

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Public Works and Government Services
Canada
ATB Place North Tower
10025 Jasper Ave./10025 ave. Jaspe
5th floor/5e étage
Edmonton
Alberta
T5J 1S6
Bid Fax: (780) 497-3510

INVITATION TO TENDER
APPEL D'OFFRES

**Tender To: Public Works and Government Services
Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Soumission aux: Travaux Publics et Services
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici et sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Vendor/Firm Name and Address
**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

Public Works and Government Services Canada
ATB Place North Tower
10025 Jasper Ave./10025 ave Jasper
5th floor/5e étage
Edmonton
Alberta
T5J 1S6

Title - Sujet Tank Pull and Remediation, Hay Rive	
Solicitation No. - N° de l'invitation ET022-150477/A	Date 2014-07-24
Client Reference No. - N° de référence du client PWGSC ET022-150477	GETS Ref. No. - N° de réf. de SEAG PW-\$PWU-201-10221
File No. - N° de dossier PWU-4-37068 (201)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-08-11	Time Zone Fuseau horaire Mountain Daylight Saving Time MDT
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Ho (RPC), Hector	Buyer Id - Id de l'acheteur pwu201
Telephone No. - N° de téléphone (780) 497-3543 ()	FAX No. - N° de FAX (780) 497-3510
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF PUBLIC WORKS AND GOVERNMENT SERVICES CANADA 100-167 LOMBARD AVE WINNIPEG Manitoba R3C2Z1 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée See Herein	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

Solicitation No. - N° de l'invitation

ET022-150477/A

Amd. No. - N° de la modif.

File No. - N° du dossier

PWU-4-37068

Buyer ID - Id de l'acheteur

pwu201

CCC No./N° CCC - FMS No/ N° VME

PWGSC ET022-150477

Refer to the attached solicitation document

INVITATION TO TENDER

IMPORTANT NOTICE TO BIDDERS

SUPPORT THE USE OF APPRENTICES

Through Canada's Economic Action Plan 2013, the Government of Canada proposes to support the employment of apprentices in federal construction and maintenance projects. Refer to SI11.

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R2710T GENERAL INSTRUCTIONS - CONSTRUCTION SERVICES - BID SECURITY REQUIREMENTS (GI) (2014-06-26)

The following GI's are included by reference and are available at the following Web Site <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

- GI01 Integrity Provisions - Bid
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SPECIAL INSTRUCTIONS TO BIDDERS (SI)

SI01 INTEGRITY PROVISIONS - ASSOCIATED INFORMATION

By submitting a bid, the Bidder certifies that the Bidder and its Affiliates are in compliance with the provisions as stated in GI01 of Integrity Provisions - Bid of General Instructions – Construction Services – Bid Security Requirements, R2710T (2014-06-26). The associated information required within the Integrity Provisions will assist Canada in confirming that the certifications are true.

SI02 BID DOCUMENTS

1. The following are the bid documents:
 - a. Invitation to Tender - Page 1;
 - b. Special Instructions to Bidders;
 - c. General Instructions - Construction Services - Bid Security Requirements R2710T (2014-06-26)
 - d. Clauses & Conditions identified in "Contract Documents";
 - e. Drawings and Specifications;
 - f. Bid and Acceptance Form and related Appendix(s); and
 - g. Any amendment issued prior to solicitation closing.

Submission of a bid constitutes acknowledgement that the Bidder has read and agrees to be bound by these documents.

2. General Instructions - Construction Services - Bid Security Requirements R2710T is incorporated by reference and is set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

SI03 ENQUIRIES DURING THE SOLICITATION PERIOD

1. Enquiries regarding this bid must be submitted in writing to the Contracting Officer named on the Invitation to Tender - Page 1 as early as possible within the solicitation period. Except for the approval of alternative materials as described in GI15 of R2710T, enquiries should be received no later than five (5) calendar days prior to the date set for solicitation closing to allow sufficient time to provide a response. Enquiries received after that time may not result in an answer being provided.
2. To ensure consistency and quality of the information provided to Bidders, the Contracting Officer shall examine the content of the enquiry and shall decide whether or not to issue an amendment.
3. All enquiries and other communications related to this bid sent throughout the solicitation period are to be directed ONLY to the Contracting Officer named on the Invitation to Tender - Page 1. Failure to comply with this requirement may result in the bid being declared non-responsive.

SI04 SITE VISIT

There will be no site visit

SI05 REVISION OF BID

A bid may be revised by letter or facsimile in accordance with GI10 of R2710T. The facsimile number for receipt of revisions is (780) 497-3510

SI06 BID RESULTS

1. A public bid opening will be held in the office designated on the Front Page "Invitation to Tender" for the receipt of bids shortly after the time set for solicitation closing.
2. Following solicitation closing, bid results may be obtained by calling at No. (780) 497-3543

SI07 BID VALIDITY PERIOD

1. Canada reserves the right to seek an extension to the bid validity period prescribed in BA04 of the Bid and Acceptance Form. Upon notification in writing from Canada, Bidders shall have the option to either accept or reject the proposed extension.
2. If the extension referred to in paragraph 1. of SI08 is accepted, in writing, by all those who submitted bids, then Canada shall continue immediately with the evaluation of the bids and its approvals processes.
3. If the extension referred to in paragraph 1. of SI08 is not accepted in writing by all those who submitted bids then Canada shall, at its sole discretion, either
 - a. continue to evaluate the bids of those who have accepted the proposed extension and seek the necessary approvals; or
 - b. cancel the invitation to tender.
4. The provisions expressed herein do not in any manner limit Canada's rights in law or under GI11 of R2710T.

SI08 CONSTRUCTION DOCUMENTS

The successful Contractor will be provided with one paper copy of the sealed and signed drawings, the specifications and the amendments upon acceptance of the offer. Additional copies, up to a maximum 1 paper copy and 1 electronic copy on a CD, will be provided free of charge upon request by the Contractor. Obtaining more copies shall be the responsibility of the Contractor including costs.

SI09 PUBLIC WORKS AND GOVERNMENT SERVICES CANADA AND DEFENCE CONSTRUCTION CANADA APPRENTICE PROCUREMENT INITIATIVE

1. To encourage employers to participate in apprenticeship training, Contractors bidding on construction and maintenance contracts by Public Works and Government Services Canada (PWGSC) are being asked to sign a voluntary certification, signaling their commitment to hire and train apprentices.
2. Canada is facing skills shortages across various sectors and regions, especially in the skilled trades. Equipping Canadians with skills and training is a shared responsibility. In Economic Action Plan (EAP) 2013, the Government of Canada made a commitment to support the use of apprentices in federal construction and maintenance contracts. Contractors have an important role in supporting apprentices through hiring and training and are encouraged to certify that they are providing opportunities to apprentices as part of doing business with the Government of Canada.
3. Through the Economic Action Plan 2013 and support for training programs, the Government of Canada is encouraging apprenticeships and careers in the skilled trades. In addition, the government offers a tax credit to employers to encourage them to hire apprentices. Information on this tax measure administered by the Canada Revenue Agency can be found at: www.cra-arc.gc.ca. Employers are also encouraged to find out what additional information and supports are available from their respective provincial or territorial jurisdiction.
4. Signed certifications (Appendix 4) will be used to better understand contractor use of apprentices on Government of Canada maintenance and construction contracts and may inform future policy and program development.
5. The Contractor hereby certifies the following:

In order to help meet demand for skilled trades people, the Contractor agrees to use, and require its subcontractors to use, reasonable commercial efforts to hire and train registered apprentices, to strive to fully utilize allowable apprenticeship ratios¹ and to respect any hiring requirements prescribed by provincial or territorial statutes

The Contractor hereby consents to this information being collected and held by PWGSC, and Employment and Social Development Canada to support work to gather data on the hiring and training of apprentices in federal construction and maintenance contracts.

To support this initiative, a voluntary certification signaling the Contractor's commitment to hire and train apprentices is available at Appendix 4.

If you accept fill out and sign Appendix 4

¹ *The journey-person-apprentice ratio is defined as the number of qualified/certified journeypersons that an employer must employ in a designated trade or occupation in order to be eligible to register an apprentice as determined by provincial/territorial (P/T) legislation, regulation, policy directive or by law issued by the responsible authority or agency.*

SI10 WCB AND SAFETY PROGRAM

- 1) The recommended Bidder shall provide to the Contracting Authority, prior to Contract award:
 - 1.1 a Workers Compensation Board Premium Rate Statement - Alberta, or equivalent documentation from another jurisdiction;
 - 1.2 a Workers Compensation Board letter of good standing, also listing covered Directors, Principals, Proprietor(s) or Partners who will be or who are anticipated to be present on the work site(s), or equivalent documentation from another jurisdiction; and
 - 1.3 a Certificate of Recognition (COR) or Registered Safety Plan (RSP). A health and safety policy and program, as required by other provincial/territorial Occupational Health and Safety Acts, will be acceptable in lieu of a COR or RSP.
- 2) The recommended Bidder shall deliver all of the above documents to the Contracting Authority on or before the date stated (usually 3-5 days after notification) by the Contracting Authority. Failure to comply with the request may result in the bid being declared non-compliant.

SI11 WEB SITES

The connection to some of the Web sites in the solicitation documents is established by the use of hyperlinks. The following is a list of the addresses of the Web sites:

Treasury Board Appendix L, Acceptable Bonding Companies
<https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=14494§ion=text#appl>

Buy and Sell <https://www.achatsetventes-buyandsell.gc.ca>

Canadian economic sanctions <http://www.international.gc.ca/sanctions/index.aspx?lang=eng>

Contractor Performance Evaluation Report (Form PWGSC-TPSGC 2913)
<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913.pdf>

Bid Bond (form PWGSC-TPSGC 504) <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/504.pdf>

Performance Bond (form PWGSC-TPSGC 505) <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/505.pdf>

Labour and Material Payment Bond (form PWGWSC-TPSGC 506)
<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/506.pdf>

Standard Acquisition Clauses and Conditions (SACC) Manual
<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

PWGSC, Industrial Security Services <http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html>

PWGSC, Code of Conduct and Certifications
<http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/index-eng.html>

PWGSC Consent to a Criminal Record Verification (PWGSC-TPSGC 229)
<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/229.pdf>

Construction and Consultant Services Contract Administration Forms Real Property Contracting
<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>

SUPPLEMENTARY CONDITIONS (SC)

SC01 SECURITY REQUIREMENTS, DOCUMENT SAFEGUARDING LOCATION

There is no security requirement applicable to this Contract.

SC02 WORKPLACE SAFETY AND HEALTH

1. EMPLOYER/PRIME CONTRACTOR

1.1 The Contractor shall, for the purposes of the Occupational Health and Safety Act, Alberta, and for the duration of the Work:

1.1.1 act as the Employer, where there is only one employer on the work site, in accordance with the Authority Having Jurisdiction;

1.1.2 accept the role of Prime Contractor, where there are two or more employers involved in work at the same time and space at the work site, in accordance with the Authority Having Jurisdiction; and

1.1.3 agree, in the event of two or more Contractors working at the same time and space at the work site, without limiting the General Conditions, to Canada's order * to:

1.1.3.1 accept, as the Prime Contractor, the responsibility for Canada's other Contractor(s); or

1.1.3.2 accept that Canada's other Contractor is Prime Contractor and conform to that Contractor's Site Specific Health and Safety Plan.

