

SITE C CLEAN ENERGY PROJECT

VOLUME 2 APPENDIX B

GEOLOGY, TERRAIN AND SOILS, PART 3

CONTAMINATED SITES TECHNICAL DATA REPORT

FINAL REPORT

November 2012

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Prepared for BC Hydro and Power Authority

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FINAL REPORT

Prepared by Hemmera Envirochem Inc.

November 2012

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EXECUTIVE SUMMARY

The purpose of this document is to identify the potential or actual presence of contamination on properties in the Project activity zone. Properties were ranked according to their potential to contain contaminated soils, soil vapour, surface water, groundwater and/or sediment, as well as their potential to present risk to human health and the environment. This information will be used to identify construction and operational measures required to minimize or avoid adverse effects associated with the potential or actual presence of contaminated sites.

The Technical Study Area encompasses the proposed Site C reservoir shoreline and adjacent slopes from the Peace Canyon Dam on the Peace River to the Site C Dam construction site; this includes the shoreline of the tributary valleys that would be inundated by the reservoir. The Technical Study Area also includes the location of the proposed Highway 29 re-alignment options, and project activity zones where clearing of vegetation and/or alteration of slopes may be required for other project components, including: construction access roads, transmission lines and source areas for rock and soil construction materials. The ranking of the risk of potential site contamination consisted of classifying properties into three categories or tiers, based on past and present land use and site activities. The three tiers, as defined below, were created by Hemmera for the purpose of this investigation. Hemmera has used this “tiered” approach on similar assignments as a method of evaluating the potential for contamination a large number of sites where the geographical areas intersects a wide variety of land uses.

- Tier 1 indicates that, based on the nature of current and historical site activities, sampling and analytical testing of soil, soil vapour, surface water, groundwater and/or sediment (i.e., a subsurface investigation, aka “a Phase 2 Investigation”) is recommended in order to determine the presence or absence of contamination;
- Tier 2 indicates that desktop review of additional information (i.e. site reconnaissance, interviews, etc.) is warranted to determine whether the site should be reclassified as Tier 1 (for future Phase 2 investigation) or Tier 3 (for no further investigation);
- Tier 3 indicates that based on current and historical site activities, no further investigation is recommended.

To determine potential historical uses of the site, aerial photographs and a number of environmental databases were reviewed. Field surveys were also conducted to assess current land use. Note that if adjacent properties appeared to be related (e.g., such as when a service station encompasses multiple legal lots), they were amalgamated into a single site. Otherwise, each site is based on individual legal lots.

Results from the investigation were as follows:

- Thirteen (13) sites, comprised of 25 properties, were classified as Tier 1, including: automotive repair operations, fuelling stations, landfills, and industrial storage.
- Thirty-three (33) sites, comprised of 84 properties, were classified as Tier 2, including: gravel pits, active mining, large scale agricultural operations and sites with potential current or historical industrial activity.
- Fourteen-hundred eighty-seven (1,487) properties were classified as Tier 3, including: agricultural, residential, and commercial properties where no evidence of actual or potential activities of concern was observed.

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1 INTRODUCTION

1.1 Background

The majority of the Technical Study Area for this report was historically vegetated or agricultural in nature. Areas near Hudson's Hope and Fort St. John were later developed industrially and commercially. Small residential and agricultural communities exist along the Peace River.

1.2 Objectives and Scope

The purpose of this document is to identify sites with potential for contamination where further investigation is warranted, based on a review and evaluation of current and historical site activities. This report provides a list of ranked sites for use in the Groundwater Regime Technical Data Report. This list will be used for the purpose of determining the risk of potentially contaminated sites to contact the rising groundwater table. Additional project components (outside the potential reservoir) were included in this report to create a list of potentially contaminated sites for reference for future construction activities.

Information has been generated and compiled from existing data sources and field surveys as described in **Section 2**, below.

