



**August 2011**

**FINAL REPORT ON**

**Phase I Environmental Site Assessment Report  
North Bow River Area, Calgary, Alberta**

**Submitted to:**

Alberta Environment  
2nd Floor, Deerfoot Square  
2938 - 11 Street NE  
Calgary, Alberta  
T2E 7L7

**REPORT**



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## Executive Summary

Golder Associates Ltd. (Golder) was retained by Alberta Environment (AENV) to conduct a Phase I Environmental Site Assessment (ESA) of the area extending from 15<sup>th</sup> Street NW to 19<sup>th</sup> Street NW and from Westmount Blvd NW to Westmount Road NW, Calgary, Alberta (the "Site"). The Site is primarily developed with single-family homes, various streets, alley ways, two churches, two parks, the Canadian Broadcasting Corporation (CBC) Calgary Radio and Television, the Bow Valley Lawn Bowling Club and Fire Hall/EMS Station #6. The Site is approximately 650 m long and 350 m wide. The Phase I ESA is required to support a Human Health Risk Assessment for the Site with respect to creosote soil and groundwater contamination.

The scope of the Phase I ESA was limited to identifying potential environmental concerns associated with potential soil and groundwater contamination by visual examination of surface features and operating practices, and from available documented information sources. During the Site visit none of the buildings or privately-owned properties on the Site were accessed, and no owners were interviewed. Observations for the Site were made from publically readily accessible areas. An assessment of the potential presence of hazardous building construction materials such as asbestos-containing materials, polychlorinated biphenyls, lead-based paints, urea formaldehyde foam insulation, ozone-depleting substances, radon and mould inside the buildings on Site was not carried out as they are not considered material to the primary objective of identifying potential sources of soil and groundwater contamination.

- The Site was developed with a mixture of single-family residential properties, agricultural land and vacant/undeveloped land prior to at least 1911. The Site continued being developed with single-family residential houses over the years, while the CBC and Fire Hall/EMS Station #6 were constructed in the 1960s. The Site has since remained mainly residential with some properties redeveloped with new homes. Based on potential site activities of the Fire Hall/EMS Station and because a Phase II ESA was conducted for due diligence purposes, this property is identified as an area of potential environmental concern. A review of available reports for the EMS property indicated the presence of creosote-related contamination inferred to be from the Canada Creosote site, but no obvious impacts from possible EMS-related activities. No issues of potential significant environmental concern have been identified in association with other current and historical land uses at the Site.
- Surrounding properties to the east, north and west were mainly developed with residential homes prior to at least 1911. Commercial businesses have been present since prior to 1911 along 14<sup>th</sup> Street NW and Kensington Road NW, located approximately 90 m east and 50 m north of the Site, respectively. The properties adjacent south of the Site were undeveloped/vacant land until the construction of Westmount Blvd NW and Memorial Drive NW in the 1950s. The Bow River is located approximately 45 m south of the Site.
- The area located approximately 150 m south of the Site and across the Bow River extending from approximately 19<sup>th</sup> Street SW to 14<sup>th</sup> Street SW and from 9<sup>th</sup> Avenue SW to the river has been occupied by various businesses of concern including: the City Incinerator, the Municipal Paving Department, the Calgary Paving Co. Ltd, River Side Lumber Co. Ltd., Great West Distributors Ltd., Canada Creosote/Domtar Creosote Plant as well as other light industrial and industrial activities (the Canada Creosote property). These former businesses were noted to have used, manufactured and/or stored various types of chemical substances including hydrocarbons, tar and creosote. Numerous reports were



reviewed in connection with known subsurface impacts in this area; as well, as reports relating to impacts on the CBC and EMS properties suspected to be linked with historic activities at the Canada Creosote property. Based on reviewed information pertaining to this area, its activities and impacts on the CBC property, it is considered to represent an issue of potential environmental concern.

- The property located at 2001 Bowness Rd NW has been occupied by HiHo service station from 1946 to the present. This business is approximately 15 m west of the Site and was present at the time of the Site visit. A review of documentation on the HiHo service station property provided by AENV indicated no investigation results were available. Based on the distance between the Site and this historic service station and the number of years it has been present, it is considered to represent a potential issue of environmental concern for the Site.
- At the time of the Site visit, eight monitoring wells were noted on the property located approximately 65 m northeast of the Site and across Westmount Rd NW. The property was developed with a single-storey building occupied by Lindal show homes, a two-storey multi-tenant commercial building and associated parking. This property is suspected to have changed municipal addresses over time including 1610 Westmount Rd NW, 1601 Kensington Rd NW and 99 – 14<sup>th</sup> Street NW. Various businesses of potential environmental concern are believed to have operated on this property in the past, including a mechanical repair shop and a fuel service station from 1954 to 1991. Based on the distance between the Site and this property and the presence of a historic service station, it is considered to represent a potential issue of environmental concern to the Site.

In summary, historic businesses of potential environmental concern were identified in the general vicinity of the Site. A Human Health Risk Assessment is being conducted for the Site in order to better assess the potential risk to human health and the environment.



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## 1.0 INTRODUCTION

### 1.1 Background

Golder Associates Ltd. (Golder) was retained by Alberta Environment (AENV) to conduct a Phase I Environmental Site Assessment (ESA) of the area extending from 15<sup>th</sup> Street NW to 19<sup>th</sup> Street NW and from Westmount Blvd NW to Westmount Road NW, Calgary, Alberta (the "Site"). The Site is primarily developed with single-family homes, various streets, alley ways, two churches, two parks, the Canadian Broadcasting Corporation (CBC) Calgary Radio and Television property, the Bow Valley Lawn Bowling Club and Fire Hall/EMS Station #6. The Site is approximately 650 m long and 350 m wide.

The Phase I ESA is required to support a Human Health Risk Assessment (HHRA) for the Site with respect to creosote soil and groundwater contamination. The HHRA is documented in a report being prepared by Golder (in-progress).

Golder's proposal for this project was dated September 3, 2010, and was prepared in response to AENV RFP #AENV-EMSR-110107. Authorization to proceed with the work was provided by AENV in November 2010.

### 1.2 Objectives

The objective of the Phase I ESA was to document the Site conditions at the time of the Site reconnaissance and, based on available sources of information and observations of surface conditions during the Site reconnaissance, to identify former and current operations or practices of the past and current occupants that may present potential environmental concerns. The assessment focused on identifying potential environmental concerns relating to soil and groundwater contamination events that may have occurred on the Site and adjacent properties.

### 1.3 Methodology

The Phase I ESA was completed in general accordance with the Canadian Standards Association (CSA) document Z768-01 entitled "Phase I Environmental Site Assessments". The scope of the Phase I ESA was limited to identifying potential environmental concerns by visual examination of surface features and operating practices, and from available documented information sources. In addition to the Site reconnaissance conducted on November 12, 2010, the information reviewed in completing the Phase I ESA included the following:

- Aerial photographs from Alberta Sustainable Resource Development and the University of Calgary Library;
- The City of Calgary Henderson's Business Directories from the Glenbow Museum;
- Insurers' Advisory Organization (1989) Inc. Fire Insurance Map Collection from the Glenbow Museum;
- Information provided by the following agencies:
  - Abacus Datagraphics Abadata oil and gas database;
  - EcoLog Environmental Risk Information Services (ERIS);
  - City of Calgary OnLine EnviroSite database;



- A search of Alberta Environment's Help End Landfill Pollution database and Alberta Environment/Environment Canada's Active and Inactive Land Disposal Sites database;
- Numerous previous reports provided by AENV and identified online on the Alberta Environment Environmental Site Assessment Repository (ESAR) database;
- A search of water well information provided by the Alberta Environment Groundwater Information Centre database; and
- Geological information from "*Surface Materials of the Calgary Urban Area: Calgary Sheet*" (NTS 82-O/1). Alberta Research Council, S.R. Moran, 1986.

During the Site visit none of the buildings or privately-owned properties on the Site were accessed, and no property owners were interviewed. Observations for the Site were made from publically-accessible areas.

The Phase I ESA did not included an assessment of the potential presence of hazardous building construction materials such as asbestos-containing materials, polychlorinated biphenyls, lead-based paints, urea formaldehyde foam insulation, ozone-depleting substances, radon and mould for the buildings on Site as these aspects were not considered material to the primary objective of identifying potential sources of soil and groundwater contamination.

No building materials, soil, water, liquid, gas, product or chemical sampling and testing was conducted on or in the vicinity of the Site as part of the assessment (for purposes of the Phase 1 ESA). The assessment included cursory observations of the neighbouring land uses from the location of the Site, but did not constitute a rigorous evaluation of the adjacent properties.



## 2.0 SITE DESCRIPTION

### 2.1 Site Location and Setting

The Site is currently developed with streets, alley ways, parks, the CBC building, the Bow Valley Lawn Bowling Club, Fire Hall/EMS Station #6 and single-family homes.

The Site is bounded by Westmount Road NW to the north, single-family homes to the east, Westmount Blvd NW to the south and 19<sup>th</sup> Street NW to the west. The Site Location Plan and Site Plan and Surrounding Land Use are shown on Figures 1 and 2, respectively.

### 2.2 Site Physical Description

**Table 1: Site Physical Description**

Topic	Data
Site Area	Approximately 23 hectares (56 acres).
Number of Buildings on the Sites	More than 150, mostly single-family residences.
Levels above grade	Single-family homes: 1 and 2 Commercial/Office building: 1 and 2
Levels below grade	Most single-family homes appeared to have basements.
Date of Building Construction	Various years, possibly some prior to 1911 to present.

**Table 2: Site Services**

Topic	Data
Water Supply Source	City of Calgary
Storm Water Flow and Discharge Location	Primarily external eaves troughs on buildings discharging to landscaped grassed areas. Storm water either infiltrates landscaped areas or flows overland into storm water catch basins located on roadways.
Sanitary/Process Wastewater Discharge Location	Municipal sanitary sewer.
Grease Traps On-Site	Unknown, none observed on exterior portions of Site.
Oil/Water Separators On-Site	Unknown, none observed on exterior portions of Site.
Electricity Back-up Generator On-Site	Unknown, none observed on exterior portions of Site.
Site is on Natural Gas Supply	Yes. Buried, piped supply.
Elevators On-Site (Use and Type)	Unknown. With the possible exception of the CBC building, the buildings on Site are not expected to have piston operated elevators.





### 3.0 HISTORICAL INFORMATION REVIEW

#### 3.1 Historic Aerial Photographs

Aerial photographs dated 1924, 1948, 1959, 1962, 1966, 1969, 1976, 1982, 1997 and 2007 were reviewed to help develop a history of land use of the Site and adjacent properties. It should be noted that there are no aerial photographs available for Calgary between 1924 and 1948. The observations are summarized in Table 3. Refer to Figures 3 to 12 for Site selected aerial photos.

**Table 3: Summary of Aerial Photograph Review**

Year	Site	Direction to Site			
		North	West	South	East
1924	Site is developed with a few single-family homes. Small portions of the Site appear to be used for agricultural purposes, but most of it is vacant /undeveloped land. Broadview Rd NW, Bowness Rd NW and 16 Street NW are present.	The Site is bound by a road, single-family homes and vacant/undeveloped land.	The Site is bound by a road and agricultural and vacant/ undeveloped land.	The Site is bound by vacant/undeveloped land, with the Bow River approximately 45 m south. There are various light industrial buildings noted on the Dominion Tar and Chemical property located across the Bow River and approximately 150 m south of the Site. Most of these buildings are located along 9 Avenue SW and in proximity to 14 Street SW, approximately 400 m from the Site. Spur lines are visible further west, as well as stacks of unknown materials, suspected of being treated wood poles, timber and rail ties, along the spur lines.	The Site is bound by single-family homes and vacant/undeveloped land.
1948	More single-family homes are present, as well as the Bow Valley Lawn Bowling Club, on the northeast corner of 17 Street NW and Bowness Rd NW. The south/southwest portion of the Site is mostly vacant /undeveloped. Parts of 17 Street	Westmount Rd NW borders the Site to the north with more single-family homes along Kensington Rd NW. Large rectangular structures are present on the northwest corner of Kensington Rd NW and 18 Street NW, approximately 70 m from the Site. These are suspected to be	19 Street NW is present along the north western portion of the Site. A small rectangular building is present on the southwest corner of Bowness Rd NW and 19 Street NW. It is suspected to be the HiHo service station and associated automotive repair shop (see Sections	Parts of Memorial Dr NW are present and border the Site. The Dominion Tar and Chemical property south of the Bow River appears to have a large quantity of material stored in well organized rows. Based on the known historic use of this Site, the stored materials are	More single-family homes and small buildings, suspected to be used for commercial purposes are located along 14 Street NW.



**PHASE I ESA - NORTH BOW RIVER AREA, CALGARY, AB**

Year	Site	Direction to Site			
		North	West	South	East
	NW and 18 Street NW are present.	the Kensington Greenhouses (see Section 3.3).	3.2, 3.4 and 4.19). There are small pathways present on a vacant lot located approximately 20 m west of the Site. The paths appear to lead from Broadview Rd NW to the Bow River. No structures were noted on the field.	suspected to include treated wood poles, timber and rail ties.	
1959	More single-family homes are present. 17 Street NW and 18 Street NW appear to have been paved.	Westmount Rd NW borders the Site. There are more single-family homes along Kensington Rd NW. The Kensington Greenhouses structures have been re-developed with two commercial buildings.  There are two small buildings on the southwest and southeast corners of Kensington Rd NW and 14 Street NW, approximately 65 m and 110 m from the Site, respectively. These are suspected to have been service stations (see Sections 3.2 and 3.4).	19 Street NW appears to have been paved and borders the Site. A large sports field is present further west.	Westmount Blvd NW borders the Site, with Memorial Dr NW further south. The exterior yard of the Dominion Tar and Chemical property (see Section 3.3) still appears to contain large quantities of stored poles, timber and/or rail ties. The Hudson's Bay, Ace Salvage, AISCO, Great West Distributors and a large warehouse are present on the northwest corner of 14 Street SW and 9 Avenue SW (see Section 3.3), approximately 400 m from the Site.	14 Street NW has been expanded and an associated bridge over the Bow River is present; as well as the overpass to Memorial Dr NW. A small building, potentially a former service station (see Sections 3.2 and 3.4) is located on the northeast corner of 14 Street NW and Kensington Close NW, approximately 110 m east of the Site.
1962	The CBC building is present.	The aerial photograph did not cover properties located north of the Site.	No significant changes noted.	No significant changes noted.	No significant changes noted.
1966	The Fire Hall/EMS Station #6 building is present. The CBC building has been expanded.	The aerial photograph did not cover properties located north of the Site.	No significant changes noted.	All buildings, stored materials and spur lines appear to have been cleared from the Dominion Tar and Chemical property.	No significant changes noted.



**PHASE I ESA - NORTH BOW RIVER AREA, CALGARY, AB**

Year	Site	Direction to Site			
		North	West	South	East
1969	The CBC building has been expanded and appears in its current configuration.	The aerial photograph did not cover properties located north of the Site.	No significant changes noted.	The area south of the Bow River has been redeveloped with Bow Trail SW, approximately 160 m south of the Site. The GSL Chev City and Renfrew Chrysler car dealership buildings are present approximately 260 m south and southwest of the Site, respectively.	No significant changes noted.
1976	No significant changes noted.	A small building is located on the northeast corner of Kensington Rd NW and 14 Street NW, and is suspected to be the current Petro Canada service station.	No significant changes noted.	No significant changes noted.	No significant changes noted.
1982	No significant changes noted.	No significant changes noted.	No significant changes noted.	No significant changes noted.	No significant changes noted.
1997	No significant changes noted.	No significant changes noted.	No significant changes noted.	The large buildings west of 14 Street SW are no longer present. The Greyhound Station building is present in its current configuration.	Some of the properties along 14 Street NW have been re-developed with low-rise residential and commercial buildings.
2007	No significant changes noted.	No significant changes noted.	No significant changes noted.	No significant changes noted.	No significant changes noted.

Based on a review of aerial photographs, the Site consisted of single-family homes, agricultural land and vacant/undeveloped land prior to 1924. The Site continued being further developed with single-family residential houses into the late 1950's. The CBC building was constructed between 1952 and 1962. The Fire Hall/EMS Station #6 was constructed between 1962 and 1966. Based on the review of aerial photographs, no obvious activities or businesses of environmental concern were visually evident on the Site.

Surrounding properties to the east, north and west started being develop primarily with single-family homes prior to at least 1924 to present. Some properties along 14<sup>th</sup> Street NW appear to have been commercial.



The area across the Bow River and located approximately 150 m south of the Site was developed prior to 1924 for industrial purposes. Dominion Tar and Chemical, otherwise known as Canada Creosote, is present prior to 1924 to the early 1960's. Significant quantities of stored materials, suspected of including creosote treated wood poles, timber and/or rail ties, were observed on the exterior yard of this property during this time period. Further details for this property are presented Sections 3.3, 3.4 and 3.5 of this report. This property was cleared between 1962 and 1966 and redeveloped with the GSL Chev City and Renfrew Chrysler car dealership buildings and lots between 1966 and 1969.

The HiHo service station on the southwest corner of Bowness Rd NW and 19<sup>th</sup> Street NW was constructed between 1924 and 1949. This property is approximately 15 m west of the Site and was present at the time of the Site visit. Based on the distance between the Site and this historic service station, and the number of years it has been operating, it is considered to represent a potential issue of environmental concern for the Site.

A former service station was identified on the southwest corner of Kensington Rd NW and 14<sup>th</sup> Street NW, approximately 65 m northeast of the Site. The service station was constructed between 1949 and 1959. At the time of the Site visit, this property was developed with a single-storey and a two-storey commercial building. Eight groundwater monitoring wells were noted on the associated parking lots of these properties.

Historical data reviewed in Section 3.5 and recent groundwater elevation data obtained at the Site compiled in the HHRA indicate that the direction of shallow groundwater flow in the area of the Site is indeterminate and depending on river stage, season and location may be either to the north to northeast or south to southeast. Based on their possible location in the upgradient groundwater flow direction and distance to the Site, the two service stations referenced above are considered to represent a potential issue of environmental concern for the Site.

### 3.2 Business and Calgary Numerical & Street Address Directories

Henderson's Business Directories for the City of Calgary (1912, 1921, 1930, 1939, 1948, 1957, 1966, 1975, 1982, and 1991) were reviewed. In addition to the Site addresses, property addresses within 250 m of the Site were also reviewed.

Various businesses of environmental concern were identified on-Site and off-Site, including dry cleaners, service stations and automotive repair shops among others. Table 4 presents property listings within 100 m of the Site.

Table 4: Summary of Henderson's Business Directories

Addresses Searched	Listing	Years Listed	Comments
14 Street SW	-	1912 – 1991	Primarily commercial with some residential. No commercial business of potential environmental concern identified.
16 Street NW	-	1912-1991	Residential
17 Street NW	-	1912-1991	Residential
18 Street NW	-	1912-1991	Residential
19 Street NW	-	1912-1991	Residential
Westmount Blvd. NW	-	1912-1991	Mainly residential



**Table 4: Summary of Henderson’s Business Directories**

Addresses Searched	Listing	Years Listed	Comments
1724	Canadian Broadcasting Corporation (CBC)	1961-1991	Radio and television broadcasting centre. Part of the Site.
1940	Fire Hall #6	1964-1991	Emergency response station. Part of the Site.
<b>Westmount Rd NW</b>	Residential	1912-1991	
1610 (this municipal address changed over time and was historically referenced as 1601 Kensington Rd NW and 99 – 14 <sup>th</sup> Street NW)	Westmount Garage Auto	1961-1969	Suspected automotive repair shop.  Property located in possible upgradient groundwater flow direction, approximately 65 m northeast of the Site and across Westmount Rd NW. At the time of the Site visit, the property was developed with a single-storey building occupied by Lindal show homes, a two-storey multi-tenant commercial building and associated parking. Eight monitoring wells were also noted. This property is suspected to have changed municipal addresses over time. Various businesses are believed to have operated on it including the Menzies/Kensington Esso service station from 1954 to 1991 (see Sections 3.3 and 3.4). Based on the distance between the Site and this property, the presence of historic service stations and monitoring wells, this property is considered to represent an issue of potential environmental concern to the Site.
<b>Broadview Rd. NW</b>	-	1912-1991	Residential
<b>Bowness Rd. NW</b>	-	1912-1991	Residential
2001	HiHo Service Station	1957-1991	Service station. Property located in possible upgradient groundwater flow direction, approximately 15 m west of the Site. Based on the close distance to the Site, this property is considered to represent an issue of potential environmental concern for the Site.
<b>Kensington Rd NW</b>	-	1912-1991	Mainly residential
1601 (also referred to as 1610 Westmount Rd. NW)	Menzies/Kensington Esso	1954-1991	Suspected service station. Property located in possible upgradient groundwater flow direction, approximately 65 m northeast of the Site and across Westmount Rd NW. Based on the relatively close distance to the Site, this property is considered to represent an issue of potential environmental concern for the Site.
1908	Royalite Service Station	1957-1973	Service station. Property located in possible upgradient groundwater flow direction, approximately 70 m north of the Site, across Westmount Rd NW and Kensington Rd NW. The property is currently developed with an at-grade parking lot. Based on the number of years this property operated as a service station, and the relatively close distance to the Site, it is considered to represent an issue of potential environmental concern for the Site.



In summary, portions of the Site were developed with residential properties prior to at least 1912. The CBC property and Fire Hall/EMS #6 were first listed in 1961 and 1964, respectively. No former businesses of potential environmental concern were identified on-Site.

With respect to surrounding properties, these were mainly developed with residential homes since prior to 1912, with commercial properties along 14<sup>th</sup> Street NW and Kensington Rd NW. Three historic service stations were identified within 65 m of the Site and are considered to represent a potential issue of environmental concern.

### 3.3 Insurers' Advisory Organization (1989) Inc.

The Insurers' Advisory Organization (1989) Inc. Fire Insurance Plan (FIP) collection was reviewed at the Glenbow Museum in Calgary, Alberta. A 1911, three 1913, one 1954 and seven 1955 FIPs were reviewed.

The 1911 FIP only covered the eastern portion of the Site and properties east of the Site. It noted that the eastern portion of the Site was developed with some single-family homes along with undeveloped/vacant land. The Site was bordered to the east by single-family homes, with 14<sup>th</sup> Street NW, single-family homes and some commercial properties further east.

The 1913 FIPs only covered the central portion of the Site and noted that it was developed with single-family homes with portions being undeveloped/vacant land. Bowness Rd NW is referred to as 2<sup>nd</sup> Avenue SW, while Broadview Rd NW is referred to as 3<sup>rd</sup> Avenue SW. A structure marked as "Auto P" was noted at the back of the single-family residence on 1635 – 2<sup>nd</sup> Avenue SW (Bowness Rd NW). A second "Auto P" was noted at 1648 – 3<sup>rd</sup> Avenue SW (Broadview Rd NW). No chemical storage or fuel tanks were noted on the FIP for these properties. Therefore, based on the lack of chemical or fuel storage identified on the FIP, and no listings of businesses of environmental concern on the Henderson's Business Directories (see Section 3.2), these properties are not considered to represent an issue of high environmental concern for the Site.

A 1913 FIP covered the area overlapping the former Canada Creosote property. The area was located across the Bow River and approximately 150 m south of the Site. It extended from approximately 19<sup>th</sup> Street SW to 14<sup>th</sup> Street SW from west to east, and from the 9<sup>th</sup> Avenue SW to the Bow River from south to north. The FIP showed that this area was utilized for the following purposes:

- The east portion was occupied by the City Incinerator and Municipal Paving Department. Four structures were noted in relation to the Municipal Paving Department. The first one was an office; the second one was noted as a motor house, belt box and rock crusher; the third one as a rock crushing water house. The fourth one was approximately 300 m south of the Site and was indicated to be a sand driving furnace, used for mixing and tar melting furnace.
- The central portion was occupied by the Calgary Paving Co. Ltd. The FIP noted beside the business name "not running old oil". Various building structures were noted including cement storage, a motor house, sand driving furnace, a portable building and an oil warehouse (noted as "BC Refining Co. Ltd."). Another structure, located approximately 300 m south of the Site was noted as tar melting.
- The western portion of the area was noted as being occupied by River Side Lumber Co. Ltd. Three spur lines, various sheds and lumber were also noted on the FIP. No information relating to activities conducted at this property were noted.

The 1954 FIP covered surrounding properties east of the central portion of the Site. These were developed with residences.



The 1955 FIPs covered most of the Site and surrounding properties north and east of the Site. Most of these were developed with single-family homes and some commercial properties along 14<sup>th</sup> Street NW. With respect to the Site, the FIPs also noted a structure marked as “Auto P” at the back of the single-family residence on 1907/1909 Bowness Rd NW. No chemical storage or fuel tanks were noted on the FIP for this property. Based on the lack of chemical or fuel storage identified on the FIP and no listings of a businesses of environmental concern on the Henderson’s Business Directories (see Section 3.2), this property is not considered to represent an issue of environmental concern for the Site.

With respect to surrounding properties, the 1955 FIPs noted a large greenhouse on Kensington Rd NW and 18A Street NW. No chemical storage was observed on this property. Two underground storage tanks (USTs) were observed on the property on the northwest corner of 14<sup>th</sup> Street NW and Westmount Rd NW, approximately 65 m northeast of the Site and across Westmount Rd NW. Due to the presence of USTs, and its close proximity to the Site, this property is considered to represent an issue of potential environmental concern for the Site (see Sections 3.2 and 3.4).

With respect to the area south of the Bow River and approximately 150 m south of the Site, the 1955 FIP noted the following:

- A large square building is located approximately 260 m south of the southeast corner of the Site. The building is noted as “Service Building Hudson’s Bay Co.” (Hudson’s Bay building). There is a small incinerator adjacent to and west of the building and one UST adjacent to and south of the building; as well as a spur line to the west of the building. No other tanks or chemical storage was indicated on the FIP.
- Two rectangular buildings are present at the northwest intersection of 14th Street SW and 9th Avenue SW, approximately 400 m south of the Site. One is labelled as being occupied by “Warehouse Ace Salvage Co.” and the second one “Metal Windows and Doors AISCO Ltd”.
- Large rectangular building west of the Hudson’s Bay building is noted as being under construction for a department store warehouse. A spur line is present west of this building.
- Six structures were noted adjacent to the southwest corner of the warehouse under construction, approximately 380 m south of the Site. These structures were labelled as being occupied by Whole Lube Oils and Greases Great West Distributors Ltd. Plant No.2. The structures were noted as being used for: drum storage, drum cleaning, empty drums, filling room, grease storage and office.
- The western portion of the area was label as being occupied by Creosoting Plant and Tie Piling Grand Dominion Tar and Chemical Ltd. approximately 150 m south of the Site. The presence of a tar and creosote chemical plant is considered to represent an issue of potential environmental concern for the Site.

### 3.4 Regulatory Agencies

Regulatory agencies were contacted during the assessment for environmental information pertaining to the Site. Copies of the correspondence are included in Appendix B. Relevant information from these inquiries is summarized below.

- Abacus Datagraphics Abadata database was searched for information on oil and gas wells and pipelines. No records were found for the Site or properties within 500 m from the Site.
- The EcoLog ERIS report did not identify any records relating to the Site. With respect to surrounding properties, various records were identified. Table 5 summarizes the key information.



Table 5: Summary of EcoLog ERIS Report

Location	Business	Comment
<b>Fuel Storage Tank Information</b>		
1720 Bow Tr SW	GSL Chev City	<p>Two steel gasoline aboveground storage tanks (AST) with a capacity of 20,000 L and 15,000 L. Three abandoned in place underground storage tanks (USTs). One of them was previously used for used oil and had a capacity of 2,500 L. The second and third USTs were used for gasoline and had a capacity of 22,700 L. No other information regarding these tanks was provided.</p> <p>Property located approximately 180 m south of the Site and across the Bow River. Based on the distance between the Site and this property, the presence of these tanks is not considered to represent an issue of high environmental concern.</p>
NE-17-24-1 W5M (Site No. 7747)	Canada Creosote Site	<p>One 32,600-L steel AST currently in service. Owned by the municipal government and reportedly containing allied petroleum products and creosote. This AST is suspected to be related to the treatment system associated with the management of creosote impacted groundwater from the former Canada Creosote Site (see Section 3.6).</p> <p>Tank location as per EcoLog ERIS map is approximately 200 m south of the Site and across the Bow River.</p>
Kim's HiHo Gas & Grocery - Hillhurst	2001 Bowness Rd NW	<p>Two gasoline USTs are reported with a capacity of 36,400 L and 9,000 L, and with no secondary containment. The EcoLog ERIS report also noted that in 1997, a UST was moved from the property. No other information regarding these tanks was provided.</p> <p>Property located approximately 15 m west of the Site, across 19 Street NW and inferred to be possibly upgradient. Given the distance relative to the Site, this property is considered to represent an issue of potential environmental concern for the Site.</p>
Telus - Hillhurst Central Office	102-15 Street NW	<p>One diesel steel AST with a capacity of 2,157 L. No other information regarding the tank was provided.</p> <p>Property located approximately 80 m north of the Site, across Westmount Rd NW and Kensington Rd NW. At the time of the Site visit, the property was occupied by a single-storey Telus building. Various service trucks were located on the parking area, as well as on the sidewalk. No tanks were observed from readily accessible areas. No evidence of spills or leaks was observed near the property. Based on the distance relative to the Site the relatively small capacity and aboveground nature of the AST, it is not considered to represent an issue of significant environmental concern for the Site.</p>
Hillhurst Shell Service	20 – 14 Street NW	<p>Records pertain to five former tanks at the property, reportedly removed in 1990. No other information was provided in relation to these tanks.</p> <p>Property located approximately 120 m east of the Site. At the time of the Site visit the property was occupied by a single-storey multi-tenant commercial building. Based on the distance between the Site and this property, its inferred trans-gradient location and the removal of the tanks, this property is not considered to represent an issue of environmental concern.</p>





**PHASE I ESA - NORTH BOW RIVER AREA, CALGARY, AB**

Location	Business	Comment
Kensington Esso 80159	1601 Kensington Rd NW	Records pertain to four former tanks at the property, and indicate they were removed in 1996. No other information was provided in relation to these tanks.  Property located approximately 65 m northeast of the Site. During the Site visit the property was developed with a single-storey building occupied by Lindal show homes. Eight groundwater monitoring wells were noted on this property from readily accessible areas. The property was identified on the City of Calgary EnviroSite Report (see below) as having operated as a service station from 1954 to 1991. Based on the distance relative to the Site, and the number of years it has operated as a service station, it is considered to represent a potential issue of environmental concern for the Site.
Kensington Service 87672	1438 Kensington Rd NW	Three gasoline double-walled USTs with capacity of 25,000 L were identified. The EcoLog ERIS report also noted that in 1995 a UST was moved from the property. No other information regarding these tanks was provided.  Property located approximately 140 m northeast of the Site, across Westmount Rd NW, Kensington Rd NW and 14 Street NW. During the Site visit, the property was occupied by a PetroCanada service station. Based on the distance between the Site and this property, it is not considered to represent an issue of high environmental concern.

**Water Wells**

NH and NE 17-24-01 W5M		12 records of dewatering wells were identified; all of these were drilled in 1995 and are owned by Hazco. It is suspected that there was a typing mistake on the records and that the wells located on NH-17-24-01 W5M are on the Northwest quarter.
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**Other Records**

Waste generators were identified for surrounding properties. However, these businesses are not included in this table as they were more than 200 m from the Site and not considered to represent a potential issue of significant environmental concern for the Site.

Retail fuel storage tank records were also identified. These records relate to service stations already discussed as part of information provided above in association with the Fuel Storage Tank Records; and therefore, they are not discussed again. Businesses in the Scott's Manufacturing Directory were noted, however based on visual observations made during the Site visit, these businesses are suspected to have offices in the area and not expected to conduct manufacturing activities in the vicinity of the Site.

- The AENV Groundwater Information Centre database indicated that there were 12 water well records on file for the area within 500 m of the Site. Further details are provided in Section 4 (see EcoLog ERIS Report). During the Site visit, four groundwater monitoring wells were noted on the EMS/Fire hall property and an additional ten were observed on the CBC property. Monitoring wells were also noted on surrounding properties located approximately 65 m northeast of the Site (see Section 4.19).
- The AENV Help End Landfill Pollution database and the AENV/Environment Canada Active and Inactive Land Disposal Sites database were reviewed. No landfills were identified on-Site. The Canada Creosote Co. Ltd. was identified as having operated from 1923 until 1961 approximately 150 m south of the Site. It is described as an old railway tie treating plant with wastes including wood, debris, scrap metal and coal slag.



- The City of Calgary OnLine EnviroSite Report identified various historic businesses of environmental concern as well as records for the Site and surrounding properties. Table 6 summarizes information identified for the Site and for properties within 100 m and to the east, north and west of the Site. A considerable amount of records were identified with respect to the former Canada Creosote property south of the Bow River. Table 7 presents a summary of the information identified for the area.