* "order" definition: after contract award, Contractor is ordered by a Change Order

2. SUBMITTALS

2.1 The Contractor shall provide to Canada:

2.1.1 prior to the pre-construction meeting, a transmittal and copy of a completed Notice of Project form PWGSC - TPSGC 458 (form will be provided to the proposed contractor prior to award), as sent to the Authority Having Jurisdiction (AHJ); and

2.1.2 prior to commencement of work and without limiting the terms of the General Conditions:

2.1.2.1 copies of all other necessary permits, notifications and related documents as called for in the scope of work/specifications and/or by the AHJ; and

2.1.2.2 a site specific Health and Safety Plan as requested.

NOTE: Please do not include any forms that include personal 3rd party information such as the names of the contractor's employees and their related claims information.

3. LABOUR AUTHORITY CONTACT:

The contact below represents the Labour Authority in the jurisdiction (AHJ). They are not representatives of the Workers Compensation.

Do not contact the people referenced below for issues pertaining to WCB or WCB Clearances. Those queries must be directed specifically to the WCB, and where the WCB has both a Labour and Compensation component, WCB issues must be directed to the Compensation/Employer Services sections.

ALBERTA South

Alberta Human Resources and Employment
Workplace Health and Safety
600 – 727, 7th Avenue S.W.
Calgary, Alberta, T2P 0Z5

Telephone: 1(866) 415-8690
Email: All submissions are to be scanned
and emailed to
whs@gov.ab.ca

ALBERTA North

Alberta Human Resources and Employment
Workplace Health and Safety
10th Floor, 7th Street Plaza
10030-107 Street
Edmonton, Alberta, T5J 3E4

Telephone: 1(866) 415-8690
Email: All submissions are to be scanned
and emailed to whs@gov.ab.ca

SC03 INSURANCE TERMS

1) Insurance Contracts

- (a) The Contractor must, at the Contractor's expense, obtain and maintain insurance contracts in accordance with the requirements of the Certificate of Insurance. Coverage must be placed with an Insurer licensed to carry out business in Canada.
- (b) Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract. The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

2) Period of Insurance

- (a) The policies required in the Certificate of Insurance must be in force from the date of contract award and be maintained throughout the duration of the Contract.
- (b) The Contractor must be responsible to provide and maintain coverage for Products/Completed Operations hazards on its Commercial General Liability insurance policy, for a period of six (6) years beyond the date of the Certificate of Substantial Performance.

3) Proof of Insurance

- (a) Before commencement of the Work, and no later than thirty (30) days after acceptance of its bid, the Contractor must deposit with Canada a Certificate of Insurance on the form attached herein.
- (b) Upon request by Canada, the Contractor must provide originals or certified true copies of all contracts of insurance maintained by the Contractor pursuant to the Certificate of Insurance.

4) Insurance Proceeds

In the event of a claim, the Contractor must, without delay, do such things and execute such documents as are necessary to effect payment of the proceeds.

5) Deductible

The payment of monies up to the deductible amount made in satisfaction of a claim must be borne by the Contractor.

CONTRACT DOCUMENTS (CD)

1. The following are the contract documents:
 - a. Contract Page when signed by Canada;
 - b. Duly completed Bid and Acceptance Form and any Appendices attached thereto;
 - c. Drawings and Specifications;
 - d. General Conditions and clauses

GC1	General Provisions – Construction Services	R2810D	(2014-06-26);
GC2	Administration of the Contract	R2820D	(2014-06-26);
GC3	Execution and Control of the Work	R2830D	(2014-03-01);
GC4	Protective Measures	R2840D	(2008-05-12);
GC5	Terms of Payment	R2850D	(2014-06-26);
GC6	Delays and Changes in the Work	R2860D	(2013-04-25);
GC7	Default, Suspension or Termination of Contract	R2870D	(2008-05-12);
GC8	Dispute Resolution	R2880D	(2012-07-16);
GC9	Contract Security	R2890D	(2014-06-26);
GC10	Insurance	R2900D	(2008-05-12);
	Allowable Costs for Contract Changes Under GC6.4.1	R2950D	(2014-06-26);
	Supplementary Conditions		
 - e. Any amendment issued or any allowable bid revision received before the date and time set for solicitation
 - f. Any amendment incorporated by mutual agreement between Canada and the Contractor before acceptance of the bid; and
 - g. Any amendment or variation of the contract documents that is made in accordance with the General Conditions.
2. The documents identified by title, number and date above are incorporated by reference and are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site:
<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>
3. The language of the contract documents is the language of the Bid and Acceptance Form submitted.

BID AND ACCEPTANCE FORM (BA)

BA01 IDENTIFICATION

Tank Pull and Remediation
Project # R.050125.011

Hay River RCMP Detachment, Hay River, Northwest Territories.

BA02 BUSINESS NAME AND ADDRESS OF BIDDER

Name: _____

Address: _____

Telephone: _____ Fax: _____ PBN: _____

BA03 THE OFFER

The Bidder offers to Canada to perform and complete the Work for the above named project in accordance with the Bid Documents for the **TOTAL BID AMOUNT INDICATED IN APPENDIX 1**.

BA04 BID VALIDITY PERIOD

The bid shall not be withdrawn for a period of (thirty) [30] days following the date of solicitation closing.

BA05 ACCEPTANCE AND CONTRACT

Upon acceptance of the Contractor's offer by Canada, a binding Contract shall be formed between Canada and the Contractor. The documents forming the Contract shall be the contract documents identified in Contract Documents (CD).

BA06 CONSTRUCTION TIME

The Contractor shall perform and complete the Work within sixteen (16) weeks from the date of notification of acceptance of the offer.

BA07 BID SECURITY

The Bidder is enclosing bid security with its bid in accordance with GI08 - Bid Security Requirements of R2710T - General Instructions - Construction Services - Bid Security Requirements.

BA08 SIGNATURE

Name and title of person authorized to sign on behalf of Bidder (Type or print)

Signature

Date

APPENDIX 1 - COMBINED PRICE FORM (1 page)

- 1) The prices per unit shall govern in establishing the Total Extended Amount. Any arithmetical errors in this Appendix will be corrected by Canada.
- 2) Canada may reject the bid if any of the prices submitted do not reasonably reflect the cost of performing the part of the work to which that price applies.

LUMP SUM

The Lump Sum Amount designates Work to which a Lump Sum Arrangement applies.

- (a) Work included in the Lump Sum Amount represents all work not included in the unit price table.

LUMP SUM AMOUNT (LSA) Excluding applicable tax(es)
--

UNIT PRICE TABLE

The Unit Price Table designates Work to which a Unit Price Arrangement applies.

- (a) Work included in each item is as described in the referenced specification section.
- (b) The Price per Unit shall not include any amounts for Work that is not included in that unit price Item.

Item	Specification Reference	Class of Labour, Plant or Material	Unit of Measurement	Estimated Quantity (EQ)	Price per Unit applicable tax(es) extra (PU)	Extended amount (EQ x PU) applicable tax(es) extra
1	02 55 13-1	Excavation of petroleum hydrocarbon contaminated soil including hauling to a licensed facility and disposal costs	Per m ³	20		
2	02 55 13-3	Removal of disposal of impacted water from the excavation	Per m ³	5		
3	02 55 13-2	Supply and backfill of clean materials including compaction and grading where impacted soil is removed	Per m ³	30		
4	03 30 00-1	Construction of replacement sidewalk	Per m ²	10		
5	31 22 33-1	Common excavation	Per m ³	70		
6	31 22 33-2	Landscape restoration	Per m ²	50		
TOTAL EXTENDED AMOUNT (TEA)						
Excluding applicable tax(es)						

TOTAL BID AMOUNT (LSA +TEA) Excluding applicable tax(es)
--

APPENDIX 3 - VOLUNTARY CERTIFICATION TO SUPPORT THE USE OF APPRENTICES

Note; The contractor will be asked to fill out a report every six months as included a Annex C

Name: _____

Signature: _____

Company Name: _____

Company Legal Name: _____

Solicitation Number: _____

Optional information to provide: _____

Number of apprentices planned to be working on this contract: _____

Trades of those apprentices:

A sample of the "Voluntary Reports for Apprentices Employed during the Contract" is provided at Annex B

ANNEX A - CERTIFICATE OF INSURANCE

See attached

Public Works and Government Services Canada

**Issued for Tender Specifications for the Removal of an
Underground Storage Tank at**

**Hay River, Northwest Territories –
RCMP Detachment**

Project No.:

Public Works and Government Services Canada

March 2014

	Pages
<u>Division 01 - General Requirements</u>	
01 11 00 Summary of Work	6
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01 33 00 Submittal Procedures	3
01 35 29.06 Health and Safety Requirements	4
01 35 43 Environmental Procedures	4
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31 22 15 Grading	5

<u>Drawing No.</u>	<u>Title</u>
Figure C00	Cover Sheet
Figure C01	Site Location Plan
Figure C02	Existing Layout
Figure C03	Restoration Plan

PART 1 - GENERAL

1.1 Precedence

- .1 Division 1 Sections take precedence over technical specification sections in other Divisions of this specification.

1.2 Background Information

- .1 An abandoned underground storage tank (UST) formerly containing heating oil has been identified within the RCMP Detachment compound in Hay River, Northwest Territories. The UST is estimated to measure approximately four (4) metres in length and 2.5 metres in width.
- .2 The Detachment compound consists of one (1) RCMP Detachment building, one (1) Mess Hall, and one (1) fenced compound used for vehicle storage.
- .3 The surrounding land of the subject property is commercial and residential properties. The soils encountered generally consisted of dark black organic topsoil underlain by silt fill with fine sand and gravel followed by brown native silt with trace sand and sand.
- .4 The topography of the site is generally flat. The nearest surface water body is the Hay River located approximately 25 m east of the Site. Based on static groundwater levels measured in the limited on-site monitoring wells, groundwater flow is expected to flow towards the east and Hay River.
- .5 Three reference reports are available for review:
 - .1 Stantec Consulting Ltd., 2011. *Phase I Environmental Site Assessment Hay River RCMP Detachment and Storage/Warehouse DFRP #20607 Hay River, Northwest Territories*. Submitted to the Royal Canadian Mounted Police, F Division.
 - .2 EBA, A Tetra Tech Company, 2012. *Phase II Environmental Site Assessment Hay River RCMP Detachment (Property ID PR G/24) Lot 776, Plan 397, 38 Capital Drive Hay River, Northwest Territories DFRP #20607*. Submitted to Public Works and Government Services Canada
 - .3 SENES Consultant Limited, 2013. *Phase III Environmental Site Assessments RCMP Detachments 20607 – Hay River Northwest Territories*. Submitted to Public Works and Government Services Canada Western Region.

1.3 Description of Work

- .1 Work of this Contract comprises the tank removal at the Hay River RCMP Detachment including, but not limited to, the following:
 - .1 Preparation of Planning documents and submittals including, but not limited to, Health and Safety Plan (includes On-Site Contingency and Emergency Response Plan, Spill Contingency Plan and Fire Safety Plan).

- .2 Mobilization and demobilization of all personnel, equipment, support facilities and materials required to complete the Work.
- .3 Demolition of sidewalk section within work area.
- .4 Removal and disposal of UST, vent and fill pipes.
- .5 Excavation and disposal of hydrocarbon contaminated soils.
- .6 Management of clean overburden material.
- .7 Dewatering of excavation.
- .8 Backfilling and site restoration activities of all excavated areas using local borrow material.
- .9 Reconstruction of sidewalk section to original conditions.
- .10 Collection and disposal of onsite wastes, unused materials and waste generated during the completion of the work.

