

Respect

Excellence

Integrity

Leadership



Contaminated Site Remediation Former Weather Station at Ennadai Lake, Nunavut

Bidders Conference

March 14th, 2013

Winnipeg, MB

Presented By:

Erika Solski, AANDC

Michael Bernardin, PWGSC

Marc Poot, PWGSC



Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

Canada



Affaires autochtones et
Développement du Nord Canada

Aboriginal Affairs and
Northern Development Canada



**Affaires autochtones et
Développement du Nord Canada**

**Aboriginal Affairs and
Northern Development Canada**



Nunavut Regional Office (NRO)

March 14th, 2013



AANDC Update

- Presentation Topics:

- Nunavut Contaminated Sites Program
- Ennadai Lake Remediation Project
 - Objectives & Introduction
 - History
 - Permitting





Nunavut Contaminated Sites Program

- The Nunavut Contaminated Sites Program (CSP) is part of the Nunavut Regional Office (NRO) of Aboriginal Affairs and Northern Development Canada (AANDC) based in Iqaluit
- Responsible for managing contaminated sites on federal lands within Nunavut
- The majority of these sites are the result of mining or military activity





Nunavut Contaminated Sites Program (CSP) – Database

- The CSP database of contaminated sites contained over 300 potential contaminated sites, all of these sites have now been assessed
 - Once a site is assessed, it is ranked using the National Classification System for Contaminated Sites (NCSCS) and high priority sites are added to our long-term plan
- Remedial work **is** complete **for** 12 sites in Nunavut
 - North Rankin Inlet Mine
 - Iqaluit Upper Base
 - Resolution Island* (C&M)
 - Radio Island
 - CAM-F Sarcpa Lake
 - FOX-C Ekaugad Fjord
 - Robert's Bay
 - Cape Christian
 - PIN-B Clifton Point
 - Bear Island
 - **CAM-D Simpson Lake**
 - **PIN-D Ross Point & PIN-E Cape Peel**





Nunavut Contaminated Sites Work Plan – 2013-2014

- Remediation
 - Hope Lake
 - Padloping & Durban Island (FOX-E)
- Mobilization
 - CAM-A Sturt Point
- Tender/Licensing
 - Ennadai Lake
 - Contwoyto Lake
 - Nottingham Island
- Phase III Environmental Site Assessments
 - FOX-D Kivitoo
 - CAM-C Matheson Point
 - CAM-E Keith Bay
 - Bathurst Island Sites





ENNADAI LAKE





Ennadai Lake - Project Objectives

- To minimize the environmental impact to humans and wildlife
- To ensure the project complies with all legal requirements
- To ensure the project follows all Federal and/or Departmental policies
- To improve public perception and attitude towards remediation activities