It should be noted that some of the reports noted by the City of Calgary's EnviroSite Report were provided by Alberta Environment to Golder for review. A summary of the reports provided is presented in Section 3.5.

**Table 6: Summary of City of Calgary EnviroSite Report Records Relating to the Site and Properties to the East, North and West**

Location	Business	Comment
<b>14 Street NW</b>		
99	Kensington 99 Auto Service	Service station from 1961 to 1965. Property located approximately 65 m northeast of the Site and across Westmount Rd NW. During the Site visit the property was developed with a single storey building occupied by Lindal show homes. This property is suspected to have changed municipal addresses over time and to be identified below as 1601 Kensington Rd NW.
<b>15 Street NW</b>		
106	-	One fuel tank registered. Property located approximately 80 m north of the Site, across Westmount Rd NW and Kensington Rd NW. This property is suspected to be the Telus - Hillhurst Central Office, identified in the EcoLog ERIS Report.
<b>Bow River</b>		
	-	One report was identified for this area: <ul style="list-style-type: none"> <li>• "Water Depth and Marine Refraction, Seismic Surveys along the Bow River in the Vicinity of the Abandoned Canada Creosote Site, Calgary, Alberta" issued by Geo-Physi-Con Co. Ltd. for Alberta Environment and dated August 20, 1992.</li> </ul> The Bow River is located approximately 45 m south of the Site.
<b>Bowness Road NW</b>		
	-	Two reports were identified for this area: <ul style="list-style-type: none"> <li>• "Report of Findings, Environmental Site Assessment, Phase I, North Bank-Westmount, Generally Bounded by Memorial Drive NW, 19 Street NW, Bowness Road NW and 17 Street NW, Calgary, Alberta" issued by Keystone Environmental Ltd. for the City of Calgary and dated September 30, 2001; and</li> <li>• "North Bank - Westmount Ground-Penetrating Radar Survey - Final Report" issued by Whytecliff Geophysics Ltd. for Keystone Environmental Ltd. and dated September 21, 2001.</li> </ul> A portion of Bowness Road NW crosses the Site from east to west.
2001	White Rose (Location # 304) / Kim's Hi-Ho Discount Gas	Service station reported to operate from 1946 to 2007, with three associated fuel tanks. Property located approximately 15 m east of the Site. During the Site visit the property was still occupied by a service station and an associated vehicle repair shop.



**PHASE I ESA - NORTH BOW RIVER AREA: CALGARY, AB**

Location	Business	Comment
		Based on the distance relative to the Site and the number of years it has operated as a service station, it is considered to represent a potential issue of environmental concern for the Site.
<b>Broadview Road from 14 Street NW to 21 Street NW</b>		
		<p>One report was identified for this area:</p> <ul style="list-style-type: none"> <li>"Report on the Geotechnical Investigation for the Proposed Water Feedermain, Broadview Road from 14 Street to 21 Street NW" issued by Sabatini Geotechnical Inc. for the City of Calgary and dated November 26, 1990.</li> </ul> <p>A portion of Broadview Road NW crosses the Site from east to west.</p>
<b>Kensington Road NW</b>		
1601	Kensington Esso Service Station	<p>Service station operated from 1954 to 1995, with four associated storage tanks.</p> <p>Several reports were identified for this property:</p> <ul style="list-style-type: none"> <li>"Environmental Assessment Reports 1601 Kensington RD NW, Calgary, Development Permit Application # 97/1004" issued by Imperial Oil Limited for the City of Calgary and dated June 26, 1997;</li> <li>"Groundwater Laboratory Analysis Results, Kensington Service Station S/S 880159, 1601 Kensington Road NW, Calgary, AB" issued Clifton Associates Ltd. for Imperial Oil Limited and dated July 11, 1996;</li> <li>"Intrusive Environmental Assessment Summary Report - Tank Removal/Test Pits - Kensington Service Station S/S 880159" issued by Clifton Associates Ltd. for Imperial Oil Limited and dated September 14, 1995;</li> <li>"Intrusive Environmental Assessment Summary Report, Borehole Drilling - Kensington Service Station S/S 880159" issued by Clifton Associates Ltd. for Imperial Oil Limited and dated November 13, 1995;</li> <li>"Monitoring Results, 06 December 1995, Kensington Service Station S/S 880159, 1601 Kensington Road NW, Calgary, AB" issued by Clifton Associates Ltd. for Imperial Oil Limited and dated December 7, 1995;</li> <li>"Monitoring Results, 17 May 1996, Kensington Service Station S/S 880159, 1601 Kensington Road NW, Calgary, AB" issued by Clifton Associates Ltd. for Imperial Oil Limited and dated May 24, 1996;</li> <li>"Monitoring Results, 24 April 1997, Kensington Service Station - S/S 880159, 1601 Kensington Road NW, Calgary, AB" issued by Clifton Associates Ltd. for Imperial Oil Limited and dated May 20, 1997;</li> <li>"Summary Report, Intrusive Environmental Assessment - Additional Borehole Drilling, Former Service Station Site - S/S 880159, 1601 Kensington RD NW, Calgary, AB" issued by Clifton Associates Ltd. for Imperial Oil Limited and dated December 19, 1996.</li> </ul> <p>Property located approximately 65 m northeast of the Site. This property was also identified in the EcoLog ERIS Report. Based on the distance relative to the Site and the existence of environmental reports which suggest intrusive environmental investigations have been conducted, the service station is considered to represent a potential issue of environmental concern for the Site.</p>



**PHASE I ESA - NORTH BOW RIVER AREA, CALGARY, AB**

Location	Business	Comment
1738	Con-Stan Industries of Canada	Cleaning Compounds Manufacturer, operating from 1968 to 1970. Property located approximately 55 m north of the Site and across Westmount Rd NW and Kensington Rd NW. At the time of the Site visit, this property was developed with a single-family home. It should also be noted that aerial photographs noted that the north side of Kensington Rd NW was developed with single-family homes. Therefore, the operation is not expected to have been very large. Based on the short time frame (2 years) during which the business was reported to have operated at the property, the small size of the building surrounded by residential properties, this property is not likely to represent an issue of environmental concern for the Site.
1814	Expert Rug & Upholstery Cleaners and Dyers	Suspected laundry / dry cleaners operating from 1962 to 1963. Property located approximately 55 m north of the Site and across Westmount Rd NW and Kensington Rd NW. At the time of the Site visit, this property was developed with a single-family home. It should also be noted that aerial photographs noted that the north side of Kensington Rd NW was developed with single-family homes. Based on the short time frame (1 year) during which the business was reported to have operated at the property, and suspected residential nature of the Site and surrounding properties, this property is not likely to represent an issue of environmental concern for the Site.
<b>Westmount Blvd. NW</b>		
1928	-	Several reports were identified for this property: <ul style="list-style-type: none"> <li>• "Hazardous Materials Survey at 1940 Westmount Blvd. NW, in Calgary, Alberta", issued by EHS Partnerships Ltd. for the City of Calgary and dated October 25, 2007;</li> <li>• "Phase II Environmental Site Assessment 1928 &amp; 1940 Westmount Boulevard NW, Calgary, Alberta" issued by UMA Engineering Ltd. for the City of Calgary and dated December 17, 2007;</li> <li>• "Site Specific Risk Assessment - Indoor Air 1928 &amp; 1940 Westmount Boulevard NW, Calgary, AB" issued by UMA Engineering Ltd. for the City of Calgary and dated December 13, 2007; and</li> <li>• "Site Specific Risk Assessment 1928 &amp; 1940 Westmount Boulevard NW Calgary, Alberta" issued by UMA Engineering Ltd. for the City of Calgary and dated March 31, 2008.</li> </ul> Property is part of the Site and is referred to as Fire Hall/EMS Station #6 (see Section 3.6 for a summary and evaluation of previous reports).
<b>Westmount Rd. NW</b>		
1601	Anderson's Service Centre	Suspected service station operating from 1977 to 1980. Property located approximately 50 m east of the Site. The property has since been re-developed with a 4-storey office building with at least one level of underground. Based on the short time frame (3 years) during which the service station was reported to have operated, and the subsequent re-development of the Site with a building with at least one level of underground parking, the former service station is not likely to represent an issue of high environmental concern for the Site.



**Table 7: Summary of City of Calgary EnviroSite Report Records Relating to the area South of the Bow River and in the Vicinity of the former Canada Creosote Property**

Location	Business	Comment
<b>14 Street SW to 24 Street SW</b>		
	-	<p>Various reports were identified:</p> <ul style="list-style-type: none"> <li>• "Canada Creosote Project, Supplementary Field Program" issued by Thurber Engineering Ltd. for Alberta Environment and dated 1993/05/21;</li> <li>• "Aquifer Analyses, Canada Creosote Site" issued by CH2M Gore &amp; Storrie Limited for Alberta Environment and dated 1996/04/03;</li> <li>• "Canada Creosote Calgary, DNAPL Pumping Test, Final Report" issued by Acres International Limited for Alberta Environment and dated 1994/03/31;</li> <li>• "Canada Creosote Calgary, Site Inspection Report No. 003" issued by Acres International Limited for Alberta Environment and dated 1994/02/07;</li> <li>• "Canada Creosote Site - Calgary, Report on 1992 Work" issued by Monenco AGRA Inc. for Acres International Limited and dated 1993/03/29;</li> <li>• "Groundwater Flow Modeling for Containment Wall Design, Canada Creosote Site" issued by Alberta Research Council for Alberta Environment H.E.L.P. Project and dated 1992/03/31;</li> <li>• "Historical Review, Former Canada Creosote and Surrounding Area, Calgary, AB" issued by Jacques Whitford Environment Limited for the City of Calgary and dated 2005/11/04;</li> <li>• "Hydrogeological and Geophysical Investigations, Clean Well Area, Canada Creosote Site, Calgary, Alberta" issued by CH2M HILL Engineering Ltd. for Alberta Environment and dated 1995/03/13;</li> <li>• "Recent Changes in Contaminant Levels in the Bow River Following the Installation of a Containment System at the Canada Creosote Site" issued by Water Sciences Branch, Water Management Division, National Resources Service for Alberta Environment and dated 1999/03/31;</li> <li>• "Report to ACRES INTERNATIONAL LTD. for River Engineering Investigation at Canada Creosote Site, Calgary, Alberta" issued by Golder Associates Ltd. for Alberta Environment and dated 1992/05/01;</li> <li>• "Water Depth and Marine Refraction Seismic Surveys Along the Bow River in the Vicinity of the Abandoned Canada Creosote Site, Calgary, Alberta" issued by Geo-Physi-Con Company Ltd. for Alberta Environment and dated 1992/08/01;</li> </ul> <p>The Canada Creosote site. Area located approximately 150 m south of the Site.</p>
<b>15 Street SW</b>		
905	-	<p>Various reports identified:</p> <ul style="list-style-type: none"> <li>• "Geotechnical Investigation for the Proposed Stampede Pontiac Dealership Located at 905 &amp; 915 - 15th Street SW" issued by Global Engineering and Testing for Ulmer Auto Group and dated 2007/11/30;</li> <li>• "Environmental Site Assessment and Risk Management Plan, Stampede Pontiac Buick, 905 - 15 Street SW, Calgary Alberta" issued by Jacques Whitford AXYS for Glen Alan Ross Holdings</li> </ul>



**PHASE I ESA - NORTH BOW RIVER AREA, CALGARY, AB**

Location	Business	Comment
		<p>Ltd. and dated 2008/09/22;</p> <ul style="list-style-type: none"> <li>• "Limited Phase II Environmental Site Assessment for the Property Located at 905 15 Street SW, Calgary Alberta" issued by Global Engineering and Testing Ltd. for Ulmer Auto Group and dated 2007/09/12;</li> <li>• "Phase II Environmental Site Assessment for the Property Located at 905 - 15 Street SW, Calgary Alberta" issued by Global Engineering and Testing Ltd. for Ulmer Auto Group and dated 2008/06/30;</li> <li>• "Phase I Environmental Site Assessment Report for the Property Located at 905 &amp; 915 - 15 Street SW, Calgary, Alberta" issued by Global Engineering and Testing Ltd. for Ulmer Auto Group and dated 2008/07/16.</li> </ul> <p>Property located approximately 260 m south of the Site.</p>
909	<p>AlSCO Ltd.</p> <p>Hartfield Chieftain Service Station And Leasing</p> <p>Calgary Coachworks</p> <p>Mercedes Benz-Hyatt Auto Gallery</p>	<p>Metal manufacturing/ machine shop operated from 1954 to 1960.</p> <p>Gas station and car rentals operated from 1979 to 1985.</p> <p>Auto body repair shop operated from 1988 to 2001.</p> <p>Auto dealership business operated from 2001 to 2008.</p> <p>Two reports were identified:</p> <ul style="list-style-type: none"> <li>• "Phase II Environmental Assessment for Property Located at 907 and 909 - 15 Street SW, Calgary, Alberta" issued by Hazmacon Environmental Services Inc. for Hyatt Auto Sales Ltd. and dated 1996/01/02;</li> <li>• "Site Assessment Up-Date for a Development Permit Application with the City of Calgary on the property located at 907 &amp; 909 - 15 Street SW, Calgary, Alberta, Plan 7844HB; Block E; Lots 1 &amp; 2" issued by Hazmacon Environmental Services Inc. and dated 2000/08/30. The City did not indicate for whom the report had been issued.</li> </ul> <p>Property located approximately 340 m south of the Site.</p>
915	<p>Riverside Lumber Company</p> <p>Ace Salvage Ltd.</p> <p>Glade Automotive</p> <p>Lone Star Motors (Alberta) Ltd.</p>	<p>Lumber manufacturing/ processing business operated from 1911 to 1916.</p> <p>Auto wrecking yards operated from 1951 to 1958.</p> <p>Auto repair business operated from 1951 to 1960.</p> <p>Auto repair and auto dealership operated from 1972 to 1986.</p> <p>Property located approximately 400 m south of the Site.</p>



**PHASE I ESA - NORTH BOW RIVER AREA · CALGARY, AB**

Location	Business	Comment
<p>16 Street SW</p> <p>850</p>	<p>Riverside Lumber Company</p> <p>Great West Distributors Ltd.</p>	<p>Lumber Manufacturing/ Processing operated from 1913 to 1916.</p> <p>Petrochemical business operated from 1943 to 1971.</p> <p>Various reports were identified:</p> <ul style="list-style-type: none"> <li>• "Environmental Site Assessment Greyhound Bus Terminal 850 - 16th Street SW, Calgary, Alberta" issued by Meridian Environmental Inc. for Greyhound Canada Transportation Corp. &amp; Viad Corp dated 2002/11/21;</li> <li>• "Screening-Level Risk Assessment and Proposed Risk Management Strategy Greyhound Bus Terminal 850 - 16th Street SW, Calgary, Alberta" issued by Meridian Environmental Inc. for Greyhound Canada Transportation Corp. &amp; Viad Corp and dated 2002/11/21;</li> <li>• "Sampling and Analysis of Excavated Soil, Calgary Greyhound Terminal" issued by Meridian Environmental Inc. for Earth Tech Canada Inc. and dated 2002/12/13;</li> <li>• "Confidential - Environmental Sample Results" issued by Earth Tech Canada Inc. for Greyhound Lines Inc. and dated 2002/03/20;</li> <li>• "Environmental Sample Results, Bus Service Pit Locations" issued by Earth Tech Canada Inc. for Greyhound Lines of Canada Ltd. and dated 2002/03/31</li> <li>• "Greyhound Canada Transportation Corp., Site Management Plan" issued by Earth Tech Canada Inc. for Greyhound Canada and dated 2002/11/20;</li> <li>• "Limited Phase II Environmental Site Assessment, 850 - 16 Street SW, Calgary, Alberta" issued by Earth Tech Canada Inc. for Greyhound Canada and dated 2002/02/28</li> <li>• "Sampling and Analysis of Excavated Soil, Calgary Greyhound Terminal" issued by Meridian Environmental Inc. for Earth Tech Canada Inc. and dated 2003/03/26;</li> <li>• "Sampling and Analysis of Excavated Soil, Maintenance Pit Location, Calgary Greyhound Terminal" issued by Meridian Environmental Inc. for Earth Tech Canada Inc. and dated 2003/02/19;</li> <li>• "Subsurface Investigation Greyhound Bus Terminal, 850 - 16th Street SW, Calgary, Alberta" issued by O'Connor Associates Environmental Inc. for Greyhound Lines of Canada Ltd. and dated 1996/03/22;</li> <li>• "Summary Report, Sampling and Analysis of Excavated Soil, Calgary Greyhound Terminal" (no parcel address or site map included in report) issued by Meridian Environmental Inc. for Earth Tech Canada Inc. and dated 2003/10/20. The comment in brackets was included in the City of Calgary EnviroSite Report.</li> </ul> <p>Property located approximately 250 m south of the Site and currently developed with the Greyhound bus station.</p>



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Location	Business	Comment
<b>Bow Trail SW</b>		
1720	Shelly Quarry Company	Sand, gravel & concrete business operated from 1909 to 1916.
	Ogilvie Flour Mills Company Ltd	Milling business operated from 1914 to 1924.
	Calgary Brick & Supply Company Ltd.	Brick manufacturing operated from 1914 to 1916.
	City Planing Mills	Lumber manufacturing/ processing business operated from 1911 to 1916.
	Western Canada Stone Company Ltd.	Sand, gravel & concrete operated from 1912 to 1931.
	GSL Chevrolet Oldsmobile Cadillac 1986 Ltd.	Auto dealership operated from 1969 to 2008.
	Canada Creosote / Domtar Creosote Plant	Wood preservation and processing business operated from 1924 to 1971.
		<p>Various reports were identified:</p> <ul style="list-style-type: none"> <li>• "Supplemental Historical Review 1720 Bow Trail SW, Calgary, Alberta 1720 Bow Trail SW, Calgary, Alberta Lots 13 to 25, Block E, Plan 5380V, 17-024-01 W5M" issued by Matrix Solutions Inc. for the City of Calgary and dated 2009/09/25;</li> <li>• "City of Calgary GSL Site, 1720 Bow Trail SW - Revised Tables with Residential/Parkland Criteria (Matrix 8334-501)" issued by Matrix Solutions Inc. for the City of Calgary and dated 2010/03/08;</li> <li>• "Phase II Environmental Site Assessment, 1720 Bow Trail SW, Calgary, Alberta, Lots 13 to 25, Block E, plan 5380V, 17-024-01 W5M" issued by Matrix Solutions Inc. for the City of Calgary and dated 2010/02/01;</li> <li>• "Preliminary Phase II Contamination Assessment Report for 1720 Bow Trail SW, Calgary Alberta" issued by Great White North Environmental Services Limited for F.B. Boersema &amp; Partners and dated 2003/05/31.</li> </ul> <p>Three petroleum storage tanks are also reported to be at this location.</p> <p>The Canada Creosote site. Property located approximately 200 m south of the Site and currently developed with the GSL Chev City.</p>

In terms of the Site, the City of Calgary EnviroSite report identified one Phase I ESA, one ground penetrating radar survey and one geotechnical report associated with roads which cross the Site. It is not clear whether the reports were specific to the location of the Site. In addition, intrusive environmental investigation and site-specific risk assessment reports were identified for the Fire Hall/EMS Station #6 property located at 1928 Westmount Boulevard (refer to Section 3.5 for a summary of the previous reports). No other records were reported for the Site.





In terms of nearby properties located on the north side of the Bow River, the City of Calgary EnviroSite report identified former and existing service stations located 15 m and 50 m to the east, and 65 m to the northeast of the Site. In addition, Con-Stan Industries of Canada, a cleaning compounds manufacturer, reportedly operated at 1738 Kensington Road and 55 m north of the Site from 1968 to 1970; and Expert Rug & Upholstery Cleaners and Dyers, a suspected laundry / dry cleaners reportedly operated at 1814 Kensington Road and 55 m north of the Site from 1962 to 1963. Given the short time frames (1, 2 or 3 years) during which these two businesses and the service station to the east reportedly operated, they are not likely to represent an issue of high environmental concern for the Site.

In terms of the properties located to the south of the Bow River, the City of Calgary EnviroSite report identified numerous environmental investigation reports for the former Canada Creosote site. Although other businesses and activities of potential environmental concern were identified in the area south of the Bow River, in general their distance relative to the Site and the intervening presence of the Bow River suggests that they do not represent an environmental concern for the Site.

In summary, numerous subsurface investigation reports and various historic businesses of potential environmental concern were identified in the vicinity of the Site, and included the former Canada Creosote property. Refer to Section 3.5 for further information and discussion on reviewed reports for the area.

### 3.5 Previous Investigations

To develop an understanding of site conditions, Golder completed a preliminary review of documents listed in Table 8. The list in Table 8 was developed from information obtained from Alberta Environment, Golder files, and reports listed in Keystone (2003). Detailed descriptions of these reports are presented in the following sections.

Table 8: Summary of Available Information

Electronic File Name	Author	Date	Site	Description
<b>General Area Reports North of Bow River</b>				
-	Golder for City of Calgary	July 1991	Broadview Road NW	<p>"Draft Report to City of Calgary on Creosote Discovery along Broadview Rd. NW, July 1991":</p> <ul style="list-style-type: none"> <li>• Creosote first encountered June 3, 1991, at STN +96 to STN 1+05</li> <li>• Liquid creosote observed to be migrating into base excavation STN 1+75 to STN2+05, from north side wall; LNAPL in form of sheen entered excavation from south wall; creosote contamination appeared continuous in this interval</li> <li>• Creosote odours detected at STN 2+80, creosote stained soil at STN 2+85 at base of excavation</li> <li>• Approximately 880 tonnes of suspected contaminated fill disposed of off-site.</li> </ul>



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Electronic File Name	Author	Date	Site	Description
-	Golder Associates	May 1992	Memorial Drive	<p>Report to Acres International Ltd. on “River Engineering Investigation at Canada Creosote Site, May 1992”:</p> <ul style="list-style-type: none"> <li>Investigation involved hydrogeologic testing and analysis, monitoring of wells for LNAPL and DNAPL, and headspace vapour tests on soil and rock cores (no chemistry testing was conducted)</li> <li>Monitoring wells probed for LNAPL on March 27 and April 21, 1992</li> <li>LNAPL observed as oily film on probe in wells AC-92-03, AC-92-04, AC-92-05, AC-92-06, AC-92-07 and AC-92-16</li> <li>DNAPL encountered in well AC-92-06R at thicknesses of up to 8.46 m</li> <li>During drilling, creosote staining was visible in bedrock fracture zone at depths of 1 to 5 m below soil/bedrock interface, at boreholes AC-92-4, 5 and 6.</li> </ul>
-	O'Connor Associates	February 1993	Bow River to Bowness Rd. NW, 17 <sup>th</sup> to 19 <sup>th</sup> Street NW	<p>“North Bank Risk Assessment Canada Creosote V.1, O'Connor Associates Inc., February 1993”:</p> <ul style="list-style-type: none"> <li>11 boreholes advanced along Broadview Rd. and Memorial Drive</li> <li>Groundwater and soil vapour data collect</li> <li>Detailed compositional analysis for soil vapour obtained</li> <li>Vapour intrusion modeling and health risk assessment conducted</li> <li>Soil profile along Broadview Rd. generally consisted of gravel fill overlying sand and gravel to bedrock surface, generally encountered at approximately 5 m bgs</li> <li>Soil profile along Memorial Drive generally consisted of silt and sand topsoil overlying silt, sand, gravel and cobble materials. Bedrock was encountered at 8 m bgs</li> <li>DNAPL observed at BH-1 (in Broadview Rd. N), no DNAPL or creosote staining noted in wells along Memorial Drive, although most wells were shallow. Only three wells extended to bedrock, but did not penetrate bedrock for any significant distance.</li> </ul>
-	Keystone Environmental	September 2001	Bow River to Bowness Rd. NW, 17 <sup>th</sup> to 19 <sup>th</sup> Street NW	<p>“Report of Findings of Environmental Site Assessment Phase I North Bank Westmount Generally Bound by the Bow River, 19<sup>th</sup> Street NW, Bowness Road NW and 17<sup>th</sup> Street NW”</p>



**PHASE I ESA - NORTH BOW RIVER AREA · CALGARY, AB**

Electronic File Name	Author	Date	Site	Description
SCD00940- Compilation Report North Bow	Keystone for City of Calgary	September 2003	North Bow	<p>"Compilation Report North Bow, Calgary, Alberta":</p> <ul style="list-style-type: none"> <li>• Compilation of available information on occurrence of suspected creosote contamination discovered in 1991 during excavation utility trenches along Broadview Road NW</li> <li>• In 1992, soil &amp; bedrock boreholes and wells along Memorial Drive indicated creosote contamination detected in fractured bedrock at 1 m to 5 m depth below bedrock-soil interface in North Bow Area.</li> <li>• In 1993, borehole and wells installed as part of risk assessment (RA) for North Bow Area found creosote-like contamination discovered in other areas besides the utility trenches along Broadview Road NW.</li> <li>• Geology of North Bow Area is characterized by sand and gravel fill over sand, over sand and gravel, over weathered bedrock, over interbedded shale and sandstone bedrock.</li> <li>• A distinct clay layer is observed on north bank of the Bow River that appears to start ~ 90 m west of 17th Street NW and extends ~ 16th Street NW and possibly further. The clay layer does not appear to be continuous across the Bow River.</li> <li>• Shale/sandstone bedrock surface is generally 7 to 10 m bgs on south bank and generally 7 m to 8.5 m bgs on north bank. The bedrock surface is generally sloped downward towards the north-northeast.</li> <li>• In general, anticipated that the groundwater on north side of the Bow flows to the south to southwest.</li> </ul>
April 28 2010 AENV Comments Re ARP	Warren Riley, Alberta Environment to City of Calgary	April 28, 2010		Proposed West Village Area Redevelopment Plan (Draft), City of Calgary, March 2010
SCD00940_ CORRESPONDENCE	Alberta Environment	N/A	N/A	Chemical Safety Data Sheets for Wood Preserving Chemicals
SCD00940_ CORRESPONDANCE_2	N/A	N/A	N/A	Label
<b>Canada Creosote</b>				
SCD00940_ CORRESPONDENCE_5	Alberta Environment?	1988	Canada Creosote	Industrial Waste Landfill Program HELP End Landfill Pollution – Site Investigation Requirements
SCD00940_ CORRESPONDENCE_8	Not known	Up to 1988	Canada Creosote	Aerial Photographs and Utility Clearance,



**PHASE I ESA - NORTH BOW RIVER AREA, CALGARY, AB**

Electronic File Name	Author	Date	Site	Description
SCD00940_ CORRESPONDENCE_ 10	Not known	1988	Canada Creosote	Site Plans, Groundwater Contours, Slug Tests, Aerial Photographs, Analytical Testing
SCD00940_ CORRESPONDENCE_ 11		1988	Canada Creosote	Newspaper article
SCD00940_ CORRESPONDENCE_ 13		1988 & 1989	Canada Creosote	Newspaper article
SCD00940_ GROUNDWATER CHEMISTRY ANALYSIS	Not known	1988	Canada Creosote	Chemistry data
SCD00940_ WELL TEST REPORT	Not known	1988	Canada Creosote	Slug test results
SCD00940_ GROUNDWATER MONITORING	Not known	1988	Canada Creosote	Hydrogeological and Chemistry Data Report including Borehole Logs
SCD00940- CORRESPONDENCE_ SOIL AND GROUNDWATER QUALITY	Not known	1988	Canada Creosote	"Hydrogeological and Chemistry Data Report"
N/A (Golder library)	EMA Associates	1990	Canada Creosote	"Relative Toxicity, Bioaccumulation and Other Variables for Specific Dense Non-Aqueous Phase Liquids"
N/A (Golder library)	Golder Associates and EMA	1990	Canada Creosote	"Final Report to Alberta Environment HELP Project Preliminary Risk Assessment, Canada Creosote Site": <ul style="list-style-type: none"> <li>• Soil, groundwater and DNAPL characterization, and preliminary hydrogeological and DNAPL mobility assessment completed.</li> <li>• All investigation locations were south of the Bow R. except 3 boreholes (GA-13, 14 and 15) advanced along the north shore (no evidence of DNAPL at these locations).</li> </ul>
Distr Dissolved Contaminants in Bow River	G. Van der Vinne, Alberta Research Council	December 1992	Canada Creosote	"Distribution of Dissolved Contaminants in Bow River Below Canada Creosote Site" <ul style="list-style-type: none"> <li>• Limited to water quality testing (no subsurface information)</li> </ul>
N/A (Golder library)	Al Sosiak	Feb 1998	Canada Creosote	Changes in Contaminant Levels in the Bow River Following the Installation of a Containment System at the Canada Creosote Site
<b>1724 Westmount Blvd. N</b>				
SCD01416-SCD Phase 1 ESA Site 1 CBC Calgary	Jacques Whitford	March 29,2005	1724 Westmount Blvd. NW	"Phase I Environmental Site Assessment Report Site 1 - CBC Calgary Radio & Television 1724 Westmount Boulevard NW Calgary": <ul style="list-style-type: none"> <li>• Based on high permeable soils in area of Site and northerly direction of regional groundwater flow (i.e., towards the Site), the storage and handling wood preserving chemicals (e.g., constituents</li> </ul>



**PHASE I ESA - NORTH BOW RIVER AREA · CALGARY, AB**

Electronic File Name	Author	Date	Site	Description
				including naphthalene, PCP, creosote, metals) at the former wood treatment and lumber manufacturing plants and storage/handling of hydrocarbons at the former and current oil refineries, service stations, and bus terminal located south of the Site was considered to represent a potential environmental concern to the Site.
SCD01416-REPORT – SUMMARY OF INITIAL FINDINGS PHASE II ASSESSMENT	Jacques Whitford	2006	1724 Westmount Blvd. NW	<p>“Summary of Initial Findings – Limited Phase II Environmental Site Assessment CBC Building, 1724 Westmount Boulevard NW, Calgary, Alberta”:</p> <ul style="list-style-type: none"> <li>• Stratigraphy consists of sand &amp; gravel, underlain clay at 5.8m, &amp; siltstone bedrock at 7.1m</li> <li>• Two monitoring wells installed; depth to water table = 3.7m</li> <li>• In soil, PAH compounds at 8 to 11 m bgs exceeded CCME SQG</li> <li>• In groundwater, PAH and phenolic compounds exceeded CCME FAL</li> <li>• Creosote or coal-tar DNAPL detected in bedrock</li> </ul>
SCD01653 - PHASE II ESA	Jacques Whitford	July 26, 2006	1724 Westmount Blvd. NW	<p>“Phase II Environmental Site Assessment CBC Building, 1724 Westmount Boulevard NW, Calgary, Alberta”:</p> <ul style="list-style-type: none"> <li>• Stratigraphy consists of sand &amp; gravel, underlain clay at 6m, &amp; siltstone bedrock at 7.2- 9.2m</li> <li>• 14 monitoring wells installed</li> <li>• Depth to water table was 3.4 to 4.1m on Apr 18, 06 (water levels considered “high” due to high water level in river) (on Apr 18, 06, geodetic elevation water Bow R. 1047.01m, groundwater on site 1046.66m)</li> <li>• Interpreted groundwater flow direction to the northeast</li> <li>• Six wells (MW2A-7A) are screened above water table</li> <li>• Creosote DNAPL encountered in wells at 9.3 m depth (MW1B), 5.2 depth (MW3B) and 3.9 m depth (MW6B)</li> <li>• Volatile headspace concentrations measured in wells ranged from non-detect to 118 ppm (MW6B)</li> <li>• Elevated concentrations of PAH, petroleum hydrocarbon and phenolic compounds groundwater</li> </ul>



**PHASE I ESA - NORTH BOW RIVER AREA, CALGARY, AB**

Electronic File Name	Author	Date	Site	Description
HHRA Calgary CBC Jan 5 ph 3	Jacques Whitford	January 4, 2007	1724 Westmount Blvd.	<p>"Human Health Risk Assessment for 1724 Westmount Blvd., Calgary, Alberta":</p> <ul style="list-style-type: none"> <li>• Qualitative risk assessment (QRA) completed</li> <li>• 2-storey cinderblock building with concrete slab-on-grade foundation</li> <li>• COPCs were BTEX, naphthalene and phenolics</li> <li>• Modeled indoor air using groundwater concentrations and J&amp;E model</li> <li>• Also obtained indoor air samples for analysis</li> <li>• Predicted risks were within acceptable levels</li> </ul>
SCD01653 – COVERING LETTER	City of Calgary	January 2008	1724 Westmount Blvd. NW	Covering Letter
<b>1928 and 1940 Westmount Blvd. N</b>				
SCD01416-REPORT – FINAL REPORT PHASE II ESA	UMA	December 17, 2007	1928 and 1940 Westmount Blvd. NW	<p>Phase II Environmental Site Assessment 1928 &amp; 1940 Westmount Boulevard NW, Calgary, Alberta</p> <ul style="list-style-type: none"> <li>• Stratigraphy consists of sand &amp; gravel, underlain clay and siltstone bedrock at about 7 m</li> <li>• Three monitoring wells installed; depth to water table –4m, based on September 2007 groundwater levels, water table above screen at MW7-01 and just below screen at MW07-2 and 3</li> <li>• No measureable LNAPL or DNAPL encountered in wells but sheens detected in two wells (MW7-02 &amp; 03) along west boundary, logs indicate sheen on gravel</li> <li>• Naphthalene groundwater concentrations at MW7-02 &amp; -03 were 3 and 7.4 mg/L, respectively, suggesting nearby NAPL, F2 and PAH concentrations in soil and groundwater at these locations exceeded applicable criteria</li> </ul>
SCD01653 – SITE SPECIFIC RISK ASSESSMENT INDOOR AIR	UMA	December 13, 2007	1928 and 1940 Westmount Blvd. NW	<p>"Site Specific Risk Assessment Indoor Air, 1928 and 1940 Westmount Blvd. NW":</p> <ul style="list-style-type: none"> <li>• Two indoor air samples collected from Emergency Services Building</li> <li>• Analyzed for BTEX and naphthalene using carbotrap tubes in series; individual BTEX concentrations ranged from 0.1 to 4.3 ug/m3, naphthalene concentrations were less than detection limit (0.7 ug/m3)</li> <li>• Predicted health risk acceptable</li> </ul>