1.3 Study Area

The Project Activity Zone (PAZ) encompasses the proposed Site C reservoir shoreline and adjacent slopes from the Peace Canyon Dam to the Site C Dam construction site; this includes the shoreline of the tributary valleys that would be inundated by the reservoir. The PAZ also includes the location of the proposed Highway 29 re-alignment options, and project components where clearing of vegetation and/or alteration of slopes may be required for other project components, including: construction access roads, transmission lines and source areas for rock and soil construction materials.

The Technical Study Area included all areas of the PAZ plus a 2 km buffer around the proposed reservoir in consideration of potential changes to the groundwater regime (see **Figure 1**). The 2 km buffer was chosen as a conservative estimate, greater than the maximum expected rise in groundwater, to ensure all possible potentially impacted properties were considered in this investigation.

The presence of contaminated sites would be expected to primarily affect groundwater quality during construction and operation of the Project. The rise in groundwater elevation expected as a result of the reservoir flooding may cause groundwater to come in contact with contamination sources. The presence of contaminated sites may also affect infrastructure works via the disposal or relocation of excavated soils from contaminated areas.

2 METHODS

2.1 Property Identification

Each property within the PAZ was assigned a unique identification (ID) number as some properties shared or were missing Parcel Identification Numbers (PIDs) and/or legal descriptions. Note that individual sites consist of legal lots, unless it was found that adjacent properties shared a common land use (e.g., a service station encompassing multiple legal lots); in such a case, the properties were amalgamated into a single site for representative assessment.

2.2 Review of Existing Data Sources

Data sources reviewed and used to gain knowledge of the history of the site include aerial photographs and a number of environmental databases, as detailed in the following sub-sections.

Areas within the Technical Study Area and outside of the proposed reservoir (i.e., transmission lines, access roads and proposed construction material source areas) were evaluated through a review of current aerial photographs and/or historical aerial photographs, a field survey, and a review of environmental databases.

2.2.1 Aerial Photograph Review

An aerial photograph review was conducted to document historical and current activities within the Technical Study Area and to identify potential sources of contamination and operations/activities of potential concern.

Historical and current aerial photographs were obtained from the University of British Columbia Geographic Information Centre and Google Earth, respectively, for areas within the TSA. Aerial photographs taken in the following years were available for review: 1945, 1954, 1964, 1967, 1977, 1981, 1996, 1997, and 2012.

2.2.2 Environmental Databases

An Ecolog Environmental Risk Information Services (ERIS) report was obtained May 11, 2011. The report provides historical environmental information for properties through an environmental database search. A summary of the environmental databases searched is provided in **Appendix A**. The search was conducted in the area located up to 2 km north of the upper limit of the proposed Site C reservoir. The area south of the reservoir was not selected for a database search, as aerial photographs indicated little anthropogenic activity in that area.

An updated report was obtained on October 17, 2012. The report indicated the presence of an additional oil and gas well and additional water well; no other changes were identified. The new information was incorporated into the report.

2.2.3 Field Surveys

To assess current land use, field surveys were conducted on September 28, 29 and 30, 2011 from publically accessible areas (i.e., roads, parks). Properties visible from Highway 29 and public roads in Hudson's Hope, Fort St. John and Lynx Creek within the Technical Study Area were included in the field survey. Approximately 35% of the Technical Study Area was assessed in these surveys. For the remainder of properties (those not accessible for the field surveys), current land use is characterized through aerial photographs.

Field staff looked for evidence of current and historical industrial or commercial usage, as well as the presence of potential contaminant sources (i.e., fuel tanks, evidence of spills) on the properties.

Additionally, interviews were conducted with personnel familiar with the area during the site visits, including:

- Elinor Morrissey, Manager, Hudson's Hope Museum
- Shannon Anderson, Deputy Chief Administrative Officer, Peace River Regional District
- Bruce Simard, General Manager of Development Services, Peace River Regional District
- Mike Carter, Director of Public Works, District of Hudson's Hope

Interview information is included in **Appendix A**.

