of Regulation 347 made under the EPA requires that a Subject Waste Generator Registration Number be obtained from the MOE if the facility generates "Subject Waste" (i.e., hazardous, liquid industrial or registerable solid waste as defined by Regulation 347) beyond the small quantities exemption listed in Section 18(15) of Regulation 347. An application must also be made to the MOE if any changes to the process alter the nature, type or volume of waste generated at a property. A waste generator is required to report to the MOE any registered waste that has been stored on a property longer than three months (Section 18(10) of Regulation 347 made under the EPA).

Ontario Regulation 102 Part VIII requires that a large manufacturing establishment, in which the hours worked by the persons employed at the site has exceeded 16,000 hours in any month in the last two years, conduct a waste audit and prepare a written report, prepare and implement a waste reduction work plan, and update the waste audit and work plan on an annual basis.

Ontario Regulation 103 Section 12 (1) requires that a large manufacturing establishment, in which the hours worked by the persons employed at the site has exceeded 16,000 hours in any month in the last two years, have a source separation recycling program in place.

C-3 WASTEWATER DISCHARGE

Regulatory control of water taking and discharging from natural systems in Ontario is the responsibility of the MOE. According to the Ontario *Water Resources Act* (OWRA), a Permit To Take Water is required if greater than 50,000 litres per day of water is taken from a natural system (such as a lake, river or groundwater), and a Certificate-of-Approval (C-of-A) (Industrial Sewage) is required for the discharge of a contaminant into a natural watercourse.

Regulatory control of wastewater discharges to the municipal sewer system is the responsibility of the City of Toronto, and the effluent quality must meet the City of Etobicoke Sewer Use By-Law No. 457-2000 ("Sewer Use By-Law") requirements.

C-4 AIR EMISSIONS

In Ontario, regulatory control of air emissions to the natural environment is the responsibility of the MOE.

Section 9 of the EPA requires that a C-of-A (Air & Noise) be obtained for the construction or modification of any equipment that may result in the discharge of a contaminant into the natural environment (other than water).

Air quality and atmospheric emissions are addressed specifically by Ontario Regulation 419 made under the EPA, which came into effect on November 30, 2005. The Regulation consists of Part I to Part III, and Schedule 1 to 7 as follows:

Part I:	Interpretation and Application
Part II:	Contaminant Concentrations and Dispersion Modelling
Part III:	Miscellaneous
Schedule 1	Standards with Half Hour Averaging Times
Schedule 2	Updated Standards with Half Hour Averaging Times
Schedule 3	Standards with Variable Averaging Times
Schedule 4	Target Sectors for 2010
Schedule 5	Target Sectors for 2013
Schedule 6	Upper Risk Thresholds
Schedule 7	Contaminants with Updated Standards

Presently, a micro-computer Air Dispersion Model, developed by the MOE, or any other air dispersion model acceptable to the MOE, may be used to predict contaminant concentrations. However, Regulation 419 requires that new dispersion models (AERMOD, ISCPRIME, SCREEN3 or ISCST3) be used, which will be implemented in phases over a period of 15 years. "Target sectors" (based on NAICS codes) are identified for implementation in 2010 (Schedule 4) and 2013 (Schedule 5). All other facilities must use the new models by 2020.

Ontario Regulation 524/98 (amended by Regulation 273/03) provides a list of specific equipment and conditions that are exempt from the requirement of a C-of-A (Air & Noise). Some of these situations applicable to the Site include the following:

- Fuel burning equipment used for comfort heating in a building using natural gas, propane or Number 2 oil (with a sulphur content of 0.5 percent or less) at a rate of less than 1.58 million kilojoules per hour (kJ/h) (1.5 million British Thermal units per hour);

- Fuel burning equipment used solely for the purpose of comfort heating in a dwelling used for the housing of not more than three families;

- Equipment for the preparation of food or beverages in a domestic residence, restaurant, snack bar, cafeteria, banquet hall or similar facility; or

- Any equipment, apparatus, mechanism or thing that is used for cleaning operations, if only aqueous detergent is used (i.e., laundry dryers and irons are exempt).