1.4 Definitions

- .1 **Departmental Representative:** Within the context of these Specifications, the term Departmental Representative refers to the person exercising the roles and attributes of Canada under the contract.
- .2 **Departmental Representative's Authorized Personnel:** Within the context of these Specifications, the term Departmental Representative's Authorized Personnel refers to personnel appointed by Departmental Representative or authorized on-site by Departmental Representative. Departmental Representative's Authorized Personnel provide recommendations/technical guidance to Departmental Representative, as required, for the enforcement of these specifications.
- .3 **Contractor:** The Contractor procured to undertake the site management and operation services, decontamination/demolition, remediation and restoration work is defined, within the context of these specifications, as the Contractor.
- .4 **Contractor's Site Superintendent:** Contractor's resident site representative, who is authorized to make decisions on behalf of Contractor.
- .5 **Authorities Having Jurisdiction (AHJ):** Governmental agency or sub-agency that regulates the codes and standards that are to be met during the remediation processes.

1.5 Submittals

- .1 All submittals in accordance with Section 01 33 00 - Submittal Procedures.

1.6 On-Site Documents

- .1 Maintain at job site, one copy each of the following:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Request for clarification and responses.
 - .4 Addenda.
 - .5 Tasks Authorization.

- .6 Change orders.
- .7 Other modifications to Contract.
- .8 Field test reports.
- .9 Copy of approved Work schedule.
- .10 Copies of any test results.
- .11 Material and Safety Data Sheets Specifications.
- .12 Site Specific Health and Safety Plan (SSHSP) including:
 - i) Spill Contingency Plan.
 - ii) Fire Safety Plan.
 - iii) Emergency Response Plan.
- .13 Environmental Protection Plan.
- .14 Waste disposal Work Plan.
- .15 Copies of permits/approvals and/or authorizations
- .16 Labour conditions and wage schedules.
- .17 All applicable Territorial permits and licenses.
- .18 All applicable Federal permits and licenses.
- .19 Copies of manifests and bills of lading.
- .20 Copies of TDG shipping documents.
- .21 Hazardous Material Audit.
- .22 Workers' Safety and Compensation Commission (WSCC) Notification of Project.
- .23 Letter of Good Standing with WSCC.
- .24 Other documents as specified.
- .25 Environmental Assessment.

1.7 Work Schedule

- .1 Provide and maintain Work Schedule in accordance with instructions of Section 01 32 18 Construction Progress Schedules - Bar (GANNT) Chart.
- .2 Keep the Departmental Representative advised of planned Work activities in accordance with the instructions of Section 01 33 00 - Submittal Procedures.

1.8 Contractor's Use of Site

- .1 Contractor's use of site is restricted to the terms and conditions of the issued permits, and all applicable guidelines and regulations.
- .2 Coordinate use of premises under the direction of the Departmental Representative.
- .3 Use of site shall comply with the environmental requirements of Section 01 35 43 - Environmental Procedures.
- .4 Operations should only occur where entirely necessary to complete the works to reduce effects to nearby soils, vegetation, and resident species. Respect should be given to the natural environment to minimize the footprint of the project.

1.9 Permits and Licenses

- .1 Departmental Representative will apply for all applicable permits relating to federal regulatory agencies, as required. All restrictions and requirements of these apply to Contractor.
- .2 Register, obtain and pay for all required licenses and permits for individual tradesmen employed for Work as referenced in the various Sections of the Contract Specifications.
- .3 Obtain and pay for any other licenses or permits required to perform the activities required on-site.
- .4 Provide supplemental information to the regulators for any necessary license amendments or reporting requirements.
- .5 Pay all costs associated with complying with the requirements for the permits and licenses noted in the above clauses.

1.10 Site Supervision

- .1 Designate Contractor's Site Superintendent to be on-site at all times during construction, to have full authority to make decisions on behalf of the Contractor, to be knowledgeable of the requirements of the contract, and to act upon Departmental Representative's instructions.
- .2 Notify Departmental Representative two (2) weeks in advance of changing the Site Superintendent and provide an updated chain-of-command.

1.11 Additional Drawings

- .1 Departmental Representative may furnish additional drawings to assist with proper execution of the work. These drawings will be issued for clarification only. Such drawings are to have the same meaning and intent as if they were included with plans referred to in Contract documents.

1.12 Substantial Completion

- .1 The contractor shall issue a letter of warranty for review and approval by the Departmental Representative.
- .2 Upon issuance of a Certificate of Substantial Performance and submission of all items specified with these specifications as requirements for achieving Substantial Performance, the Departmental Representative arrange for a site inspection to ascertain that Substantial Performance has been achieved.
- .3 If upon completion of this inspection, it has been shown that Substantial Performance has not been achieved, a new inspection date will be established and a re-inspection will be held at the expense of the contractor.

- .4 Contractor shall insert all specifications, drawings, shop drawings, certificates and warranty into the Tenants' O&M manual.

1.13 Measurement of Payment

- .1 Work under this Contract will be paid for as follows:
 - .1 Lump sum pay items will be paid at the lump sum price tendered for each lump sum item listed in the Basis of Payment Forms.
 - .2 Unit price items will be paid at the unit price tendered for each unit price item listed in the Basis of Payment Forms.
 - .3 Miscellaneous project costs will be paid at the lump sum price tendered for "Balance of Project Costs" (BOPC) in the Basis of Payment Form.
- .2 Unit price items, lump sum items and provisional cost sum items will be paid under the Basis of Pricing of the proposed contract. All other items, whether specifically defined in the specific sections of the Specifications or not, will be paid under Item BOPC-1, Balance of Project Costs, in the Basis of Payment Schedule.
- .3 Direct costs include all costs directly attributable to a particular pay item including equipment, operators, materials, equipment maintenance and depreciation, etc. All direct costs for lump sum and unit price items are to be included in the appropriate price item in the Basis of Payment Schedules.
- .4 Indirect costs include all costs not directly attributable to the pay items including profit, supervision, overhead, administration, CGL Insurance, Workers' Safety and Compensation Commission WSCC, Contractor's allowance for equipment repairs and depreciation, and any other relevant costs. All indirect costs associated with specific unit price or lump sum items will be included in Item BOPC-1, Balance of Project Costs, in the Basis of Payment Schedule.
- .5 Include costs for work, goods or services required in this section that are not covered by appropriate payment clauses in other sections in Item BOPC-1, Balance of Project Costs, in the Basis of Payment Schedule.
- .6 Notify Departmental Representative of planned Work activities in accordance with requirements of Section 01 33 00 - Submittal Procedures, and at least two (2) days in advance of operations to permit required measurements for payment.
- .7 The work under this section will not be measured. Include all costs in Item BOPC-1, Balance of Project Costs in the Basis of Payment Schedule. Indicate cost of the work of this section as a separate line item in the Contract Work Breakdown Structure (CWBS) specified in Section 01 32 18 - Construction Progress Schedules - Bar (GANTT) Chart.

PART 2 - PRODUCTS

.1 Not Used.

PART 3 - EXECUTION

.1 Not Used.

END OF SECTION

PART 1 – GENERAL

1.1 Existing Services

- .1 Notify the Town of Hay River and utility companies of intended interruption of services and obtain required permission.
- .2 Where Work involves breaking into or connecting to existing services, give seventy-two (72) hours of notice for necessary interruption of mechanical or electrical service throughout course of work.
 - .1 Keep duration of interruptions to a minimum.
 - .2 Perform interruptions after normal working hours of occupants, preferably on weekends.
- .3 Provide for personnel and vehicular traffic.
- .4 Construct barriers in accordance with Section 01 53 00.

1.2 Coordinating with Facility Operation

- .1 The Hay River RCMP detachment will remain in operation while the Work is in progress.
 - .1 Normal occupied hours of work are 07:00 to 19:00. The Contractor can extend these hours; however the work hours must be consistent with the City notice bylaw. Weekend activities are not permitted without written permission of the Departmental Representative.

PART 2 - PRODUCTS

- .1 Not Used.

PART 3 - EXECUTION

- .1 Not Used.

END OF SECTION

PART 1 - GENERAL

1.1 General

- .1 Particular requirements for inspection and testing to be carried out by testing laboratory designated by Departmental Representative are specified under various sections.
- .2 Provide and pay for all transportation and analyses required for all Contractors' samples to an accredited laboratory to meet the requirements specified.

1.2 Submittals

- .1 All submittals in accordance with Section 01 33 00 - Submittal Procedures.

1.3 Appointment and Payment

- .1 Departmental Representative will appoint and pay for services of testing laboratory required for the following:
 - .1 Confirmatory testing as described in this Section.
 - .2 Testing for the classification of hazardous contaminated soil for licensed disposal facility acceptance requirements.
 - .3 Compaction and gradation testing.
 - .4 Testing associated with the identification and characterization of hazardous waste materials.
 - .5 Testing required for quality assurance.
- .2 Appoint and pay for testing services for quality control of Contractor's own Work including the following:
 - .1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.
 - .2 Inspection and testing performed exclusively for Contractor's convenience.
 - .3 Testing of wash water resulting from all cleaning activities, equipment decontamination.
 - .4 Tests specified to be carried out by Contractor under the supervision of Departmental Representative.
 - .5 All tests required by Contractor to prove conformance and quality control of Contractor's Work.
 - .6 Inspection and testing required by the conditions of permits issued for the Work.
 - .7 Testing of contact water from contaminated soil excavations or other areas where water may have come in contact with contaminants as a result of the Contractor's activities.
- .3 Where tests or inspections by designated testing laboratory reveal Work not in accordance with contract requirements, pay costs for additional tests or inspections as required by Departmental Representative to verify acceptability of corrected Work.

- .4 The analytical testing laboratory designated by Contractor to carry out off-site tests to be acceptable to the Departmental Representative. The analytical laboratory must maintain ISO 17025 certification for all tests to be performed and in advance of analytical testing. The proposed analytical laboratory must be independent from the Contractor and acceptable to the Departmental Representatives.

1.4 Contractor's Responsibilities

- .1 Provide labour, equipment and facilities to:
 - .1 Provide access to Work to be inspected and tested.
 - .2 Facilitate inspections and tests.
 - .3 Make good Work disturbed by inspection and test.
 - .4 Provide storage on-site for Department Representative's exclusive use to store equipment and prepare samples.
- .2 Notify Departmental Representative sufficiently in advance of operations to allow for assignment of laboratory personnel and scheduling of test.
- .3 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
- .4 Pay costs for uncovering and making good Work that is covered before required inspection or testing is completed and approved by Departmental Representative.

1.5 Confirmatory Testing

- .1 Confirmatory samples will be collected by Departmental Representative, and analysis completed by Departmental Representative's testing laboratory as follows:
 - .1 The actual location, frequency and method of testing will be determined by Departmental Representative.
 - .2 Soil sampling will be carried out by Departmental Representative within the perimeter of each contaminated soil excavation and at depth within the completed excavation area, soon after completion of excavation.
- .2 If required, confirmatory testing will be carried out at waste material processing areas to classify and delineate contaminated soil and other materials.
- .3 It is anticipated that test results will be available within approximately ten (10) calendar days from the date that samples are transported from the site for laboratory analysis. Deliver Departmental Representative's samples to Departmental Representative's designated testing laboratory in Edmonton within two (2) days maximum from the time the samples leave Hay River, NT.
- .4 Assume all responsibility for samples damaged during transport including all costs for resampling, shipping, analysis and any resulting delays.