**PHASE I ESA - NORTH BOW RIVER AREA · CALGARY, AB**

Electronic File Name	Author	Date	Site	Description
SCD01653 – EMAIL RE CHR COMMENTS ON RISK ASSESSMENT WESTMOUNT BLVD.	Denis Stefani, CHR	April 7, 2008	1928 and 1940 Westmount Blvd. NW	Email providing comments on UMA 2008 risk assessment. The Exposure and Hazard Assessment are based on the assumption that indoor concentration = soil gas concentration. And, the classification of the site as coarse-grained, residential/parkland. Specific issues raised 1. Soil gas sampling protocol 2. Applicable cancer risk level 10-6 for benzene, 3. Naphthalene considered probably human carcinogen.
<b>2001 Bowness Rd. (HiHo)</b>				
00080048_CORRESPONDENCE	Alberta Environment	2003	2001 Bowness Rd. NW	Limited information was available for this site consisting of (i) regulatory correspondence regarding UST removal (ii) Golder proposal for Phase 1 ESA. Golder was apparently not retained to conduct the Phase 1 ESA. No site investigation data or information on possible UST removal was available.
<b>#4-14 Street</b>				
00075872_ADDENDUM SOIL ANALYSIS TO REPORT ENVIRONMENTAL ASSESSMENT	Hardy BBT	June 1990	#4-14 Street	“Addendum to Environmental Assessment, #4-14 Street, NW, Calgary, Alberta”
00075872_ADDENDUM ENVIRONMENTAL ASSESSMENT	Hardy BBT, Alberta Environment	June 1990	#4-14 Street	“Environmental Assessment, #4-14 Street, NW, Calgary, Alberta”: <ul style="list-style-type: none"> <li>Shallow soil vapour survey was conducted using combustible gas detector indicated vapour concentrations between 200 and 700 ppm</li> <li>Screening of groundwater wells indicated low to moderate combustible gas concentrations of up to 4% of LEL and faint gasoline odours.</li> </ul>
00075872_MONITORING WELL INSTALLATION	Hardy BBT	Dec 1990	#4-14 Street	“Excavation and Follow-up Groundwater Monitoring Well Installation, #4-14 Street, NW, Calgary, Alberta”
00075872_MONITORING FOLLOW-UP WELL INSTALLATION	Hardy BBT	Dec 1990	#4-14 Street	“Excavation and Follow-up Groundwater Monitoring Well Installation, #4-14 Street, NW, Calgary, Alberta” – Same as above?
00075872_OFF SITE WATER SAMPLING	Morrow	Nov 16, 1992	#4-14 Street	“Off-Site Water Sampling at the Shell Service Station, 14 <sup>th</sup> Street and Bowness Road, NW, Calgary”: <ul style="list-style-type: none"> <li>Concentrations in one off-site well below detection limit</li> </ul>
00075872_SUPPLEMENTARY SUBSURFACE INVESTIGATION	AGRA	Nov 15, 1995	#4-14 Street	“Former Shell Canada Service Station Confirmatory Drilling Investigation, #4-14 <sup>th</sup> Street NW, Calgary”: <ul style="list-style-type: none"> <li>Focussed investigation</li> <li>No hydrocarbon impacts</li> </ul>



Electronic File Name	Author	Date	Site	Description
00075872_RESULTS OF EXCAVATION AND REMOVAL REMEDIATION	AGRA plus correspondence Shell, Alberta Environment	1996, 1997	#4-14 Street	Site achieved Level II coarse risk-management criteria for inhalation
00075872_PHASE II ENVIRONMENTAL SITE ASSESSMENT	J.R.Smith & Associates	April 1997	#4-14 Street	"Phase II Environmental Site Assessment, #4-14 Street N.W., Calgary, Alberta": <ul style="list-style-type: none"><li>Multi-storey apartment with retail planned for former Shell service station site</li><li>Two boreholes conventional auger, six boreholes Becker hammer</li><li>Sandy gravel, some sand layers to 5-7 m depth, underlain by bedrock</li><li>Depth to groundwater 3.4 to 4.5 m</li><li>Soil and groundwater concentrations were below applicable standards</li></ul>
00075872_CORRESPONDENCE	Raynor, Alberta Environment, AGRA, Shell	April 1997	#4-14 Street	Correspondence <ul style="list-style-type: none"><li>Investigation including shallow soil vapour survey conducted in 1990</li><li>1,500 m<sup>3</sup> soil removed in 1990, 150 m<sup>3</sup> removed in 1995</li><li>Some groundwater sampling results</li></ul>

### 3.5.1 Canada Creosote Site Field Investigation (1990)

The former Canada Creosote Site is located adjacent to the south bank of the Bow River and covered an area of 18 hectares. Wood-preserving operations historically took place on the site and involved the use of tars, creosote, petroleum oils and pentachlorophenol. Both DNAPL and LNAPL were found to be present at the Canada Creosote Site.

The former Canada Creosote Site is bounded to the north by the Bow River, to the east by 16<sup>th</sup> Street SW, to the south by 9<sup>th</sup> Avenue SW and the Canadian Pacific Railway (CPR) rail-line, and to the west by the City of Calgary snow dump area.

The former Canada Creosote plant was constructed on a flood plain terrace of the Bow River. Sediments deposited in the floodplain consist of fluvial channel gravels and sands. From place-to-place, the fluvial channel gravels and sands are overlain by silts that were deposited as overbank deposits during periods of flooding of the Bow River. Bedrock beneath the fluvial channel gravels and sands consists of the Paskapoo and Porcupine Hills Formations, which are thickly bedded; calcareous, cherty sandstone; siltstone and mudstone; minor conglomerate; thin limestone, coal and tuff beds. The upper portions of these formations have been eroded by river action prior to and during deposition of the fluvial channel gravels and sands.

Environmental reports prepared for the site indicate that a pool of DNAPL (creosote and related compounds) was encountered beneath the site and that the DNAPL body extended out beneath the Bow River. In addition to the denser-than-water creosote, localized areas of LNAPL with creosote-like characteristics were encountered as indicated by separate-phase product encountered in monitoring wells. Pentachlorophenol (PCP) contamination was also found in soil and groundwater at the site.





### 3.5.2 Broadview Utility Excavation Monitoring (1991)

The first documented discovery of creosote north of the Bow River was in 1991 where creosote was encountered in open excavations when the City of Calgary was performing a waterworks construction project on Broadview Road NW (Figure 13). Golder (1991) was retained to conduct monitoring and sampling activities. The findings of this work are summarized as follows:

- The depth to the base of the trench was generally between 4.5 and 6 m below ground surface;
- Groundwater seepage was observed below about 2.5 m depth below ground surface;
- Creosote was first encountered on June 3, 1991, at STN +96 to STN 1+05 (the station numbers refer to metres measured west from the fire hydrant at the corner of Broadview Road NW and 17<sup>th</sup> Street);
- Liquid creosote was observed to be migrating into the base of the excavation from the north side wall between STN 1+75 and STN2+05; LNAPL in the form of a sheen entered the excavation from the south wall; creosote contamination appeared continuous in this interval;
- Creosote odours were detected at STN 2+80; creosote stained soil was observed at STN 2+85 at the base of the excavation; further excavation was temporarily ceased at this location;
- The soil stratigraphy encountered during excavation, in sequence from ground surface, generally consisted of topsoil, silty sand fill, gravelly sand to sand, and sand and gravel. Clayey till was also observed over a portion of the excavated trench length;
- Shale bedrock was encountered at 5.7 m (2+60) and 5 m (2+85) below ground surface;
- A section of the 150 mm diameter PVC water main was replaced with “yellow-jacket” steel pipe; and
- Approximately 880 tonnes of fill that was suspected to be contaminated was disposed of off-site at a licensed landfill.

A creosote-impacted sample analyzed for polycyclic aromatic hydrocarbons (PAHs) as part of the monitoring program indicated naphthalene (130,000 ppm), 1-methyl naphthalene (570,000 ppm) and 2-methyl naphthalene (360,000 ppm) concentrations were highly elevated, while concentrations of other PAHs were at least an order-of-magnitude lower. The results of analysis of a groundwater sample indicated that the naphthalene (53 ppm), 1-methyl naphthalene (62 ppm) and 2-methyl naphthalene (42 ppm) concentrations were elevated together with the C1-anthracene (77 ppm) and fluorene (61 ppm) concentrations. Lower concentrations of benzene (0.025 ppm), toluene (0.2 ppm), ethylbenzene (0.17 ppm) and xylenes (0.72 ppm) were measured.

### 3.5.3 North Bow Phase 1 ESA (1991)

Keystone (1991), as a follow-up assessment to the Golder (1991) monitoring program, completed a Phase I ESA for the North Bow area in September 1991. The study area was between the Bow River and Bowness Road NW, and between 17<sup>th</sup> and 19<sup>th</sup> Street NW. The Phase I ESA indicated a high probability that chemicals from the Canada Creosote site had impacted this area, and also identified gasoline service stations and dry cleaners (locations not specified, but identified as general concerns) as potential sources of chemicals of concern.



### 3.5.4 Memorial Drive Geotechnical Field Investigation (1992)

In 1992, Golder conducted an investigation with dual objectives of providing data on the presence of DNAPL and potential migration pathways, and geotechnical information for remediation design purposes (Golder, 1992). The investigation included 29 boreholes drilled along Memorial Drive between 22<sup>nd</sup> Street West and 13<sup>th</sup> Street West and a geophysical survey along Memorial Drive to identify possibly low areas in the bedrock surface that could represent channels for potential migration of creosote to the north.

The geologic profile at boreholes generally consisted of topsoil, underlain by sandy gravel, and sand and gravel deposits, underlain by glacial till at selected boreholes, which in turn was underlain by bedrock. The descriptions in the borehole logs indicate that the bedrock surface slopes downward the northeast. Fine sand and/or silt layers were encountered at most boreholes excluding AC-92-03 (between 16<sup>th</sup> and 17<sup>th</sup> Street) and AC-92-04 (just west of 19<sup>th</sup> Street West). At wells along Memorial Drive:

- LNAPL was observed as an oily film on the water level probe in wells AC-92-03, AC-92-04S, AC-92-05, AC-92-06, AC-92-7 and AC-92-16; and
- DNAPL was encountered in well AC-92-06R at thicknesses of up to 8.46 m.

During drilling, creosote staining was visible in the bedrock fracture zone at depths of 1 to 5 m below the soil/bedrock interface, at boreholes AC-92-4, 5 and 6. The field observations are summarized in Figure 13.

### 3.5.5 North Bow Site Field Investigation and Risk Assessment (1993)

In 1993, O'Connor Associates Environmental, Inc. conducted an investigation in the North Bow area between the Bow River and Bowness Road NW and 17<sup>th</sup> Street NW and 19<sup>th</sup> Street NW (O'Connor, 1993). Eleven boreholes completed as groundwater and soil vapour monitoring wells were installed.

The soil profile at borehole locations in Broadview Road NW generally consisted of gravel fill overlying sand and gravel extending to the bedrock surface, which was encountered at approximately 5 m below grade. Silt fill was encountered beneath the gravel fill at one location. The soil profile at boreholes beside Memorial Drive NW was generally comprised of silt and sand topsoil overlying silt, sand, gravel and cobble materials. Bedrock was encountered at approximately 8 m below grade. The average moisture content in soil samples from the vadose zone was 8 percent, while the average fraction of organic carbon was 0.55 percent.

The average depth to the water table was approximately 3.5 m below grade in March and May 1991, and 4.3 m below grade in August and October 1992. Along Broadview Road NW, the shallow groundwater flow direction was stated to be north to northwest on August 21, 1992 and October 7, 1992. Along Memorial Drive, the shallow groundwater flow direction on these dates was towards the south to southeast (*i.e.*, toward the Bow River). No explanation was provided in the report for the apparent divergent groundwater flow directions.

DNAPL was not observed in any piezometers installed by O'Connor in the North Bow area. DNAPL was encountered during drilling BH-1 in Broadview Road, at a location where DNAPL had been observed during the water line trench excavation (between STN 1+75 and 2+05). No DNAPL or creosote staining was noted in wells along Memorial Drive, although most wells were shallow and only three wells extended to bedrock (but did not penetrate the bedrock for any significant distance). The maximum headspace vapour concentration in soil samples measured by a combustible gas detector was 170 ppm. The maximum well headspace concentration measured by a combustible gas detector was 12% of the lower explosive limit (the report did not indicate what gas the detector was calibrated to).



Groundwater samples were analyzed for PAHs, U.S. EPA priority pollutant volatiles, phenols/chlorophenols and total purgeable and extractable hydrocarbons. Soil vapour samples were analyzed for the distribution of hydrocarbon constituents (GC scan), target U.S. EPA volatiles, PAHs, chlorophenols and non-target compounds. Based on a review by the Toxicology Research Centre (TRC) of the University of Saskatchewan, a short-list of detected compounds of toxicological concern were identified for inclusion in the risk assessment, as follows: benzene, benzo (a) anthracene, carbon disulphide, chloroform, dichloromethane, n-hexane, naphthalene, pentachlorophenol, tetrachloroethylene, xylene and 2,3,7,8-tetrachloro-dibenzo(p)dioxin (TCDD). The four compounds with the highest soil vapour concentrations were methylene chloride (72,000 ug/m<sup>3</sup>), limonene (17,100 ug/m<sup>3</sup>), C4 alkyl benzenes (4,400 ug/m<sup>3</sup>) and xylenes (4,100 ug/m<sup>3</sup>). Methylene chloride and limonene are chemicals that would not be expected to be associated with creosote.

The indoor air concentrations were predicted using a proprietary one-dimensional vapour intrusion model developed by O'Connor using measured groundwater and soil vapour concentrations. The O'Connor model is similar to the Johnson and Ettinger (1991) model. The vapour attenuation factors for the modeling are not reported in detail except a reference was made that the vapour attenuation factor predicted by the O'Connor model ( $1 \times 10^{-4}$ ) compared favourably to the attenuation factor predicted by the Johnson and Ettinger model.

The predicted maximum compound-specific incremental cancer risk was  $1 \times 10^{-6}$ , based on a concentration of chloroform measured in the soil vapour. The predicted maximum non-cancer hazard quotient was  $2.4 \times 10^{-2}$ , based on the concentration of naphthalene in the groundwater. The risk assessment concluded that the incremental human health risks associated with measured concentrations were not considered to be significant.

### 3.5.6 Former Service Station #4-14<sup>th</sup> Street

A Shell service station was formerly located at #4-14<sup>th</sup> Street northeast of the Site. An initial soil vapour survey suggested the presence of site contamination. Site remediation at the former service station included removal of 1,500 m<sup>3</sup> soil in 1990, and 150 m<sup>3</sup> in 1995. Follow-up sampling indicated no remaining hydrocarbon impacts and that the site "achieved Level II coarse-grained risk management criteria for inhalation" (see Table 8). A follow-up environmental site assessment conducted in 1997 indicated that soil and groundwater concentrations were below applicable standards.

### 3.5.7 Keystone Compilation Report (2003)

The Keystone (2003) compilation report was written to attain a better understanding of the stratigraphic, hydrogeological, and physiological setting in which the contamination is found. In addition, potential conceptual models to explain creosote migration from the hypothesized source of the creosote contamination, the former Canada Creosote Site, to the North Bow area were provided. The geology of North Bow area is characterized as follows:

- sand and gravel fill, underlain by
- sand, underlain by
- sand and gravel, underlain by
- weathered bedrock, underlain by
- interbedded shale and sandstone bedrock.



A distinct clay layer is observed on the north bank of the Bow River that appears to start approximately 90 m west of 17<sup>th</sup> Street NW and extends to approximately 16<sup>th</sup> Street NW and possibly further east. The shale and sandstone bedrock surface is generally 7 to 10 m below ground surface on the south bank and generally 7 m to 8.5 m below ground surface on the north bank. There was limited piezometric data, but Keystone anticipated that shallow groundwater in the North Bow area flows south toward the Bow River, but near to the river takes on a southeast direction matching the gradient of the river.

The ground surface topography of the former Canada Creosote Site is relatively flat with a relief of less than 3 m across the site. The ground surface on the north side of the river is also relatively flat. There are no morphological indications of potential preferential pathways for creosote migration such as channels visible at surface. The bedrock surface generally slopes downward towards the north to northeast, although bedrock depressions were encountered at boreholes on the Canada Creosote Site, and from geophysics were inferred to be present elsewhere. The bedrock depressions may have a north-south orientation.

The chemistry of samples analyzed from wells north and south of the Bow River indicated variability with respect to the chemical signature, but overall, a similar range of compounds that were representative of creosote were detected. There was greater variability in PCP concentrations, possibly due to fractionation of PCP that may have occurred during migration to the north.

Two models for the migration of creosote from the former Canada Creosote Site to the North Bow area were presented. The first model involves gravity flow of creosote DNAPL on top of the northward sloping bedrock surface. The second is creosote DNAPL migration through fractures in bedrock that is driven by the head of creosote in pools present in bedrock depression(s) on the former Canada Creosote site. Keystone indicated that further investigation is required to test these hypotheses.

### 3.5.8 1724 Westmount Blvd. NW (CBC Site)

A Phase I ESA was completed in 2005 by Jaques Whitford for the CBC building site located at 1724 Westmount Blvd. NW (Jacques Whitford, 2005). Their Phase 1 ESA concluded that based on the highly permeable soils in the area of the CBC Site and northerly direction of regional groundwater flow (*i.e.*, towards the Site), land use south of the Site represents a potential environmental concern to the CBC site. The land uses identified were the storage and handling of wood-preserving chemicals (*e.g.*, constituents including naphthalene, PCP, creosote and metals) at the former wood treatment and lumber manufacturing plants and the storage and handling of hydrocarbons at the former and current oil refineries, service stations, and bus terminal.

Jacques Whitford completed a Phase II ESA in July 2006 (Jacques Whitford, 2006). The findings of this study are summarized as follows:

- The soil stratigraphy consists of sand and gravel, underlain by clay at approximately 6 m depth below ground surface, and siltstone bedrock at 7.2 to 9.2 m depth;
- Fourteen monitoring wells were installed at the CBC site;
- The depth to the water table was 3.4 to 4.1 m below ground surface on April 18, 2006; the groundwater levels were considered “high” due to the high water level in the Bow River; on April 18, 2006, the geodetic elevation of water in the Bow River near the site was 1047.01 m, while the average elevation of the water table on the site was 1046.66 m;



- The interpreted shallow groundwater flow direction was to the northeast;
- Six wells (MW2A-7A) have well screens that straddle the water table and therefore potentially could be utilized for the purposes of monitoring soil vapour (subject to quality control testing to ensure well seals are not leaking);
- Creosote DNAPL was encountered in the eastern part of the site at well MW1B at 9.3 m depth below ground surface, and in the central part of the site at MW3B at 5.2 m depth and at MW6B at 3.9 m depth;
- The maximum thickness of DNAPL in wells was 5.2 m at MW6B;
- Volatile organic compound concentrations of soil vapour samples from well headspaces measured with a photoionization detector (PID) ranged from non-detect concentrations to 118 ppm (maximum concentration at MW6B);
- No laboratory testing of soil vapour samples were conducted; and
- Elevated concentrations of PAH, petroleum hydrocarbon and phenolic compounds were measured in groundwater.

The maximum BTEX concentrations were measured at well MW7B where the benzene concentration was equal to 0.096 mg/L, the toluene concentration was 0.407 mg/L, the ethylbenzene concentration was 0.207 mg/L and the xylenes concentration was 1 mg/L.

The individual PAH compound with the highest concentration was naphthalene; the highest concentration was measured at well MW1A, where the concentration was 25.6 mg/L, followed by MW1B, where the concentration was 22.6 mg/L. The next highest concentration, 5.7 mg/L, was measured at MW7B, followed by 2.6 mg/L measured at MW2B. Higher concentrations were measured in wells along the west and south sides of the CBC site (compared to other parts of the site), and in the deeper than shallower well pair.

A quantitative risk assessment (QRA) was completed in 2007 by Jacques Whitford (Jacques Whitford, 2007). The soil vapour intrusion pathway was the only exposure pathway retained for quantitative analysis. The chemicals retained for the risk assessment were F2 and naphthalene for soil, and F2, TEQ benzo(a)pyrene, anthracene and pyrene for groundwater. The soil vapour concentrations were estimated from soil and groundwater concentrations using a partitioning model (no soil vapour monitoring was conducted). The Johnson and Ettinger model was used to predict indoor vapour concentrations using parameters considered representative of a 2-storey cinderblock building with concrete slab-on-grade foundation. Indoor air monitoring was also conducted in the building. The results of this assessment indicated that the predicted human health risks were within acceptable limits.

### 3.5.9 1928 and 1940 Westmount Blvd. NW (EMS No. 6 Site)

A Phase II ESA of the Emergency Services Station (EMS) No. 6 located at 1928 and 1940 Westmount Blvd. NW was completed in 2007 by UMA Engineering Ltd. (UMA, 2007). Aside from indicating that the assessment was conducted for due diligence purposes, the rationale for the Phase II ESA is not described in the report and no Phase I ESA is available. The findings of this study are summarized as follows:

- The soil stratigraphy consists of sand & gravel, underlain by clay and siltstone bedrock at approximately 7 m depth below ground surface;



- Three monitoring wells were installed at the EMS site;
- The depth to the water table was approximately 4 m below the ground surface in September 2007; the water table was above the top of the screen at MW7-01 and just below the top of screen at wells MW07-2 and 3 (these wells are unlikely to be suitable for soil vapour sampling);
- No measureable LNAPL or DNAPL was encountered in wells but sheens were detected in two wells (MW7-02 & 03) along the west boundary of the site; borehole logs also indicate a sheen was observed on gravel at these locations;
- There were elevated naphthalene concentrations in groundwater at MW07-01 (2.3 mg/L), MW07-02 (3.7 mg/L) and MW07-03 (7.4 mg/L); the benzene concentrations were non-detect at all three wells, but toluene, ethylbenzene and xylenes were detected at wells MW07-02 and MW07-03. The maximum individual BTEX concentration was measured for xylenes (0.139 mg/L at MW07-03); and
- No soil vapour testing was conducted at the site.

A site specific risk assessment of indoor air was conducted by UMA in 2007 (UMA, 2007). The findings of this risk assessment were as follows:

- Two indoor air samples were obtained from the EMS building;
- Air samples were collected for BTEX and naphthalene analyses using carbotrap sorbent tubes;
- Individual BTEX concentrations in indoor air ranged from 0.1 to 4.3 ug/m<sup>3</sup>, naphthalene concentrations were less than detection limit (0.7 ug/m<sup>3</sup>); and
- Based on the measured indoor air concentrations, the predicted health risks were considered acceptable.

### 3.6 2001 Bowness Road (HiHo Service Station)

Limited information was available for this site consisting of (i) regulatory correspondence regarding UST removal (ii) Golder proposal for Phase 1 ESA. Golder was apparently not retained to conduct the Phase 1 ESA. No site investigation data or information on possible UST removal was available.



## 4.0 SITE RECONNAISSANCE

A Site reconnaissance was conducted by Ingrid Trimble of Golder on November 12, 2010. It should be noted that no buildings or private property was accessed during the Site visit. As well, building occupants were not interviewed. Observations of Site buildings and adjacent properties were made from publically accessible areas. Observations of the Site buildings and property as well as adjacent properties were documented by Golder with the associated photographs presented in Appendix A. Figure 2 shows the general features of the Site and adjacent properties.

**Table 9: Site Topography and Subsurface Description**

Topic	Data
Site Subsurface Soils	Sand and gravel underlying in descending order by clay and siltstone.
Depth to Bedrock	Approximately 7 m.
Type of Bedrock	Siltstone.
Depth of Groundwater, metres below ground surface	Approximately 4 mbgs.
Flow Direction of Near Surface Groundwater	Based on the topography of the surrounding area, the groundwater flow direction is indeterminate. The groundwater flow direction may be influenced by the Bow River and seasonal factors. The local flow direction may be affected by buried infrastructure.
Slope of Site Ground Surface	Generally flat.
Topography of Site and Surrounding Area	The Site and area are generally flat with no significant sloping.
Site Grade relative to the Surrounding Area	The Site is at relatively the same grade as the surrounding properties.
Nearest Open Water Body	The Bow River located approximately 45 m south of the Site.
Water Wells On-Site	None reported through AENV Groundwater Information Centre. During the Site visit ten environmental groundwater monitoring wells (MW) were observed on the CBC property. An additional four environmental MWs were observed on the Fire Hall/EMS Station #6.
Water Wells in Area Surrounding the Site and Use	As noted in Section 3.4, the AENV Groundwater Information Centre database and the EcoLog ERIS Report identified 12 dewatering wells in the area of the Site.  As indicated in Section 3.1, eight environmental groundwater MWs were observed on properties located approximately 65 m northeast of the Site. The purpose of the observed monitoring wells is suspected to be associated with the former service station in this location.
Prominent Physical Features On-Site or Surrounding Area	None noted.
Previous Investigations of the Subsurface	Refer to Section 3.5.

The Site topography is based on observations made during the Site reconnaissance. Subsurface soil conditions are based on previous reports of subsurface investigations reviewed for the Site (see Section 3.5).



## 4.1 Site Operations

At the time of the Site visit, the Site was primarily developed with single-family homes. The CBC building, two parks and Fire Hall/EMS Station #6 were located on the north side of Westmount Blvd. NW along the Site's southern boundary. The Ethiopian Evangelical Church in Calgary was located at 1705 Westmount Rd NW; while the St. Boniface German Church was located at 1923 Broadview Rd NW. The Bow Valley Lawn Bowling Club was located at 1738 Bowness Rd NW. Westmount RD NW, Bowness Rd NW, Broadview Rd NW, Westmount Blvd and three alley ways cross through the Site from east to west. 16<sup>th</sup> Street NW and 17<sup>th</sup> Street NW cross the Site from north to south; while 17<sup>th</sup> Street NW only extends from Westmount Blvd NW to Broadview Rd NW.

## 4.2 Air Emissions

Emissions to the atmosphere from the Site include only non-regulated sources such as washroom vents, natural gas forced air furnaces and engineered air or exhaust ventilation common to the types of residential, institutional and commercial buildings present on Site. No strong, pungent or noxious odours were identified during the Site visit.

## 4.3 Water and Wastewater Discharges

The Site is serviced with municipal water supplied from the City of Calgary. Water supplied to the Site is assumed to be used for domestic and/or office purposes only. Domestic wastewaters generated at the Site are discharged directly to the municipal sanitary sewer system. No process-related wastewaters are expected to be generated by the types of residential, institutional and commercial activities observed on Site.

Storm water flows to overland to grassed areas infiltrating the subsurface or overland into municipal storm water catch basins located in the paved roads running through and adjacent to the Site.

## 4.4 Waste Management and Handling

In general, the perimeter of the Site was free of debris and refuse materials. In general, waste is expected to be placed for road side pickup and disposed of by the City of Calgary and/or by third-party contractors on a regular basis. With the exception of a designated compost (leaves, pumpkins, trees) collection area in a vacant lot along the south central portion of the Site, no waste storage facilities were observed to be present.

No significant quantities of hazardous wastes are expected to be generated or stored by the types of residential, institutional and commercial activities observed on Site.

## 4.5 Material and Chemical Storage, Handling and Management

No bulk chemical storage was observed on the exterior portions of the Site from ready accessible areas. No significant quantities of hazardous chemicals are expected to be used or stored by the types of residential, institutional and commercial activities observed on Site.

## 4.6 PCB-Containing Materials and Equipment

The use of polychlorinated biphenyl (PCB) dielectric fluids in electrical equipment such as transformers, fluorescent light ballasts and capacitors was common in industry practice up to about 1980. The Federal Chlorobiphenyls Regulation SOR/91-152 prohibits the use of PCBs in this electrical equipment installed after July 1, 1980. There are federal and provincial regulations that govern the storage and disposal of PCBs and PCB-containing equipment.





Utility-owned pole-mounted and pad-mounted transformers were observed throughout the Site. No leaks were noted on the poles or the pads.

#### 4.7 Aboveground Storage Tanks

No evidence of ASTs was observed on the exterior portions of the Site from readily accessible areas. The regulatory and historical records obtained as part of this Phase I ESA did not identify the historical presence of ASTs on the Site.

#### 4.8 Underground Storage Tanks

No evidence of USTs such as fill pipes, vent pipes, or pump islands was observed on the exterior portions of the Site at the time of the reconnaissance. The regulatory and historical records obtained as part of this Phase I ESA did not identify the historical presence of USTs on the Site.

#### 4.9 Hydraulic Equipment

No hydraulic equipment was observed on the exterior portions of the Site. With the exception of possibly the CBC building, the types of residential, institutional and commercial buildings present on Site are not expected to have hydraulic piston elevators, or in-ground vehicle hydraulic hoists.

#### 4.10 Noise

No sources of significant noise or vibrations were observed on the Site at the time of the Site reconnaissance. Monitoring of noise levels was not conducted as part of this Phase I ESA.

#### 4.11 Surrounding Land Use

The Site is located in an area developed with residential and commercial properties. A visual reconnaissance of the outdoor operations of the adjacent properties that may potentially impact the Site was carried out from the Site and publicly accessible areas. Surrounding properties and land use are identified on Figure 2.

##### **NORTH**

The Site is bound to the north by Westmount Rd NW, with residential homes and Kensington Rd NW further north. Lindal show homes, a multi-tenant commercial building and associated parking were located approximately 65 m northeast of the Site. Eight environmental groundwater monitoring wells were noted in the parking areas. The purpose of these monitoring wells is not certain, but likely associated with an investigation of the historical service station formerly in this location. As indicated before (see Section 3.2, 3.3 and 3.4), this property is considered to represent an issue of potential environmental concern.

##### **EAST**

The Site is bound to the east by single-family homes. Offices, commercial and residential properties are located further east along 14 Street NW. A PetroCanada service station is located approximately 150 m northeast of the Site and across Westmount Rd NW, 14<sup>th</sup> Street NW and Kensington Rd NW. Based on the distance between this property and the Site, it is not considered to represent an issue of high environmental concern.



## **SOUTH**

The Site is bound to the south by Westmount Blvd NW, with Memorial Dr NW, a pedestrian/bicycle pathway and the Bow River further south. A berm is located along the pedestrian/bicycle pathway on the northern bank of the Bow River approximately 40 m south of the Site and across Westmount Blvd NW and Memorial Dr NW. It is suspected that the berm would have been constructed at the same time as Memorial Dr NW (prior to 1949, as per aerial photographs).

Another pedestrian/bicycle pathway is located along the southern bank of the Bow River, with Bow Tr SW, the Greyhound bus station, the GSL Chev City and Renfrew Chrysler automotive dealer ships further south. A retaining wall is located just north of GSL Chev City along the southern bank of the Bow River approximately 150 m south of the central portion of the Site. It is understood that this retaining wall is related to the Canada Creosote property.

## **WEST**

The Site is bound to the west by 19<sup>th</sup> Street NW, with single-family homes and a park further west. HiHo, a service station was observed on the southwest corner of Bowness Rd NW and 19 Street NW, approximately 15 m west of the Site. This business is considered to represent a potential issue of environmental concern for the Site.



## 5.0 PHASE I ESA FINDINGS

Based on the findings of this Phase I ESA, including a Site reconnaissance conducted by Golder on November 12, 2010, the following conclusions are made:

The scope of the Phase I ESA was limited to identifying potential environmental concerns associated with potential soil and groundwater contamination by visual examination of surface features and operating practices, and from available documented information sources. During the Site visit none of the buildings or privately-owned properties on the Site were accessed, and no owners were interviewed. Observations for the Site were made from publically readily accessible areas. An assessment of the potential presence of hazardous building construction materials such as ACMs, PCBs, LBPs, UFFI, ODS, radon and mould inside the buildings on the Site was not carried out as they are not considered material to the primary objective of identifying potential sources of soil and groundwater contamination.