2.2.4 Summary of Data Sources Reviewed

A summary of the sources reviewed is provided in the following table, **Table 1**.

Table 1 – Sources Reviewed

TSA Component	Aerial Photographs	Environmental Databases	Field Survey - 2011	Information from BC Hydro
2 km buffer – north of proposed reservoir	X	X	X	X
2 km buffer – south of proposed reservoir	X	-	-	X
Transmission lines	X	-	-	X
Access Roads	X	-	-	X
Proposed Construction Materials Source Areas outside of 2 km search buffer	X	-	-	X

2.3 Site Classification

Properties were evaluated based on their past and present land uses, and for their potential to contain contaminated media and present risk to human health and the environment. The properties were classified as one of three tier categories based on the review of existing data sources (as described in **Section 2.2**). The three tiers were created by Hemmera for the purpose of this investigation, and are defined below. Hemmera has used this “tiered” approach on similar assignments as a method of evaluating the potential for contamination a large number of sites where the geographical areas intersects a wide variety of land uses. Note that Tier 1 and 2 properties were grouped into “sites” where adjacent properties shared current or former land uses and/or activities of potential concern. Tier 3 properties were not grouped into sites, and are discussed as individual properties, based on legal property boundaries.

- Tier 1 classification:** based on the nature of the identified current and historical site activities, further investigation is recommended. For the Tier 1 sites further investigation is expected to include sampling and analytical testing of soil, soil vapour, surface water, groundwater and/or sediment (i.e., a subsurface investigation, aka “a Phase 2 Investigation”) in order to determine the presence or absence of contamination;

- **Tier 2 classification:** further desktop review of additional information (i.e. historical records, site reconnaissance, interviews, etc.) is recommended to determine whether the site should be reclassified as Tier 1 (for future Phase 2 investigation) or Tier 3 (for no further investigation);
- **Tier 3 classification:** based on review of the current and historical site activities, no further investigation is recommended.

The properties were further classified within the Tiers as being located either: (1) within the reservoir area (i.e., the property is below the future reservoir water line); or, (2) as those within the Technical Study Area but not within the reservoir (i.e., the property is above the future reservoir water line).

3 RESULTS

Based on the review of exiting data sources and field surveys, the sites and properties identified within the Technical Study Area were classified as follows:

- **Tier 1:** 13 sites, comprised of 25 properties. The Tier 1 properties generally include: automotive repair operations, fuelling stations, landfills, and industrial storage.
- **Tier 2:** 33 sites, comprised of 84 properties. The Tier 2 properties include: gravel pits, active mining, large scale agricultural operations and sites with potential current or historical industrial activity.
- **Tier 3:** 1,487 properties. The Tier 3 properties include agricultural, residential, and commercial properties where no evidence of actual or potential activities of concern was observed.

The following table, **Table 2**, summarizes the general property use of the Tier 1, 2, and 3 sites. Subtotals indicate the number of Tier 1, 2, and 3 properties that are located within the reservoir area (i.e., will be flooded), and also those located within the Technical Study Area but not within reservoir (i.e., will not be flooded).

Table 2 – Summary of Results by Property Use

Actual or Suspected Property Use		Tier 1 Sites	Tier 2 Sites	Tier 3 Properties
Landfill		3	3	0
Service Station		3	4	0
Public Works Facility		3	2	0
Industrial		1	6	0
Automotive Repair		3	2	0
Mining		0	2	0
Gravel Pit		0	3	2
Proposed Construction Materials Source Areas	Portage Mountain Quarry	0	0	2
	Del Rio Pit	0	1	0
	85 th Avenue Industrial Lands	0	1	0
	Area E	0	1	0
	Wuthrich Quarry	0	1	0
	West Pine Quarry	0	1	0
Agricultural/Vegetated/Residential		0	4	1,059
Commercial		0	2	28
Cemetery		0	0	2
Municipal		0	0	30
Other		0	0	364
<i>Subtotal: Within reservoir (i.e. will be flooded)</i>		<i>1</i>	<i>5</i>	<i>383</i>
<i>Subtotal: Outside reservoir but within the Technical Study Area:</i>		<i>12</i>	<i>28</i>	<i>1,104</i>
Total:		13	33	1,487