1.6 Measurement of Payment

- .1 The provision of Contractor's Testing Requirements, include sampling packaging, handling, off-site transport and testing of Contractor's samples at an accredited laboratory of choice, will be paid as a lump sum under Item 01 29 83-1, Contractor's Testing Requirements including Sampling, Transportation and Analysis at an Accredited Laboratory of choice in the Basis of Payment Schedule.
- .2 Except as indicated above, Work under this section will not be measured. Include all costs in Item BOPC-1, Balance of Project Costs in the Basis of Payment Schedule. Indicate cost of the Work of this section as a separate line item in the Contract Work Breakdown Structure (CWBS) specified in Section 01 32 18 - Construction Progress Schedules - Bar (GANTT).

PART 2 - PRODUCTS

- .1 Not used.

PART 3 - EXECUTION

- .1 Not used.

END OF SECTION

PART 1 – GENERAL

1.1 Definitions

- .1 Project Start-Up Teleconference Meeting: conference call to be held within ten (10) days following Contract Award and to include the Contractor and Departmental Representative(s). This meeting will be initiated by PWGSC.
- .2 Pre-Construction Meeting: meeting to be held on-site prior to Contractor Mobilization and to include the Contractor and Departmental Representative(s).
- .3 Construction Meeting: meeting to be held on-site as required, but at a minimum of weekly intervals during the course of the work and to include the Contractor, major Sub-Contractors and Departmental Representative.
- .4 Tailgate Meeting: meeting to be held on-site daily during the construction season and to include Contractor and all construction staff.

1.2 Administrative

- .1 Responsibilities of Departmental Representative:
 - .1 Schedule and administer project meetings throughout the progress of the Work.
 - .2 Prepare agenda for meetings unless otherwise specified.
 - .3 Preside at meetings unless otherwise specified.
 - .4 Record the meeting minutes unless otherwise specified. Include significant proceedings and decisions. Identify actions by parties.
 - .5 Reproduce and distribute copies of minutes within three (3) days after meetings and transmit to meeting participants, affected parties not in attendance and Departmental Representative.
- .2 Responsibilities of Contractor:
 - .1 Provide physical space and make arrangements for meetings.
 - .2 Representative of Contractor, Sub-Contractor and suppliers attending meetings will be qualified and authorized to act on behalf of party each represents.

1.3 Project Start-up Teleconference Meeting

- .1 PWGSC will request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities within ten (10) days after award of Contract. The meeting will be a teleconference between all parties in attendance.
- .2 Departmental Representative(s), Contractor, major Sub-Contractors, field representatives and supervisors will be in attendance.

- .3 Departmental Representative will chair the meeting and take minutes. Meeting will be informal and agenda to include:
 - .1 Appointment of official representative of participants in the Work.
 - .2 Preliminary Schedule of Work.
 - .3 Preliminary Schedule of submission of Work Plan and Cost Breakdown and other submissions.
 - .4 Preliminary requirements for temporary facilities, site security, worker accommodations, equipment and proposed method of mobilization and demobilization to minimize disturbances to the environment.
 - .5 Set-up of Pre-Construction meeting.

1.4 Pre-Construction Meeting

- .1 PWGSC will request a teleconference meeting of parties in the contract to discuss and resolve administrative procedures and responsibilities.
- .2 Departmental Representative(s), Contractor, major Sub-Contractors, field representatives and supervisors will be in attendance.
- .3 Establish time and location of meeting and notify parties concerned minimum five (5) days before meeting.
- .4 Incorporate mutually agreed variations to Contract Documents into Agreement, prior to signing.
- .5 Agenda to include:
 - .1 Appointment of official representative of participants in the Work.
 - .2 Schedule of Work: in accordance with Section 01 32 18 - Construction Progress Schedules - Bar (GANTT) Chart.
 - .3 Schedule of submission of shop drawings, samples, etc. Submit submittals in accordance with Section 01 33 00 - Submittal Procedures.
 - .4 Schedule of submission in accordance with Section 01 33 00 - Submittal Procedures including but not limited to:
 - .1 Site Specific Health and Safety Plan (SSHSP).
 - .1 Emergency Response Plan.
 - .2 Spill Contingency Plan.
 - .3 Fire Safety Plan.
 - .4 Environmental Protection Plan.
 - .2 Insurance and transcripts.
 - .3 Equipment to be used by Contractor.
 - .4 Location of equipment and proposed methods for mobilization and demobilization.
 - .5 Delivery schedule of specified equipment.
 - .6 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, administrative requirements.
 - .7 Departmental Representative provided products, if any.
 - .8 Record drawings in accordance with Section 01 33 00 - Submittal Procedures.

- .9 Maintenance manuals in accordance with Section 01 78 00 - Closeout Submittals.
- .10 Take-over procedures, acceptance, warranties in accordance with Section 01 78 00 - Closeout Submittals.
- .11 Monthly progress claims, administrative procedures, photographs, hold backs.
- .12 Appointment of inspection and testing agencies or firms.
- .13 Regulatory Issues.
- .14 Aboriginal involvement and reporting.
- .15 Project Photograph requirements.
- .16 Regulatory Review of all permits required to perform Work.

1.5 Construction Meetings

- .1 During course of Work, Departmental Representative will schedule progress meetings as required.
- .2 Contractor, major Sub-contractors involved in Work, and Departmental Representative are to be in attendance.
- .3 Departmental Representative will record minutes of meetings and circulate to attending parties and affected parties not in attendance shortly after meeting.
- .4 Agenda to include:
 - .1 Review and comment on minutes of previous meeting.
 - .2 Regulatory Review.
 - .3 Review of Work progress since previous meeting.
 - .4 Field observations, problems, or conflicts.
 - .5 Problems which impede construction schedule.
 - .6 Review of off-site fabrication delivery schedules
 - .7 Project schedule review, identifying activities that are behind schedule and providing measures to regain slippage.
 - .8 Corrective measures and procedures to regain projected schedule.
 - .9 Revisions to construction Schedule.
 - .10 Progress schedule during succeeding Work period.
 - .11 Review submittal schedules: expedite as required.
 - .12 Maintenance of quality standards.
 - .13 Review proposed changes for affect on construction schedule and on completion date.
 - .14 Health, Safety and Security issues.
 - .15 Correspondence from Authorities Having Jurisdiction (AHJ) or expected visits from AHJ.
 - .16 Other business.

- .5 Contractor to preside over daily tailgate meetings with all construction staff and document minutes with daily reporting requirements.
- .6 Provide written explanations on activities which are overrunning estimated time. If any such activities are on the critical path, indicate what corrective action will be taken to bring them back on Schedule. An updated schedule for activities not meeting schedule must be provided by the Contractor at each Construction Meeting.

1.6 Submittals

- .1 Submit requests for payment for review and for transmittal to Departmental Representative.
- .2 Submit requests for interpretation of Contract Documents and obtain instructions through the Departmental Representative.
- .3 Submit and process substitutions through Departmental Representative.
- .4 Submit and process task authorizations and contemplated change notices through Departmental Representative.
- .5 Deliver closeout submittals for review to Departmental Representative.
- .6 Provide submittals to the Departmental Representative for review. Include submittals as noted in Table 01 33 00-1 in Section 01 33 00 - Submittal Procedures.

1.7 Measurement of Payment

- .1 Work under this section will not be measured. Include all costs in Item BOPC-1, Balance of Project Costs in the Basis of Payment Schedule. Indicate cost of the work of this section as a separate line item in the Contract Work Breakdown Structure (CWBS) specified in Section 01 32 18 - Construction Progress Schedules - Bar (GANTT) Chart.

PART 2 - PRODUCTS

- .1 Not Used.

PART 3 - EXECUTION

- .1 Not Used.

END OF SECTION

PART 1 – GENERAL

1.1 Definitions

- .1 Activity: element of Work performed during course of Project. Activity normally has expected duration, expected cost and expected resource requirements. Activities can be subdivided into tasks.
- .2 Bar (GANTT) Chart: graphic display of Schedule-related information. In a typical bar chart, activities or other Project elements are listed down the left side of the chart, dates are shown across the top, and activity durations are shown as date-placed horizontal bars. Generally Bar Charts should be derived from commercially available computerized Project management systems.
- .3 Baseline: original approved plan (for Project, Work package, or activity), plus or minus approved scope changes.
- .4 Construction Work Week: Monday to Sunday, inclusive, will provide seven (7) days Work week and define Schedule calendar working days as part of Bar (GANTT) Chart submission.
- .5 Duration: number of work periods (not including holidays or other nonworking periods) required to complete activity or other Project element. Usually expressed as days or workweeks.
- .6 Milestone: significant event in Project, usually completion of major deliverable.
- .7 Project Schedule: planned dates for performing activities and the planned dates for meeting milestones. Dynamic, detailed record of tasks or activities that must be accomplished to satisfy Project objectives. Monitoring and control process involves using Project Schedule in executing and controlling activities and is used as basis for decision making throughout Project life cycle.

1.2 Requirements

- .1 Develop a practical schedule. Monitor and update the schedule so that it remains within specified Contract duration.
- .2 Plan to complete Work in accordance with prescribed milestones and time frame.
- .3 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Interim Certificate and Final Certificate as defined times of completion are of essence of this contract.
- .4 Identify tasks that lie on the critical path. Show float where possible.

1.3 Submittals

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit the Bar (GANTT) Chart to Departmental Representative within seven (7) working days of the contract award date.
- .3 Distribute copies of the schedule to Job site office:
 - .1 Subcontractors
 - .2 Other concerned parties.
- .4 Instruct recipients to report to Contractor within ten (10) days with any problems anticipated by timetable shown in schedule.

1.4 Project Schedule

- .1 Develop detailed Project Schedule.
- .2 Ensure detailed Project Schedule includes, as minimum, milestone and activity types as follows:
 - .1 Award.
 - .2 Planning document submittals, Shop Drawings, Samples.
 - .3 Permits.
 - .4 Mobilization.
 - .5 All meetings.
 - .6 Excavation.
 - .7 UST Removal.
 - .8 Backfilling.
 - .9 Site restoration activities.
 - .10 Interim Certificate of Completion.
 - .11 Demobilization.
 - .12 Closeout Submittals.
 - .13 Final Certificate of Completion.
- .3 Submit preliminary construction progress Schedule in accordance with Section 01 33 00 - Submittal Procedures to Departmental Representative coordinated with Departmental Representative's Project Schedule.
- .4 After review, revise and resubmit Schedule to comply with revised Project Schedule.
- .5 During progress of Work revise and resubmit Schedule as directed by Departmental Representative

1.5 Project Milestones

.1 At minimum, incorporate the following project milestones into the Project Schedule:

- .1 Mobilization to Site: TBD
- .2 Start of work: TBD
- .3 Final Completion of all works: TBD

1.6 Project Schedule Reporting

.1 Update Project Schedule on monthly basis reflecting activity changes and completions, as well as activities in progress.

.2 Include as part of Project Schedule, narrative report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.

.3 Indicate estimated percentage of completion for each item of Work at each submission.

.4 Indicate changes occurring since previous submission schedule:

- .1 Major changes in scope.
- .2 Activities modified since previous submission.
- .3 Revised projections of progress and completion
- .4 Other identifiable changes.

.5 Provide a narrative report to define:

- .1 Problem areas, anticipated delays, and impact on schedule.
- .2 Corrective action recommended and its effect.

1.7 Project Meetings

.1 Discuss Project Schedule at regular site meetings, identify activities that are behind schedule and provide measures to regain slippage. Activities considered behind schedule are those with projected start or completion dates later than current approved dates shown on baseline schedule.

.2 Contractor to expect and be prepared for and anticipate normal weather conditions and average runoff/flooding in schedule development and during the completion of the work. Weather-related delays beyond what can be reasonably expected will be discussed and negotiated.