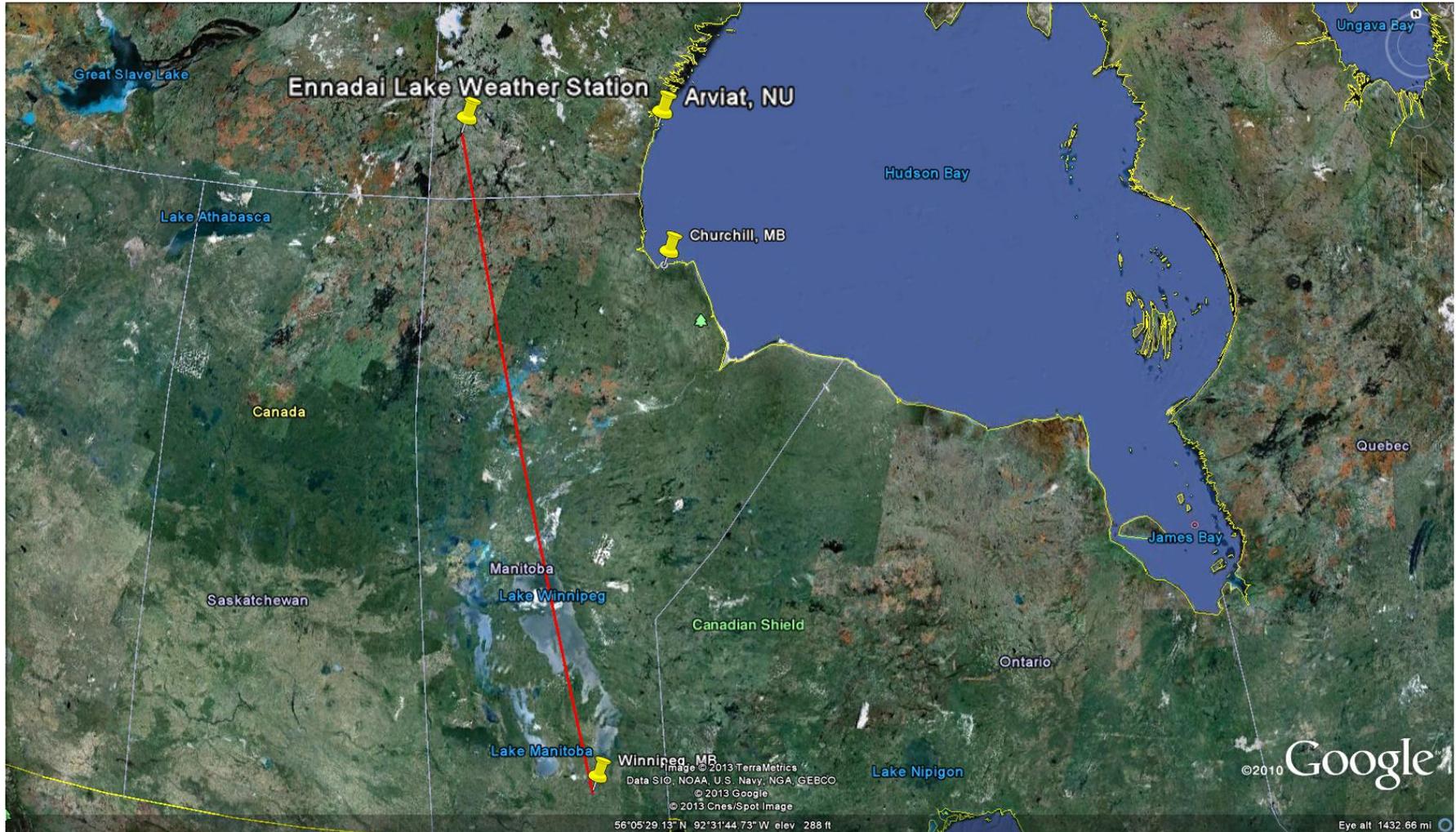


ca



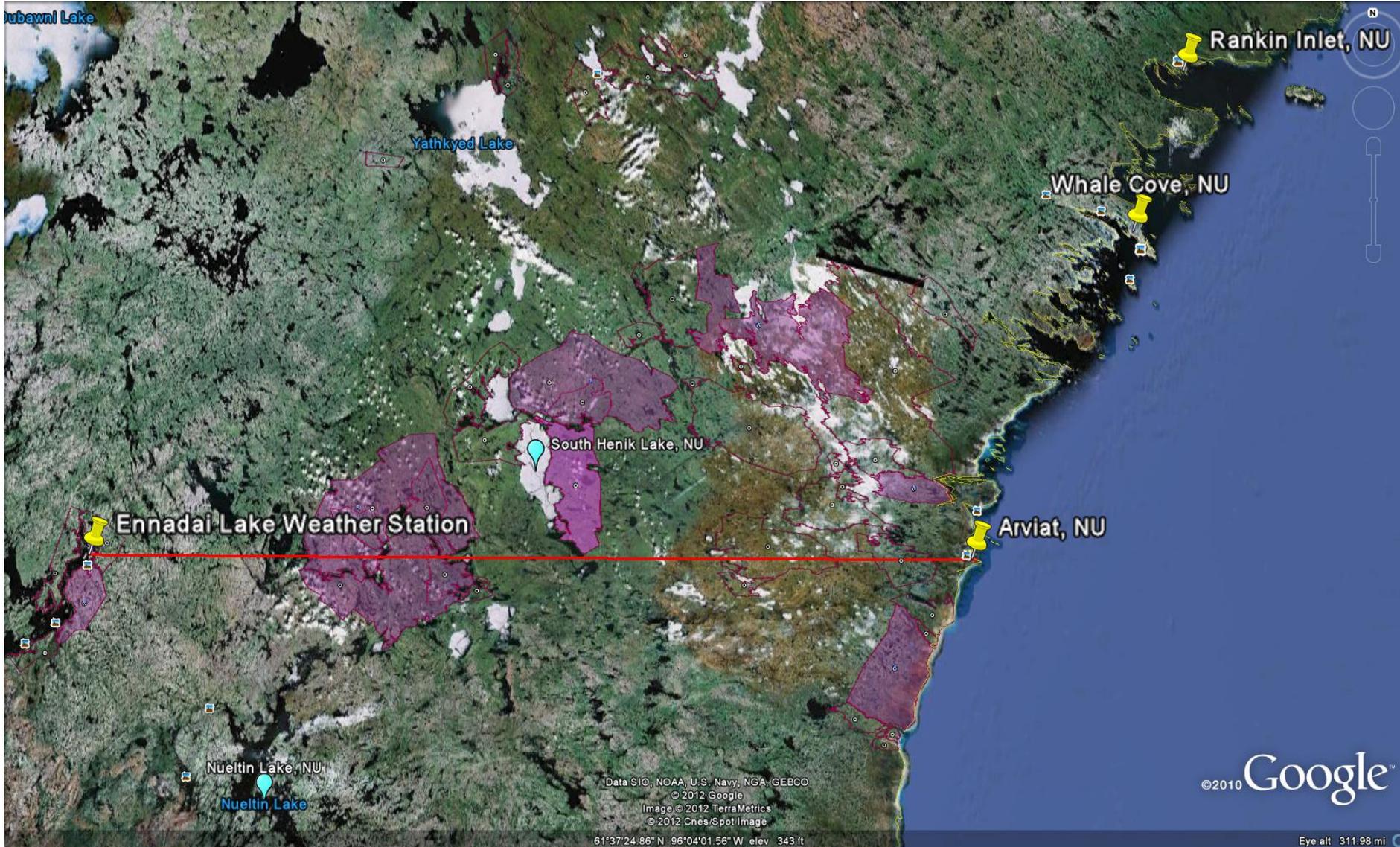


Ennadai Lake in Relation to Winnipeg (~1280 km) & Arviat





Location (~370 km West of Arviat)





Ennadai Lake Remediation Project Introduction

- **Project includes:**
 - **13 building structures on site**
 - **5 Above Ground Storage Tanks (ASTs) on site**
 - **A pipeline running from the point on Ennadai Lake, to the ASTs, to the overhead piping, which was used to deliver fuel to the buildings.**





Ennadai Lake Site History

- **1949** Department of National Defence (DND) constructed the Royal Canadian (RC) Signal Station at Ennadai Lake. Start of Weather Station Activities.