- The Site was developed with a mixture of single-family residential properties, agricultural land and vacant/undeveloped land prior to at least 1911. The Site continued being developed with single-family residential houses over the years, while the CBC and Fire Hall/EMS Station #6 were constructed in the 1960s. The Site has since remained mainly residential with some properties redeveloped with new homes. Based on potential site activities of the Fire Hall/EMS Station and because a Phase II ESA was conducted for due diligence purposes, this site is identified as an area of potential environmental concern. As described in Section 3.5., a review of available reports for the EMS site indicate the presence of creosote-related contamination inferred to be from the Canada Creosote site, but no obvious impacts from possible EMS site-related activities. No issues of potential significant environmental concern have been identified in association with other current and historical land uses at the Site.
- Surrounding properties to the east, north and west were mainly developed with residential homes prior to at least 1911. Commercial businesses have been present since prior to 1911 along 14<sup>th</sup> Street NW and Kensington Road NW, located approximately 90 m east and 50 m north of the Site, respectively. The properties adjacent south of the Site were undeveloped/vacant land until the construction of Westmount Blvd NW and Memorial Drive NW in the 1950s. The Bow River is located approximately 45 m south of the Site.
- The area located approximately 150 m south of the Site and across the Bow River extending from approximately 19<sup>th</sup> Street SW to 14<sup>th</sup> Street SW and from 9<sup>th</sup> Avenue SW to the river has been occupied by various businesses of concern including: the City Incinerator, the Municipal Paving Department, the Calgary Paving Co. Ltd, River Side Lumber Co. Ltd., Great West Distributors Ltd., Canada Creosote/Domtar Creosote Plant as well as other light industrial and industrial activities (the Canada Creosote property). These former businesses were noted to have used, manufactured and/or stored various types of chemical substances including hydrocarbons, tar and creosote. Numerous reports were reviewed in connection with known subsurface impacts in this area; as well, as reports relating to impacts on the CBC and EMS properties suspected to be linked with historic activities at the Canada Creosote property. Based on reviewed information pertaining to this area, its activities and impacts on the CBC and EMS properties, it is considered to represent an issue of potential environmental concern.
- The property located at 2001 Bowness Rd NW has been occupied by HiHo service station from 1946 to the present. This business is approximately 15 m west of the Site and was present at the time of the Site visit. A review of documentation on the HiHo service station property provided by AENV indicated no



investigation results were available. Based on the distance between the Site and this historic service station and the number of years it has been present, it is considered to represent a potential issue of environmental concern for the Site. At the time of the Site visit, eight monitoring wells were noted on the property located approximately 65 m northeast of the Site and across Westmount Rd NW. The property was developed with a single-storey building occupied by Lindal show homes, a two-storey multi-tenant commercial building and associated parking. This property is suspected to have changed municipal addresses over time including 1610 Westmount Rd NW, 1601 Kensington Rd NW and 99 – 14<sup>th</sup> Street NW. Various businesses of potential environmental concern are believed to have operated on this property in the past, including a mechanical repair shop and a fuel service station from 1954 to 1991. Based on the distance between the Site and this property and the presence of historic service station, it is considered to represent a potential issue of environmental concern to the Site.

In summary, historic businesses of potential environmental concern were identified in the general vicinity of the Site. A Human Health Risk Assessment is being conducted for the Site in order to better assess the potential risk to human health and the environment.



## 6.0 LIMITATIONS AND USE OF REPORT

This report was prepared for the exclusive use by Alberta Environment. Golder Associates Ltd. or its employees will not be responsible for any use of the information contained in this report or any reliance on or decisions made based on it by an unauthorized third party. The report is based on data and information collected during the Phase I Environmental Site Assessment of the Site conducted by Golder Associates Ltd. personnel and is based solely on the Site conditions encountered at the time of the Site reconnaissance supplemented by historical information and data obtained by Golder Associates Ltd. as described in this report. No assurance is made regarding changes in conditions subsequent to the time of the Site reconnaissance. If additional information is discovered in the future, including excavations, borings or other studies, Golder Associates Ltd. should be requested to re-evaluate the conclusions presented in this report and to provide amendments as required.

In evaluating the Site, Golder Associates Ltd. has relied in good faith on information provided by individuals as noted in this report. We assume that the information provided is factual and accurate. We accept no responsibility for any deficiency, misstatements or inaccuracies contained in this report as a result of omissions, misinterpretation or fraudulent acts of the persons interviewed or contacted. No other warranties are expressed or implied. Golder Associates Ltd. accepts no responsibility for the consequential effects of this factual report on the real or perceived decrease in property value, on its saleability, or on the ability to gain financing as a result of the Phase I ESA.



## 7.0 CLOSURE

We trust the information presented in this report meets your current requirements. Should you have any questions or require any clarification, please do not hesitate to contact the undersigned.

### **GOLDER ASSOCIATES LTD.**

Report prepared by:

Report reviewed by:



Ian Hers, Ph.D., P.Eng.  
Principal, Senior Specialist Engineer

David Simpson, M.Sc., P.Eng.  
Associate, Senior Chemical/Environmental Engineer

**APEGGA PERMIT TO PRACTICE P5122**

IH/DLS/km

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# FIGURES

*Figure 1: Site Location Plan*

*Figure 2: Site Plan*

*Figure 3: 1924 Aerial Photograph*

*Figure 4: 1948 Aerial Photograph*

*Figure 5: 1959 Aerial Photograph*

*Figure 6: 1962 Aerial Photograph*

*Figure 7: 1966 Aerial Photograph*

*Figure 8: 1969 Aerial Photograph*

*Figure 9: 1976 Aerial Photograph*

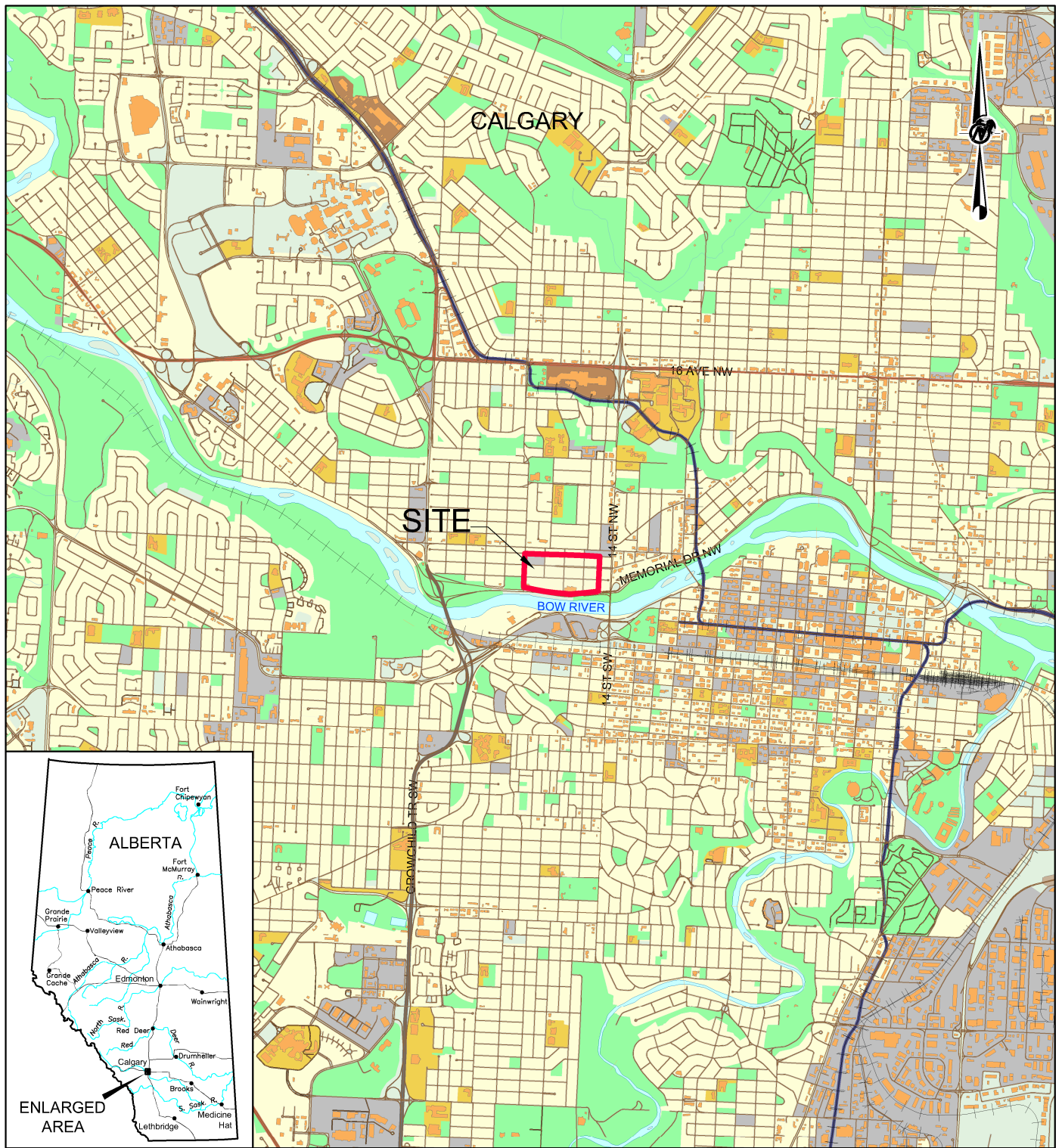
*Figure 10: 1982 Aerial Photograph*

*Figure 11: 1997 Aerial Photograph*

*Figure 12: 2007 Aerial Photograph*

*Figure 13: Historical Observations of NAPL (Golder 1991 and Golder 1992)*

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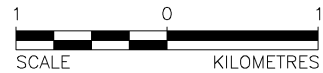


**LEGEND**

- GOLDER PROJECT
- PARK
- RAIL NETWORK
- LRT ROUTE
- ROADWAY
- RIVER AND STREAM
- BUILDING FOOTPRINT
- COMMERCIAL
- GOVERNMENT AND INSTITUTIONAL
- OPEN WATER
- PARKS AND RECREATIONAL
- RESIDENTIAL
- RESOURCE AND INDUSTRIAL

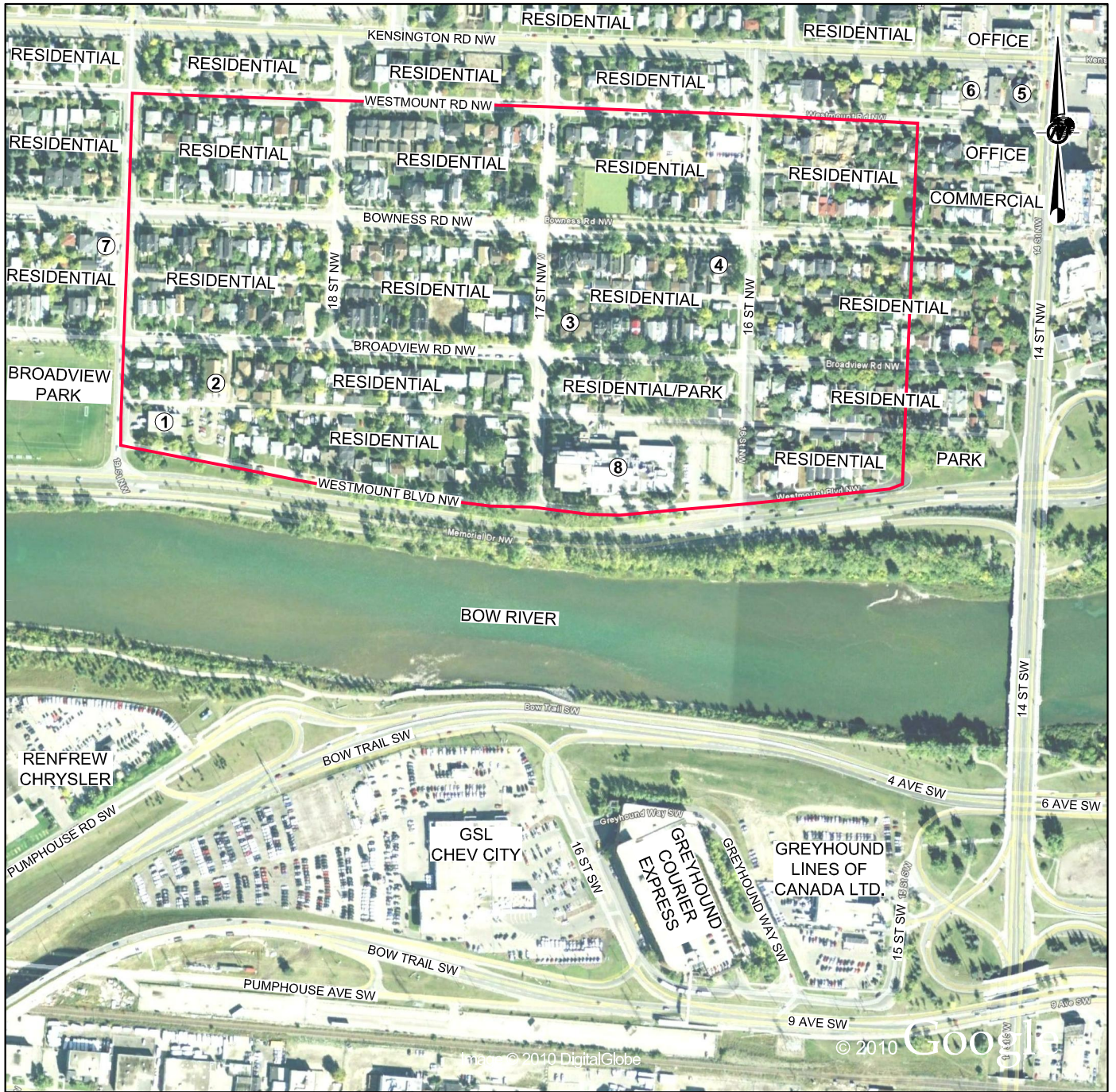
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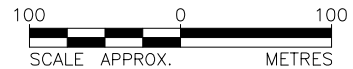
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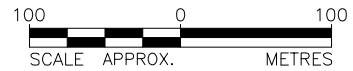
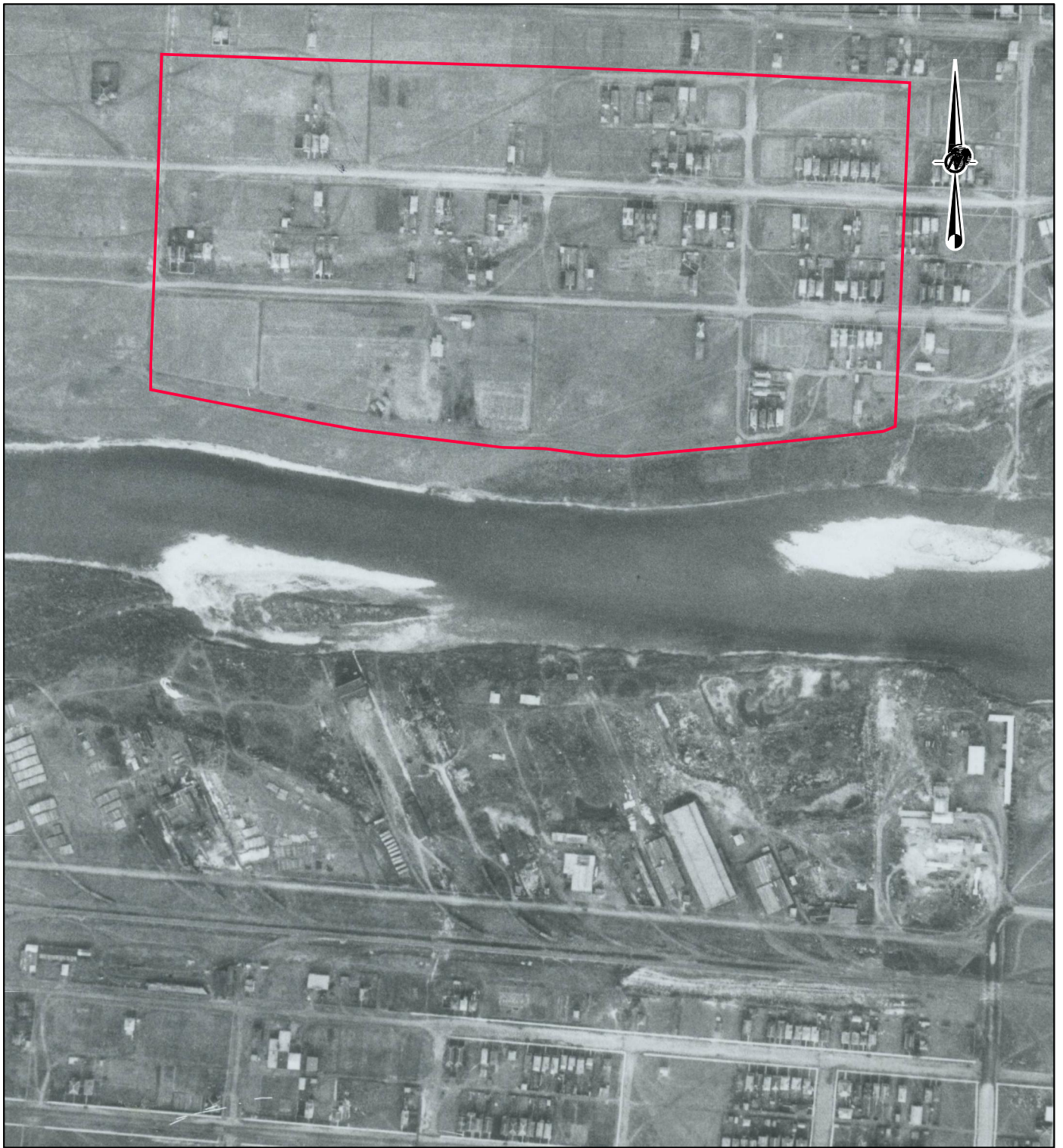
- SITE LOCATION
- ① EMS/FIRE HALL #6 (4 MWs NOTED)
- ② ST. BONIFACE GERMAN CHURCH
- ③ BOW VALLEY LAWN BOWLING CLUB
- ④ ETHIOPIAN EVANGELICAL CHURCH IN CALGARY
- ⑤ LINDAL CEDAR HOMES (6 MWs NOTED)
- ⑥ MULTI TENANT COMMERCIAL (2 MWs NOTED)
- ⑦ HI HO SERVICE STATION (2 USTs)
- ⑧ CBC BUILDING (10 MWs NOTED)



**REFERENCE**

IMAGE OBTAINED FROM GOOGLE EARTH, USED UNDER LICENSE.  
 IMAGERY DATE: SEP 14, 2008

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<b>Golder Associates</b> Calgary, Alberta			<b>FIGURE: 2</b>



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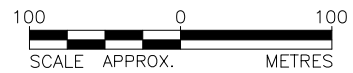
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**REFERENCE**

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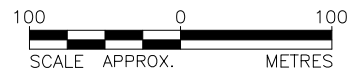
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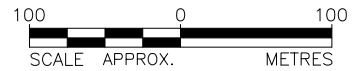
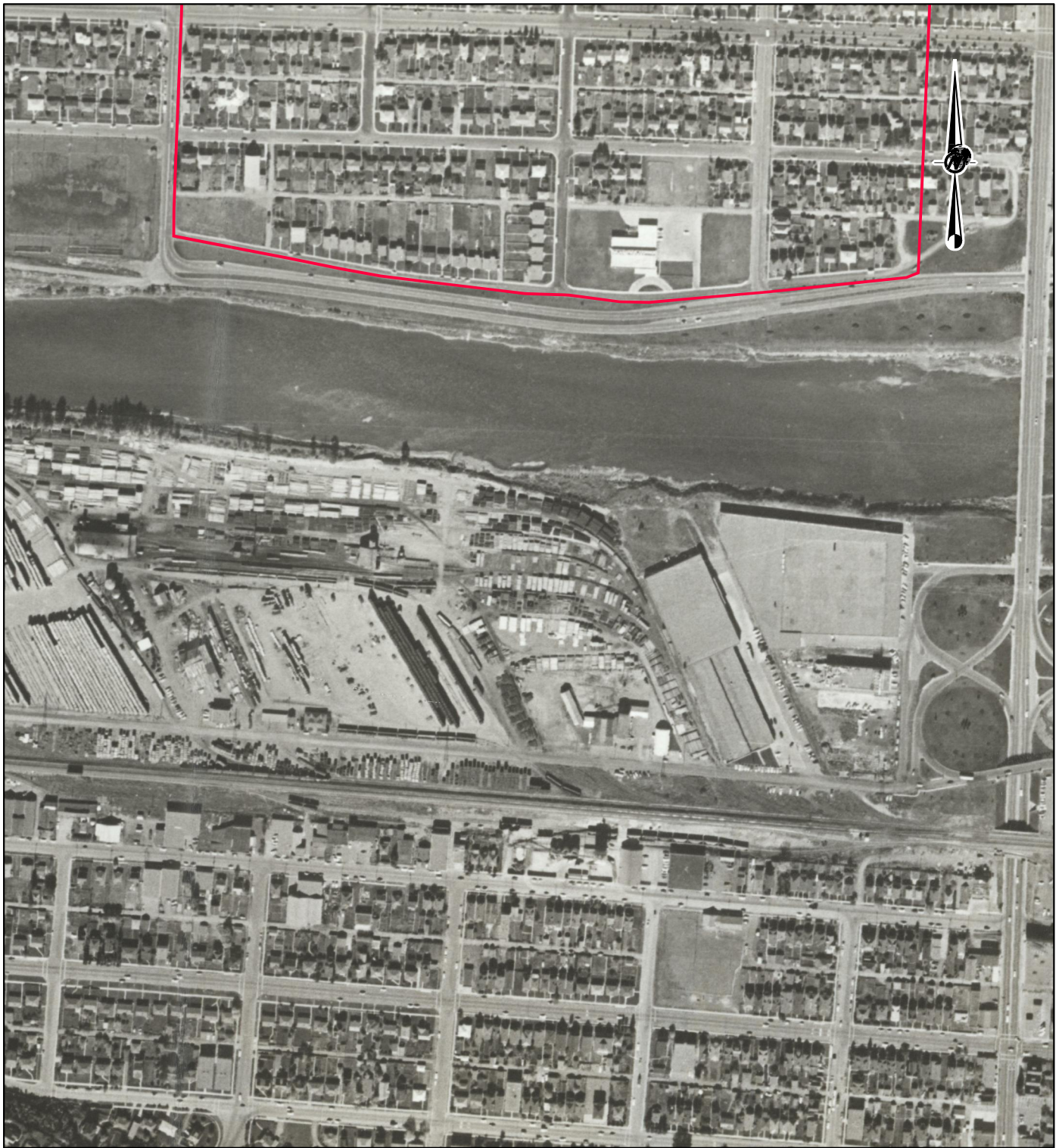
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REVIEW	DLS	08/06/11			





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 SITE LOCATION

**REFERENCE**

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PROJECT

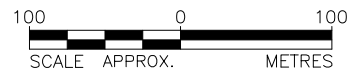
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CALGARY, ALBERTA

TITLE

**1962 AERIAL PHOTOGRAPH**



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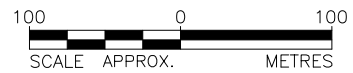
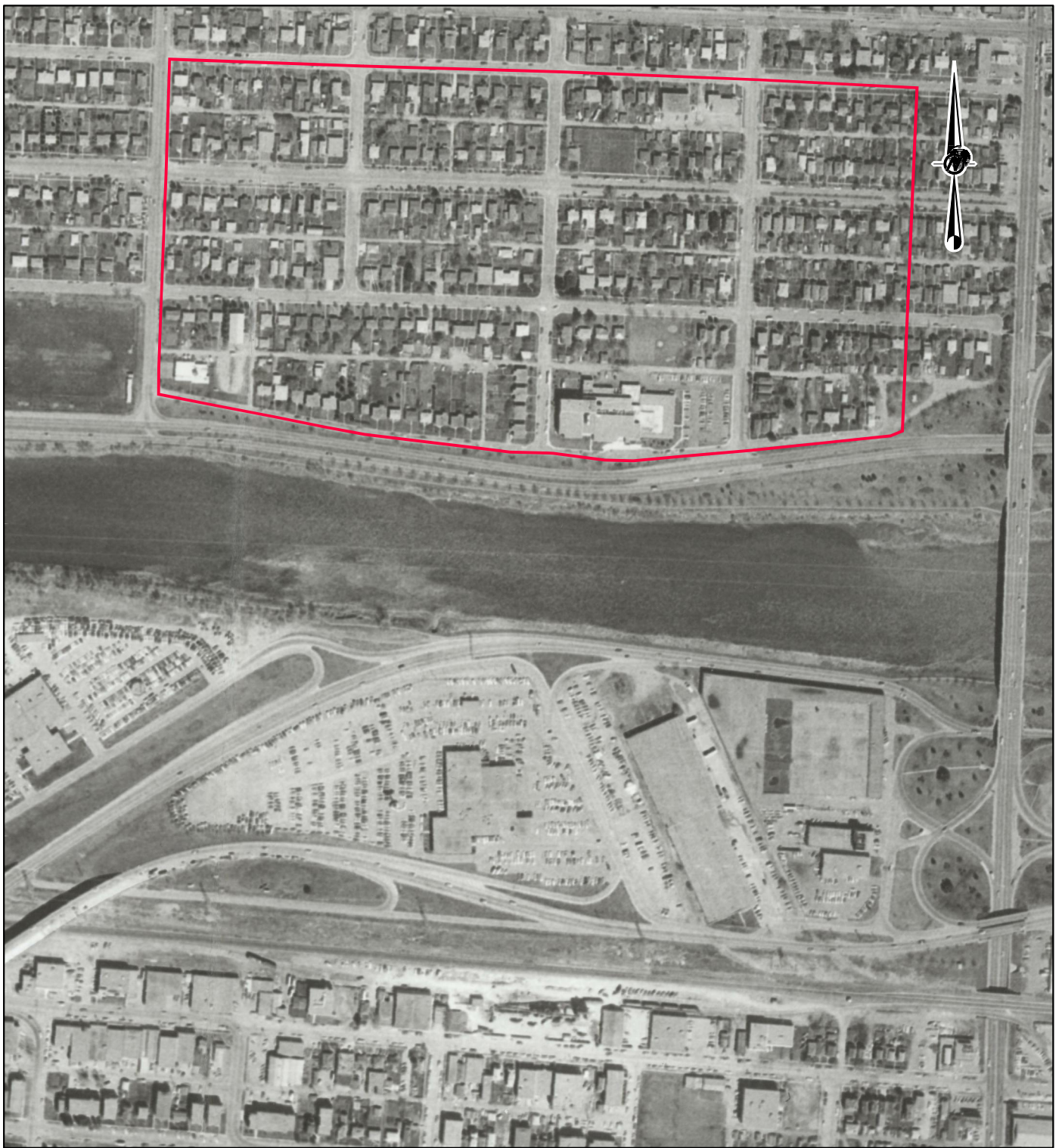
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SITE LOCATION

**REFERENCE**

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CALGARY, ALBERTA

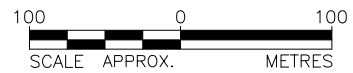
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REVIEW	DLS 08/06/11	

**FIGURE: 8**



**LEGEND**

SITE LOCATION

**REFERENCE**

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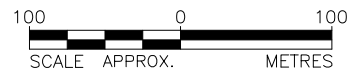
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TITLE  
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REVIEW	DLS	08/06/11	





**LEGEND**

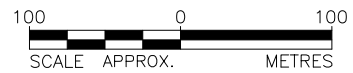
SITE LOCATION

**REFERENCE**

ORIGINAL AIR PHOTO OBTAINED FROM ALBERTA SUSTAINABLE RESOURCES DEVELOPMENT

PROJECT		PHASE I ESA NORTH BOW RIVER AREA CALGARY, ALBERTA			
TITLE		1982 AERIAL PHOTOGRAPH			
PROJECT	10.1346.0046.4000	FILE No.	10134600464000A007		
DESIGN	DLS	05/11/10	SCALE	AS SHOWN	REV. 0
CADD	JJB	23/11/10	<b>FIGURE: 10</b>		
CHECK	JMB	08/06/11			
REVIEW	DLS	08/06/11			





**LEGEND**

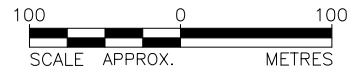
 SITE LOCATION

**REFERENCE**

ORIGINAL AIR PHOTO OBTAINED FROM ALBERTA SUSTAINABLE RESOURCES DEVELOPMENT

PROJECT		PHASE I ESA NORTH BOW RIVER AREA CALGARY, ALBERTA			
TITLE		1997 AERIAL PHOTOGRAPH			
PROJECT	10.1346.0046.4000	FILE	No.10134600464000A008		
DESIGN	DLS	05/11/10	SCALE	AS SHOWN	REV. 0
CADD	JJB	23/11/10	<b>FIGURE: 11</b>		
CHECK	JMB	08/06/11			
REVIEW	DLS	08/06/11			





**LEGEND**

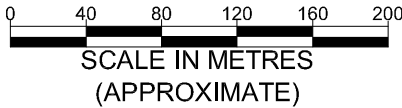
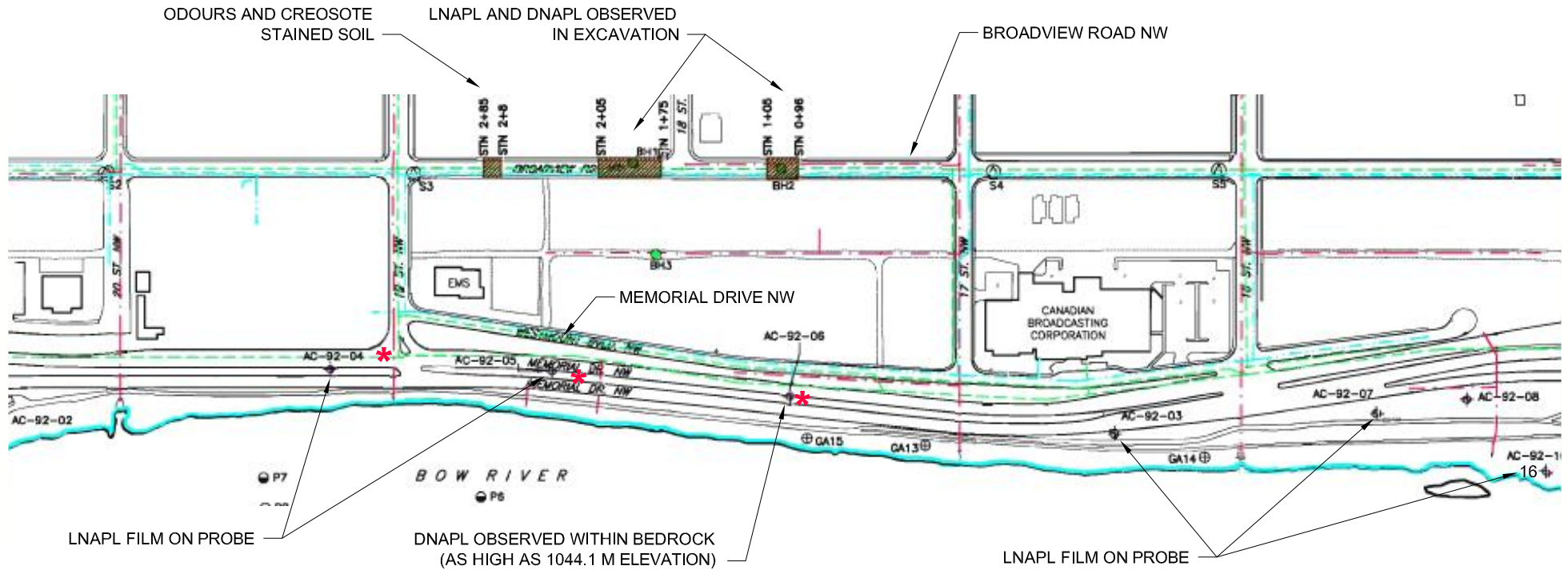
SITE LOCATION

**REFERENCE**

ORIGINAL AIR PHOTO OBTAINED FROM ALBERTA SUSTAINABLE RESOURCES DEVELOPMENT

PROJECT		PHASE I ESA NORTH BOW RIVER AREA CALGARY, ALBERTA			
TITLE		2007 AERIAL PHOTOGRAPH			
PROJECT	10.1346.0046.4000	FILE No.	10134600464000A009		
DESIGN	DLS	05/11/10	SCALE	AS SHOWN	REV. 0
CADD	JJB	23/11/10	<b>FIGURE: 12</b>		
CHECK	JWB	08/06/11			
REVIEW	DLS	08/06/11			





**LEGEND**

- \* CREOSOTE STAINING VISIBLE IN FRACTURE ZONE AT DEPTHS OF 1-5 M BELOW SOIL/BEDROCK INTERFACE, IN BEDROCK AT AC-92-4, 5 AND 6

PROJECT		ALBERTA ENVIRONMENT NORTH BOW SITE HUMAN HEALTH RISK ASSESSMENT	
TITLE		<b>HISTORICAL OBSERVATIONS OF NAPL (GOLDER 1991 AND GOLDER 1992)</b>	
PROJECT No. 10-1346-0046		PHASE No. 3000	
DESIGN	IH 02JUN11	SCALE	AS SHOWN
CADD	NS 02JUN11	REV.	-
CHECK	IH 07JUN11	<b>FIGURE 13</b>	
REVIEW	IH 07JUN11		





# APPENDIX A

## Site Photographs



**APPENDIX A**  
**Site Photographs**



↑ Photograph 1 Westmount Blvd NW looking south.