C-5 SPILLS, RELEASES AND EMERGENCY RESPONSE

Spills from industrial facilities in Ontario fall under the requirements of the EPA, the OWRA and the *Gasoline Handling Act*. In general, the legislation requires that measures be taken to prevent spills and if a spill occurs that measure be taken to prevent or minimize any adverse effect that might result. Notification of the appropriate authorities is also required. In particular, Section 92 of the EPA requires that that MOE and the local municipality be notified of a spill that "*causes or is likely to cause an adverse effect.*" Section 30(1) of the OWRA also requires the notification of MOE in the event of a discharge to waters that "*may impair the quality of the water*." Spills from ASTs and USTs regulated by the Liquid Fuels Regulation are required to be reported to the TSSA.

In the event of a spill, it is the responsibility of the person and / or company responsible for the spill to demonstrate that all practicable measures were taken to prevent a spill from occurring in the first place. It is therefore important that a facility have a Spill Prevention, Control and Countermeasures (SPCC) plan in order to reduce the likelihood of spills, ensure proper notification, containment and remediation measures. SPCC plans will vary significantly based on the nature of the site and operation, but certain basic elements remain the same. The MOE

has a guidance document, entitled "*Planning for Spill Contingencies*", which, according to the MOE Spills Action Centre, was updated in February 2000.

C-6 ASBESTOS CONTAINING MATERIALS

Asbestos-containing materials (ACMs) are fibrous hydrated silicates, and can be found in building materials as either "friable" or "non-friable" asbestos products. Friable asbestos refers to materials that can be readily crumbled using hand pressure, separating asbestos fibres from the binding materials with which they are associated. Non-friable material refers to asbestos that is associated with a binding agent (such as tar or cement), preventing ready release of airborne fibres. Friable asbestos is commonly found in boiler and pipe insulation. Non-friable asbestos is typically found in roofing tars, floor and ceiling tiles, and precast asbestos cement products commonly referred to as "transite".

Asbestos in the workplace is defined as a Designated Substance under the Ontario *Occupational Health and Safety Act* (OHSA). Under the OHSA, Ontario Regulation 278/05 (Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations) governs the safe handling of ACMs in the workplace. This regulation requires owners to notify workpersons of the presence of friable ACMs once their presence has been confirmed. Ontario Regulation 278/05 also requires the implementation of an asbestos management plan until all ACMs have been removed from the buildings.

ACMs were discontinued from use in Canada in the late 1970s / early 1980s, although non-friable asbestos is still found in many more recent buildings. Section 4 of Ontario Regulation 278/05 prohibited the installation of new asbestos-containing thermal insulation and fireproofing.

Asbestos may become an issue during renovation, alteration, maintenance or demolition activities, or when ACMs are taken out-of-service. Materials identified as containing asbestos that are in poor condition should immediately be managed either by proper encapsulation or removal.

The on-Site management and removal of ACMs is governed by the OHSA, and the removal and disposal of ACMs are governed by the specific regulations in the provincial EPA. Neither the OHSA nor EPA requires licensing, approval or registration of a property in which ACMs are identified. The only method of confirming whether materials are asbestos-containing is to sample and analyze the suspect material.

C-7 OZONE-DEPLETING SUBSTANCES

Federal regulations introduced in 1995 required the elimination of production and import of CFCs by January 1, 1996 (subject to certain essential uses) and a freeze on the production and import of HCFC-22 by January 1, 1996. These regulations require the complete elimination of HCFC-22 by the year 2020.

Since the regulations govern only the production and import of certain ozone-depleting substances (ODSs), they are allowed to be used in Canada as long as there is a supply in place. Eventually the supply will run out, and the present equipment will either need to be refitted or replaced. Watters Environmental understands, from several air conditioning companies, that there is a sufficient supply of CFCs and HCFC-22 in Canada for at least the next 10 years.