- **1954** RC Signal Station handed over to Department of Transport
- **1980s** Site was abandoned



Photo courtesy Jack Girard

Ennadai Lake - 1953

Sgt. Joe Funfer – NCO IC, Ikalyarah, Sigm. Rolly Benner – opr.



Photo courtesy Jack Girard

Fall 1953 Ennadai Lake

Sigm. Rolly Benner, Pte. Bill Adams-cook, Sigm. Jack Girard, Sgt. Joe Funfer – NCO IC, with local Inuit bidding Jack farewell.

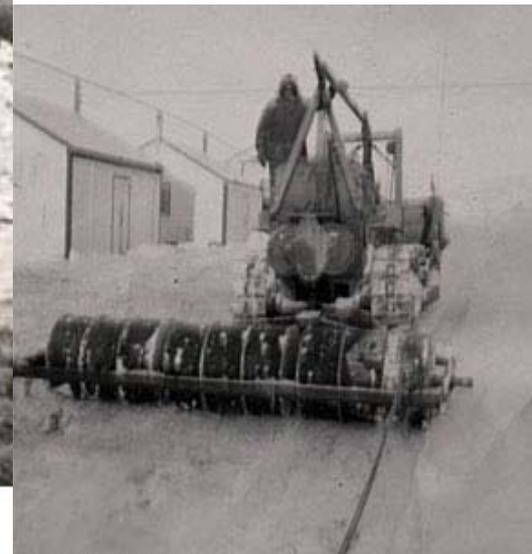


Photo courtesy Jack Girard

Alec Burgess on D-6 Cat towing roller for maintaining runways on the ice. Ennadai Lake 1953.