4 CLOSURE

A 2 km buffer and the Project Activity Zone were evaluated in this investigation for the presence of potentially contaminated sites. The evaluation included a review of historical aerial photographs and relevant environmental databases, as well as field surveys and interviews. The study concluded the following:

- Thirteen sites were identified as Tier 1, indicating that the potential for contamination exists and subsurface investigation would be required to evaluate the presence or absence of actual contamination;
- Thirty-three sites were identified as Tier 2, indicating that insufficient data was available to categorize as either Tier 1 or 3, and further desktop review is necessary to evaluate the potential for contamination and ultimately reclassify the site as Tier 1 or 3.
- The remaining 1,487 properties were classified as Tier 3, indicating that sufficient information was available and nothing was identified to suggest potential for contamination, therefore further investigation is not recommended.

These sites have potential for contamination and further investigation is warranted. This information is used in the Groundwater Regime Technical Data Report.

Hemmera has prepared this report for the sole benefit of BC Hydro for the purpose of documenting baseline conditions in anticipation of an environmental assessment under the British Columbia *Environmental Assessment Act* and the *Canadian Environmental Assessment Act*. The report may not be relied upon by any other person or entity, other than for its intended purposes, without the express written consent of Hemmera and BC Hydro. Any use of this report by a third party, or any reliance on decisions made based upon it, are the responsibility of such third parties.

BC Hydro has the right to reproduce, use and rely upon this Report for proper purposes in planning, operating and maintaining the electrical generation, transmission and distribution system in the Province of British Columbia, including, without limitation, the right to deliver this Report to regulatory authorities in support of or in response to regulatory inquiries and proceedings, including environmental assessment.

The information provided in this report was compiled from existing documents and data provided by BC Hydro and by field data compiled by Hemmera. This report represents the best professional judgment of our personnel available at the time of its preparation. Hemmera reserves the right to modify the contents of this report, in whole or in part, to reflect any new information that becomes available. If any conditions become apparent that differ significantly from our understanding of conditions as presented in this report, we request that we be notified immediately to reassess the conclusions provided herein.

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5 REFERENCES

Ecolog ERIS, 2011. ERIS Project Number 20110425030: Peace Canyon Dam, Hudson's Hope to Fort St. John, BC, Custom Report – 2 km Search Radius. May 11, 2011.