1.8 Cost and Quality Controls

.1 Provide a Contract Work Breakdown Structure (CWBS) based on Contractor's Cost Breakdown and any modifications requested by Departmental Representative as follows:

.1 CWBS to be an organization of the Work to be performed, services to be provided and data to be submitted by Contractor, as well as payments to be made to Contractor under the terms of the Contract.

.2 The CWBS to clearly define the Work elements of each item of the CWBS.

.3 The CWBS to include a breakdown of pay items included under Item BOPC -1, Balance of Project Costs in the Basis of Payment Schedule. All unit price, lump sum, and provisional cost sum allowance pay items included in the Basis of Payment Schedule to also be included in the CWBS.

.4 Prepare the CWBS in computerized spreadsheet format compatible with the most recent release of Microsoft Excel software. Provide CWBS in hard copy format.

.5 Submit the CWBS within fourteen (14) days following contract award date.

.2 Equipment and Material Control:

.1 Record status of construction material used, soil volumes and equipment and report daily to Departmental Representative.

1.9 Measurement of Payment

.1 Work under this section will not be measured. Include all costs in Item BOPC-1, Balance of Project Costs in the Basis of Payment Schedule. Indicate the cost of this Work as a separate line item in the Cost Breakdown specified in this Section.

PART 2 - PRODUCTS

.1 Not Used.

PART 3 - EXECUTION

.1 Not Used.

END OF SECTION

PART 1 – GENERAL

1.1 Administrative

- .1 Submit to Departmental Representative all submittals listed for review. Submittal list is bound into specification section and is for information only. Submit with reasonable promptness in accordance with the Submittal Procedures Table and in orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract time and no claim for extension by reason of such default will be allowed.
- .2 Work affected by submittal is not to proceed until review is complete.
- .3 Present shop drawings and product data, in SI Metric units.
- .4 Where items or information is not produced in SI Metric units, converted values are acceptable.
- .5 Review submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to a specific Project will be returned without being examined and will be considered rejected.
- .6 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work are coordinated.
- .8 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative's review.
- .10 Keep one reviewed copy of each submission on-site.

1.2 Measurement of Payment

- .1 Work under this section will not be measured. Include all costs in Item BOPC-1, Balance of Project Costs in the Basis of Payment Schedule BOP-1. Indicate cost of the work of this section as a separate line item in the Contract Work Breakdown Structure (CWBS) specified in Section 01 32 18 - Construction Progress Schedules - Bar (GANTT) Chart.

PART 2 - PRODUCTS

.1 Not Used.

PART 3 - EXECUTION

.1 Not Used.

END OF SECTION

**TABLE 01 33 00-1
CONTRACTOR SUBMITTAL SCHEDULE**

Specification		Description	Date
Section	Title		
01 29 83	Certified Laboratory	Laboratory Certification	Upon Departmental Representative's request
01 32 18	Construction Progress Schedules - Bar (GANTT) Chart	Bar (GANTT) Chart	Seven (7) days after contract award
01 32 18	Construction Progress Schedules - Bar (GANTT) Chart	Contract Work Breakdown Structure (CWBS)	Submit within fourteen (14) days after contract award
01 35 15	Special Procedures for Contaminated Sites	Copies of waste disposal manifests	Submit within thirty (30) days of disposal
01 35 15	Special Procedures for Contaminated Sites	Off site hazardous material disposal facility, address and credentials	Submit at least ten (10) days prior to the scheduled shipment of the material off-site.
01 35 23	Health and Safety Requirements	Site Specific Health and Safety Plan	Ten (10) days prior to commencement of construction
01 35 23	Health and Safety Requirements	Spill Contingency Plan	Ten (10) days prior to commencement of construction
01 35 23	Health and Safety Requirements	Proof of First Aid credentials	Submit prior to the start of each construction season
01 35 23	Health and Safety Requirements	Accidents and Accident Reports	Immediately report both verbally and followed by a written report within 24 hours of occurrence
01 35 23	Health and Safety Requirements	Claims against Contractor or Sub-Contractor on account of any accidents	Promptly report in writing
01 35 43	Environmental Procedures	All required Contractor submittals to satisfy environmental requirements	Submit directly to the responsible agency and Authorities Having Jurisdiction (AHJ)
01 35 43	Environmental Procedures	Environmental Protection Plan	Submit directly to the responsible agency and Authorities Having Jurisdiction (AHJ)
01 35 43	Environmental Procedures	One complete copy of all submittals and agency approvals	As required
01 41 00	Regulatory Requirements	WHMIS MSDS data sheets	Submit upon delivery of materials
01 45 00	Quality Control	Samples and materials requiring off-site analysis	Submit with reasonable promptness
01 45 00	Quality Control	Inspection and test reports	Submit results within three (3) days after receipt
01 53 00	Mobilization and Demobilization	Mobilization Demobilization Plan	One hard copy and one electronic copy ten (10) days after contract award.
01 77 00	Closeout Procedures	Inspection and Declaration - Written Certificate	When ready for final inspection
01 78 00	Closeout Submittals	Record Drawings and other record information	At the completion of work and prior to final inspection
01 78 00	Closeout Submittals	Other Records	Prior to completion of the project
02 55 13	Contaminated Soil	Details of Contaminated Soil Containers	Prior to commencement of work
02 55 13	Contaminated Soil	Inventory Record of container contents	Maintained on site during Work and a summary provided with Closeout Submissions
02 55 13	Contaminated Soil	Name of Contaminated Soil Disposal Location	Submit within fourteen (14) days after contract award
02 55 13	Contaminated Soil	Name of Contaminated Water Disposal Location	Submit within fourteen (14) days after contract award
31 22 15	Grading	Location of Proposed Aggregate Source(s)	Seven (7) days prior to commencing production

END OF SECTION

PART 1 – GENERAL

1.1 Definitions

- .1 Hot Work:
 - .1 The process whereby one or more of the parts to be joined is heated near or above its melting point and the heated surfaces are caused to flow together.
 - .2 The process of applying heat to bring to red heat the spot to be severed, gouged or pierced and the metals burned in a jet of oxygen.
 - .3 Grinding operations that generate sparks.
 - .4 Torch-on roofing or air barrier operations.
 - .5 Roof tarring operations.

1.2 Safety Plan

- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to commencing any site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
- .2 Consultant may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

1.3 Responsibility

- .1 The “Prime Contractor” according to applicable local jurisdiction, is responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.
- .3 The Contractor is responsible for completing an evacuation plan if one is not available at site or to make itself familiar with the plan for the facility if available and follow it if an incident occurs that requires evacuation.
- .4 Should any unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of Work, follow procedures in place for Employee’s Right to Refuse Work in accordance with Acts and Regulations of the Territory having jurisdiction. Advise Departmental Representative verbally of such condition and follow immediately thereafter such notice-in-writing.

1.4 Submittals

- .1 Make submittals in accordance with Section 01 33 00.
- .2 Submit site-specific Health and Safety Plan: Within seven (7) days after date of Construction Startup Meeting and prior to commencement of Work. Health and Safety Plan must include:
 - .1 Results of site specific hazard assessment.
 - .2 Results of safety and health risk or hazard analysis for site tasks and operation.
- .3 Make available Contractor's authorized representative's work site health and safety inspection reports to the Departmental Representative.
- .4 Submit copies of reports or directions issued by Territorial health and safety inspectors.
- .5 Submit copies of incident and accident reports.
- .6 Submit Material Safety Data Sheets (MSDS) to the Departmental Representative.
- .7 The Departmental Representative will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within seven (7) days after receipt of plan. Revise plan as appropriate and resubmit with seven (7) days after receipt of comments.
- .8 The Departmental Representative's review of Contractor's final Health and Safety plan should not be construed as tacit approval and does not reduce or alter the Contractor's overall responsibility for construction Health and Safety.
- .9 On-site Contingency and Emergency Response Plan: Address standard operating procedures to be implemented during emergency situations.

1.5 Safety Activities

- .1 Perform site specific safety hazard assessment related to project.

1.6 Posting of Documents

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Territorial Acts and Regulations, and in consultation with Departmental Representative.

1.7 Correction of Non-Compliance

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by the Departmental Representative.
- .2 Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.

- .3 The Departmental Representative may stop Work if non-compliance of health and safety regulations is not corrected.

1.8 Hazardous Work

- .1 Blasting or other use of explosives is not permitted.
- .2 Working on live electrical equipment is not permitted. The Contractor shall study and adhere to Department's lockout procedure, prepare a written procedure for the work, obtain a permit to proceed and coordinate power shutdown with the Departmental Representative.

1.9 Work Stoppage

- .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

1.10 Fire Protection

- .1 Provide and maintain temporary fire protection equipment during performance of Work required by governing codes, regulations and bylaws.
- .2 Burning rubbish and construction waste materials is not permitted on site.
- .3 Remove combustible debris from site daily.
- .4 Position temporary heaters used on site on fire resistive drywall board tied off to a wall or floor with no less than 1.2 metres of clear space surrounding it.
- .5 Generate and implement a "Hot Work" permit system for "Hot Work" operations of any kind, such as but not limited to:
 - .1 Combustible Material: All combustible material must be removed a minimum of six (6) metres away from the working area and adjoining area.
 - .2 Flammable Liquids or Vapours: Drums, tanks or other containers or explosive liquids or vapours must be cleaned and cleared of flammable or explosive liquids or vapours before work is done on them.
 - .3 Pre-Operation Precautions: When feasible, work area should be wetted down.
 - .4 Spark Control: Sheet metal guards, fire proof blankets and similar protection must be provided to prevent hot metal and sparks falling on combustible material which cannot be moved.
 - .5 Fire Protection: If the area in which hot work operations are being performed is presently under operative sprinkler protection, the sprinklers in that area must be operative during welding or cutting operations. Suitable fire extinguishers or hand hose must be maintained near the operations. An extra person must be provided in the welding or cutting team whose sole responsibility is to watch for sparks and promptly use the extinguisher equipment.
 - .6 Post-Operations Precautions: After work a thorough check must be made for smoldering fire in out-of-the-way places and guard patrol protection (fire watch) must be maintained for a minimum of four (4) hours.

1.11 Fueled Welding Machines and Air Compressors

- .1 Where possible, locate fuelled welding machines and air compressors outside of building. When located inside building, ensure adequate ventilation is provided.

1.12 Protection of Public

- .1 Ensure that access and movement at or adjacent to the worksite is controlled on a twenty-four (24) hour basis and ensure that the public is not exposed to hazards present at the worksite.
 - .1 Use lighting, signage, hoarding, locked covers over openings, watchmen, "authorized entry only" provisions or other means as appropriate.
- .2 Ensure that authorized Department personnel have access to the site.
- .3 Institute a means of identifying authorized workers on site to assist in site security.

1.13 Measurement for Payment

- .1 All costs for the preparation and completion of the Health and Safety Plan are to be included in the lump sum price for Health and Safety Plan, Item 01 35 23-1 in the Basis of Payment Schedule BOP-1. The lump sum price for the Health and Safety Plan will be paid after a satisfactory Health and Safety Plan has been submitted to the Departmental Representative.
- .2 Except of indicated above, work under this section will not be measured. Indicate the cost of this Work as a separate line item in the Cost Breakdown in this Section.

PART 2 - PRODUCTS

- .1 Not Used.

PART 3 - EXECUTION

- .1 Not Used.