↑ Photograph 2 Westmount Blvd NW looking east.



**APPENDIX A**  
**Site Photographs**



↑ Photograph 3 Westmount Blvd NW looking west.



↑ Photograph 4 Westmount Blvd NW looking north.



**APPENDIX A**  
**Site Photographs**



↑ Photograph 5 Westmount Blvd NW looking west towards 19<sup>th</sup> St. NW.



↑ Photograph 6 EMS Firehall looking northwest.





**APPENDIX A**  
**Site Photographs**



↑ Photograph 7 EMS Firehall looking east down back alley parallel to Westmount Blvd.



↑ Photograph 8 Looking northeast from 19<sup>th</sup> St NW and Westmount Blvd.



**APPENDIX A**  
**Site Photographs**



↑ Photograph 9 Looking southwest towards CBC from 16<sup>th</sup> St. NW.



↑ Photograph 10 Westmount Auto Centre/gas station, southwest corner of 19<sup>th</sup> St. and Bowness Road NW.



**APPENDIX A**  
**Site Photographs**



↑ Photograph 11 Gas pumps at Westmount Auto Centre, looking east.



↑ Photograph 12 Looking north towards the intersection of 19<sup>th</sup> St. and Kensington Road NW.



**APPENDIX A**  
**Site Photographs**



↑ Photograph 13 Bowness Road and 17<sup>th</sup> St. NW looking north. Bow Valley Lawn Bowling Club on left.



↑ Photograph 14 Petro Canada gas station on the northeast corner of Kensington Road and 15<sup>th</sup> St. NW.



**APPENDIX A**  
**Site Photographs**



↑ Photograph 15 Looking east down Kensington Road from 14<sup>th</sup> St. NW.



# APPENDIX B

## Regulatory Information



# Canada's Primary Environmental Risk Information Service

**Project Site:** Un-named  
15 St NW to 19 St NW  
Calgary, AB

**Client:** Ingrid G. Trimble  
Golder Associates Ltd.  
102, 2535 - 3 Avenue SE  
Calgary, AB T2A7W5

**ERIS Project No:** 20101110016

**Report Type:** Custom Report - .25km Search Radius

**Prepared By:** Matt Thompson  
[mthompson@eris.ca](mailto:mthompson@eris.ca)

**Date:** November 15, 2010

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# Table of Contents

Order Number: 20101110016  
Site Name: Un-named  
Site Address: 15 St NW to 19 St NW Calgary, AB  
Report Type: Custom Report, 0.25 km Search Radius

	<u>Section</u>	<u>Page</u>
<b>Report Summary</b> <i>This outlines the number of records from each database that fall on the site, and within various distances from the site.</i>	i	
<b>Site Diagram</b> <i>The records that were found within a specified distance from the project property (the primary search radius) have been plotted on a diagram to provide you with a visual representation of the information available. Sites will be plotted on the diagram if there is sufficient information from the database source to determine accurate geographic coordinates. Each plotted site is marked with an acronym identifying the database in which the record was found (i.e., WDS for Waste Disposal Sites). These are referred to as "Map Keys". A variety of problems are inherent when attempting to associate various government or private source records with locations. EcoLog ERIS has attempted to make the best fit possible between the available data and their positions on the site diagram.</i>	ii	
<b>Site Profile</b> <i>This table describes the records that relate directly to the property that is being researched.</i>	iii	
<b>Detail Report</b> <i>This section represents information, by database, for the records found within the primary search radius. Listed at the end of each database are the sites that could not be plotted on the locator diagram because of insufficient address information. These records will not have map keys. They have been included because they may be found to be relevant during a more detailed investigation.</i>	iv	
Compliance and Convictions		1
ERIS Historical Searches		2
Fuel Storage Tanks		3
Waste Generators Summary		15
Retail Fuel Storage Tanks		16
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 Appendix: Database Descriptions		



# Report Summary

Order Number: 20101110016  
 Site Name: Un-named  
 Site Address: 15 St NW to 19 St NW Calgary, AB  
 Report Type: Custom Report, 0.25 km Search Radius

## Number of Mappable Records Surrounding the Site

Database		Selected	On-site	Within 0.25	0.25km to 0.25km	Total
AGR	Agriculture and Fisheries	Y	0	0	0	0
AOGW	Alberta Oil and Gas Wells	Y	0	0	0	0
AUWR	Automobile Wrecking & Supplies	Y	0	0	0	0
CAWD	Waste Management Facilities	Y	0	0	0	0
CFO	Confined Feeding Operations	Y	0	0	0	0
CHEM	Chemical Processing Operations	Y	0	0	0	0
CONV	Compliance and Convictions	Y	0	0	0	0
EEM	Environmental Effects Monitoring	Y	0	0	0	0
EHS	ERIS Historical Searches	Y	0	1	0	1
EIIS	Environmental Issues Information System	Y	0	0	0	0
FAC	Facility List	N	0	0	0	0
FCON	Federal Convictions	Y	0	0	0	0
FCS	Contaminated Sites on Federal Land	Y	0	0	0	0
FIS	Field Inspection Incident Report	Y	0	0	0	0
FOOD	Food Processing Operations	Y	0	0	0	0
FST	Fuel Storage Tanks	Y	0	23	0	23
GEN	Waste Generators Summary	Y	0	4	0	4
IAFT	Indian & Northern Affairs Fuel Tanks	Y	0	0	0	0
LUM	Lumber Related Operations	Y	0	0	0	0
MINE	Canadian Mine Locations	Y	0	0	0	0
MMB	Metals, Minerals and Building Materials Operations	Y	0	0	0	0
MNR	Mineral Occurrences	Y	0	0	0	0
NATE	National Analysis of Trends in Emergencies System (NATES)	Y	0	0	0	0
NDFT	National Defence & Canadian Forces Fuel Storage Tanks	Y	0	0	0	0
NDSP	National Defence & Canadian Forces Spills	Y	0	0	0	0
NDWD	National Defence & Canadian Forces Waste Disposal Sites	Y	0	0	0	0
NEES	National Environmental Emergencies System (NEES)	Y	0	0	0	0
NPCB	National PCB Inventory	Y	0	0	0	0
NPRI	National Pollutant Release Inventory	Y	0	0	0	0
OAM	Operating and Abandoned Mines	Y	0	0	0	0
OGW	Oil and Gas Wells	Y	0	0	0	0
ORP	Alberta Orphan Wells	N	0	0	0	0
PAP	Canadian Pulp and Paper	Y	0	0	0	0
PCFT	Parks Canada Fuel Storage Tanks	Y	0	0	0	0
PCG	Petrochemical, Coal and Gas Operations	Y	0	0	0	0
PES	Pesticide Register	Y	0	0	0	0
PITS	Conglomerate and Waste Management Facilities	Y	0	0	0	0
PSP	Alberta Private Sewage Disposal Permits	Y	0	0	0	0
REC	Waste Receivers Summary	Y	0	0	0	0
RST	Retail Fuel Storage Tanks	Y	0	3	0	3
SCT	Scott's Manufacturing Directory	Y	0	9	0	9
SPEC	Special Operation Classifications	Y	0	0	0	0

## Report Summary

Order Number: 20101110016  
Site Name: Un-named  
Site Address: 15 St NW to 19 St NW Calgary, AB  
Report Type: Custom Report, 0.25 km Search Radius

Database		Selected	On-site	Within 0.25	0.25km to 0.25km	Total
WDS	Inventory of Waste Disposal Sites	Y	0	0	0	0
WSTE	Wastewater Operations	Y	0	0	0	0
WWIS	Water Well Information System	Y	0	12	0	12
		TOTAL	0	52	0	52

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.



Pinpointing Your Environmental Risks

12 Concorde Pl, Suite 800 North York, ON M3C 4J2  
416-510-5204

Project Property: Un-named  
15 St NW to 19 St NW  
Calgary, AB

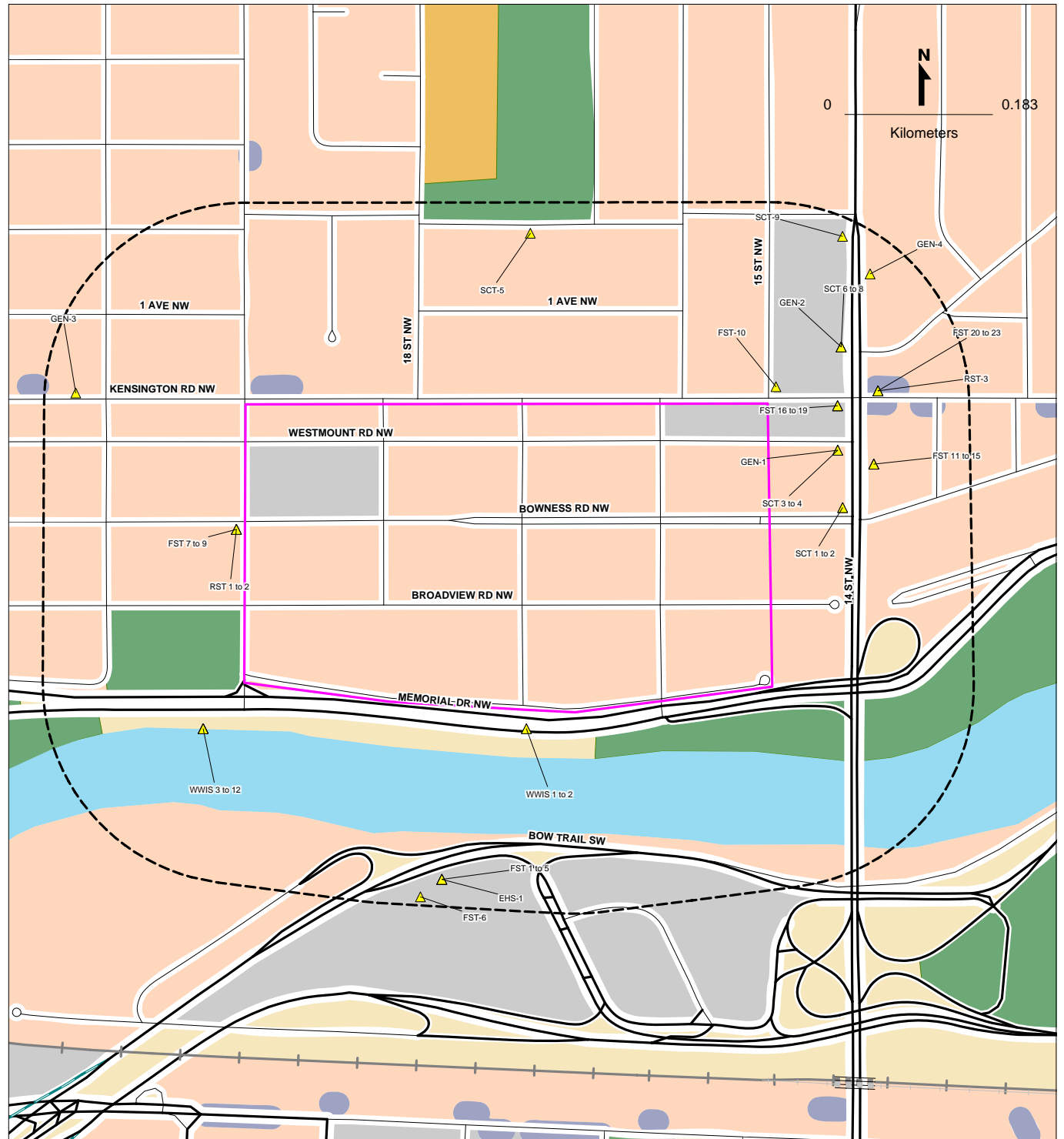
ERIS Project #: 20101110016

Date: NOV-10-2010

**LEGEND**

Project Property	<b>Landuse Classifications</b>
Database Location	Open Area
<b>Points of Interest</b>	Residential
Chimney	Commercial
Silo	Resource and Industrial
<b>Pipe &amp; Transmission Lines</b>	Government and Institutional
Pipeline	Parks and Recreational
Transmission Line	Waterbody
Transmission Tower	<b>Recreation</b>
Transformer Station	Golf Course/Driving Range
<b>Rail</b>	Park/Sports Field
Railway - Main	Other Recreation Area
Railway - Sidetrack	Sports/Race Track
Railway - Abandoned	Cemetery
Bridge	Campground
Tunnel	<b>Vegetation</b>
<b>Transportation - Other</b>	Wooded Area
Embankment	Orchard
Trail	Vineyard
Runway	<b>Industrial Resources</b>
<b>Hydrographic Features</b>	Conveyor
Permanent Waterway	Crane: Moveable
Intermittent Waterway	Crane: Stationary
Open Reservoir	Tank
Dyke/Levee	Rock Cut
Dam	Auto Wrecker
Breakwall	Lumber Yard
Wetland	Pit

**SITE DIAGRAM**



*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: 20101110016

Site Name: Un-named

Site Address: 15 St NW to 19 St NW Calgary, AB

Report Type: Custom Report, 0.25 km Search Radius

FOR COMPLETE INFORMATION, REFER TO DETAIL REPORT

**A search has been conducted for this site (address) and company name. No records were found, within the database(s) selected, that meet either of these criteria.**

## Detail Report

Order Number: 20101110016

Site Name: Un-named

Site Address: 15 St NW to 19 St NW Calgary AB

Report Type: Custom Report, 0.25 km Search Radius

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

Compliance and Convictions

ERIS Historical Searches

Fuel Storage Tanks

Waste Generators Summary

Retail Fuel Storage Tanks

Scott's Manufacturing Directory

Water Well Information System

## Compliance and Convictions

Map Key	Company	Address	Date	Legislation	Action	Penalty
n/a	Canem Systems Ltd.	Plan 8209JK, Block A Calgary	8/11/2003	AEPEA(R (R)181/00 2(1)	Warning Letter	
			<b>Disposition:</b>	The Company released Halon 1301 from a fire suppression system without authorization.		

## ERIS Historical Searches

---

Map Key	Company	Address	Order No.	Report Date	Report Type	Search Radius (km)
EHS-1		1720 Bow Trail SW Calgary T3C 2E4	20050324027  Addit. Info Ordered:	4/5/2005		0.25

---

### Fuel Storage Tanks

Map Key	Company	Address	Site No.	Tank No.	DLS Coord.	Lot	Block	Plan
FST-1	GSL CHEV CITY	1720-BOW TR. SW CALGARY (A) T3C 2E4	1297	5		13-25		5380V
			<b>Date Removed:</b> <b>Removal Reason:</b> <b>Tank Type:</b> Aboveground <b>Tank Status:</b> Currently in service <b>Date Last Used:</b> <b>Located 200m:</b> NO <b>Located 500m:</b> NO <b>Facility 1:</b> <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> Commercial / Industrial <b>Contents:</b> Gasoline <b>Other Contents:</b> <b>Capacity:</b> Other - specify in liters <b>Other Capacity:</b> 20,000 litres <b>Agred Tank Secondary:</b> Steel <b>Ugrd Tank Secondary:</b> <b>Spill Containment:</b> <b>Overfill Prevention:</b> Liquid - Tight Fill Box					
FST-2	GSL CHEV CITY	1720-BOW TR. SW CALGARY (A) T3C 2E4	1297	4		13-25		5380V
			<b>Date Removed:</b> <b>Removal Reason:</b> <b>Tank Type:</b> Aboveground <b>Tank Status:</b> Currently in service <b>Date Last Used:</b> <b>Located 200m:</b> NO <b>Located 500m:</b> NO <b>Facility 1:</b> <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> Commercial / Industrial <b>Contents:</b> Gasoline <b>Other Contents:</b> <b>Capacity:</b> 15,000 litres <b>Other Capacity:</b> <b>Agred Tank Secondary:</b> Steel <b>Ugrd Tank Secondary:</b> <b>Spill Containment:</b> <b>Overfill Prevention:</b> Liquid - Tight Fill Box					



### Fuel Storage Tanks

Map Key	Company	Address	Site No.	Tank No.	DLS Coord.	Lot	Block	Plan
FST-3	GSL CHEV CITY	1720-BOW TR. SW CALGARY (A) T3C 2E4	1297	3		13-25		5380V
			<b>Date Removed:</b> <b>Removal Reason:</b> <b>Tank Type:</b> Underground <b>Tank Status:</b> Abandoned in place <b>Date Last Used:</b> <b>Located 200m:</b> NO <b>Located 500m:</b> NO <b>Facility 1:</b> <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> Commercial / Industrial <b>Contents:</b> Used Oil <b>Other Contents:</b> <b>Capacity:</b> 2,500 litres (550 gal.) <b>Other Capacity:</b> <b>Agred Tank Secondary:</b> <b>Ugrd Tank Secondary:</b> None <b>Spill Containment:</b> None <b>Overfill Prevention:</b> Unknown					
FST-4	GSL CHEV CITY	1720-BOW TR. SW CALGARY (A) T3C 2E4	1297	2		13-25		5380V
			<b>Date Removed:</b> <b>Removal Reason:</b> <b>Tank Type:</b> Underground <b>Tank Status:</b> Abandoned in place <b>Date Last Used:</b> <b>Located 200m:</b> NO <b>Located 500m:</b> NO <b>Facility 1:</b> <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> Commercial / Industrial <b>Contents:</b> Gasoline <b>Other Contents:</b> <b>Capacity:</b> 22,700 litres (5,000 gal.) <b>Other Capacity:</b> <b>Agred Tank Secondary:</b> <b>Ugrd Tank Secondary:</b> None <b>Spill Containment:</b> None <b>Overfill Prevention:</b> Unknown					

### Fuel Storage Tanks

Map Key	Company	Address	Site No.	Tank No.	DLS Coord.	Lot	Block	Plan
FST-5	GSL CHEV CITY	1720-BOW TR. SW CALGARY (A) T3C 2E4	1297	1		13-25		5380V
			<b>Date Removed:</b> <b>Removal Reason:</b> <b>Tank Type:</b> Underground <b>Tank Status:</b> Abandoned in place <b>Date Last Used:</b> <b>Located 200m:</b> NO <b>Located 500m:</b> NO <b>Facility 1:</b> <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> Commercial / Industrial <b>Contents:</b> Gasoline <b>Other Contents:</b> <b>Capacity:</b> 22,700 litres (5,000 gal.) <b>Other Capacity:</b> <b>Agred Tank Secondary:</b> <b>Ugrd Tank Secondary:</b> None <b>Spill Containment:</b> None <b>Overfill Prevention:</b> Unknown					
FST-6	CANADA CREOSOTE SITE	CALGARY (A)	7747	1	NE-17-24-1-5			
			<b>Date Removed:</b> <b>Removal Reason:</b> <b>Tank Type:</b> Aboveground <b>Tank Status:</b> Currently in service <b>Date Last Used:</b> <b>Located 200m:</b> YES <b>Located 500m:</b> YES <b>Facility 1:</b> <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> Municipal Government <b>Contents:</b> Allied Petroleum Products <b>Other Contents:</b> Creosote <b>Capacity:</b> Other - specify in liters <b>Other Capacity:</b> 32,600 litres <b>Agred Tank Secondary:</b> Steel <b>Ugrd Tank Secondary:</b> <b>Spill Containment:</b> <b>Overfill Prevention:</b>					

### Fuel Storage Tanks

Map Key	Company	Address	Site No.	Tank No.	DLS Coord.	Lot	Block	Plan
FST-7	KIM'S HI HO GAS & GROCERY - HILLHURST	2001-BOWNESS RD. NW CALGARY (A) T2N 3K9	4584	1		39-40	23	51510
			<b>Date Removed:</b> <b>Removal Reason:</b> <b>Tank Type:</b> Underground <b>Tank Status:</b> Currently in service <b>Date Last Used:</b> <b>Located 200m:</b> NO <b>Located 500m:</b> NO <b>Facility 1:</b> Retail <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> <b>Contents:</b> Gasoline <b>Other Contents:</b> <b>Capacity:</b> 36,400 litres (8,000 gal.) <b>Other Capacity:</b> <b>Agred Tank Secondary:</b> <b>Ugred Tank Secondary:</b> None <b>Spill Containment:</b> Liquid - Tight Fill Box, Liquid / Vapour Tight Couplings On Fill Pipes <b>Overfill Prevention:</b> Liquid - Tight Fill Box					
FST-8	KIM'S HI HO GAS & GROCERY - HILLHURST	2001-BOWNESS RD. NW CALGARY (A) T2N 3K9	4584	2		39-40	23	51510
			<b>Date Removed:</b> <b>Removal Reason:</b> <b>Tank Type:</b> Underground <b>Tank Status:</b> Currently in service <b>Date Last Used:</b> <b>Located 200m:</b> NO <b>Located 500m:</b> NO <b>Facility 1:</b> Retail <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> <b>Contents:</b> Gasoline <b>Other Contents:</b> <b>Capacity:</b> Other - specify in liters <b>Other Capacity:</b> 9,000 litres <b>Agred Tank Secondary:</b> <b>Ugred Tank Secondary:</b> None <b>Spill Containment:</b> Liquid - Tight Fill Box, Liquid / Vapour Tight Couplings On Fill Pipes <b>Overfill Prevention:</b> Liquid - Tight Fill Box					

### Fuel Storage Tanks

Map Key	Company	Address	Site No.	Tank No.	DLS Coord.	Lot	Block	Plan
FST-9	KIM'S HI HO GAS & GROCERY - HILLHURST	2001-BOWNESS RD. NW CALGARY (A) T2N 3K9	4584	3		39-40	23	51510
			<b>Date Removed:</b> 199704 <b>Removal Reason:</b> No Longer Required <b>Tank Type:</b> Underground <b>Tank Status:</b> <b>Date Last Used:</b> <b>Located 200m:</b> NO <b>Located 500m:</b> NO <b>Facility 1:</b> Retail <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> <b>Contents:</b> <b>Other Contents:</b> <b>Capacity:</b> <b>Other Capacity:</b> <b>Agred Tank Secondary:</b> <b>Ugred Tank Secondary:</b> <b>Spill Containment:</b> <b>Overfill Prevention:</b>					
FST-10	TELUS - HILLHURST CENTRAL OFFICE	102-15 STR. NW CALGARY (A) T2N 2A7	86	1		28-31	3	6219L
			<b>Date Removed:</b> <b>Removal Reason:</b> <b>Tank Type:</b> Aboveground <b>Tank Status:</b> Currently in service <b>Date Last Used:</b> <b>Located 200m:</b> NO <b>Located 500m:</b> NO <b>Facility 1:</b> <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> Commercial / Industrial <b>Contents:</b> Diesel <b>Other Contents:</b> <b>Capacity:</b> Other - specify in liters <b>Other Capacity:</b> 2,157 litres <b>Agred Tank Secondary:</b> Steel <b>Ugred Tank Secondary:</b> <b>Spill Containment:</b> <b>Overfill Prevention:</b>					

### Fuel Storage Tanks

Map Key	Company	Address	Site No.	Tank No.	DLS Coord.	Lot	Block	Plan
FST-11	HILLHURST SHELL SERVICE	20-14 STR. NW CALGARY (A) T2N 1Z4	1487	5				
					Date Removed:	199011		
					Removal Reason:	No Longer Required		
					Tank Type:			
					Tank Status:			
					Date Last Used:			
					Located 200m:	NO		
					Located 500m:	NO		
					Facility 1:	Retail		
					Facility 2:			
					Facility 3:			
					Facility 4:			
					Contents:			
					Other Contents:			
					Capacity:			
					Other Capacity:			
					Agred Tank Secondary:			
					Ugred Tank Secondary:			
					Spill Containment:			
					Overfill Prevention:			
FST-12	HILLHURST SHELL SERVICE	20-14 STR. NW CALGARY (A) T2N 1Z4	1487	3				
					Date Removed:	199011		
					Removal Reason:	No Longer Required		
					Tank Type:			
					Tank Status:			
					Date Last Used:			
					Located 200m:	NO		
					Located 500m:	NO		
					Facility 1:	Retail		
					Facility 2:			
					Facility 3:			
					Facility 4:			
					Contents:			
					Other Contents:			
					Capacity:			
					Other Capacity:			
					Agred Tank Secondary:			
					Ugred Tank Secondary:			
					Spill Containment:			
					Overfill Prevention:			

### Fuel Storage Tanks

Map Key	Company	Address	Site No.	Tank No.	DLS Coord.	Lot	Block	Plan
FST-13	HILLHURST SHELL SERVICE	20-14 STR. NW CALGARY (A) T2N 1Z4	1487	4				
					Date Removed:	199011		
					Removal Reason:	No Longer Required		
					Tank Type:			
					Tank Status:			
					Date Last Used:			
					Located 200m:	NO		
					Located 500m:	NO		
					Facility 1:	Retail		
					Facility 2:			
					Facility 3:			
					Facility 4:			
					Contents:			
					Other Contents:			
					Capacity:			
					Other Capacity:			
					Agrd Tank Secondary:			
					Ugrd Tank Secondary:			
					Spill Containment:			
					Overfill Prevention:			
FST-14	HILLHURST SHELL SERVICE	20-14 STR. NW CALGARY (A) T2N 1Z4	1487	2				
					Date Removed:	199011		
					Removal Reason:	No Longer Required		
					Tank Type:			
					Tank Status:			
					Date Last Used:			
					Located 200m:	NO		
					Located 500m:	NO		
					Facility 1:	Retail		
					Facility 2:			
					Facility 3:			
					Facility 4:			
					Contents:			
					Other Contents:			
					Capacity:			
					Other Capacity:			
					Agrd Tank Secondary:			
					Ugrd Tank Secondary:			
					Spill Containment:			
					Overfill Prevention:			

### Fuel Storage Tanks

Map Key	Company	Address	Site No.	Tank No.	DLS Coord.	Lot	Block	Plan
FST-15	HILLHURST SHELL SERVICE	20-14 STR. NW CALGARY (A) T2N 1Z4	1487	1				
			<b>Date Removed:</b> 199011 <b>Removal Reason:</b> No Longer Required <b>Tank Type:</b> <b>Tank Status:</b> <b>Date Last Used:</b> <b>Located 200m:</b> NO <b>Located 500m:</b> NO <b>Facility 1:</b> Retail <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> <b>Contents:</b> <b>Other Contents:</b> <b>Capacity:</b> <b>Other Capacity:</b> <b>Agred Tank Secondary:</b> <b>Ugred Tank Secondary:</b> <b>Spill Containment:</b> <b>Overfill Prevention:</b>					
FST-16	KENSINGTON ESSO 80159	1601-KENSINGTON RD. NW CALGARY (A) T2N 3R2	1741	4		1TO4	1	51510
			<b>Date Removed:</b> 199608 <b>Removal Reason:</b> No Longer Required <b>Tank Type:</b> <b>Tank Status:</b> <b>Date Last Used:</b> <b>Located 200m:</b> NO <b>Located 500m:</b> NO <b>Facility 1:</b> Retail <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> <b>Contents:</b> <b>Other Contents:</b> <b>Capacity:</b> <b>Other Capacity:</b> <b>Agred Tank Secondary:</b> <b>Ugred Tank Secondary:</b> <b>Spill Containment:</b> <b>Overfill Prevention:</b>					

### Fuel Storage Tanks

Map Key	Company	Address	Site No.	Tank No.	DLS Coord.	Lot	Block	Plan
FST-17	KENSINGTON ESSO 80159	1601-KENSINGTON RD. NW CALGARY (A) T2N 3R2	1741	3		1TO4	1	51510
			<b>Date Removed:</b> 199608 <b>Removal Reason:</b> No Longer Required <b>Tank Type:</b> <b>Tank Status:</b> <b>Date Last Used:</b> <b>Located 200m:</b> NO <b>Located 500m:</b> NO <b>Facility 1:</b> Retail <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> <b>Contents:</b> <b>Other Contents:</b> <b>Capacity:</b> <b>Other Capacity:</b> <b>Agrd Tank Secondary:</b> <b>Ugrd Tank Secondary:</b> <b>Spill Containment:</b> <b>Overfill Prevention:</b>					
FST-18	KENSINGTON ESSO 80159	1601-KENSINGTON RD. NW CALGARY (A) T2N 3R2	1741	1		1TO4	1	51510
			<b>Date Removed:</b> 199608 <b>Removal Reason:</b> No Longer Required <b>Tank Type:</b> <b>Tank Status:</b> <b>Date Last Used:</b> <b>Located 200m:</b> NO <b>Located 500m:</b> NO <b>Facility 1:</b> Retail <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> <b>Contents:</b> <b>Other Contents:</b> <b>Capacity:</b> <b>Other Capacity:</b> <b>Agrd Tank Secondary:</b> <b>Ugrd Tank Secondary:</b> <b>Spill Containment:</b> <b>Overfill Prevention:</b>					



### Fuel Storage Tanks

Map Key	Company	Address	Site No.	Tank No.	DLS Coord.	Lot	Block	Plan
FST-19	KENSINGTON ESSO 80159	1601-KENSINGTON RD. NW CALGARY (A) T2N 3R2	1741	2		1TO4	1	51510
			<b>Date Removed:</b> 199608 <b>Removal Reason:</b> No Longer Required <b>Tank Type:</b> <b>Tank Status:</b> <b>Date Last Used:</b> <b>Located 200m:</b> NO <b>Located 500m:</b> NO <b>Facility 1:</b> Retail <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> <b>Contents:</b> <b>Other Contents:</b> <b>Capacity:</b> <b>Other Capacity:</b> <b>Agred Tank Secondary:</b> <b>Ugred Tank Secondary:</b> <b>Spill Containment:</b> <b>Overfill Prevention:</b>					
FST-20	KENSINGTON SERVICE 87672	1438-KENSINGTON RD. NW CALGARY (A) T2N 3P9	2830	1				
			<b>Date Removed:</b> <b>Removal Reason:</b> <b>Tank Type:</b> Underground <b>Tank Status:</b> Currently in service <b>Date Last Used:</b> <b>Located 200m:</b> YES <b>Located 500m:</b> NO <b>Facility 1:</b> Retail <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> <b>Contents:</b> Gasoline <b>Other Contents:</b> <b>Capacity:</b> 25,000 litres <b>Other Capacity:</b> <b>Agred Tank Secondary:</b> <b>Ugred Tank Secondary:</b> Double Walled Tank <b>Spill Containment:</b> Liquid - Tight Fill Box, Liquid / Vapour Tight Couplings On Fill Pipes <b>Overfill Prevention:</b> Liquid - Tight Fill Box					

### Fuel Storage Tanks

Map Key	Company	Address	Site No.	Tank No.	DLS Coord.	Lot	Block	Plan
FST-21	KENSINGTON SERVICE 87672	1438-KENSINGTON RD. NW CALGARY (A) T2N 3P9	2830	2				
								<b>Date Removed:</b> <b>Removal Reason:</b> <b>Tank Type:</b> Underground <b>Tank Status:</b> Currently in service <b>Date Last Used:</b> <b>Located 200m:</b> YES <b>Located 500m:</b> NO <b>Facility 1:</b> Retail <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> <b>Contents:</b> Gasoline <b>Other Contents:</b> <b>Capacity:</b> 25,000 litres <b>Other Capacity:</b> <b>Agred Tank Secondary:</b> <b>Ugred Tank Secondary:</b> Double Walled Tank <b>Spill Containment:</b> Liquid - Tight Fill Box, Liquid / Vapour Tight Couplings On Fill Pipes <b>Overfill Prevention:</b> Liquid - Tight Fill Box
FST-22	KENSINGTON SERVICE 87672	1438-KENSINGTON RD. NW CALGARY (A) T2N 3P9	2830	3				
								<b>Date Removed:</b> <b>Removal Reason:</b> <b>Tank Type:</b> Underground <b>Tank Status:</b> Currently in service <b>Date Last Used:</b> <b>Located 200m:</b> YES <b>Located 500m:</b> NO <b>Facility 1:</b> Retail <b>Facility 2:</b> <b>Facility 3:</b> <b>Facility 4:</b> <b>Contents:</b> Gasoline <b>Other Contents:</b> <b>Capacity:</b> 25,000 litres <b>Other Capacity:</b> <b>Agred Tank Secondary:</b> <b>Ugred Tank Secondary:</b> Double Walled Tank <b>Spill Containment:</b> Liquid - Tight Fill Box, Liquid / Vapour Tight Couplings On Fill Pipes <b>Overfill Prevention:</b> Liquid - Tight Fill Box

### Fuel Storage Tanks

Map Key	Company	Address	Site No.	Tank No.	DLS Coord.	Lot	Block	Plan
FST-23	KENSINGTON SERVICE 87672	1438-KENSINGTON RD. NW CALGARY (A) T2N 3P9	2830	4				
			<b>Date Removed:</b>	199510				
			<b>Removal Reason:</b>	No Longer Required				
			<b>Tank Type:</b>	Underground				
			<b>Tank Status:</b>					
			<b>Date Last Used:</b>					
			<b>Located 200m:</b>	YES				
			<b>Located 500m:</b>	NO				
			<b>Facility 1:</b>	Retail				
			<b>Facility 2:</b>					
			<b>Facility 3:</b>					
			<b>Facility 4:</b>					
			<b>Contents:</b>					
			<b>Other Contents:</b>					
			<b>Capacity:</b>					
			<b>Other Capacity:</b>					
			<b>Agred Tank Secondary:</b>					
			<b>Ugred Tank Secondary:</b>					
			<b>Spill Containment:</b>					
			<b>Overfill Prevention:</b>					

## Waste Generators Summary

Map Key	Company	Address	Approval Year	Approval #	Material Code	Material Description
GEN-1	SOLEX ENERGY COMPANY INC.	200-1601 Westmount Road NW Calgary AB T2N 3M2 T2N 3M2	1993-1998	ABG05702		
GEN-2	CANEM SYSTEMS	119 14 ST NW CALGARY T2N 1Z6	2005		9.10	Unclassified Dangerous Substance/Product
GEN-3	LAYTON'S BULK DRY CLEANING	3, 2104 Kensington Rd. NW Calgary AB T2N 3R7 T2N 3R7	1993-1998	ABG06585		
GEN-4	Speedy Auto Glass Limited	320 14 ST NW Calgary T2N 1Z7	1999	ABG10369	UN1760	Corrosive Liquids, n.o.s.