Ennadai Lake History Continued

- 2009 Phase I and II Environmental Site Assessment (ESA)
- 2012 Phase III ESA, Geotechnical & Archaeological Assessments
- 2012/13 Completed Remedial Action Plan, Community Consultation



Photo courtesy Jack Girard

RC Sigs Station Ennadai Lake, NWT - 1952



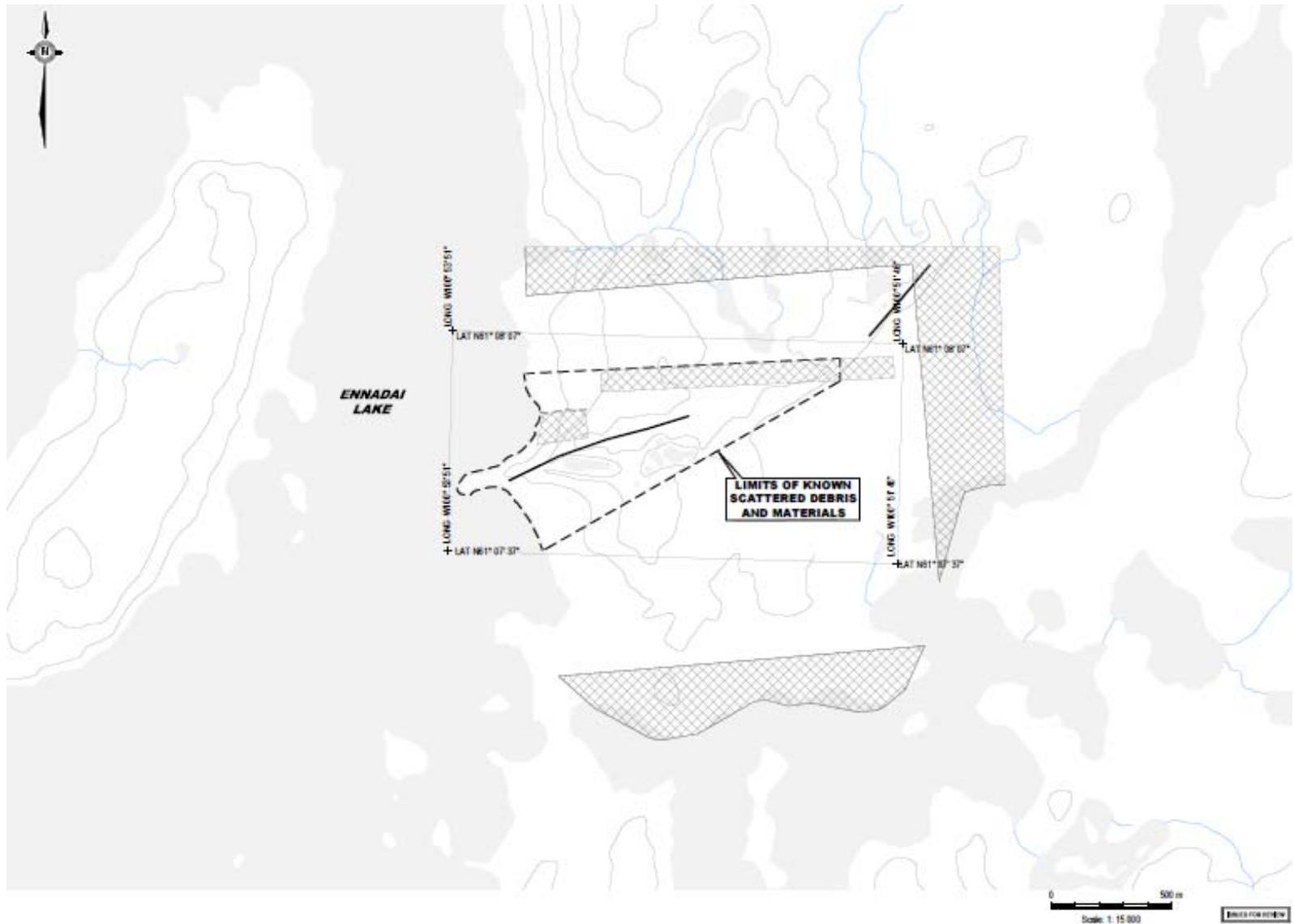
Ennadai Lake – Permitting

- Water Licence
 - Nunavut Water Board
- Crown Land Use Permit
 - AANDC Land Administration
 - Quarry Permits
- Inuit Owned Land (IOL) Exemption Certificate
 - Kivalliq Inuit Association (Kiv**IA**)





Ennadai Lake Showing IOL





Affaires autochtones et
Développement du Nord Canada

Aboriginal Affairs and
Northern Development Canada



TURNOVER TO PWGSC

PWGSC Presentation Topics:

- Health and Safety
- Mobilization Demobilization
- Potential Site Access Options
- Scope of Work - Specifications
- Anticipated Schedule
- Supporting Documentation
- RFP Review (Marc Poot)



Health and Safety

01 35 32 - SSHSP

- Contractor assumes role of Prime Contractor, as such is responsible for H&S of all persons on the site.
- SSHSP to be developed by the Contractor based on hazards identified by Contractor/AANDC/PWGSC, other hazards identified during pre-mobilization site visit, and hazards inherent in the work tasks. SSHSP must also meet or exceed requirements identified in the specifications.
- Provision of a full time EMT, first aid supplies and dedicated treatment facility.
- Compliance with NU Safety Act and Regulations.
- Lump Sum payment item.



Mobilization / Demobilization

01 53 00 Key Points

- Contractor is responsible for all aspects of mobilization and demobilization of equipment, fuel, supplies, camp, crews, etc.
- Methodology should be clearly described in the proposal along with potential risks and mitigative measures.
- Potential options for accessing site are being presented base on our logistical analysis. Contractor is responsible to conduct their own research and develop specific mobilization approach.
- Mobilization and Demobilization are Lump Sum payment items.