END OF SECTION

PART 1 – GENERAL

1.1 Definitions

- .1 Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade environment aesthetically, culturally and/or historically.
- .2 Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction. Control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.2 Regulatory Overview

- .1 Comply with all applicable environmental laws, regulations and requirements of Federal, Territorial and other regional authorities, and acquire and comply with such permits, approvals and authorizations as may be required.
- .2 Comply with and be subject to those permits and approvals obtained from Departmental Representative to conduct the Work.

1.3 Submittals

- .1 Submit all required Contractor submittals to satisfy environmental requirements directly to the responsible agency and Authorities Having Jurisdiction (AHJ).
- .2 Contractor to submit Environmental Protection Plan within fourteen (14) working days of the contract award date.
- .3 Submit one complete copy of all submittals and agency approvals to Departmental Representative.
- .4 All submittals in accordance with Section 01 33 00 - Submittal Procedures.

1.4 Site Maintenance

- .1 Keep the site free from the accumulation of waste materials and debris as specified in this section.
- .2 Upon completion of the work, clean away and dispose of all surplus material, supplies, rubbish and temporary works leaving the site neat and tidy to the requirements of Departmental Representative.
- .3 Proposed locations for stockpile or container placement on the RCMP property must be reviewed by the Departmental Representative prior to placement. Stored material and loading activities must not impede RCMP operations.

1.5 Disposal of Wastes

- .1 Do not bury rubbish and waste materials on-site.
- .2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways.

1.6 Drainage

- .1 Provide temporary drainage and pumping as necessary to keep excavations and site free from water.
- .2 Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- .3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

1.7 Site Clearing and Plant Protection

- .1 Protect vegetation, including plants on site and adjacent properties, where indicated.
- .2 Minimize stripping of topsoil and vegetation.

1.8 Erosion and Sediment Control

- .1 Plan and execute construction by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas, from stockpiles, staging areas, and other Work areas. Prevent erosion and sedimentation.
- .2 Minimize amount of bare soil exposed at one time. Stabilize disturbed soils as quickly as practical. Strip vegetation, re-grade, or otherwise develop in such a way as to minimize erosion. Remove accumulated sediment resulting from construction activity from adjoining surfaces, drainage systems, and water courses, and repair damage caused by soil erosion and sedimentation, as directed by Departmental Representative.
- .3 Provide and maintain temporary measures, which may include, but are not limited to, silt fences, drains, berms, terracing, temporary drainage piping, and any other construction required to prevent erosion and migration of silt, mud, sediment, and other debris off site or to other areas of site where damage might result, or that might otherwise be required by Laws and Regulations. Make sediment control measures available during construction. Place silt fences and/or hay or straw bales in ditches to prevent sediments from escaping from ditch terminations.
- .4 Plan construction procedures to avoid damage to Work or equipment encroachment onto water bodies or drainage ditch banks. In the event of damage, promptly take action to mitigate effects. Restore affected bank or water body to pre-existing condition.

- .5 Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.
- .6 If soil and debris from site accumulate in low areas, ditches, or other areas where in the Departmental Representative's determination it is undesirable, remove accumulation and restore area to original condition.

1.9 Dust and Particulate Control

- .1 Execute Work by methods to minimize raising dust from decontamination operations. Implement and maintain dust and particulate control measures as determined necessary by applicable regulations and standards during Work and in accordance with AHJ.
- .2 Provide positive means to prevent airborne dust from dispersing into atmosphere. The use of oil for dust control is prohibited.
- .3 Prevent dust from spreading to beyond the immediate work area.
- .4 Departmental Representative or designate may stop work at any time when Contractor's control of dusts and particulates is inadequate for worker exposure relative to indoor conditions when air quality monitoring indicates that release of fugitive dusts and particulates into the work area equals or exceeds specified levels.
- .5 If Contractor's dust and particulate control is not sufficient for controlling dusts and particulates into atmosphere, stop work. Contractor must discuss procedures that Contractor proposes to resolve problem. Make all necessary changes to operations prior to resuming work that may cause release of dusts or particulates.
 - .1 Cover or wet down dry materials and rubbish to prevent blowing dust and debris.

1.10 Environmental Protection Supplies

- .1 Supply, transport, install and maintain erosion, sediment and drainage controls necessary to complete the work in accordance with the requirements of Departmental Representative.
- .2 At the completion of construction, dispose of used absorbent boom, and/or other potentially hazardous waste generated during remediation activities, in accordance with the applicable guidelines and standards.

1.11 Notification

- .1 Departmental Representative will notify Contractor in writing of observed non-compliance with Federal, Provincial, Territorial or Municipal environmental laws or regulations, permits, etc.
- .2 Contractor, after receipt of such notice, will inform Departmental Representative of proposed corrective action and take such action after review and comment by Departmental Representative.

- .3 Departmental Representative will issue stop order of Work until satisfactory corrective action has been taken.
- .4 No time extensions granted, or equitable adjustments allowed, to Contractor for such suspensions.

1.12 Measurement for Payment

- .1 Except as indicated above, work under this section will not be measured. Include all costs in Item BOPC-1, Balance of Project Costs in the Basis of Payment Schedule. Indicate cost of the work of this section as a separate line item in the Contract Work Breakdown Structure (CWBS) specified in Section 01 32 18 - Construction Progress Schedules - Bar (GANNT) Chart.

PART 2 - PRODUCTS

- .1 Not Used.

PART 3 - EXECUTION

3.1 Temporary Erosion Sedimentation Control

- .1 Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff to adjacent properties, according to requirements of AHJ.
- .2 Inspect, repair, and maintain erosion and sedimentation control measures during Work.
- .3 Implement erosion control methods as directed by Departmental Representative.

3.2 Installation:

- .1 Construct temporary erosion control items as indicated. Actual alignment and/or location of various items as directed by Departmental Representative.
- .2 Check erosion and sediment control measures daily.
- .3 Prior to or during construction, Departmental Representative may require the installation or construction of improvements to prevent or correct temporary conditions on site. Improvements may include berms, grading, retaining walls, and other measures appropriate to the specific condition. Temporary improvements must remain in place and in operation as necessary or until otherwise directed by Departmental Representative.
- .4 Unless indicated or directed by Departmental Representative, remove temporary erosion and sediment control devices upon completion of Work. Spread accumulated sediments to form a suitable surface for seeding or dispose of, and shape area to permit natural drainage to satisfaction of Departmental Representative. Materials once removed become property of Contractor.

END OF SECTION

PART 1 – GENERAL

1.1 References and Codes

- .1 Perform Work in accordance with National Building Code of Canada (NBC) including all amendments and other codes of territorial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.
- .2 Meet or exceed requirements of:
 - .1 Contract documents.
 - .2 Specified standards, codes and referenced documents.
- .3 Work in accordance with the Specifications and meet or exceed all codes, standards and regulations applicable to the Work and issued under the authority of the Government of Canada and the Government of the NWT. Advise Departmental Representative of any discrepancies in the codes, standards and regulations applicable to the Work.

1.2 References and Codes - Federal

- .1 Meet or exceed the governing codes, standards and guidelines, and regulations applicable to Work and issued under the authority of the Government of Canada as follows:
 - .1 Canada Labour Code Part 11-Occupational Health and Safety (R.S. 1985, c.L-2).
 - .2 Canada Occupational Health and Safety Regulations (SOR/86-304).
 - .3 Canadian Environmental Protection Act, PCB Regulations (SOR/2008-273).
 - .4 Controlled Products Regulations (SOR/88-66) a.SOR/2001-254.
 - .5 Inter-provincial Movement of Hazardous Waste Regulations (SOR/2002-301).
 - .6 National Fire Code of Canada, 1995 a. 2002, updated 2010.
 - .7 Ozone Depleting Substances Regulations, 1998 (SOR/99-7).
 - .8 Transportation of Dangerous Goods Act, 1992 (S.C. 1992, c.34) a.1999, c.31.
 - .9 Transportation of Dangerous Goods Regulations (SOR/2001-286) a.SOR/2003-400.
 - .10 Territorial Land Use Regulations (C.R.C., c.1524) a.98-430.
 - .11 Storage Tank System for Petroleum Products & Allied Petroleum Products Regulations (SOR / 2008-197).
 - .12 Migratory Birds Convention Act, 1994.
 - .13 Environmental Code of Practice for Aboveground Storage Tank Systems Containing Petroleum Products, 1994 CCME.
 - .14 Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations (Environment Canada (EC)) 2008
 - .15 Canadian Environmental Quality Guidelines for the Protection of Environmental and Human Health, 1999, updated 2009.
 - .16 Canadian Environmental Protection Act (EC, 1999).
 - .17 A Federal Approach to Contaminated Sites (CSMWG, 2002).
 - .18 Treasury Board Policy on Management of Real Property (TB, 2006)
 - .19 Canada-Wide Standard for Petroleum Hydrocarbons (PHC) in Soil (CCME, 2008).
 - .20 Construction Project Safety Management Guide, 5th Edition (PWGSC, 2008).

- .21 PCB Regulations (EC, 2008).
- .22 Guidelines for Canadian Drinking Water Quality, April 2007, updated 2010.
- .23 Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments, April 1976.

1.3 References and Codes – Northwest Territories

- .1 Meet or exceed the governing codes, standards and guidelines, and regulations applicable to Work and issued under the authority of the Government of Nunavut and the Northwest Territories as follows:
 - .1 Environmental Protection Act (R.S.N.W.T. 1988, c. E-7) a. 1998, c.21, c.24.
 - .2 Public Health Act, R.S.N.W.T. 1988, c.P-12.
 - .3 Spill Contingency Planning and Reporting Regulations R-068-93.
 - .4 Fire Prevention Act, R.S.N.W.T. 1988, c.F-6.
 - .5 Transportation of Dangerous Goods Act (1990 S.N.W.T. 1990, c.36).
 - .6 Used Oil and Waste Fuel Management Regulations, November 2003.
 - .7 Work Site Hazardous Materials Information System Regulations (R.R.N.W.T. 1990, c.S-2).
 - .8 Guideline for the General Management of Hazardous Waste in the NWT. February 1998.
 - .9 Guideline for Industrial Waste Discharges in the NWT, April 2004
 - .10 Homeowner's Guide to Oil Tanks, GNWT, Department of Environment and Natural Resources, April 2010.

1.4 Hazardous Material Discovery

- .1 Stop Work immediately and notify Departmental Representative upon discovery of following materials during course of Work:
 - .1 Designated substances such as PCBs, asbestos, and mercury.
 - .2 Unknown and/or potentially hazardous substances.
 - .3 Items that may have archaeological, cultural or scientific significance.
- .2 Work at site may involve contact with:
 - .1 PHC (total petroleum hydrocarbons) impacted soils and water.

1.5 WHMIS

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada and Health and Welfare Canada.
- .2 Deliver copies of MSDS data sheets to Departmental Representative upon delivery of materials.

1.6 Submittals

- .1 All submittals in accordance with Section 01 33 00 - Submittal Procedures.

1.7 Measurement for Payment

- .1 Work under this section will not be measured. Include all costs in Item BOPC-1, Balance of Project Costs in the Basis of Payment Schedule. Indicate the cost of this Work as a separate line item in the Cost Breakdown specified in Section 01 32 18 - Construction Progress Schedules - Bar (GANTT) Chart.

PART 2 - PRODUCTS

- .1 Not Used.

PART 3 - EXECUTION

- .1 Not Used.

END OF SECTION

PART 1 – GENERAL

1.1 Inspection

- .1 Allow Departmental Representative access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
- .2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Departmental Representative, instructions, or law, of Place of Work.
- .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
- .4 Departmental Representative may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction. If such Work is found in accordance with Contract Documents, Departmental Representative is to pay cost of examination and replacement.