## Retail Fuel Storage Tanks

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Map Key	Company	Address	Facility	Description
RST-1	HI-HO GAS	2001 BOWNESS RD NW CALGARY T2N 3K9	Service Stations-Gasoline, Oil & Natural Gas	Gasoline Service Stations
RST-2	HI HO GAS	2001 BOWNESS RD NW CALGARY T2N 3K9	SERVICE STATIONS-GASOLINE, OIL & NATURAL GAS	
RST-3	KENSINGTON PETRO CANADA	1438 KENSINGTON RD NW CALGARY T2N 3P9	SERVICE STATIONS-GASOLINE, OIL & NATURAL GAS	

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## Scott's Manufacturing Directory

Map Key	Company	Address	Established	Plant Size (ft <sup>2</sup> )	Employment	SIC/NAICS Code	Description
SCT-1	THE GOLDSMITHS LTD.	53 14 St NW Calgary T2N 1Z5	1969	1500	8	339910	Jewellery and Silverware Manufacturing
SCT-2	The Kirsten Ltd.	53 14 St NW Calgary T2N 1Z5	1969	1500	8		
SCT-3	Shewan Energy Corporation	300-1601 Westmount Rd NW Calgary T2N 3M2	1984		2	211113	Conventional Oil and Gas Extraction
SCT-4	Oleum Exploration Ltd.	300-1601 Westmount Rd NW Calgary T2N 3M2	1969		2	211113	Conventional Oil and Gas Extraction
SCT-5	TR Prospecting Ltd.	1747 2 Ave NW Calgary T2N 0G3	1985			212220 213119	Gold and Silver Ore Mining  Other Support Activities for Mining
SCT-6	Arteif Furniture Manufacturing Inc.	400-119 14 St NW Calgary T2N 1Z6			3	414390 417920	Other Home Furnishings Wholesaler-Distributors Service Establishment Machinery, Equipment and Supplies Wholesaler- Distributors
SCT-7	Williamson Industries Inc.	400-119 14 St NW Calgary T2N 1Z6				213118 332999 333130 333990	Services to Oil and Gas Extraction All Other Miscellaneous Fabricated Metal Product Manufacturing Mining and Oil and Gas Field Machinery Manufacturing All Other General-Purpose Machinery Manufacturing

## Scott's Manufacturing Directory

Map Key	Company	Address	Established	Plant Size (ft <sup>2</sup> )	Employment	SIC/NAICS Code	Description
SCT-8	Electro-Meters Company Ltd.	400-119 14 St NW Calgary T2N 1Z6			1	416110	Electrical Wiring and Construction Supplies Wholesaler-Distributors
						417230	Industrial Machinery, Equipment and Supplies Wholesaler-Distributors
						417310	Computer, Computer Peripheral and Pre-Packaged Software Wholesaler-Distributors
						417320	Electronic Components, Navigational and Communications Equipment and Supplies Wholesaler-Distributors
SCT-9	D & R LEATHER WEAR	223 14 St NW Calgary T2N 1Z6	1961	0	10	315210	Cut and Sew Clothing Contracting
						315292	Fur and Leather Clothing Manufacturing

### Water Well Information System

Map Key	Company	Address	Well ID	Licence No.	Date Started	Date Completed	Depth (ft)	Elevation (ft)	Elevation Source																
WWIS-1	HAZCO ENV #DW 2A		493300	1326	8/25/1995	8/26/1995	39		Not Obtained																
<p> <b>Proposed Use:</b> Dewatering  <b>Type of Work:</b> New Well  <b>Method of Drilling:</b> Rotary  <b>Flowing Well:</b> N  <b>Flow Rate:</b>  <b>Gas Present:</b> N  <b>Oil Present:</b> N  <b>Water Requirements Per Day:</b> 0  <b>DLS Coordinates:</b> NE-17-024-01-5  <b>Lot:</b>  <b>Block:</b>  <b>Plan:</b>  <b>Owner Mailing Address:</b> 200 5720 4 ST SE, CALGARY, , T2H 1K7,  <b>Drilling Company:</b> CORA LYNN DRILLING CO. LTD.  <b>Driller Mailing Address:</b> BOX 2, SITE 18, RR 2, STRATHMORE, AB, T1P 1K5                 </p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Depth (ft)</u></th> <th style="text-align: left;"><u>Material</u></th> <th style="text-align: left;"><u>Colour</u></th> <th style="text-align: left;"><u>Description</u></th> </tr> </thead> <tbody> <tr> <td>26</td> <td>Unknown</td> <td></td> <td></td> </tr> <tr> <td>35</td> <td>Sandstone Stringers</td> <td></td> <td></td> </tr> <tr> <td>39</td> <td>Shale &amp; Coal</td> <td></td> <td></td> </tr> </tbody> </table>										<u>Depth (ft)</u>	<u>Material</u>	<u>Colour</u>	<u>Description</u>	26	Unknown			35	Sandstone Stringers			39	Shale & Coal		
<u>Depth (ft)</u>	<u>Material</u>	<u>Colour</u>	<u>Description</u>																						
26	Unknown																								
35	Sandstone Stringers																								
39	Shale & Coal																								
WWIS-2	HAZCO ENVIRONMENTAL #DW1A		354219	1326	8/23/1995	8/25/1995	38		Not Obtained																
<p> <b>Proposed Use:</b> Dewatering  <b>Type of Work:</b> New Well  <b>Method of Drilling:</b> Rotary  <b>Flowing Well:</b> N  <b>Flow Rate:</b>  <b>Gas Present:</b> N  <b>Oil Present:</b> N  <b>Water Requirements Per Day:</b> 0  <b>DLS Coordinates:</b> NE-17-024-01-5  <b>Lot:</b>  <b>Block:</b>  <b>Plan:</b>  <b>Owner Mailing Address:</b> 200 5720 4 ST SE, CALGARY, , T2H 1K7,  <b>Drilling Company:</b> CORA LYNN DRILLING CO. LTD.  <b>Driller Mailing Address:</b> BOX 2, SITE 18, RR 2, STRATHMORE, AB, T1P 1K5                 </p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Depth (ft)</u></th> <th style="text-align: left;"><u>Material</u></th> <th style="text-align: left;"><u>Colour</u></th> <th style="text-align: left;"><u>Description</u></th> </tr> </thead> <tbody> <tr> <td>38</td> <td>Shale &amp; Coal</td> <td></td> <td></td> </tr> <tr> <td>33</td> <td>Sandstone Stringers</td> <td></td> <td></td> </tr> </tbody> </table>										<u>Depth (ft)</u>	<u>Material</u>	<u>Colour</u>	<u>Description</u>	38	Shale & Coal			33	Sandstone Stringers						
<u>Depth (ft)</u>	<u>Material</u>	<u>Colour</u>	<u>Description</u>																						
38	Shale & Coal																								
33	Sandstone Stringers																								



### Water Well Information System

Map Key	Company	Address	Well ID	Licence No.	Date Started	Date Completed	Depth (ft)	Elevation (ft)	Elevation Source
WWIS-3	HAZCO #DW 3		356170	1326	5/17/1995	6/23/1995	35		Not Obtained
<p><b>Proposed Use:</b> Dewatering  <b>Type of Work:</b> New Well  <b>Method of Drilling:</b> Combination  <b>Flowing Well:</b> N  <b>Flow Rate:</b>  <b>Gas Present:</b> N  <b>Oil Present:</b> N  <b>Water Requirements Per Day:</b> 0  <b>DLS Coordinates:</b> NH-17-024-01-5  <b>Lot:</b>  <b>Block:</b>  <b>Plan:</b>  <b>Owner Mailing Address:</b> 200 5730 4 ST SE, CALGARY, , T2H 1K7,  <b>Drilling Company:</b> CORA LYNN DRILLING CO. LTD.  <b>Driller Mailing Address:</b> BOX 2, SITE 18, RR 2, STRATHMORE, AB, T1P 1K5</p>									
			<u>Depth (ft)</u>	<u>Material</u>	<u>Colour</u>	<u>Description</u>			
			9	Gravel		Silty			
			18	Sand & Gravel					
			21	Silt		Clayey			
			35	Shale & Coal					

### Water Well Information System

Map Key	Company	Address	Well ID	Licence No.	Date Started	Date Completed	Depth (ft)	Elevation (ft)	Elevation Source
WWIS-4	HAZCO		356171	1326	5/17/1995	6/23/1995	35		Not Obtained
<p><b>Proposed Use:</b> Dewatering  <b>Type of Work:</b> New Well  <b>Method of Drilling:</b> Combination  <b>Flowing Well:</b> N  <b>Flow Rate:</b>  <b>Gas Present:</b> N  <b>Oil Present:</b> N  <b>Water Requirements Per Day:</b> 0  <b>DLS Coordinates:</b> NH-17-024-01-5  <b>Lot:</b>  <b>Block:</b>  <b>Plan:</b>  <b>Owner Mailing Address:</b> 200 5720 4 ST SE, CALGARY, , T2H 1K7,  <b>Drilling Company:</b> CORA LYNN DRILLING CO. LTD.  <b>Driller Mailing Address:</b> BOX 2, SITE 18, RR 2, STRATHMORE, AB, T1P 1K5</p>									
			<u>Depth (ft)</u>	<u>Material</u>	<u>Colour</u>	<u>Description</u>			
			9	Gravel		Silty			
			18	Sand & Gravel					
			21	Silt		Clayey			
			35	Shale & Coal					

### Water Well Information System

Map Key	Company	Address	Well ID	Licence No.	Date Started	Date Completed	Depth (ft)	Elevation (ft)	Elevation Source
WWIS-5	HAZCO #DW 2		493298	1326	5/11/1995	6/16/1995	53		Not Obtained
<p><b>Proposed Use:</b> Dewatering  <b>Type of Work:</b> New Well  <b>Method of Drilling:</b> Auger  <b>Flowing Well:</b> N  <b>Flow Rate:</b>  <b>Gas Present:</b> N  <b>Oil Present:</b> N  <b>Water Requirements Per Day:</b> 0  <b>DLS Coordinates:</b> NH-17-024-01-5  <b>Lot:</b>  <b>Block:</b>  <b>Plan:</b>  <b>Owner Mailing Address:</b> 200 5720 4 ST SE, CALGARY, , T2H 1K7,  <b>Drilling Company:</b> CORA LYNN DRILLING CO. LTD.  <b>Driller Mailing Address:</b> BOX 2, SITE 18, RR 2, STRATHMORE, AB, T1P 1K5</p>									
			<u>Depth (ft)</u>	<u>Material</u>	<u>Colour</u>	<u>Description</u>			
			20	Gravel		Silty			
			30	Sand & Gravel					
			53	Shale & Sandstone					

### Water Well Information System

Map Key	Company	Address	Well ID	Licence No.	Date Started	Date Completed	Depth (ft)	Elevation (ft)	Elevation Source
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WWIS-6	HAZCO #DW 4		493299	1326	5/16/1995	6/20/1995	33		Not Obtained
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**Proposed Use:** Dewatering  
**Type of Work:** New Well  
**Method of Drilling:** Auger  
**Flowing Well:** N  
**Flow Rate:**  
**Gas Present:** N  
**Oil Present:** N  
**Water Requirements Per Day:** 0  
**DLS Coordinates:** NH-17-024-01-5  
**Lot:**  
**Block:**  
**Plan:**  
**Owner Mailing Address:** 200 5720 4 ST SE, CALGARY, , T7H 1K7,  
**Drilling Company:** CORA LYNN DRILLING CO. LTD.  
**Driller Mailing Address:** BOX 2, SITE 18, RR 2, STRATHMORE, AB, T1P 1K5

<u>Depth (ft)</u>	<u>Material</u>	<u>Colour</u>	<u>Description</u>
12	Unknown		
18	Sand & Gravel		
20	Sandstone		
33	Shale		

### Water Well Information System

Map Key	Company	Address	Well ID	Licence No.	Date Started	Date Completed	Depth (ft)	Elevation (ft)	Elevation Source																				
WWIS-7	HAZCO #DW 1		493303	1326	5/17/1995	6/13/1995	50		Not Obtained																				
<p> <b>Proposed Use:</b> Dewatering  <b>Type of Work:</b> New Well  <b>Method of Drilling:</b> Auger  <b>Flowing Well:</b> N  <b>Flow Rate:</b>  <b>Gas Present:</b> N  <b>Oil Present:</b> N  <b>Water Requirements Per Day:</b> 0  <b>DLS Coordinates:</b> NH-17-024-01-5  <b>Lot:</b>  <b>Block:</b>  <b>Plan:</b>  <b>Owner Mailing Address:</b> 200 5720 4 ST SE, CALGARY, , T2H 1K7,  <b>Drilling Company:</b> CORA LYNN DRILLING CO. LTD.  <b>Driller Mailing Address:</b> BOX 2, SITE 18, RR 2, STRATHMORE, AB, T1P 1K5                 </p> <table border="1"> <thead> <tr> <th>Depth (ft)</th> <th>Material</th> <th>Colour</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>17</td> <td>Gravel</td> <td></td> <td>Sandy</td> </tr> <tr> <td>50</td> <td>Shale</td> <td></td> <td></td> </tr> <tr> <td>10</td> <td>Silt</td> <td></td> <td>Sandy</td> </tr> <tr> <td>13</td> <td>Gravel</td> <td></td> <td>Sandy</td> </tr> </tbody> </table>										Depth (ft)	Material	Colour	Description	17	Gravel		Sandy	50	Shale			10	Silt		Sandy	13	Gravel		Sandy
Depth (ft)	Material	Colour	Description																										
17	Gravel		Sandy																										
50	Shale																												
10	Silt		Sandy																										
13	Gravel		Sandy																										
WWIS-8	HAZCO #CW 5		493357	1326	5/9/1995	5/30/1995	39		Not Obtained																				
<p> <b>Proposed Use:</b> Dewatering  <b>Type of Work:</b> New Well  <b>Method of Drilling:</b> Rotary  <b>Flowing Well:</b> N  <b>Flow Rate:</b>  <b>Gas Present:</b> N  <b>Oil Present:</b> N  <b>Water Requirements Per Day:</b> 0  <b>DLS Coordinates:</b> NH-17-024-01-5  <b>Lot:</b>  <b>Block:</b>  <b>Plan:</b>  <b>Owner Mailing Address:</b> 200 5720 4 ST SE, CALGARY, , T2H 1K7,  <b>Drilling Company:</b> CORA LYNN DRILLING CO. LTD.  <b>Driller Mailing Address:</b> BOX 2, SITE 18, RR 2, STRATHMORE, AB, T1P 1K5                 </p> <table border="1"> <thead> <tr> <th>Depth (ft)</th> <th>Material</th> <th>Colour</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>Overburden</td> <td></td> <td></td> </tr> <tr> <td>39</td> <td>Bedrock</td> <td></td> <td></td> </tr> </tbody> </table>										Depth (ft)	Material	Colour	Description	25	Overburden			39	Bedrock										
Depth (ft)	Material	Colour	Description																										
25	Overburden																												
39	Bedrock																												

### Water Well Information System

Map Key	Company	Address	Well ID	Licence No.	Date Started	Date Completed	Depth (ft)	Elevation (ft)	Elevation Source
WWIS-9	HAZCO #CW 7		493358	1326	6/1/1995	6/11/1995	35		Not Obtained
<p><b>Proposed Use:</b> Dewatering  <b>Type of Work:</b> New Well  <b>Method of Drilling:</b> Rotary  <b>Flowing Well:</b> N  <b>Flow Rate:</b>  <b>Gas Present:</b> N  <b>Oil Present:</b> N  <b>Water Requirements Per Day:</b> 0  <b>DLS Coordinates:</b> NH-17-024-01-5  <b>Lot:</b>  <b>Block:</b>  <b>Plan:</b>  <b>Owner Mailing Address:</b> 200 5720 4 ST SE, CALGARY, , T2H 1K7,  <b>Drilling Company:</b> CORA LYNN DRILLING CO. LTD.  <b>Driller Mailing Address:</b> BOX 2, SITE 18, RR 2, STRATHMORE, AB, T1P 1K5</p>									
			<u>Depth (ft)</u>			<u>Material</u>	<u>Colour</u>	<u>Description</u>	
			22			Overburden			
			35			Bedrock			
WWIS-10	HAZCO #CW 3		493359	1326	5/8/1995	6/2/1995	34		Not Obtained
<p><b>Proposed Use:</b> Dewatering  <b>Type of Work:</b> New Well  <b>Method of Drilling:</b> Rotary  <b>Flowing Well:</b> N  <b>Flow Rate:</b>  <b>Gas Present:</b> N  <b>Oil Present:</b> N  <b>Water Requirements Per Day:</b> 0  <b>DLS Coordinates:</b> NH-17-024-01-5  <b>Lot:</b>  <b>Block:</b>  <b>Plan:</b>  <b>Owner Mailing Address:</b> 200 5720 4 ST SE, CALGARY, , T2H 1K7,  <b>Drilling Company:</b> CORA LYNN DRILLING CO. LTD.  <b>Driller Mailing Address:</b> BOX 2, SITE 18, RR 2, STRATHMORE, AB, T1P 1K5</p>									
			<u>Depth (ft)</u>			<u>Material</u>	<u>Colour</u>	<u>Description</u>	
			21			Overburden			
			34			Bedrock			

### Water Well Information System

Map Key	Company	Address	Well ID	Licence No.	Date Started	Date Completed	Depth (ft)	Elevation (ft)	Elevation Source												
WWIS-11	HAZCO #CW 6		493360	1326	5/10/1995	6/5/1995	34		Not Obtained												
<p><b>Proposed Use:</b> Dewatering  <b>Type of Work:</b> New Well  <b>Method of Drilling:</b> Rotary  <b>Flowing Well:</b> N  <b>Flow Rate:</b>  <b>Gas Present:</b> N  <b>Oil Present:</b> N  <b>Water Requirements Per Day:</b> 0  <b>DLS Coordinates:</b> NH-17-024-01-5  <b>Lot:</b>  <b>Block:</b>  <b>Plan:</b>  <b>Owner Mailing Address:</b> 200 5720 4 ST SE, CALGARY, , T2H 1K7,  <b>Drilling Company:</b> CORA LYNN DRILLING CO. LTD.  <b>Driller Mailing Address:</b> BOX 2, SITE 18, RR 2, STRATHMORE, AB, T1P 1K5</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Depth (ft)</u></th> <th style="text-align: left;"><u>Material</u></th> <th style="text-align: left;"><u>Colour</u></th> <th style="text-align: left;"><u>Description</u></th> </tr> </thead> <tbody> <tr> <td>21</td> <td>Overburden</td> <td></td> <td></td> </tr> <tr> <td>34</td> <td>Bedrock</td> <td></td> <td></td> </tr> </tbody> </table>										<u>Depth (ft)</u>	<u>Material</u>	<u>Colour</u>	<u>Description</u>	21	Overburden			34	Bedrock		
<u>Depth (ft)</u>	<u>Material</u>	<u>Colour</u>	<u>Description</u>																		
21	Overburden																				
34	Bedrock																				
WWIS-12	HAZCO #CW 2		394736	1326	5/5/1995	5/27/1995	34		Not Obtained												
<p><b>Proposed Use:</b> Dewatering  <b>Type of Work:</b> New Well  <b>Method of Drilling:</b> Rotary  <b>Flowing Well:</b> N  <b>Flow Rate:</b>  <b>Gas Present:</b> N  <b>Oil Present:</b> N  <b>Water Requirements Per Day:</b> 0  <b>DLS Coordinates:</b> NH-17-024-01-5  <b>Lot:</b>  <b>Block:</b>  <b>Plan:</b>  <b>Owner Mailing Address:</b> 200 5720 4 ST SE, CALGARY, , T2H 1K7,  <b>Drilling Company:</b> CORA LYNN DRILLING CO. LTD.  <b>Driller Mailing Address:</b> BOX 2, SITE 18, RR 2, STRATHMORE, AB, T1P 1K5</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Depth (ft)</u></th> <th style="text-align: left;"><u>Material</u></th> <th style="text-align: left;"><u>Colour</u></th> <th style="text-align: left;"><u>Description</u></th> </tr> </thead> <tbody> <tr> <td>20</td> <td>Overburden</td> <td></td> <td></td> </tr> <tr> <td>34</td> <td>Bedrock</td> <td></td> <td></td> </tr> </tbody> </table>										<u>Depth (ft)</u>	<u>Material</u>	<u>Colour</u>	<u>Description</u>	20	Overburden			34	Bedrock		
<u>Depth (ft)</u>	<u>Material</u>	<u>Colour</u>	<u>Description</u>																		
20	Overburden																				
34	Bedrock																				

## Appendix: Alberta 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.

### Provincial Government Source Databases:

#### **Agriculture and Fisheries - Certificates of Approval 1993-2009**

**AGR**

This database contains approvals for processes pertaining to drying of alfalfa/forage/peat, feedlots, fish farms and feed/seed mills. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

#### **Alberta Oil and Gas Wells 1883-Sept 2003\***

**AOGW**

The Alberta Energy Utilities Board maintains a database of all oil and gas wells drilled in the province of Alberta. The database contains information on well name, licensee name, licence number, location, status, total well depth and date of final drilling. Please note that this database will not be updated, information on wells drilled after September 2003 can be found in the Oil and Gas Wells (OGW) database under the 'Private Source Database' section.

#### **Waste Management Facilities - Certificates of Approval 1993-2009**

**CAWD**

This database contains approvals for processes pertaining to waste management facilities (hazardous waste manifesting, waste disposal/incineration/open burning/processing/storage/treatment). Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

#### **Confined Feeding Operations 2002-Sept 2010**

**CFO**

In 1991, the Natural Resources Conservation Board (NRCB) was created to review applications for approval of major natural resource development projects in Alberta. In January 2002, the NRCB was given the responsibility to regulate the Confined Feeding Operation industry. The Agricultural Operation Practices Act defines a confined feeding operation to be: "an activity on land that is fenced or enclosed or within buildings where livestock are confined for the purpose of growing, sustaining, finishing or breeding by means other than grazing, but does not include seasonal feeding and bedding sites." Under the AOPA regulations, all new or expanding confined feeding operations (CFOs) or manure storage facilities are required to make an application for Approval, Registration or Authorization to the NRCB before construction or expansion commences. Geographic coordinates were provided in DLS (Dominion Land Survey) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the Quarter section only.

#### **Chemical Processing Operations - Certificates of Approval 1993-2009**

**CHEM**

This database contains approvals for processes pertaining to the manufacturing and use of chemical products and pesticides. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.



**Compliance and Convictions 1993-Sept 2010**

**CONV**

This database summarizes the penalties and convictions handed down by the Alberta courts. This database identifies companies and/or individuals that have been found guilty of environmental offenses under Alberta's Environmental Protection Legislation. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Unfortunately, from state of the data, the location that the address pertains to cannot be confirmed.

**Field Inspection Incident Report 1975-Jun 2010**

**FIS**

Received from ERCB (Energy Resources Conservation Board) formerly the EUB (Energy Utilities Board), this database, which used to be called EISL (Environmental Information System Listing), contains reported environmental incidents beginning in 1975. Descriptions include noise infractions, air quality emissions, oil spills and failures for pipelines, wells, plants, and batteries. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

**Food Processing Operations - Certificates of Approval 1993-2009**

**FOOD**

This database contains approvals for processes pertaining to the manufacturing of food products. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

**Fuel Storage Tanks 1985-Sept 2010**

**FST**

Information in this database was collected according to Alberta Regulation AR 291/95 Storage Tank System Management and to AR 52/98 Fire Code which was formerly The Alberta Fire Code Regulation, 1992 (AR 204/92). This information was received from the Petroleum Tank Management Association of Alberta (PTMAA) which has regulated Storage Tanks since 1994.

**Waste Generators Summary 1993-Apr 2010**

**GEN**

Under Alberta's Waste Control Regulation, Alta. Reg. 192/96, a generator is a person who consigns hazardous waste for storage, transport, treatment or disposal. As of 2007, Alberta Environment no longer provides detailed information on each waste generator, such as approval number, class, and class description.

**Lumber Related Operations - Certificates of Approval 1993-2009**

**LUM**

This database contains approvals for processes pertaining to the manufacturing of wood products, pulp and paper including the associated water treatment processes. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

**Metals, Minerals and Building Material Operations - Certificates of Approval 1993-2009**

**MMB**

This database contains approvals for processes pertaining to the manufacturing of building materials, metals, and mineral products. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

**Mineral Occurrences 1993-2003\***

**MNR**

The AMDO (Alberta Mineral Deposits and Occurrences) application was created by the Minerals and Coal Geoscience Section of the Alberta Geological Survey as a database for mineral deposits in Alberta in the early 1990s. This is a one time inventory and will not be updated.

**Operating and Abandoned Coal Mines 2001, 2003\***

**OAM**

This data is based on the 2001 edition (revised in 2003), published by The Alberta Energy and Utilities Board (EUB) now The Energy Resources Conservation Board (ERCB). It was a one time inventory of Operating and Abandoned Coal Mines in Alberta. In 1905, Alberta began to catalogue coal mines by assigning a unique number to each operation. This database will provide information on location, mine #, mine name, mine company, life span, amount of coal produced, depth, thickness and other important information concerning the mine.

**Petrochemical, Coal and Gas Operations - Certificates of Approval 1993-2009**

**PCG**

This database contains approvals for processes pertaining to petroleum, coal, and oil and gas processing. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

**Pesticide Register 1998-Apr 2010**

**PES**

This is a list of all Registered Pesticide Vendors in Alberta (retail and wholesale). The pesticide vendor list is comprised of vendors who have both audited AWSA pesticide storage facilities as part of their operation, and those vendors that do not have an audited AWSA pesticide storage facilities. Non-audited retail and wholesale vendors may be selling products that are not covered by the AWSA program, or may be utilizing external AWSA pesticide warehouses. Registration numbers and expiry dates are identified for each operation. If a registration number is not present, the operation's vendor registration is in the process of renewal.

**Conglomerate Operations - Certificates of Approval 1993-2009**

**PITS**

This database contains approvals for processes pertaining to the use of gravel pits, sand pits, and clay pits. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

**Alberta Private Sewage Disposal Permits 2003-Jan 2010**

**PSP**

These permits are private sewage disposal permits that have been issued to owners and contractors. They would include various types of installations including holding tanks, septic tanks, packaged treatment plants, sand filters, fields, mounds, lagoons and open discharges. In 2003 Alberta Municipal Affairs started collecting information and issuing permits using an electronic permitting system. These records include all private sewage disposal permits within the jurisdiction of Alberta Municipal Affairs.

**Waste Receivers Summary 1993-Apr 2010**

**REC**

A waste receiving location is any site or facility to which waste is transferred through a waste carrier. A receiver of regulated waste is required to register the waste receiving facility. This database represents receivers of regulated wastes under Alberta's Waste Control Regulation, Alta. Reg. 192/96. As of 2007, Alberta Environment no longer provides detailed information on each waste receiver, such as approval number, class, and class description.

**Special Operation Classifications - Certificates of Approval 1993-2009**

**SPEC**

This database contains approvals for processes pertaining to classifications listed as special operations (i.e. locations owned/operated by municipalities, operations that involve the presence of pesticides). Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

**Wastewater Operations - Certificates of Approval 1993-2009**

**WSTE**

This database contains approvals for processes pertaining to wastewater treatment systems. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

**Water Well Information System 1880-Sept 2009**

**WWIS**

This database was collected from the Groundwater Information Center of the Natural Resource Service and contains over 387,000 records. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

**Federal Government Source Databases:**

**Diagram Identifier:**

**Environmental Effects Monitoring 1992-2007\***

**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-Jun 2007**

**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-Oct 2010**

**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.

**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. This database will no longer be updated due to the new National Security protocols which have prohibited any release of this database.

**National Defence & Canadian Forces Spills Mar 1999-Jul 2009**

**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-April 2007**

**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 1988-2008**

**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 1993-2008**

**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 for recycling for more than 300 listed 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.

**Private Source Databases:**

**Automobile Wrecking & Supplies 2001-Jun 2010**

**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.

**ERIS Historical Searches 1999-Sept 2010**

**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 1998-2009**

**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 1988-Sept 2010**

**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](http://www.nickles.com).

**Canadian Pulp and Paper 1999, 2002, 2004, 2005, 2009**

**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 2001-Jun 2010**

**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 1999-Sept 2009**

**SCT**

Scott's Directories is a database of information on over 12,000 manufacturers in Alberta. Even though Scott's listings are voluntary, it is a comprehensive database of Alberta manufacturers available. Information concerning a company's address, plant size, and main products are included in this database.

**Waste Disposal Site Inventory 1998\***

**WDS**

This one time inventory is a compilation of information collected from each region and pertains to active, regulated waste disposal sites within the province of Alberta. In the past, waste disposal sites were registered with both regional and health offices. That process was dissolved and regional landfills were developed. There is no central source of this information. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only

You have selected more than one water well.  
Please click the water well ID to generate Water Well Drilling Report.

Well ID	LSD	SEC	TWP	RGE	M	DRILLING COMPANY	DATE COMPLETED	DEPTH (m)	TYPE OF WORK	USE	CHM	LT	PT	WELL OWNER	STATIC LEVEL (m)	TEST RATE (L/min)
<a href="#">354219</a>	NE	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-08-25	11.58	New Well	Dewatering		2		HAZCO ENVIRONMENTAL #DW1A	6.10	24.61
<a href="#">356170</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-06-23	10.67	New Well	Dewatering		4		HAZCO #DW 3	4.21	37.85
<a href="#">356171</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-06-23	10.67	New Well	Dewatering		4		HAZCO	4.21	37.85
<a href="#">394736</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-05-27	10.36	New Well	Dewatering		2		HAZCO #CW 2	4.39	18.93
<a href="#">399928</a>	NW	16	024	01	5	WENGER (D) DRILLING	1946-09-13	9.14	Well Inventory	Stock		3		JONES, G.L.	3.81	56.78
<a href="#">399932</a>	SW	21	024	01	5	RICHMOND WW DRLG	1977-08-10	27.43	New Well	Domestic		2		NIELSON, BEN	12.50	113.56
<a href="#">416033</a>	SE	20	024	01	5	DIVERSIFIED DRILLING & EXPLORATION CO.	1981-11-02	21.34	New Well	Domestic		5		CALGARY, CITY OF	3.66	45.42
<a href="#">493298</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-06-16	16.15	New Well	Dewatering		3		HAZCO #DW 2	4.94	37.85
<a href="#">493299</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-06-20	10.06	New Well	Dewatering		4		HAZCO #DW 4	3.44	18.93
<a href="#">493300</a>	NE	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-08-26	11.89	New Well	Dewatering		3		HAZCO ENV #DW 2A	5.49	32.93
<a href="#">493303</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-06-13	15.24	New Well	Dewatering		4		HAZCO #DW 1	5.36	26.50
<a href="#">493357</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-05-30	11.89	New Well	Dewatering		2		HAZCO #CW 5	5.09	56.78
<a href="#">493358</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-06-11	10.67	New Well	Dewatering		2		HAZCO #CW 7	4.11	37.85
<a href="#">493359</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-06-02	10.36	New Well	Dewatering		2		HAZCO #CW 3	4.79	18.93
<a href="#">493360</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-06-05	10.36	New Well	Dewatering		2		HAZCO #CW 6	4.72	5.68

You have selected more than one water well.  
Please click the water well ID to generate Water Well Drilling Report.