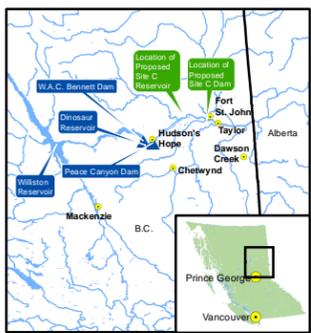
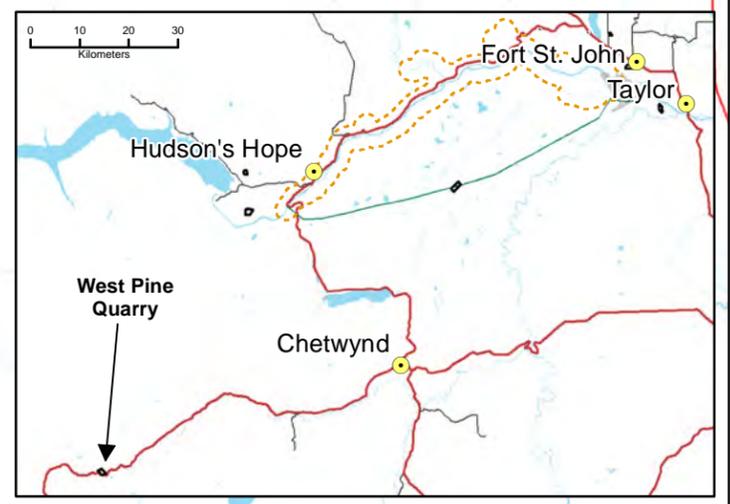
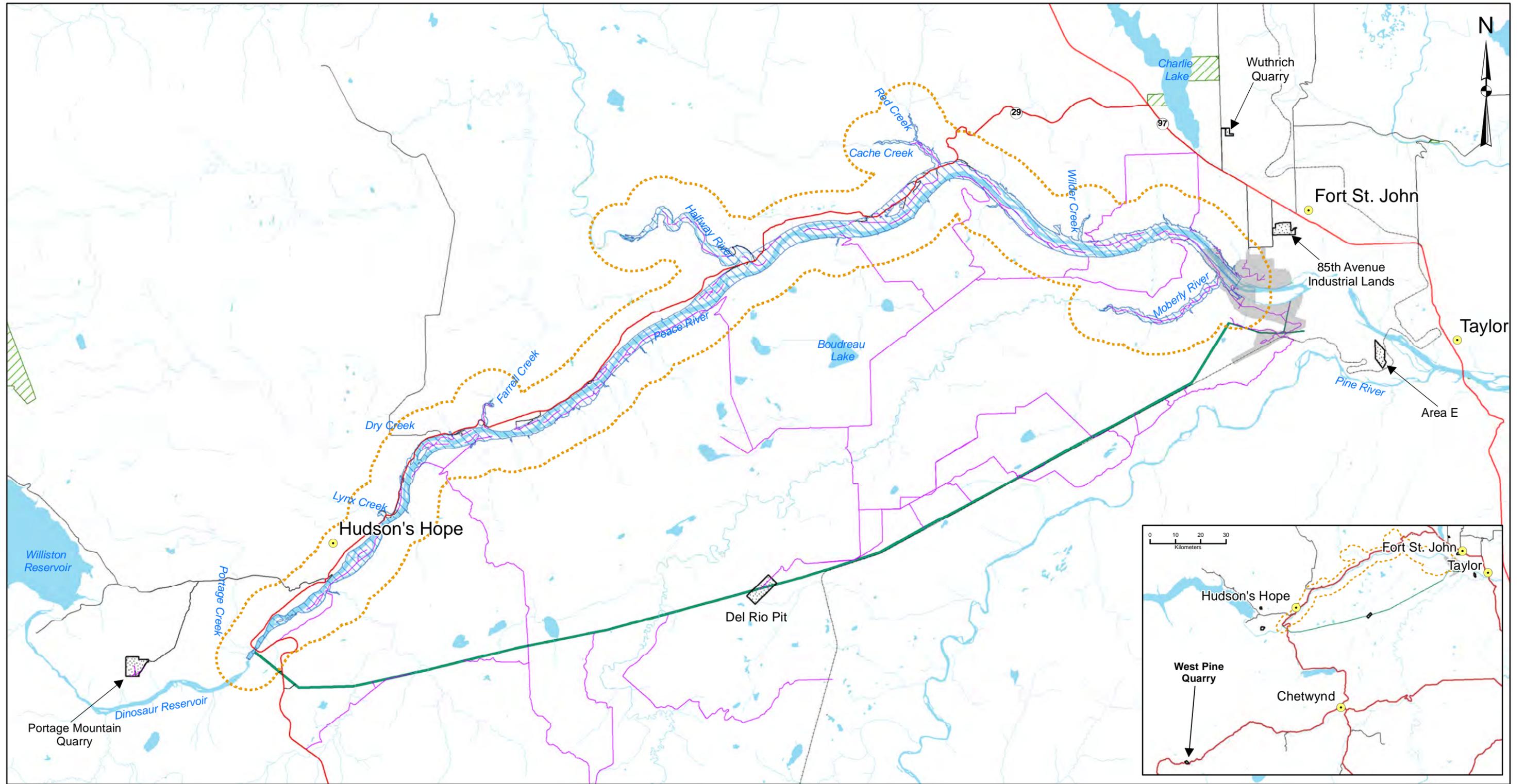
Aerial photographs for the Peace River Region, obtained from the University of British Columbia Geographic Information Centre, dated 1945 to 1997.