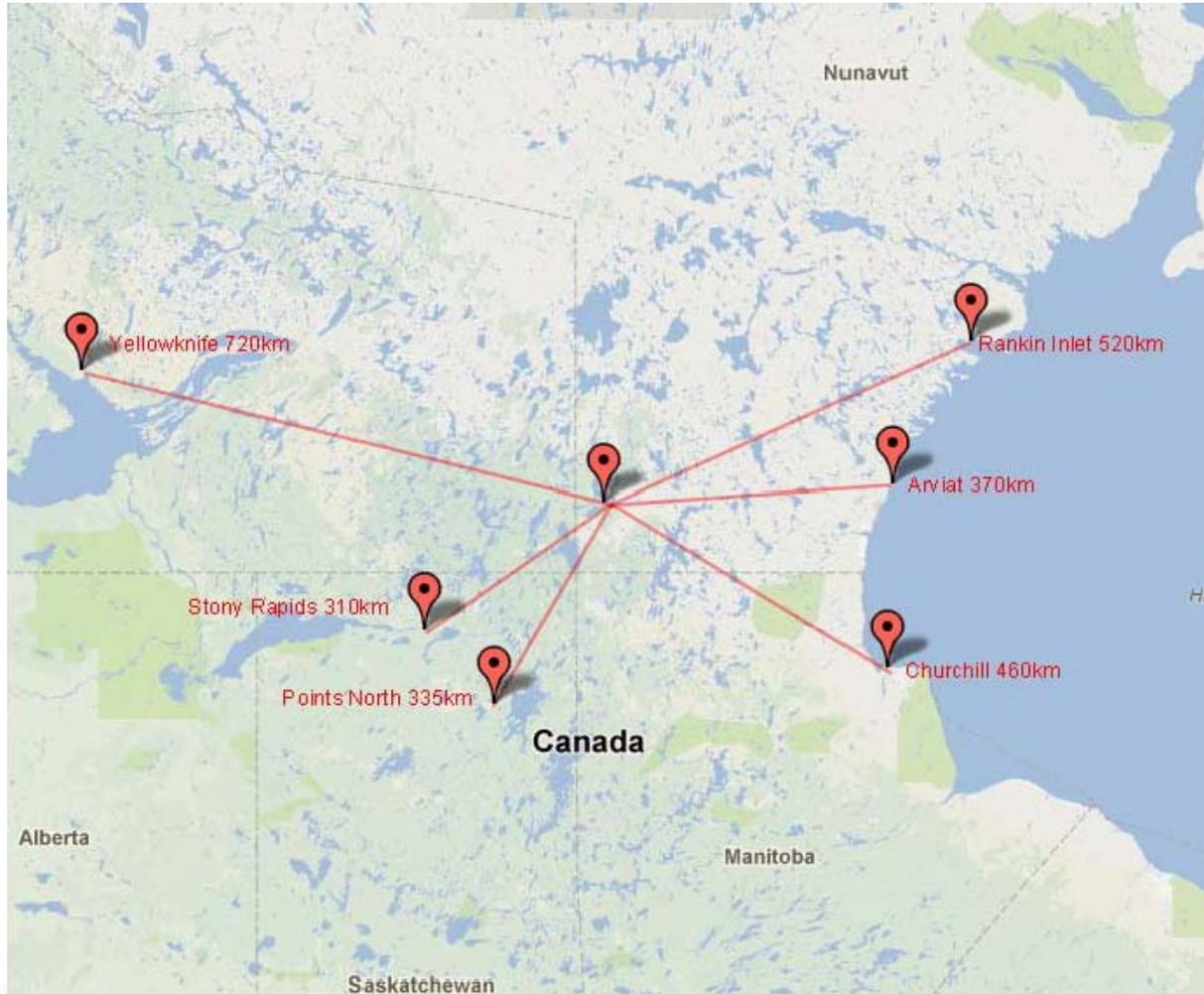
Site Access and Logistics

Air Options

- Existing abandoned airstrip at site suitable for small planes. Some upgrades may be required.
- Site accessed in 2011 via float planes (beach landing).
- Potential for constructing ice strip for landing heavy lift aircraft near site.
- Airstrip at Ennadai Lake Lodge suitable for landing Buffalo, or equivalent aircraft (~40km from site).
- Points North SK, 850 km north of Saskatoon is nearest all weather road staging base, logistically suitable for heavy lift aircraft operations.
- Stony Rapids Sk, has charter base and is located 310 km from site.
- Yellowknife, NT has multiple charter base options.



Site Access and Logistics



Site Access and Logistics

Barge / Cat-Train

- Supplies to build the weather station were brought to site via cat train from Churchill MB in 1949 – 460km southeast from site.
- Arviat, NU has a barge landing (sea access), is 370km east from site, but no historical overland route. Local hunters from Arviat do frequent the site by snowmobile during winter months.
- Stony Rapids, SK is 310 km southwest from site.
- Overland access from Stony Rapids SK, Arviat NU and Churchill MB are **not** considered viable options due to modern day permitting requirements.



Scope of Work

01 54 00 - Camp Supply and Operation

Contractor responsible for:

- Supply and operation of camp.
- Security & wildlife protection.
- Selecting camp location to avoid areas of historical significance.
- Water use and effluent discharge.
- Regulatory compliance.
- Existing structures **not** suitable for use as temporary camp.
- Lump sum payment item.



Scope of Work

02 41 16-1 – Structure Demolition

- All structures onsite are to be demolished and separated into various waste streams. Non hazardous materials are to be landfilled onsite.
- Untreated wood debris to be burned onsite in a pre-approved location.
- Known hazardous and non-hazardous materials and estimated volumes are categorized in the spec appendix C&D, and detailed in the supporting documents.
- Lump sum payment item, quantities will not be measured for payment.



Main Building Cluster



Scope of Work

02 41 16-2 Tank Demolition

- Tank1 & 2 – 36,000L
- Tanks 3 & 4 – 37,000L
- Tank 5 – 42,000 L
- Fuel distribution infrastructure.
- Various drum caches – 1,100 total.
- Lump sum payment item.
- Demolition debris categorized in the spec appendix C&D, and detailed in the supporting documents.