Well ID	LSD	SEC	TWP	RGE	M	DRILLING COMPANY	DATE COMPLETED	DEPTH (ft)	TYPE OF WORK	USE	CHM	LT	PT	WELL OWNER	STATIC LEVEL (ft)	TEST RATE (igpm)
<a href="#">354219</a>	NE	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-08-25	38.00	New Well	Dewatering		2		HAZCO ENVIRONMENTAL #DW1A	20.00	6.50
<a href="#">356170</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-06-23	35.00	New Well	Dewatering		4		HAZCO #DW 3	13.80	10.00
<a href="#">356171</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-06-23	35.00	New Well	Dewatering		4		HAZCO	13.80	10.00
<a href="#">394736</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-05-27	34.00	New Well	Dewatering		2		HAZCO #CW 2	14.40	5.00
<a href="#">493298</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-06-16	53.00	New Well	Dewatering		3		HAZCO #DW 2	16.20	10.00
<a href="#">493299</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-06-20	33.00	New Well	Dewatering		4		HAZCO #DW 4	11.30	5.00
<a href="#">493300</a>	NE	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-08-26	39.00	New Well	Dewatering		3		HAZCO ENV #DW 2A	18.00	8.70
<a href="#">493303</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-06-13	50.00	New Well	Dewatering		4		HAZCO #DW 1	17.60	7.00
<a href="#">493357</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-05-30	39.00	New Well	Dewatering		2		HAZCO #CW 5	16.70	15.00
<a href="#">493358</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-06-11	35.00	New Well	Dewatering		2		HAZCO #CW 7	13.50	10.00
<a href="#">493359</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-06-02	34.00	New Well	Dewatering		2		HAZCO #CW 3	15.70	5.00
<a href="#">493360</a>	NH	17	024	01	5	CORA LYNN DRILLING CO. LTD.	1995-06-05	34.00	New Well	Dewatering		2		HAZCO #CW 6	15.50	1.50



## THE CITY OF CALGARY

### EnviroSite Report

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#### Query Information

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Request Number: 3573430      Charged: Yes      Response Date: 2010/11/17  
CompanyID: GOLDER      UserID: ITRIMBLE      Folio #: 10-1346-0046 (4000)  
Search Key: 1621 WESTMOUNT RD NW

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#### Search Results for Parcel Address: 1621 WESTMOUNT RD NW

---

There is no SIMS (Site Information Management System) information that matches the search criteria.(#25330)

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#### Search Results for Adjacent Address: 106 15 ST NW

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#### Petroleum Storage Tanks

[Historical number of tanks from the Petroleum Tank Management Association\(1996\):](#) 1

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#### Search Results for Adjacent Address: 1443 KENSINGTON RD NW

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#### Commercial/Industrial Users:

[Company Name:](#) MENZIES ESSO SERVICE STATION  
[Description:](#) Gas Station  
[Operating From:](#) 1954      [Operating To:](#) 1958

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#### Search Results for Adjacent Address: 1601 KENSINGTON RD NW

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#### Environmental Reports

[Document Title:](#) Report: "Environmental Assessment Reports 1601 Kensington RD NW, Calgary, Development Permit Application # 97/1004"

[Author:](#) Imperial Oil Limited  
[Client:](#) The City of Calgary  
[Date:](#) 1997/06/26

[Document Title:](#) Report: "Groundwater Laboratory Analysis Results, Kensington Service Station S/S 880159, 1601 Kensington Road NW, Calgary, AB"

[Author:](#) Clifton Associates Ltd.  
[Client:](#) Imperial Oil Limited  
[Date:](#) 1996/07/11

[Document Title:](#) Report: "Intrusive Environmental Assessment Summary Report - Tank Removal/Test Pits -



Author: Kensington Service Station S/S 880159"  
Client: Clifton Associates Ltd.  
Date: Imperial Oil Limited  
1995/09/14

Document Title: Report: "Intrusive Environmental Assessment Summary Report, Borehole Drilling - Kensington Service Station S/S 880159"

Author: Clifton Associates Ltd.  
Client: Imperial Oil Limited  
Date: 1995/11/13

Document Title: Report: "Monitoring Results, 06 December 1995, Kensington Service Station S/S 880159, 1601 Kensington Road NW, Calgary, AB"

Author: Clifton Associates Ltd.  
Client: Imperial Oil Limited  
Date: 1995/12/07

Document Title: Report: "Monitoring Results, 17 May 1996, Kensington Service Station S/S 880159, 1601 Kensington Road NW, Calgary, AB"

Author: Clifton Associates Ltd.  
Client: Imperial Oil Limited  
Date: 1996/05/24

Document Title: Report: "Monitoring Results, 24 April 1997, Kensington Service Station - S/S 880159, 1601 Kensington Road NW, Calgary, AB"

Author: Clifton Associates Ltd.  
Client: Imperial Oil Limited  
Date: 1997/05/20

Document Title: Report: "Summary Report, Intrusive Environmental Assessment - Additional Borehole Drilling, Former Service Station Site - S/S 880159, 1601 Kensington RD NW, Calgary, AB"

Author: Clifton Associates Ltd.  
Client: Imperial Oil Limited  
Date: 1996/12/19

#### **Petroleum Storage Tanks**

Historical number of tanks from the Petroleum Tank Management Association(1996): 4

#### **Commercial/Industrial Users:**

Company Name: KENSINGTON ESSO SERVICE STATION  
Description: Gas Station  
Operating From: 1954 Operating To: 1995

---

**Search Results for Adjacent Address: 1601 WESTMOUNT RD NW**

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#### **Commercial/Industrial Users:**

Company Name: ANDERSON'S SERVICE CENTRE  
Description: Gas Station  
Operating From: 1977 Operating To: 1980

---

**Search Results for Adjacent Address: 1609 KENSINGTON RD NW**

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#### **Commercial/Industrial Users:**

Company Name: A CREATIVE IMAGE  
Description: Photographic Industries  
Operating From: 1987 Operating To: 1995

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**Search Results for Adjacent Address: 20 14 ST NW**

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**Petroleum Storage Tanks**

[Historical number of tanks from the Petroleum Tank Management Association\(1996\):](#) 5

**Commercial/Industrial Users:**

[Company Name:](#) COMMUNITY SHELL SERVICE / HILLHURST SHELL SERVICE

[Description:](#) Gas Station

[Operating From:](#) 1956

[Operating To:](#) 1990

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**Search Results for Adjacent Address: 2131 BROWNSEA DR NW**

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**Environmental Reports**

[Document Title:](#) Report: "Compilation Report, North Bow Area, Calgary, Alberta"

[Author:](#) Keystone Environmental Ltd.

[Client:](#) The City of Calgary

[Date:](#) 2003/09/30

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**Search Results for Adjacent Address: 99 14 ST NW**

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**Commercial/Industrial Users:**

[Company Name:](#) KENSINGTON 99 AUTO SERVICE

[Description:](#) Gas Station

[Operating From:](#) 1961

[Operating To:](#) 1965

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




### EnviroSite Map Information

#### Query Information

Request Number: 3573450      Charged: No      Response Date: 2010/11/17  
 CompanyID: GOLDER      UserID: ITRIMBLE      Folio #: 10-1346-0046 (4000)  
 Search Key: 1632 WESTMOUNT BV NW

#### Map Text Info

Parcel Address: 1632 WESTMOUNT BV NW      Ward: 07  
Community: HILLHURST      Map #: 17C

	Selected Feature	<b>Easements:</b>		Train Tracks	
	Registered Address		- Overland Drainage		LRT Tracks
	Lot Lines		- Utility		Manhole
	Roof Outlines		Rivers, Lakes, Canals		Green Space
	100m Buffer		Landfill Boundary		Landfill Setback



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### EnviroSite Report

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#### Query Information

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Request Number: 3573449      Charged: Yes      Response Date: 2010/11/17  
CompanyID: GOLDER      UserID: ITRIMBLE      Folio #: 10-1346-0046 (4000)  
Search Key: 1632 WESTMOUNT BV NW

---

#### Search Results for Parcel Address: 1632 WESTMOUNT BV NW

---

There is no SIMS (Site Information Management System) information that matches the search criteria.(#25330)

---

#### Search Results for Adjacent Address: 2131 BROWNSEA DR NW

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#### Environmental Reports

Document Title: Report: "Compilation Report, North Bow Area, Calgary, Alberta"  
Author: Keystone Environmental Ltd.  
Client: The City of Calgary  
Date: 2003/09/30

---

#### Search Results for Adjacent Address: BOW RIVER

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#### Environmental Reports

Document Title: Report: "Water Depth and Marine Refraction, Seismic Surveys along the Bow River in the Vicinity of the Abandoned Canada Creosote Site, Calgary, Alberta"  
Author: Geo-Physi-Con Co. Ltd.  
Client: Alberta Environment  
Date: 1992/08/20

---

#### Search Results for Adjacent Address: BROADVIEW RD FROM 14 ST NW TO 21 ST NW

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#### Environmental Reports

Document Title: Report: "Report on the Geotechnical Investigation for the Proposed Water Feedermain, Broadview Road from 14 Street to 21 Street NW"  
Author: Sabatini Geotechnical Inc.  
Client: The City of Calgary  
Date: 1990/11/26



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### EnviroSite Map Information

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#### Query Information

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Request Number:  
3573467

Charged: No

Response Date: 2010/11/17

CompanyID: GOLDER

UserID: ITRIMBLE

Folio #: 10-1346-0046 (4000)

Search Key: 1737 BOWNESS RD NW

Response Message: The search key you used was not found on City files. Please verify your information.(#20040)



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











### EnviroSite Map Information

#### Query Information

Request Number: 3573454      Charged: No      Response Date: 2010/11/17  
 CompanyID: GOLDER      UserID: ITRIMBLE      Folio #: 10-1346-0046 (4000)  
 Search Key: 1737 WESTMOUNT RD NW

#### Map Text Info

Parcel Address: 1737 WESTMOUNT RD NW      Ward: 07  
Community: HILLHURST      Map #: 17C

	Selected Feature	<b>Easements:</b>		Train Tracks	
	Registered Address		- Overland Drainage		LRT Tracks
	Lot Lines		- Utility		Manhole
	Roof Outlines		Rivers, Lakes, Canals		Green Space
	100m Buffer		Landfill Boundary		Landfill Setback



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### EnviroSite Report

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#### Query Information

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Request Number: 3573453      Charged: Yes      Response Date: 2010/11/17  
CompanyID: GOLDER      UserID: ITRIMBLE      Folio #: 10-1346-0046 (4000)  
Search Key: 1737 WESTMOUNT RD NW

---

#### Search Results for Parcel Address: 1737 WESTMOUNT RD NW

---

There is no SIMS (Site Information Management System) information that matches the search criteria.(#25330)

---

#### Search Results for Adjacent Address: 1738 KENSINGTON RD NW

---

#### Commercial/Industrial Users:

Company Name: CON-STAN INDUSTRIES OF CANADA  
Description: Cleaning Compounds Manufacturer  
Operating From: 1968      Operating To: 1970

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#### Search Results for Adjacent Address: 1814 KENSINGTON RD NW

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#### Commercial/Industrial Users:

Company Name: EXPERT RUG & UPHOLSTERY CLEANERS AND DYERS  
Description: Laundry / Dry Cleaners  
Operating From: 1962      Operating To: 1963

---

#### Search Results for Adjacent Address: 2131 BROWNSEA DR NW

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#### Environmental Reports

Document Title: Report: "Compilation Report, North Bow Area, Calgary, Alberta"  
Author: Keystone Environmental Ltd.  
Client: The City of Calgary  
Date: 2003/09/30

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#### Search Results for Adjacent Address: BOWNESS RD NW

---

#### Environmental Reports

Document Title: Report: "Report of Findings, Environmental Site Assessment, Phase I, North Bank-Westmount, Generally Bounded by Memorial Drive NW, 19 Street NW, Bowness Road NW and 17 Street NW, Calgary, Alberta"

Author: Keystone Environmental Ltd.

Client: The City of Calgary

Date: 2001/09/30

Document Title: Report: "North Bank - Westmount Ground-Penetrating Radar Survey - Final Report"

Author: Whytecliff Geophysics Ltd.

Client: Keystone Environmental Ltd.

Date: 2001/09/21



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




### EnviroSite Map Information

#### Query Information

Request Number: 3573472      Charged: No      Response Date: 2010/11/17  
 CompanyID: GOLDER      UserID: ITRIMBLE      Folio #: 10-1346-0046 (4000)  
 Search Key: 1740 BOWNESS RD NW

#### Map Text Info

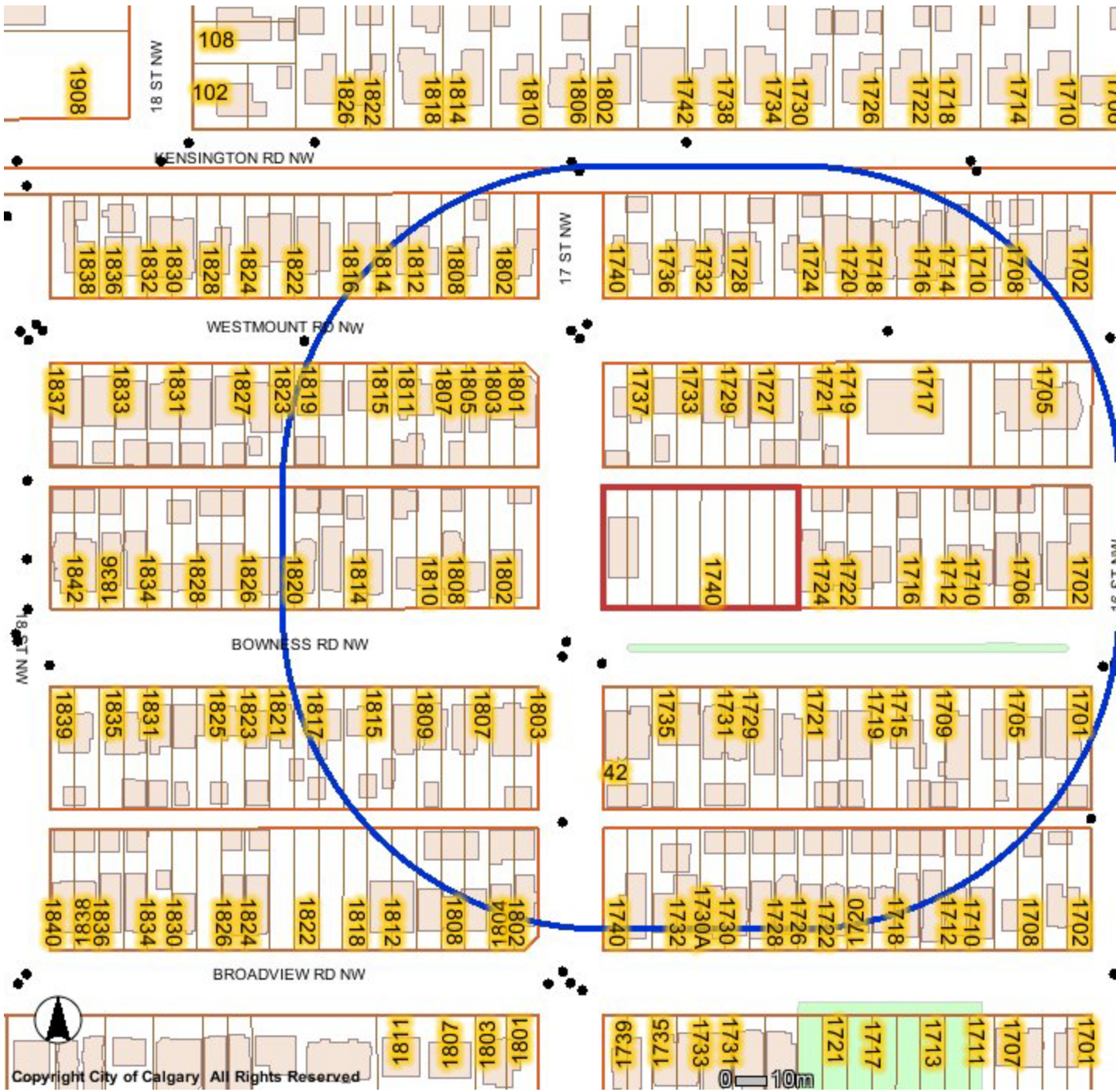
Parcel Address: 1740 BOWNESS RD NW      Ward: 07  
Community: HILLHURST      Map #: 17C

	Selected Feature	<b>Easements:</b>		Train Tracks	
	Registered Address		- Overland Drainage		LRT Tracks
	Lot Lines		- Utility		Manhole
	Roof Outlines		Rivers, Lakes, Canals		Green Space
	100m Buffer		Landfill Boundary		Landfill Setback



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## THE CITY OF CALGARY

### EnviroSite Report

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#### Query Information

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Request Number: 3573471      Charged: Yes      Response Date: 2010/11/17  
CompanyID: GOLDER      UserID: ITRIMBLE      Folio #: 10-1346-0046 (4000)  
Search Key: 1740 BOWNESS RD NW

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#### Search Results for Parcel Address: 1740 BOWNESS RD NW

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#### Environmental Reports

Document Title: Report: "Report of Findings, Environmental Site Assessment, Phase I, North Bank-Westmount, Generally Bounded by Memorial Drive NW, 19 Street NW, Bowness Road NW and 17 Street NW, Calgary, Alberta"

Author: Keystone Environmental Ltd.

Client: The City of Calgary

Date: 2001/09/30

Document Title: Report: "North Bank - Westmount Ground-Penetrating Radar Survey - Final Report"

Author: Whytecliff Geophysics Ltd.

Client: Keystone Environmental Ltd.

Date: 2001/09/21

---

#### Search Results for Adjacent Address: 2131 BROWNSEA DR NW

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#### Environmental Reports

Document Title: Report: "Compilation Report, North Bow Area, Calgary, Alberta"

Author: Keystone Environmental Ltd.

Client: The City of Calgary

Date: 2003/09/30



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











### EnviroSite Map Information

#### Query Information

Request Number: 3573426      Charged: No      Response Date: 2010/11/17  
 CompanyID: GOLDER      UserID: ITRIMBLE      Folio #: 10-1346-0046 (4000)  
 Search Key: 1939 BOWNESS RD NW

#### Map Text Info

Parcel Address: 1939 BOWNESS RD NW      Ward: 07  
Community: WEST HILLHURST      Map #: 17C

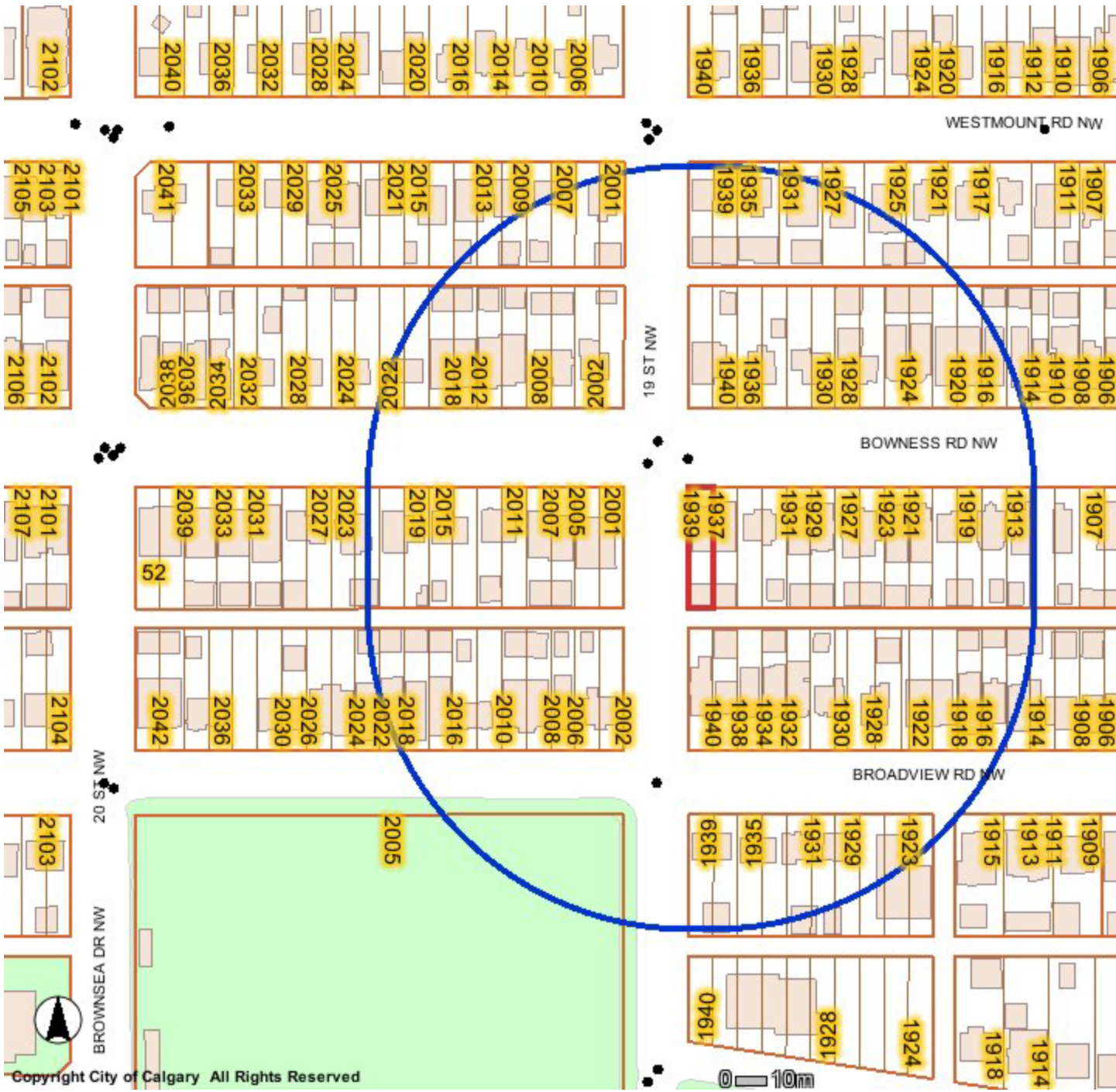
	Selected Feature	<b>Easements:</b>		Train Tracks	
	Registered Address		- Overland Drainage		LRT Tracks
	Lot Lines		- Utility		Manhole
	Roof Outlines		Rivers, Lakes, Canals		Green Space
	100m Buffer		Landfill Boundary		Landfill Setback



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## THE CITY OF CALGARY

### EnviroSite Report

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#### Query Information

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Request Number: 3573425      Charged: Yes      Response Date: 2010/11/17  
CompanyID: GOLDER      UserID: ITRIMBLE      Folio #: 10-1346-0046 (4000)  
Search Key: 1939 BOWNESS RD NW

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#### Search Results for Parcel Address: 1939 BOWNESS RD NW

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#### Environmental Reports

Document Title: Report: "Report of Findings, Environmental Site Assessment, Phase I, North Bank-Westmount, Generally Bounded by Memorial Drive NW, 19 Street NW, Bowness Road NW and 17 Street NW, Calgary, Alberta"  
Author: Keystone Environmental Ltd.  
Client: The City of Calgary  
Date: 2001/09/30

Document Title: Report: "North Bank - Westmount Ground-Penetrating Radar Survey - Final Report"  
Author: Whytecliff Geophysics Ltd.  
Client: Keystone Environmental Ltd.  
Date: 2001/09/21

---

#### Search Results for Adjacent Address: 2001 BOWNESS RD NW

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#### Petroleum Storage Tanks

Historical number of tanks from the Petroleum Tank Management Association(1996): 3

#### Commercial/Industrial Users:

Company Name: WHITE ROSE (Location # 304) / KIM'S HI-HO DISCOUNT GAS  
Description: Gas Station  
Operating From: 1946      Operating To: 2007

---

#### Search Results for Adjacent Address: 2131 BROWNSEA DR NW

---

#### Environmental Reports

Document Title: Report: "Compilation Report, North Bow Area, Calgary, Alberta"  
Author: Keystone Environmental Ltd.  
Client: The City of Calgary  
Date: 2003/09/30

Document Title: Report: "Phase I Environmental Site Assessment, Calgary United Soccer Association,

Author: Property at 2131 Brownsea Drive NW, Calgary, Alberta"  
Client: UMA Engineering Ltd.  
Date: 2003/11/18

Document Title: Report: "Analytical Sampling and Groundwater Monitoring; Well Decommissioning; Calgary United Soccer Association Leased Property, 2131 Brownsea Drive NW, Calgary, AB"

Author: UMA Engineering Ltd.  
Client: The City of Calgary  
Date: 2007/03/16

Document Title: Report: "Assessment Update to the Phase I ESA dated November 23, 2003 titled "Phase I Environmental Site Assessment Calgary United Soccer Association Property at 2131 Brownsea Drive NW, Calgary, Alberta"

Author: UMA Engineering Ltd.  
Client: The City of Calgary  
Date: 2005/09/27

Document Title: Report: "Phase II Environmental Site Assessment, Calgary United Soccer Association Leased Property, 2131 Brownsea Drive NW, Calgary, AB"

Author: UMA Engineering Ltd.  
Client: The City of Calgary  
Date: 2006/02/24

---

**Search Results for Adjacent Address: BROADVIEW RD FROM 14 ST NW TO 21 ST NW**

---

**Environmental Reports**

Document Title: Report: "Report on the Geotechnical Investigation for the Proposed Water Feedermain, Broadview Road from 14 Street to 21 Street NW"

Author: Sabatini Geotechnical Inc.  
Client: The City of Calgary  
Date: 1990/11/26



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











### EnviroSite Map Information

#### Query Information

Request Number: 3573429      Charged: No      Response Date: 2010/11/17  
 CompanyID: GOLDER      UserID: ITRIMBLE      Folio #: 10-1346-0046 (4000)  
 Search Key: 1939 WESTMOUNT RD NW

#### Map Text Info

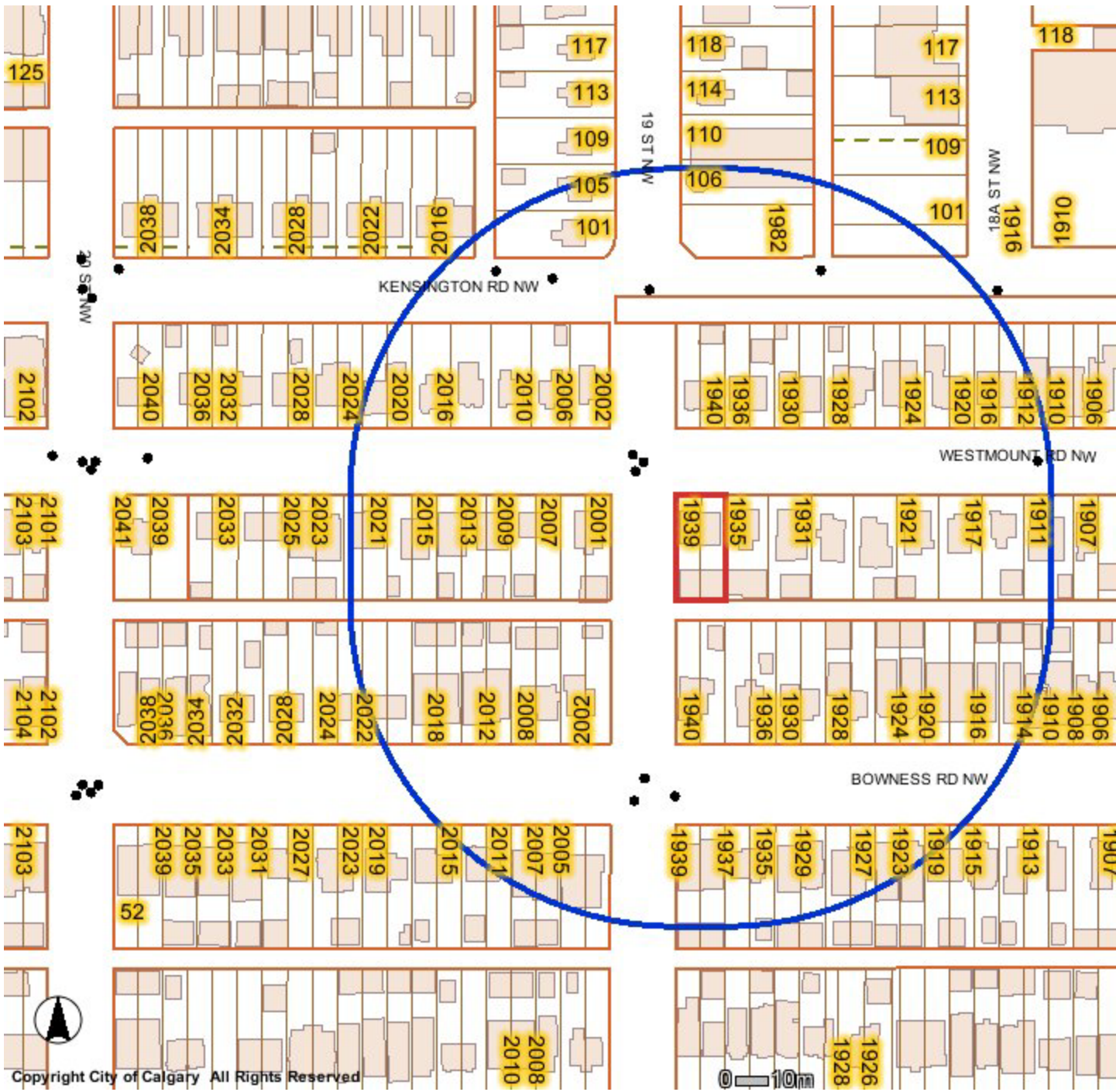
Parcel Address: 1939 WESTMOUNT RD NW      Ward: 07  
Community: WEST HILLHURST      Map #: 17C

	Selected Feature	<b>Easements:</b>		Train Tracks	
	Registered Address		- Overland Drainage		LRT Tracks
	Lot Lines		- Utility		Manhole
	Roof Outlines		Rivers, Lakes, Canals		Green Space
	100m Buffer		Landfill Boundary		Landfill Setback



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### EnviroSite Report

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#### Query Information

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Request Number: 3573428      Charged: Yes      Response Date: 2010/11/17  
CompanyID: GOLDER      UserID: ITRIMBLE      Folio #: 10-1346-0046 (4000)  
Search Key: 1939 WESTMOUNT RD NW

---

#### Search Results for Parcel Address: 1939 WESTMOUNT RD NW

---

There is no SIMS (Site Information Management System) information that matches the search criteria.(#25330)

---

#### Search Results for Adjacent Address: 2001 BOWNESS RD NW

---

#### Petroleum Storage Tanks

[Historical number of tanks from the Petroleum Tank Management Association\(1996\):](#) 3

#### Commercial/Industrial Users:

[Company Name:](#) WHITE ROSE (Location # 304) / KIM'S HI-HO DISCOUNT GAS  
[Description:](#) Gas Station  
[Operating From:](#) 1946      [Operating To:](#) 2007

---

#### Search Results for Adjacent Address: 2131 BROWNSEA DR NW

---

#### Environmental Reports

[Document Title:](#) Report: "Compilation Report, North Bow Area, Calgary, Alberta"

[Author:](#) Keystone Environmental Ltd.  
[Client:](#) The City of Calgary  
[Date:](#) 2003/09/30

[Document Title:](#) Report: "Report of Findings, Environmental Site Assessment, Phase I, North Bank-Westmount, Generally Bounded by Memorial Drive NW, 19 Street NW, Bowness Road NW and 17 Street NW, Calgary, Alberta"

[Author:](#) Keystone Environmental Ltd.  
[Client:](#) The City of Calgary  
[Date:](#) 2001/09/30

[Document Title:](#) Report: "North Bank - Westmount Ground-Penetrating Radar Survey - Final Report"

[Author:](#) Whytecliff Geophysics Ltd.  
[Client:](#) Keystone Environmental Ltd.  
[Date:](#) 2001/09/21



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### EnviroSite Map Information

#### Query Information

Request Number: 3573417      Charged: No      Response Date: 2010/11/17  
 CompanyID: GOLDER      UserID: ITRIMBLE      Folio #: 10-1346-0046 (4000)  
 Search Key: 1724 WESTMOUNT BV NW

#### Map Text Info

Parcel Address: 1724 WESTMOUNT BV NW      Ward: 07  
Community: HILLHURST      Map #: 17C