1.2 Submittals

- .1 All submittals in accordance with Section 01 33 00 - Submittal Procedures.

1.3 Testing by the Contractor

- .1 Backfill compaction testing will be done by the Contractor. Provide minimum 48 hours notice of scheduled backfill operations. Upon contract award, contractor to notify Departmental Representative on proposed source of backfill material. Contractor to provide to the Departmental Representative a sample consisting of two 5 gallon pails of the proposed fill material.

1.4 Access to Work

- .1 Co-operate to provide reasonable facilities for such access.

1.5 Procedures

- .1 Notify appropriate agency and Departmental Representative in advance of requirement for tests, in order that attendance arrangements can be made.
- .2 Submit samples and materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in on orderly sequence so as not to cause delay in Work.
- .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

1.6 Rejected Work

- .1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by the Departmental Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
- .2 Make good other Contractor's Work damaged by such removals or replacements promptly.
- .3 If in the opinion of the Departmental Representative it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Departmental Representative may deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which will be determined by Departmental Representative.

1.7 Reports

- .1 Submit three (3) copies of inspection and test reports to Departmental Representative within three (3) days of Contractor receipt.

1.8 Measurement for Payment

- .1 Work under this section will not be measured. Include all costs in Item BOPC-1, Balance of Project Costs in the Basis of Payment Schedule. Indicate the cost of this Work as a separate line item in the Cost Breakdown specified in Section 01 32 18 - Construction Progress Schedules - Bar (GANTT) Chart.

PART 2 - PRODUCTS

- .1 Not Used.

PART 3 - EXECUTION

- .1 Not Used.

END OF SECTION

PART 1 – GENERAL

1.1 General

- .1 Provide all labour, equipment and materials, and performance of all Work necessary for mobilization to, and demobilization from site. This will include all the Departmental Representative provided supplies, equipment and material.
- .2 Mobilization to include transportation to site of Contractor's labour, equipment, materials, and assembling, erecting, and preparing site in readiness to start Work, all in accordance with Contractor's Schedule.
- .3 Demobilization to include dismantling and removal from site, of all Contractor's equipment, and materials, waste resulting from cleanup of site and transportation of labour from site.
- .4 Decontaminate and clean all equipment used on the Project prior to demobilization. All machinery and equipment must be cleaned before being brought to the site to ensure no plant matter or seeds from invasive species are introduced to the site.
- .5 Do not mobilize to the site without written authorization from the Departmental Representative.
- .6 All mobilization and demobilization methods to comply with the requirements of all applicable codes, standards, guidelines and permits, approvals and/or authorizations.

1.2 Measurement of Payment

- .1 All costs for Mobilization to the Hay River RCMP Site of all equipment and materials are to be included in the lump sum price for Mobilization, Item 01 53 00-1, as indicated in the Basis of Payment Schedule. The lump sum price for mobilization is to include all labour, equipment, materials, meals, accommodation, flights and any other costs necessary to undertake work required.
- .2 All costs for Demobilization from the Hay River RCMP Site of all equipment and materials are to be included in the lump sum price for Demobilization, Item 01 53 00-2, as indicated in the Basis of Payment Schedule. The lump sum price for Demobilization is to include all labour equipment, materials, meals, accommodation, flights and any other costs necessary to undertake the work required. Payment for Demobilization will be made after satisfactory cleanup of the site, removal from the site of all equipment, materials, and contaminated soils as indicated, and submission to Departmental Representative of all Contractor submittals.
- .3 Except as indicated above, work under this section will not be measured. Include all costs in Item BOPC-1, Balance of Project Costs in the Basis of Payment Schedule. Indicate cost of the work of this section as a separate line item in the Contract Work Breakdown Structure (CWBS) specified in Section 01 32 18 - Construction Progress Schedules - Bar (GANTT) Chart.

PART 2 - PRODUCTS

.1 Not Used.

PART 3 - EXECUTION

.1 Not Used.

END OF SECTION

PART 1 - GENERAL

1.1 Description

- .1 This Section specifies requirements for temporary barriers and signage during tank removal activities.

1.2 Installation and Removal

- .1 Provide temporary controls in order to execute Work expeditiously.
- .2 Remove from site all such work after use.
- .3 Confirm with the Departmental Representative and RCMP locations and installation schedule three days prior to installation.
- .4 Be responsible for damage incurred due to lack of or improper protection.

1.3 Guard Rails and Barricades

- .1 Provide secure, rigid guard rails and barricades around deep excavations, as required.

1.4 Signage

- .1 Provide all signage in language that can be understood by the community and workers on the site (English and/or local dialects, as needed).
- .2 Provide signage on all barricades fences identifying the locations of excavations and outlining the hazard.
- .3 Provide signage to outline detours, and direct the public to services and RCMP entrances potentially obscured by barricade fences, as required.

1.5 Dewatering

- .1 Provide temporary drainage and pumping facilities to keep excavations and site free from standing water.
- .2 Do not discharge drainage water into the Town sewers without approval from the Town, Drainage Services.
- .3 Departmental Representative will collect and analyze water samples from water recovered in excavated areas in order to determine disposal requirements.

1.6 Dust Control

- .1 Provide dust controls, such as tight screens/partitions or watering to localize dust generating activities, and for protection of workers, finished areas of Work and public, as needed. All controls must comply with applicable permits.

- .2 Maintain and relocate protection until such work is complete.

1.7 Access to the Site

- .1 Provide and maintain access roads, sidewalk crossings, ramps, and detachment/house accesses, as may be required for access to Work, private residences, and public services.

1.8 Protection of Building Finishes

- .1 Provide protection for finished and partially finished building finishes and equipment during performance of Work.
- .2 Provide necessary screens, covers, and hoardings.

1.9 Protection of Permafrost

- .1 Provide shade so excavated areas are not subject to direct sunshine.
- .2 Provide necessary screens, covers, wood frames and hoardings.

1.10 Measurement for Payment

- .1 Work under this section will not be measured. Include all costs in Item BOPC-1, Balance of Project Costs in the Basis of Payment Schedule. Indicate the cost of this work as a separate line item in the cost breakdown specified in Section 01 32 18 - Construction Progress Schedules - Bar (GANTT) Chart.

PART 2 - PRODUCTS

- .1 Not Used.

PART 3 - EXECUTION

- .1 Not Used.

END OF SECTION

PART 1 - GENERAL

1.1 Definitions

- .1 Clean Waste: Untreated and unpainted; not contaminated with oils, solvents, sealants or similar materials.
- .2 Construction and Demolition Waste: Solid wastes typically including but not limited to, building materials, packaging, trash, debris, and rubble resulting from construction, re-modelling, repair and demolition operations.
- .3 Hazardous: Exhibiting the characteristics of hazardous substances, including, but not limited to, ignitability, corrosiveness, toxicity or reactivity.
- .4 Non-hazardous: Exhibiting none of the characteristics of hazardous substances, including, but not limited to, ignitability, corrosiveness, toxicity, or reactivity.
- .5 Non-toxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- .6 Recyclable: The ability of a product or material to be recovered at the end of its life cycle and re-manufactured into a new product for reuse by others.
- .7 Recycle: To remove a waste material from the Project site to another site for re-manufacture into a new product for reuse by others.
- .8 Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating or thermally destroying waste.
- .9 Return: To give back reusable items or unused products to vendors credit.
- .10 Reuse: To reuse a construction waste material in some manner on the Project site.
- .11 Salvage: To remove a waste material from the Project site to another site for resale or reuse by others.
- .12 Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- .13 Source Separation: the act of keeping different types of waste materials separate beginning from the first time they become waste.
- .14 Toxic: Poisonous to humans either immediately or after a long period of exposure.
- .15 Trash: Any product or material unable to be reused, returned, recycled, or salvaged.

- .16 Volatile Organic Compounds (VOC's): Chemical compounds common in and emitted by many building products over time through outgassing:
 - .1 Solvents in paints and other coatings.
 - .2 Wood preservatives; strippers and household cleaners.
 - .3 Adhesives in particle board, fibreboard, and some plywood; and foam insulation.
 - .4 When released, VOC's can contribute to the formation of smog and can cause respiratory tract problems, headaches, eye irritations, nausea, damage to the liver, kidneys, and central nervous system, and possibly cancer.
- .17 Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.
- .18 Waste Management Plan: A Project-related plan for the collection, transportation, and disposal of the waste generated at the construction site. The purpose of the plan is to ultimately reduce the amount of material being landfilled.

1.2 Submittals

- .1 All submittals in accordance with Section 01 33 00 - Submittal Procedures.

1.3 Storage, Handling, and Protection

- .1 Unless specified otherwise, materials for removal become Contractor's property.
- .2 Protect structural components not removed for demolition from movement or damage.
- .3 Support affected structures, if necessary. If safety of building is endangered, cease operations and immediately notify Departmental Representative.
- .4 Protect surface drainage, storm sewers, sanitary sewers, and utility services from damage and blockage.

1.4 Scheduling

- .1 Coordinate work with other activities at site to ensure timely and orderly progress of the work.

1.5 Measurement for Payment

- .1 Work under this section will not be measured. Include all costs in Item BOPC – 1, Balance of Project Costs in the Basis of Payment Schedule. Indicate the cost of this work as a separate line item in the cost breakdown specified in Section 01 32 18 – Construction Progress Schedules – Bar (GANTT) Chart.

PART 2 - PRODUCTS

- .1 Not Used.

PART 3 - EXECUTION

3.1 Preparation

- .1 Handle waste materials not reused, salvaged, or recycled in accordance with appropriate regulations and codes.

3.2 Disposal of Waste

- .1 Burying of rubbish and waste materials is prohibited.
- .2 Disposal of waste, volatile materials, mineral spirits, oil, paint thinner into waterways, storm, or sanitary sewers is prohibited.
- .3 Remove and dispose of UST, vent and fill pipes in accordance with appropriate regulations and codes.

3.3 Cleaning

- .1 Remove tools and waste materials on completion of work, leave work area in clean and orderly condition.
- .2 Clean-up work area as work progresses.
- .3 Source separate materials to be reused/recycled into specified sort areas.

END OF SECTION

PART 1 – GENERAL

1.1 Closeout Procedures

- .1 Notify Departmental Representative when Work is considered ready for substantial performance.
- .2 Accompany Departmental Representative on preliminary inspection to determine items listed for completion or correction.
- .3 Comply with Departmental Representative's instructions for correction of items of Work listed in executed Certificate of Substantial Completion.
- .4 Notify Departmental Representative of instructions for completion of items of Work determined in Departmental Representative's final inspection.

1.2 Inspection and Declaration

- .1 Contractor's Inspection: Contractor and all Sub-Contractors to conduct an inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
 - .1 Notify Departmental Representative in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.
 - .2 Request Departmental Representative's Inspection.
- .2 Departmental Representative's Inspection: Departmental Representative and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor to correct Work accordingly.
- .3 Completion: submit written certificate that the following have been performed:
 - .1 Work has been completed and inspected for compliance with Contract Documents.
 - .2 Defects have been corrected and deficiencies have been completed.
 - .3 Work is complete and ready for Final Inspection.
- .4 Final Inspection: when items noted above are completed, request final inspection of Work by Departmental Representative and Contractor. If Work is deemed incomplete by Departmental Representative, complete outstanding items and request re-inspection.

1.3 Measurement of Payment

- .1 Except as indicated above, work under this section will not be measured. Include all costs in Item BOPC-1, Balance of Project Costs in the Basis of Payment Schedule
- .2 Indicate cost of the work of this section as a separate line item in the Contract Work Breakdown Structure (CWBS) specified in Section 01 32 18 - Construction Progress Schedules - Bar (GANTT) Chart.