Scope of Work

02 41 23 – Debris and Misc Removals

- All non hazardous scattered and buried debris to be placed in onsite landfill.
- Untreated wood debris to be burned onsite in a pre-approved location.
- Quantities will not be measured for payment. Lump Sum Payment item.
- Demolition debris categorized in the spec appendix C&D, and detailed in the supporting documents.



Scope of Work

02 61 00 Soil Remediation

- Estimated 2,200 m³ of PHC impacted soil (above clean soil guidelines). To be treated onsite.
- Contractor responsible for treatment methodology.
- Contractor responsible for lanfarm construction, operation and decommissioning.
- Clean soil will be measured for payment by the cubic meter.
- Estimated 2 Tonnes of metal impacted soil above CCME criteria). To be shipped offsite for disposal.



Scope of Work

02 81 01 – Processing Organic Content

- Ageing fuel infrastructure with known past leaks.
- Securing and/or transferring the fuel from the tanks into drums is a high priority. This activity should be planned ASAP. Empty drums will be provided.
- Estimated volume of fuel in tanks and pipelines is 9,500L.
- Estimated volume of fuel in various drums is 7,500L.
- Consolidation, testing and treatment and/or offsite disposal of drum contents in accordance with INAC Abandoned Military Site Remediation Protocol (AMSRP).
- Lump Sum Payment Item. Volumes will not be measured for payment.



Scope of Work

02 81 01– Hazardous Materials

- Known hazardous materials include, but not limited to batteries, fire extinguisher, fluorescent lights, PCB & mercury containing light ballasts, ACMs, propane cylinders, lead containing paint on select drums and equipment, and hazardous liquid contents.
- Lump Sum Payment Item for collection, transportation and disposal at contractor’s designated hazardous waste disposal facility. Quantities will not be measured for payment.
- Description and estimated volumes of known hazardous materials are categorized in appendix C&D and detailed in the supporting documents.



Scope of Work

02 82 00– Asbestos Abatement

02 83 00 – Lead based paint

Abatement

- Take special note of buildings containing asbestos containing materials (ACM) or lead based paint requiring special removal precautions.

Not measured for payment. Costs are to be included in section 02 41 16 Structure Demolition and section 02 81 01 – Hazardous Materials.