The federal *Hazardous Products Act* (HPA) does not require the licensing, approval or registration of a property in which ODSs have been identified.

In Ontario, regulatory control of refrigerants is the responsibility of the MOE.

Section 6 (1) of the Refrigerants Regulation (O. Reg. 189/94) indicates no person shall service or test refrigeration equipment in any manner that has the potential for causing the discharge of a refrigerant into the natural environment unless,

(a) the person is certified under section 21; and

(b) the person has access to equipment that is capable of collecting and capturing the refrigerant. O. Reg. 189/94, s. 6 (1)

APPENDIX D

Qualifications of Watters Environmental and Key Personnel Involved with this ESA

QUALIFICATIONS OF WATTERS ENVIRONMENTAL AND KEY PERSONNEL

D-1 WATTERS ENVIRONMENTAL GROUP INC.

Watters Environmental offers a strategic business-focused approach in assisting our clients to proactively manage environmental issues, and to find practical solutions when environmental issues arise.

We are an employee-owned environmental consulting company that prides itself on uncompromising dedication to service quality and client satisfaction. We understand our client's needs for timeliness of response, and innovative, technically-sound solutions to their problems.

Watters Environmental brings together a team of experts in the related technical disciplines of environmental due diligence, environmental site assessment, environmental management systems, and environmental permitting. In addition, the team offers specialty-consulting services including technical peer review, litigation support, environmental risk assessment, and forensic environmental investigations.

Our team consists of recognized leaders in their disciplines, with real-world industry experience that allows Watters Environmental to provide cost-effective solutions to our clients. Our executive team has worked together for more than 10 years, and have built lasting relationships with loyal, repeat clients who have come to rely upon us for our spirit of working closely with them to resolve their issues as if they were our own. Senior staff members are some of the most experience individuals in the industry, most with 15 to 20 years of environmental consulting experience. Our employees are highly motivated and pride themselves in being innovative and client focused.

Major corporations, law firms, lending institutions, investors and municipalities routinely call upon us to assist them with complex real estate transactions, or to help manage complicated environmental issues.

D-2 ROBERT J. WATTERS, PH.D. – PRESIDENT & CEO

Robert is the President & Chief Executive Officer of Watters Environmental. He maintains an active practice in assisting clients with the management of environmental matters regarding their real estate portfolios. Specifically, Robert has managed or directed hundreds of environmental liability and due diligence assessments across Canada, the United States and abroad, for public offerings, financing, insolvencies, underwriting, and mergers and acquisitions. Robert's experience is diverse, having been involved with environmental assessments of major building supplies manufacturing and retail operations, power plants, pulp and paper mills, hospitals, hotels, resorts, ports, manufacturing facilities, mining operations, apartments, office buildings, funeral homes and others. He also has very particular experience in coordinating environmental due diligence reviews for commercial/industrial development sites.

D-3 BEN U, P.ENG. – VICE PRESIDENT

Ben is the Vice President of Watters Environmental. He provides senior-level project management and senior technical support on environmental due diligence reviews, environmental audits and assessments, real estate transaction assessments, environmental permitting and licensing, and air emission assessment studies for a variety of clients, including investment banks, private industry, public utilities, law firms, developers and municipalities. Ben is a professional environmental / process engineer, with over twenty-six years of environmental consulting and industrial experience. He has extensive experience in power generation and pulp and paper industries, and has completed over 1,000 due diligence reviews, environmental auditing, permitting and licensing projects in both commercial and industrial sectors in the last ten years. Ben also manages and provides technical support on multi-site portfolio due diligence review assignments across Canada and the United States for property / operations acquisition or loan refinancing.

D-4 SEBLE AFEWORK, P.ENG. – ENVIRONMENTAL ENGINEER

Seble is an Environmental Engineer with Watters Environmental, and is a Professional Engineer (licensed in Ontario), with over ten years experience in providing technical support on environmental assessments for a variety of clients in the industrial and commercial sector. She has managed and completed several Phase I and II ESAs for numerous industrial and commercial sites.