Aerial photographs obtained from Google Earth Inc, dated 2012. Available at: <http://www.google.com/earth/index.html>.

FIGURES

Please see the following pages.

Figure 1: Technical Study Area Overview



Map Notes:
 1. Datum/Projection: NAD83/UTM Zone 10N
 2. Proposed Reservoir Area (461.8 m maximum normal elevation) from Digital Elevation Models (DEM) generated from LIDAR data acquired July/August 2006.

Legend

- Existing Highway
- Existing Road
- Access Road
- Existing Railway
- Proposed Reservoir (461.8m)
- Proposed Dam Site Area
- 2 km Search Buffer
- Transmission Line Right-of-Way
- Protected Areas, Provincial Parks, Regional Parks, and Ecological Reserves
- Offsite Construction Material Locations

1:250,000



Figure 1 Technical Study Area Overview			
Date	November 2012	DWG NO	1016-C14-B5598 R 0

APPENDIX A

Summary of Environmental Databases

ECOLOG ERIS DATABASES

Database	Active Dates	Description
Assessment Report Indexing System	1947 – May 2010	The assessment reports provided by the Geological Survey Branch contain summary information for reports on geology, geophysics, geochemistry, drilling, prospecting, and physical work.
Authorizations (formerly Certificates of Approval)	1957 – October 2010	The database includes authorization types such as: Petroleum Storage & Distribution Facilities (Storm Water Regulation), Hazardous Waste Regulation, Asphalt Plant Regulation, Oil & Gas Waste Regulation (Facility Registration), Permits, Organic Matter Recycling Regulation, and Vehicle Dismantling & Recycling Industry Environmental Planning Regulation.
Automobile Wrecking and Supplies	2001 – June 2010	This database provides an inventory of all known locations that are involved in the scrap metal, automobile wrecking/recycling, and automobile parts and supplies industry.
BC Oil and Gas Wells	1918 – January 2006	The BC Oil and Gas Wells database was collected from the BC Oil and Gas Commission and is a comprehensive database that includes information regarding well number, well name, operator name, location, depth, status, as well as drill date and type.
Chemical Register	1999 – June 2010	This database includes a listing of locations of facilities within BC that either manufacture or distribute chemicals.
Coal Tar Sites	1992	This one-time study is an inventory of all known and historical coal tar sites, identifying sites that produced coal tar and other related tars during the mid-1800s to the mid-1900s.
Complicate and Enforcement Summary	1990 – March 2010	This database summarizes orders, tickets and convictions issued by the Ministry of the Environment under applicable ministry and federal legislation. This reporting summary began in January 2007, replacing Non-Compliance Reports by the former Ministry of Water, Land, and Air Protection (MWLAP). See the <i>Non-Compliance Reports</i> database for more information.
Wastewater Discharge Inventory	1957 – 1995	This inventory contains information regarding direct dischargers of toxic pollutants for the following operations: Industrial; commercial; agricultural; mining; municipal; urban; aquaculture; and pulp and paper, operating under provincial permits. The program was discontinued and therefore the database will not be updated.
Environmental Effects Monitoring	1992 – 2007	This program assesses the effects and effluent from industrial or other sources on fish, fish habitat and human usage of fisheries resources. This database provides information on the mill name, geographical location and sub-lethal toxicity data.
ERIS Historical Searches	1999 – September 2010	EcoLog ERIS has compiled a database of all environmental risk reports completed since March 1999.
Environmental Issues Information System	1992 – 2001	This system was part of a program established to determine the location and severity of contaminated sites on inhabited First Nation reserves.
Federal Convictions	1988 – June 2007	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).