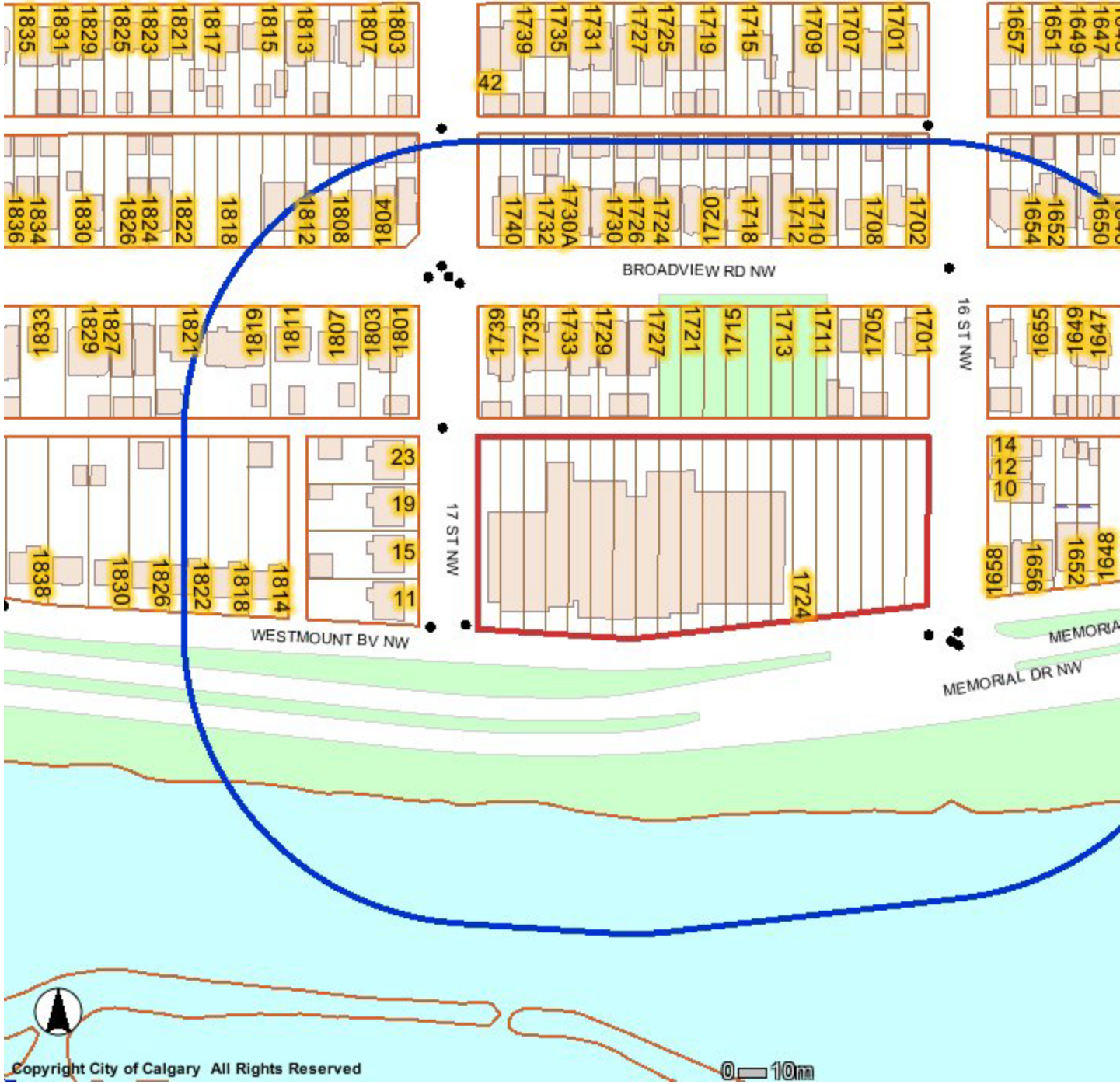
	Selected Feature	<b>Easements:</b>		Train Tracks	
	Registered Address		- Overland Drainage		LRT Tracks
	Lot Lines		- Utility		Manhole
	Roof Outlines		Rivers, Lakes, Canals		Green Space
	100m Buffer		Landfill Boundary		Landfill Setback



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### EnviroSite Report

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#### Query Information

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Request Number: 3573416      Charged: Yes      Response Date: 2010/11/17  
CompanyID: GOLDER      UserID: ITRIMBLE      Folio #: 10-1346-0046 (4000)  
Search Key: 1724 WESTMOUNT BV NW

---

#### Search Results for Parcel Address: 1724 WESTMOUNT BV NW

---

There is no SIMS (Site Information Management System) information that matches the search criteria.(#25330)

---

#### Search Results for Adjacent Address: 2131 BROWNSEA DR NW

---

#### Environmental Reports

Document Title: Report: "Compilation Report, North Bow Area, Calgary, Alberta"  
Author: Keystone Environmental Ltd.  
Client: The City of Calgary  
Date: 2003/09/30

---

#### Search Results for Adjacent Address: BOW RIVER

---

#### Environmental Reports

Document Title: Report: "Water Depth and Marine Refraction, Seismic Surveys along the Bow River in the Vicinity of the Abandoned Canada Creosote Site, Calgary, Alberta"  
Author: Geo-Physi-Con Co. Ltd.  
Client: Alberta Environment  
Date: 1992/08/20

---

#### Search Results for Adjacent Address: BOWNESS RD NW

---

#### Environmental Reports

Document Title: Report: "Report of Findings, Environmental Site Assessment, Phase I, North Bank-Westmount, Generally Bounded by Memorial Drive NW, 19 Street NW, Bowness Road NW and 17 Street NW, Calgary, Alberta"

Author: Keystone Environmental Ltd.  
Client: The City of Calgary  
Date: 2001/09/30

Document Title: Report: "North Bank - Westmount Ground-Penetrating Radar Survey - Final Report"

Author: Whytecliff Geophysics Ltd.  
Client: Keystone Environmental Ltd.  
Date: 2001/09/21

---

**Search Results for Adjacent Address: BROADVIEW RD FROM 14 ST NW TO 21 ST NW**

---

**Environmental Reports**

Document Title: Report: "Report on the Geotechnical Investigation for the Proposed Water Feedermain, Broadview Road from 14 Street to 21 Street NW"

Author: Sabatini Geotechnical Inc.  
Client: The City of Calgary  
Date: 1990/11/26



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










### EnviroSite Map Information

#### Query Information

Request Number: 3573421      Charged: No      Response Date: 2010/11/17  
 CompanyID: GOLDER      UserID: ITRIMBLE      Folio #: 10-1346-0046 (4000)  
 Search Key: 1940 WESTMOUNT BV NW

#### Map Text Info

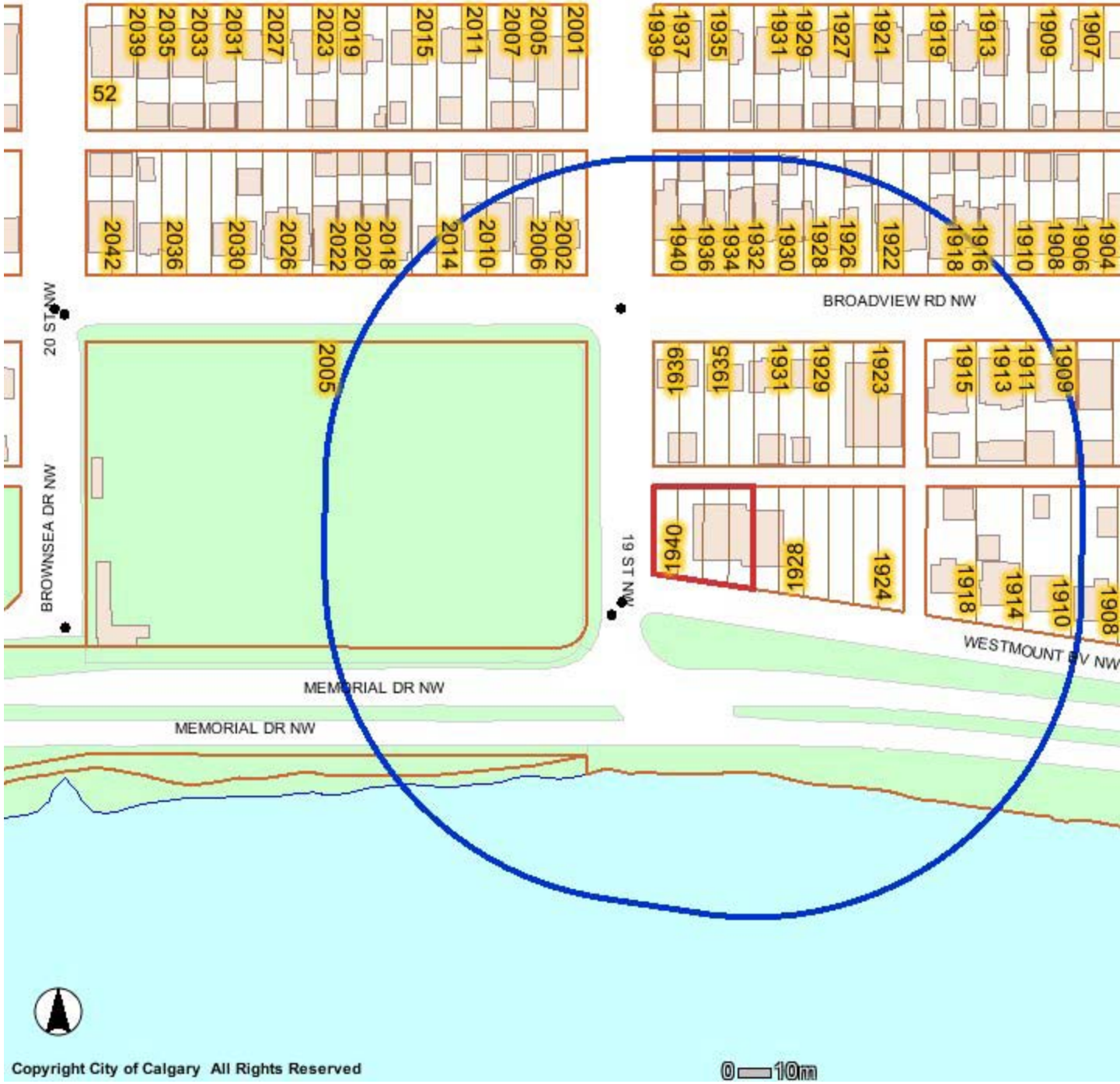
Parcel Address: 1940 WESTMOUNT BV NW      Ward: 07  
Community: WEST HILLHURST      Map #: 17C

	Selected Feature	<b>Easements:</b>		Train Tracks	
	Registered Address		- Overland Drainage		LRT Tracks
	Lot Lines		- Utility		Manhole
	Roof Outlines		Rivers, Lakes, Canals		Green Space
	100m Buffer		Landfill Boundary		Landfill Setback



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### EnviroSite Report

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#### Query Information

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Request Number: 3573420      Charged: Yes      Response Date: 2010/11/17  
CompanyID: GOLDER      UserID: ITRIMBLE      Folio #: 10-1346-0046 (4000)  
Search Key: 1940 WESTMOUNT BV NW

---

#### Search Results for Parcel Address: 1940 WESTMOUNT BV NW

---

There is no SIMS (Site Information Management System) information that matches the search criteria.(#25330)

---

#### Search Results for Adjacent Address: 1928 WESTMOUNT BV NW

---

#### Environmental Reports

Document Title: Report: "Hazardous Materials Survey at 1940 Westmount Blvd. NW, in Calgary, Alberta"

Author: EHS Partnerships Ltd.

Client: The City of Calgary

Date: 2007/10/25

Document Title: Report: "Phase II Environmental Site Assessment 1928 & 1940 Westmount Boulevard NW, Calgary, Alberta"

Author: UMA Engineering Ltd.

Client: The City of Calgary

Date: 2007/12/17

Document Title: Report: "Site Specific Risk Assessment - Indoor Air 1928 & 1940 Westmount Boulevard NW, Calgary, AB"

Author: UMA Engineering Ltd.

Client: The City of Calgary

Date: 2007/12/13

Document Title: Report: "Site Specific Risk Assessment 1928 & 1940 Westmount Boulevard NW Calgary, Alberta"

Author: UMA Engineering Ltd.

Client: The City of Calgary

Date: 2008/03/31

---

#### Search Results for Adjacent Address: 2131 BROWNSEA DR NW

---

#### Environmental Reports

Document Title: Report: "Compilation Report, North Bow Area, Calgary, Alberta"

Author: Keystone Environmental Ltd.  
Client: The City of Calgary  
Date: 2003/09/30

Document Title: Report: "Phase I Environmental Site Assessment, Calgary United Soccer Association, Property at 2131 Brownsea Drive NW, Calgary, Alberta"

Author: UMA Engineering Ltd.  
Client: The City of Calgary  
Date: 2003/11/18

Document Title: Report: "Analytical Sampling and Groundwater Monitoring; Well Decommissioning; Calgary United Soccer Association Leased Property, 2131 Brownsea Drive NW, Calgary, AB"

Author: UMA Engineering Ltd.  
Client: The City of Calgary  
Date: 2007/03/16

Document Title: Report: "Assessment Update to the Phase I ESA dated November 23, 2003 titled "Phase I Environmental Site Assessment Calgary United Soccer Association Property at 2131 Brownsea Drive NW, Calgary, Alberta"

Author: UMA Engineering Ltd.  
Client: The City of Calgary  
Date: 2005/09/27

Document Title: Report: "Phase II Environmental Site Assessment, Calgary United Soccer Association Leased Property, 2131 Brownsea Drive NW, Calgary, AB"

Author: UMA Engineering Ltd.  
Client: The City of Calgary  
Date: 2006/02/24

---

**Search Results for Adjacent Address: BOW RIVER**

---

**Environmental Reports**

Document Title: Report: "Water Depth and Marine Refraction, Seismic Surveys along the Bow River in the Vicinity of the Abandoned Canada Creosote Site, Calgary, Alberta"

Author: Geo-Physi-Con Co. Ltd.  
Client: Alberta Environment  
Date: 1992/08/20

---

**Search Results for Adjacent Address: BOWNESS RD NW**

---

**Environmental Reports**

Document Title: Report: "Report of Findings, Environmental Site Assessment, Phase I, North Bank-Westmount, Generally Bounded by Memorial Drive NW, 19 Street NW, Bowness Road NW and 17 Street NW, Calgary, Alberta"

Author: Keystone Environmental Ltd.  
Client: The City of Calgary  
Date: 2001/09/30

Document Title: Report: "North Bank - Westmount Ground-Penetrating Radar Survey - Final Report"

Author: Whytecliff Geophysics Ltd.  
Client: Keystone Environmental Ltd.  
Date: 2001/09/21

---

**Search Results for Adjacent Address: BROADVIEW RD FROM 14 ST NW TO 21 ST NW**

---

**Environmental Reports**

Document Title: Report: "Report on the Geotechnical Investigation for the Proposed Water Feedermain, Broadview Road from 14 Street to 21 Street NW"

Author: Sabatini Geotechnical Inc.  
Client: The City of Calgary  
Date: 1990/11/26



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## THE CITY OF CALGARY

### EnviroSite Map Information

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#### Query Information

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Request Number:  
3589680

Charged: No

Response Date: 2010/12/09

CompanyID: GOLDER

UserID: ITRIMBLE

Folio #: 10-1346-0046 (4000)

Search Key: 877 GREYHOUND WY SW

Response Message: The address search key you used is NOT A PARCEL ADDRESS. The City stores PARCEL, BUILDING, SUITE and ENTRYWAY addresses. The proper search key to use is the PARCEL ADDRESS.(#21150)

---

#### Map Text Info

---

Parcel Address: 850 16 ST SW

Ward: 08

Community: SUNALTA

Map #: 17C



Selected Feature



Registered Address



Lot Lines



Roof Outlines



100m Buffer

#### Easements:



- Overland Drainage



- Utility



Rivers, Lakes, Canals



Landfill Boundary



Train Tracks



LRT Tracks



Manhole



Green Space

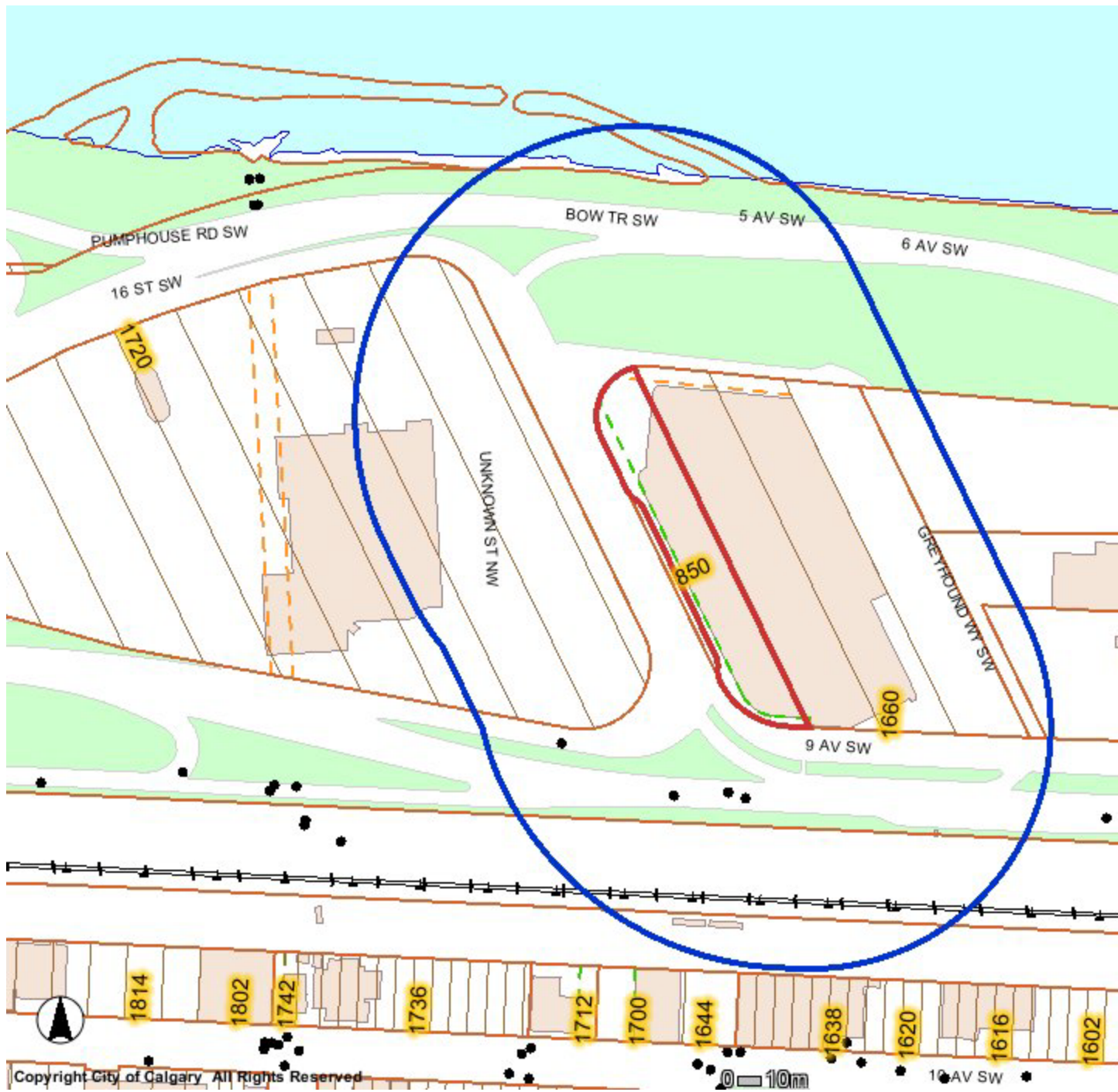


Landfill Setback



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## THE CITY OF CALGARY

### EnviroSite Report

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#### Query Information

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Request Number: 3589679      Charged: Yes      Response Date: 2010/12/09  
CompanyID: GOLDER      UserID: ITRIMBLE      Folio #: 10-1346-0046 (4000)  
Search Key: 877 GREYHOUND WY SW

Response Message: The address search key you used is NOT A PARCEL ADDRESS. The City stores PARCEL, BUILDING, SUITE and ENTRYWAY addresses. The proper search key to use is the PARCEL ADDRESS.(#21150)

---

#### Search Results for Parcel Address: 850 16 ST SW

---

#### Environmental Reports

Document Title: Report, "Environmental Site Assessment Greyhound Bus Terminal 850 - 16th Street SW, Calgary, Alberta".

Author: Meridian Environmental Inc.  
Client: Greyhound Canada Transportation Corp. & Viad Corp  
Date: 2002/11/21

Document Title: Report, "Screening-Level Risk Assessment and Proposed Risk Management Strategy Greyhound Bus Terminal 850 - 16th Street SW, Calgary, Alberta".

Author: Meridian Environmental Inc.  
Client: Greyhound Canada Transportation Corp. & Viad Corp  
Date: 2002/11/21

Document Title: Report: "Sampling and Analysis of Excavated Soil, Calgary Greyhound Terminal"

Author: Meridian Environmental Inc.  
Client: Earth Tech Canada Inc.  
Date: 2002/12/13

Document Title: Report: "Confidential - Environmental Sample Results"

Author: Earth Tech Canada Inc.  
Client: Greyhound Lines Inc.  
Date: 2002/03/20

Document Title: Report: "Environmental Sample Results, Bus Service Pit Locations"

Author: Earth Tech Canada Inc.  
Client: Greyhound Lines of Canada Ltd.  
Date: 2002/03/31

Document Title: Report: "Greyhound Canada Transportation Corp., Site Management Plan"

Author: Earth Tech Canada Inc.  
Client: Greyhound Canada  
Date: 2002/11/20

Document Title: Report: "Limited Phase II Environmental Site Assessment, 850 - 16 Street SW, Calgary, Alberta"

Author: Earth Tech Canada Inc.

Client: Greyhound Canada

Date: 2002/02/28

Document Title: Report: "Sampling and Analysis of Excavated Soil, Calgary Greyhound Terminal"

Author: Meridian Environmental Inc.

Client: Earth Tech Canada Inc.

Date: 2003/03/26

Document Title: Report: "Sampling and Analysis of Excavated Soil, Maintenance Pit Location, Calgary Greyhound Terminal"

Author: Meridian Environmental Inc.

Client: Earth Tech Canada Inc.

Date: 2003/02/19

Document Title: Report: "Subsurface Investigation Greyhound Bus Terminal, 850 - 16th Street SW, Calgary, Alberta"

Author: O'Connor Associates Environmental Inc.

Client: Greyhound Lines of Canada Ltd.

Date: 1996/03/22

Document Title: Report: Summary Report, Sampling and Analysis of Excavated Soil, Calgary Greyhound Terminal" (no parcel address or site map included in report)

Author: Meridian Environmental Inc.

Client: Earth Tech Canada Inc.

Date: 2003/10/20

#### **Commercial/Industrial Users:**

Company Name: RIVERSIDE LUMBER COMPANY

Description: Lumber Manufacturing/ Processing

Operating From: 1913 Operating To: 1916

Company Name: GREAT WEST DISTRIBUTORS LTD.

Description: Petrochemicals

Operating From: 1943 Operating To: 1971

---

#### **Search Results for Adjacent Address: 14 ST SW TO 24 ST SW**

---

#### **Environmental Reports**

Document Title: Report: "Canada Creosote Project, Supplementary Field Program"

Author: Thurber Engineering Ltd.

Client: Alberta Environment

Date: 1993/05/21

Document Title: Report: "Aquifer Analyses, Canada Creosote Site"

Author: CH2M Gore & Storrie Limited

Client: Alberta Environment

Date: 1996/04/03

Document Title: Report: "Canada Creosote Calgary, DNAPL Pumping Test, Final Report"

Author: Acres International Limited

Client: Alberta Environment

Date: 1994/03/31

Document Title: Report: "Canada Creosote Calgary, Site Inspection Report No. 003"

Author: Acres International Limited

Client: Alberta Environment

Date: 1994/02/07  
Document Title: Report: "Canada Creosote Site - Calgary, Report on 1992 Work"  
Author: Monenco AGRA Inc.  
Client: Acres International Limited  
Date: 1993/03/29  
Document Title: Report: "Groundwater Flow Modeling for Containment Wall Design, Canada Creosote Site"  
Author: Alberta Research Council  
Client: Alberta Environment H.E.L.P. Project  
Date: 1992/03/31  
Document Title: Report: "Historical Review, Former Canada Creosote and Surrounding Area, Calgary, AB"  
Author: Jacques Whitford Environment Limited  
Client: The City of Calgary  
Date: 2005/11/04  
Document Title: Report: "Hydrogeological and Geophysical Investigations, Clean Well Area, Canada Creosote Site, Calgary, Alberta"  
Author: CH2M HILL Engineering Ltd.  
Client: Alberta Environment  
Date: 1995/03/13  
Document Title: Report: "Recent Changes in Contaminant Levels in the Bow River Following the Installation of a Containment System at the Canada Creosote Site"  
Author: Water Sciences Branch, Water Management Division, National Resources Service  
Client: Alberta Environment  
Date: 1999/03/31  
Document Title: Report: "Report to ACRES INTERNATIONAL LTD. for River Engineering Investigation at Canada Creosote Site, Calgary, Alberta"  
Author: Golder Associates Ltd.  
Client: Alberta Environment  
Date: 1992/05/01  
Document Title: Report: "Water Depth and Marine Refraction Seismic Surveys Along the Bow River in the Vicinity of the Abandoned Canada Creosote Site, Calgary, Alberta"  
Author: Geo-Physi-Con Company Ltd.  
Client: Alberta Environment  
Date: 1992/08/01

---

**Search Results for Adjacent Address: 1700 10 AV SW**

---

**Environmental Reports**

Document Title: Report: "Environmental Site Assessment, Westerly 9 Feet of Lot 14 and Lots 15 to 17 Inclusive, Block 215, Calgary, Plan 5380V"  
Author: EBA Engineering Consultants Ltd.  
Client: Maillot Homes  
Date: 1998/01/13  
Document Title: Report: "Final Report, Environmental Site Assessment, Former Sunalta Batchplant, Calgary, Alberta"  
Author: EBA Engineering Consultants Ltd.  
Client: Consolidated Concrete Limited  
Date: 1992/10/01

**Commercial/Industrial Users:**

Company Name: CONSOLIDATED CONCRETE LTD.  
Description: Sand, Gravel & Concrete  
Operating From: 1963  
Operating To: 1993

Company PLACERS LTD.  
Name:  
Description: Sand, Gravel & Concrete  
Operating From: 1950 Operating To: 1954

---

**Search Results for Adjacent Address: 1720 BOW TR SW**

---

**Environmental Reports**

Document Title: Report, "Supplemental Historical Review 1720 Bow Trail SW, Calgary, Alberta 1720 Bow Trail SW, Calgary, Alberta Lots 13 to 25, Block E, Plan 5380V, 17-024-01 W5M".

Author: Matrix Solutions Inc.  
Client: The City of Calgary  
Date: 2009/09/25

Document Title: Report: "City of Calgary GSL Site, 1720 Bow Trail SW - Revised Tables with Residential/Parkland Criteria (Matrix 8334-501)"

Author: Matrix Solutions Inc.  
Client: The City of Calgary  
Date: 2010/03/08

Document Title: Report: "Phase II Environmental Site Assessment, 1720 Bow Trail SW, Calgary, Alberta, Lots 13 to 25, Block E, plan 5380V, 17-024-01 W5M"

Author: Matrix Solutions Inc.  
Client: The City of Calgary  
Date: 2010/02/01

Document Title: Report: "Preliminary Phase II Contamination Assessment Report for 1720 Bow Trail SW, Calgary Alberta"

Author: Great White North Environmental Services Limited  
Client: F.B. Boersema & Partners  
Date: 2003/05/31

**Petroleum Storage Tanks**

Historical number of tanks from the Petroleum Tank Management Association(1996): 3

**Commercial/Industrial Users:**

Company SHELLY QUARRY COMPANY  
Name:  
Description: Sand, Gravel & Concrete  
Operating From: 1909 Operating To: 1916

Company OGILVIE FLOUR MILLS COMPANY LTD  
Name:  
Description: Milling  
Operating From: 1914 Operating To: 1924

Company CALGARY BRICK & SUPPLY COMPANY LTD.  
Name:  
Description: Brick Manufacturing  
Operating From: 1914 Operating To: 1916

Company CITY PLANING MILLS  
Name:  
Description: Lumber Manufacturing/ Processing  
Operating From: 1911 Operating To: 1916

Company WESTERN CANADA STONE COMPANY LTD.  
Name:  
Description: Sand, Gravel & Concrete  
Operating From: 1912 Operating To: 1931

Company GSL CHEVROLET OLDSMOBILE CADILLAC 1986 LTD.

Name:

Description: Auto Dealership

Operating From: 1969

Operating To: 2008

Company: CANADA CREOSOTE / DOMTAR CREOSOTE PLANT

Name:

Description: Wood Preservation and Processing

Operating From: 1924

Operating To: 1971

---

**Search Results for Adjacent Address: 1895 9 AV SW**

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**Environmental Reports**

Document Title: Report: "Phase I/II Environmental Site Assessment, 1895 - 9 Avenue SW, Calgary, Alberta"

Author: Earth Tech Canada Inc.

Client: Greyhound Lines of Canada Ltd.

Date: 2001/10/24

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**Search Results for Adjacent Address: 905 15 ST SW**

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**Environmental Reports**

Document Title: Report: "Geotechnical Investigation for the Proposed Stampede Pontiac Dealership Located at 905 & 915 - 15th Street SW"

Author: Global Engineering and Testing

Client: Ulmer Auto Group

Date: 2007/11/30

Document Title: Report: "Environmental Site Assessment and Risk Management Plan, Stampede Pontiac Buick, 905 - 15 Street SW, Calgary Alberta"

Author: Jacques Whitford AXYS

Client: Glen Alan Ross Holdings Ltd.

Date: 2008/09/22

Document Title: Report: "Limited Phase II Environmental Site Assessment for the Property Located at 905 15 Street SW, Calgary Alberta"

Author: Global Engineering and Testing Ltd.

Client: Ulmer Auto Group

Date: 2007/09/12

Document Title: Report: "Phase II Environmental Site Assessment for the Property Located at 905 - 15 Street SW, Calgary Alberta"

Author: Global Engineering and Testing Ltd.

Client: Ulmer Auto Group

Date: 2008/06/30

Document Title: Report: "Phase I Environmental Site Assessment Report for the Property Located at 905 & 915 - 15 Street SW, Calgary, Alberta"

Author: Global Engineering and Testing Ltd.

Client: Ulmer Auto Group

Date: 2008/07/16

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**Search Results for Adjacent Address: 909 15 ST SW**

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**Environmental Reports**

Document Title: Report: "Phase II Environmental Assessment for Property Located at 907 and 909 - 15 Street SW, Calgary, Alberta"

Author: Hazmacon Environmental Services Inc.

Client: Hyatt Auto Sales Ltd.

Date: 1996/01/02  
Document Title: Report: "Site Assessment Up-Date for a Development Permit Application with the City of Calgary on the property located at 907 & 909 - 15 Street SW, Calgary, Alberta, Plan 7844HB; Block E; Lots 1 & 2"  
Author: Hazmacon Environmental Services Inc.  
Client:  
Date: 2000/08/30

**Commercial/Industrial Users:**

Company Name: ALSCO LTD.  
Description: Metal Manufacturing/ Machine Shop  
Operating From: 1954 Operating To: 1960

Company Name: HARTFIELD CHIEFTAIN SERVICE STATION AND LEASING  
Description: Gas Station and Car Rentals  
Operating From: 1979 Operating To: 1985

Company Name: CALGARY COACHWORKS  
Description: Auto Body Repair Shop  
Operating From: 1998 Operating To: 2001

Company Name: MERCEDES BENZ-HYATT AUTO GALLERY  
Description: Auto Dealership  
Operating From: 2001 Operating To: 2008

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**Search Results for Adjacent Address: 915 15 ST SW**

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**Commercial/Industrial Users:**

Company Name: RIVERSIDE LUMBER COMPANY  
Description: Lumber Manufacturing/ Processing  
Operating From: 1911 Operating To: 1916

Company Name: ACE SALVAGE LTD.  
Description: Auto Wrecking Yards  
Operating From: 1951 Operating To: 1958

Company Name: GLADE AUTOMOTIVE  
Description: Auto Repair  
Operating From: 1951 Operating To: 1960

Company Name: LONE STAR MOTORS (ALBERTA) LTD.  
Description: Auto Repair and Auto Dealership  
Operating From: 1972 Operating To: 1986





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Africa	+ 27 11 254 4800
Asia	+ 852 2562 3658
Australasia	+ 61 3 8862 3500
Europe	+ 356 21 42 30 20
North America	+ 1 800 275 3281
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[solutions@golder.com](mailto:solutions@golder.com)  
[www.golder.com](http://www.golder.com)

**Golder Associates Ltd.**  
**102, 2535 - 3rd Avenue S.E.**  
**Calgary, Alberta, T2A 7W5**  
**Canada**  
**T: +1 (403) 299 5600**