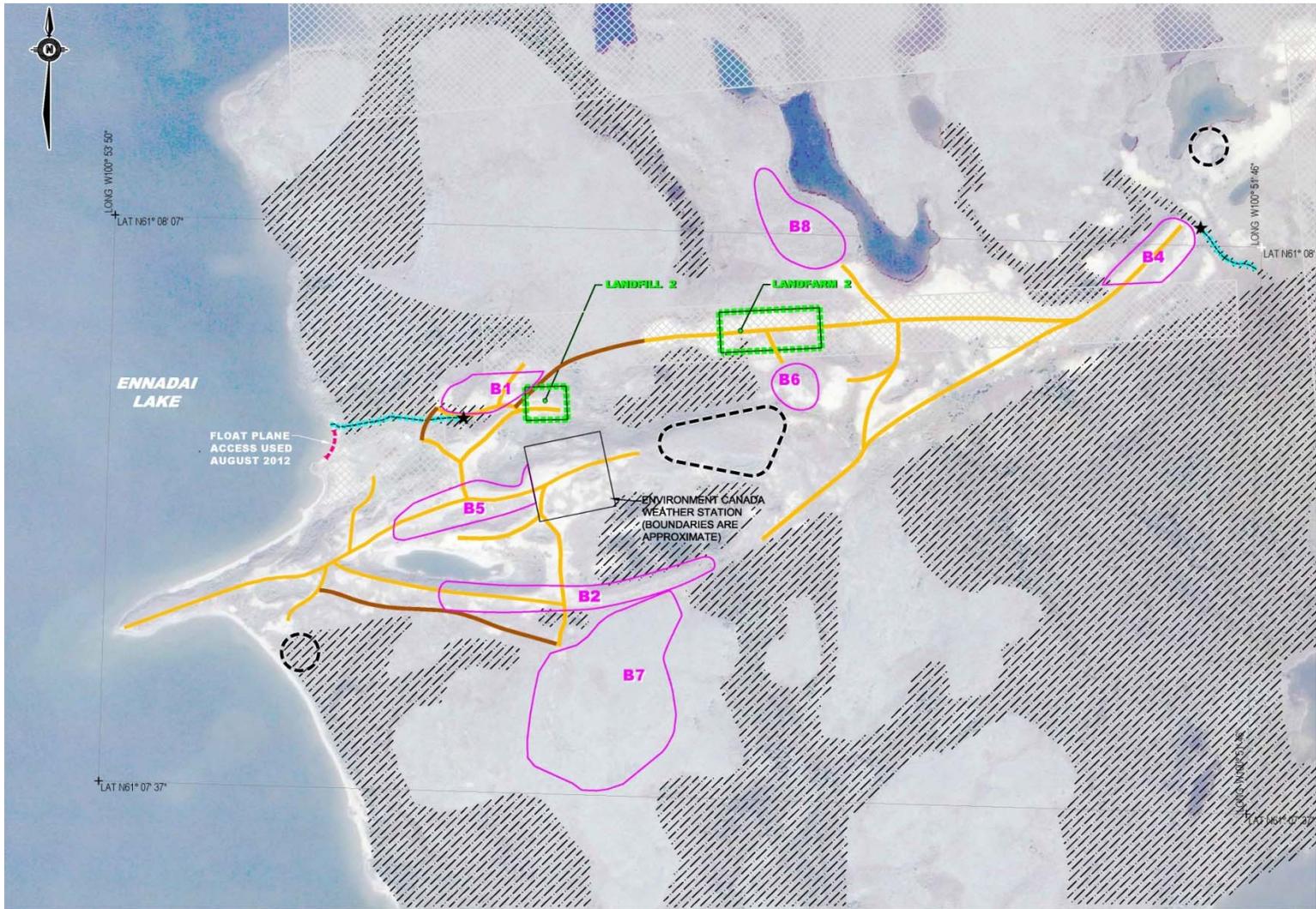


Scope of Work

21 22 13 Rough Grading

- Contractor responsible for borrow source development and production of Type 1 and Type 2 materials.
- Advanced borrow exploration recommended due to predominantly sandy soil conditions.
- Borrow required for landfill construction, landfarm construction, backfilling contaminated soil excavations and road upgrades as required.
- Quantities will be measured for payment by the cubic meter.





Schedule

Key Dates (anticipated):

- April 9, 2013 – Tender Close
- End of April 2013 – Contract Award
- April – June 2013 – Permitting
- *Summer 2013 – Pre-mob site visit and possible initial field program
- Winter 2013/14 – Ice landing strip construction and mobilization
- Summer 2014 – Field program year 1
- Summer 2015 – Field program year 2
- Winter 2015/16 – Demobilization
- March 31 2016 – Contract end date



Supporting Documentation

- WESA Inc. (2010). Integrated Phase I and Phase II Environmental Site Assessment, KW007 Ennadai Lake.
- EBA Engineering Consultants Ltd. (EBA) (2013). Phase III Environmental Site Assessment, Hazardous and Non-Hazardous Material Audit and Geotechnical Evaluation, Ennadai Lake, Nunavut. Prepared for Public Works Government Services Canada. File No. Y22101286.011. January 2013.
- EBA Engineering Consultants Ltd. 2013. Remedial Action Plan, Former Weather Station, Ennadai Lake, Nunavut. Prepared for Public Works Government Services Canada. File No. Y22101286.012. February 2013.
- EBA Engineering Consultant Ltd. 2013. Environmental Screening Report for the Former Ennadai Lake Weather Station under the NU Impact Review Process.
- Golder Associates Ltd. 2012. Archaeological Impact Assessment (AIA), Ennadai Lake Weather Station, Nunavut. Report No. 12-1372-0045 / NAP 2012-006A.

**Above mentioned reports, and photo appendix for specifications are included on the DVD provided. More copies are available upon written request to Marc.poot@pwgsc.gc.ca.*



Questions?



Request for Proposal (RFP) – Marc Poot