Database	Active Dates	Description
Contaminated Sites on Federal Land	June 2000 – January 2011	This inventory maintained by the Treasury Board of Canada Secretariat lists known contaminated sites held by various federal departments and agencies.
Commercial Fisheries	1993 – 2009	The Fisheries, Aquaculture & Commercial Fisheries Branch of MWLAP database of fish processing plant approvals, licenses and activities.
Fisheries and Oceans Fuel Storage Tanks	1964 – September 2003	Fisheries and Oceans Canada (DFO) maintains an inventory of all aboveground and underground fuel storage tanks located on DFO property or controlled by DFO.
Waste Generators Summary	1993 – September 2010	This database contains the registration number, company name, and address of registered waste generators, under the BC <i>Special Waste Regulation</i> .
Indian and Northern Affairs Fuel Tanks	1950 – August 2003	The Department of Indian and Northern Affairs Canada (INAC) maintains an inventory of all aboveground and underground fuel storage tanks located on both federal and crown land.
Lumber Mills	1997 – 2008	This database provides information regarding the general location and estimated annual output capacity of major timber processing facilities within the province of British Columbia.
Canadian Mine Locations	1998 – 2009	This national database provides listings on mines (listed as public companies) dealing primarily with precious metals and hard rocks.
Minerals Deposits Database	1852 – November 2010	The Ministry of Energy and Mines maintains a database of more than 12,000 metallic mineral, industrial mineral and coal deposits and occurrences within British Columbia.
National Analysis of Trends in Emergencies System	1974 – 1994	This database was established by Environmental Canada for the voluntary reporting of significant spill incidents.
Non-Compliance Reports	1990 – March 2001	From 1990 to March 2001 MWLAP maintained a reporting system that identified any reported concern that pertained to compliance with authorized waste management permits or plans, approvals, orders, operational certificates and regulations, or any other activity under the Waste Management Act. This reporting system was discontinued in April of 2001.
National Defence and Canadian Forces Fuel Storage Tanks	Up to May 2001	The Department of National Defence (DND) and the Canadian Forces maintain an inventory of all aboveground and underground fuel storage tanks located on DND lands.
National Defence and Canadian Forces Spills	March 1999 – August 2010	DND and the Canadian Forces maintain an inventory of spills to land and water.
National Defence and Canadian Forces Waste Disposal Sites	2001 – April 2007	DND and the Canadian Forces maintain an inventory of waste disposal sites located on DND lands.
National Energy Board Wells	1920 – Feb 2003	This database contains information regarding onshore and offshore oil and gas wells that are outside provincial jurisdiction(s) and are thereby regulated by the National Energy Board.
National Environmental Emergencies System	1974 – 2003	The Emergencies program implemented this reporting system for spills or hazardous substances.
National PCB Inventory	1988 – 2008	This inventory includes information on in-use PCB containing equipment in Canada including federal, provincial and private facilities.

Database	Active Dates	Description
National Pollutant Release Inventory	1993 – 2009	Environment Canada has defined this inventory 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.
Oil and Gas Wells	1988 – March 2011	The Nickle's Energy Group collects information on drilling activity including operator and well statistics.
Canadian Pulp and Paper	1999, 2002, 2004, 2005, 2009	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.
Inventory of PCB Storage Sites	1989, May 1993 – September 2010	MWLAP/MOE maintains a database of all active PCB waste storage sites within the Special Waste Information System.
Parks Canada Fuel Storage Tanks	1920 – January 2005	Canadian Heritage maintains this inventory of all known fuel storage tanks operated by Parks Canada, in both National Parks and at National Historic Sites.
Potentially Contaminated Sites (Site Registry)	1985 – April 2011	This information was collected from MOE and is listed on the Site Registry. All records pertain to sites that have been investigated by the Ministry due to environmental concerns.
Pesticide Register	1989 – April 2010	This is a database of individuals who apply for a service or vendor license for the use of registered pesticides.
Private Aggregate Inventory	1975 – 1996	Within BC, aggregate pits are designated as mines; in 1994, the Geological Survey Branch initiated the Aggregate Program, in order to establish an inventory of natural and crushed aggregate pits. This database was a one-time inventory and will not be updated.
Public Aggregate Inventory	1960 – 2001	Information about public aggregate pits in BC is collected and managed by the Ministry of Transportation and Highways. Data has been gathered on more than 2000 pits, in respect to pit name, type, and geographical location.
Waste Receivers Summary	1992 – 2009	This database represents registered receivers of regulated wastes. This database is part of a larger Special Waste Information System database controlled by the BC MOE.
Retail Fuel Storage Tanks	1999 – June 2010	This database includes an inventory of known fuel outlet locations (including marinas) that have on the property gasoline, petroleum oil, natural gas and/or gas propane storage tanks.
Scott's Manufacturing Directory	1999 – March 2011	This database contains over 17,000 BC manufacturers. Listings are voluntary, but it remains the most comprehensive available database of manufacturers in BC.
Transport Canada Fuel Storage Tanks	1970 – March 2007	Inventory of fuel tanks owned and operated by Transport Canada.
Waste Disposal Site Inventory	1980 – 1998	This inventory pertains to active, regulated waste disposal sites within BC. Information on Waste Disposal Sites after 1998 is contained within the Authorizations database.
Water Well Information System	1880 – February 2011	This database was collected from the Groundwater Information Centre of MWLAP and contains over 90,000 records.

Interview Record for Site C

Project Number: 398-122.02

Hemmera: Kimberly Hancock/Seth Kingsbury

Date: September 30,2011

Peace River Regional District: Shannon Anderson and
Bruce Simard

-
- The Fort St. John Solid Waste Landfill was established circa the 1960s/70s.
 - A landfill was historically located at the lookout (at the end of 100th street) – circa the 1940s.
But details not known

 - No records available for the lagoons or sewers. One outfall line services Charlie Lake, and runs south following 273 Road.

 - Details on the community plan map – available online.
 - GIS mapping data also available online.
 - The project area is mostly agricultural and vegetated to their knowledge.
 - No known mines along the project area
 - No water wells records available.
 - No historical records available.

 - Most heating along the project area outside of Hudson’s Hope and Fort St. John would be propane, heating oil or wood. This includes south of Hwy 29, just outside Fort St. John.

 - Several dug wells exist but very few wells would likely be registered.
 - Surface water licenses are registered with PRRD
 - A spring is present below a gravel pit – “Watson’s Spring”, near the Duck’s Unlimited Slough.

Interview Record for Site C

Project Number: 398-122.02

Date: September 29,2011

Hemmera: Kimberly Hancock/Seth Kingsbury

Hudson's Hope Museum: Elinor

Photos and maps were reviewed at the museum, but no areas of interest were identified.

- The empty lots located on the west side of Hudson's Hope were historically an RV Park.
- A coal mine mentioned in historical records was Gething Coal Mine, located out of the project area.
- The excavation noted during the Hudson's Hope windshield visit was a bar that burnt down approximately 4 years ago.
- A machinery yard and sawmill were noted in historical records, but no details were given of their historical location.

Interview Record for Site C

Project Number: 398-122.02

Date: September 29,2011

Hemmera: Kimberly Hancock/Seth Kingsbury

District of Hudson's Hope: Mike Carter, Rhonda Eastman

Zoning maps were available for review – photos were taken and copy of the city plan was emailed.

- No information available on historical properties
- Lagoons for the sanitary system are located at Parcel 659.

- A historical gas station was present Past Don Phillips Way, on Canyon Drive (dates unknown)
- A dry cleaners was present at the location of the current thrift store, but dry cleaning was bussed out to Fort St. John, and not done on the premises.
- Automotive repair was done at the current location of a mini-mart (883)