PART 2 - PRODUCTS

.1 Not Used.

PART 3 - EXECUTION

.1 Not Used.

END OF SECTION

PART 1 – GENERAL

1.1 Format

- .1 Present information and data in an organized format.

1.2 Contents of Final Submission

- .1 Table of Contents: provide title of project;
 - .1 Date of submission; names,
 - .2 Addresses, and telephone numbers of Contractor with name of responsible parties,
 - .3 Schedule of products and systems, indexed to content of volume,
 - .4 Summary of Health and Safety issues, Environmental issues and performance indicators,
 - .5 Photographs of construction progress; present sequentially and indicate the date and photo description beneath each photograph,
 - .6 Copies of all waste manifests and transportation records.
- .2 For each product or system:
 - .1 List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
- .3 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
- .4 Typewritten Text: as required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified.
 - .1 Conformance or non-conformance with Contract Documents.

1.3 As-Builts

- .1 In addition to requirements in General Conditions, maintain at the site for Departmental Representative one record copy of:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Task Authorizations
 - .5 Change Orders and other modifications to the Contract.
- .2 Label record documents and file in accordance with Section number listings in List of Contents
- .3 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.

- .4 Keep record documents and samples available for inspection by Departmental Representative.

1.4 Recording Actual Site Conditions

- .1 Record information drawings provided by Departmental Representative.
- .2 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- .3 Contract Drawings and shop drawings: legibly mark each item to record actual construction, including:
 - .1 Field changes of dimension and detail.
 - .2 Changes made by change orders.
 - .3 Details not on original Contract Drawings.
- .4 References to related shop drawings and modifications, including:
 - .1 Field changes of dimension and detail.
 - .2 Changes made by Task Authorization, Change Order or Field Order.
- .5 Specifications: legibly mark each item to record actual construction, including:
 - .1 Changes made by Task Authorization, Addenda and change orders.

1.5 Record Drawings

- .1 Departmental Representative will provide to Contractor, two sets of white prints for record drawing purposes.
- .2 Maintain Project record drawings and record accurately, deviations from Contract documents on one set of prints.
- .3 Record changes in red.
- .4 At completion of Project and prior to final inspection, neatly transfer record notations to second set of drawings and submit both sets to Departmental Representative. Forward information on completed areas at the end of the construction season.

1.6 Other Records

- .1 Prior to completion of Project, submit the following to the Departmental Representative:
 - .1 Copies of all documents and permits obtained by the Contractor.
 - .2 Results of all testing carried out by the Contractor.
 - .3 Any other pertinent information.
 - .4 Copies of all shipping documents identifying the shipper, the receiver and all carriers involved in the transport of materials.

- .5 Information as required by all applicable permits, other applicable regulatory bodies and AHJ.
 - .2 Consolidate the above information in one document and submit one (1) hard copy and one (1) electronic copy to the Departmental Representative.
- 1.7 Measurement for Payment
- .1 All direct costs for the Project Record Documents are to be included in the lump sum price for Project Record Documents, Item 01 78 00-1, as indicated in the Basis of Payment Schedule.
 - .2 Except as indicated above, work under this section will not be measured. Include all costs in Item BOPC-1, Balance of Project Costs in the Basis of Payment Schedule. Indicate cost of the work of this section as a separate line item in the Contract Work Breakdown Structure (CWBS) specified in Section 01 32 18 - Construction Progress Schedules - Bar (GANTT) Chart.

PART 2 - PRODUCTS

- .1 Not Used.

PART 3 - EXECUTION

- .1 Not Used.

END OF SECTION

PART 1 - GENERAL

1.1 Description

- .1 This Section specifies the requirements for the excavation, handling, containerization and disposal of contaminated soils.
- .2 The following activities are considered incidental to the work and will not be measured separately:
 - .1 Equipment decontamination.
 - .2 Dewatering of ponded contaminated soil areas, as required.
 - .3 Provision of all necessary safety equipment and clothing.
 - .4 Removal and disposal of contaminated soil from contaminated soil areas.
 - .5 Installation of environmental controls.

1.2 Definitions

- .1 Petroleum Hydrocarbons (PHC): Hydrocarbon products described by laboratory analyses as lubricating oil and grease, fuel oil, diesel and/or gasoline.
- .2 Hydrocarbon Contaminated Soil: Soil exceeding the concentrations of benzene, toluene, ethylbenzene, xylenes or hydrocarbon fractions F1, F2, F3, or F4 as outlined in the the Canadian Council of Ministers of the Environment (CCME) Environmental Quality Guidelines (Soil and Water, 2010), as well as the CCME Canada-Wide Standard for Petroleum Hydrocarbons in Soil (2001).
- .3 Free Product: Non-aqueous petroleum hydrocarbon phase in association with, but physically unmixed from, surface water, ground water or soil.
- .4 Clean Soil: Soil that has been sampled, analyzed, and determined to have contaminant concentrations below those outlined in this section.
- .5 Contractor's Designated Waste Storage Facility: a location where contaminated soil and waste can be stored securely prior to shipping offsite. Location will require approval from Departmental Representative.

1.3 Qualifications

- .1 Be thoroughly familiar with and knowledgeable about existing site conditions, scope of work and requirements of the Specification.
- .2 Only Contractor's personnel capable of demonstrating a history of satisfactory experience in the area of hazardous waste management and who can satisfy Federal and Territorial requirements will be permitted to carry out the work of this Section.
- .3 Contractor's personnel trained as described in this Section are to instruct and direct all workers with respect to the waste management procedures and labour and safety practices to be followed in carrying out the work.

.4 Provide workers, Departmental Representative, and Departmental Representative's Authorized Personnel with protection appropriate to the potential type and level of exposure. Establish specific safety protocols in the Site Specific Health and Safety Plan prior to commencing clean up activities.

.5 Provide suitable safety clothing and equipment as required during the course of the work.

1.4 Site Conditions

.1 Suspend operations whenever climatic conditions are unsatisfactory for excavating or regrading to conform with this Specification.

.2 After occurrence of heavy rains, do not operate equipment in designated areas until the material has dried sufficiently to prevent excessive rutting.

.3 Prior to the commencement of the work, remove debris, snow, ice and standing water from areas to be excavated.

.4 During excavation of contaminated soil, maintain a stable excavation and dewater as required or as directed by Departmental Representative.

1.5 Protection

.1 Environmental protection measures are to be in accordance with the requirements specified in Section 01 35 15 - Special Project Procedures for Contaminated Sites and Section 01 35 43 - Environmental Procedures.

.2 Recovered groundwater may not be released to the environment, unless authorized by the Departmental Representative. Contractor to be prepared to collect recovered contact water and dispose offsite.

.3 All equipment must be maintained in proper running order to prevent leaking or spilling of potentially hazardous or toxic products. This includes hydraulic fluid, diesel, gasoline and other petroleum products.

.4 Machinery must be operated efficiently, to ensure that noise and air quality issues are short-term and local.

.5 Protect permafrost while excavations are open with the use of tarps and shade screens.

1.6 Personnel Protection

.1 The area designated for cleanup under this contract may involve soils which contain hydrocarbons, which are considered hazardous to human health.

.2 When working with hydrocarbons, and other contaminants, workers are to wear protective clothing and equipment acceptable to Labour Canada or Territorial Labour Department as suitable for exposure in the work area. Follow National Institute for Occupational Safety and Health (NIOSH) guidelines in providing protection for on-site personnel including contract

employees, subcontractor, Department Representative and other authorized site personnel. Provide details of protective clothing and equipment required for each work area in the Site Specific Health and Safety Plan as required by Section 01 35 32 - Health and Safety Plan.

- .3 Supply sufficient quantities of designated protection equipment to fit all site personnel including Departmental Representative and authorized visitors. Educate workers as to risks, and train in safe work practices.

1.7 Measurement for Payment

- .1 The excavation of Hydrocarbon Contaminated Soil, will be measured for payment by the cubic metre (m³) of contaminated soil as determined from field measurements collected by the Departmental Representative of the excavation. Recovered contaminated water for offsite disposal will be measured by the cubic metre (m³) as determined from field measurements collected by the Departmental Representative.
- .2 The scope of work for Item 02 55 13-1, Hydrocarbon Contaminated Soil Excavation, Loading, Hauling and Offsite Disposal:
 - .1 Excavation of Hydrocarbon Contaminated Soil from the contaminated soil area as indicated on drawings and as directed by the Departmental Representative.
 - .2 Handling and loading of hydrocarbon contaminated soil to trucks onsite.
 - .3 Off-site transportation and tipping of contaminated soil at the contractors designated approved waste disposal facility. Contractor will be required to provide proof of disposal such as waste manifests or landfill scale tickets.
 - .4 Incidental items, for which additional payments will not be made, include additional excavations beyond the identified limits, handling, or transportation of contaminated soils between stockpiles or process areas.
- .3 The supply of fill and backfilling of the excavated area will be paid by Item 02 55 13-2 Supply, Placement and Reshaping of Imported Fill. The quantity measurement will match the quantity measured for Item 02 55 13-2. The scope of work for this item includes:
 - .1 The supply and placement of fill to replace the excavated soils.
 - .2 Reshaping of the fill to meet the requirements of Section 31 22 15 Grading.
- .4 The supply of containers as well as the collection and offsite disposal of recovered groundwater is included in this contract. Payment will be made according to the volume of water recovered. In the event the recovered groundwater is confirmed by analytical testing to be contaminated, contractors will be required to dispose of water at an approved facility. Contractors to provide proof of disposal such as waste manifests or proof of acceptance at an approved disposal facility. Payment will be paid under Item 02 55 13-3 in Basis of Payment Schedule for contaminated water only. In the event recovered water is confirmed to be non-contaminated, contractor will be responsible for offsite disposal.

- .5 No extra payment will be made for soil removed from beyond the specified limits of excavation, unless such removal has been specifically directed by the Departmental Representative. The volume of contaminated soil excavation beyond the specified limits that have been approved by Departmental Representative will be determined by survey.
- .6 All costs associated with the cleanup or treatment of contamination of areas within or surrounding the contaminated soil handling areas due to the migration of contaminants from those areas as a result of Contractor's actions or inactions are to become the responsibility of Contractor. These costs are to include all costs of investigation to determine the extent of contamination migration, as well as soil excavation and treatment costs.
- .7 The following activities are considered incidental to the work identified by Items 02 55 13-1 through 02 55 13-3 in the Basis of Payment Schedule and will not be measured separately:
 - .1 Provision of all necessary safety equipment and clothing.
 - .2 Any necessary excavation to facilitate the testing of contaminated soils by the Departmental Representative.
 - .3 Equipment decontamination including preparation and operation of the equipment decontamination area.
 - .4 Provision of all necessary safety equipment and clothing, as specified in Section 01 35 32-Site Specific Health and Safety Plan.
 - .5 Any requirements of local municipal or territorial permits.
- .8 Except as indicated above, work under this section will not be measured. Include all costs in Item BOPC-1, Balance of Project Costs for Hay River RCMP Site in Basis of Payment Schedule. Indicate the cost of this work as a separate line item in the cost breakdown specified in Section 01 32 18 - Construction Progress Schedules - Bar (GANTT) Chart.

PART 2 - PRODUCTS

2.1 Materials

- .1 Environmental Protection Supplies: as per Section 01 35 43 - Environmental Procedures.

PART 3 - EXECUTION

3.1 Excavation of Contaminated Soil

- .1 Layout and excavate to the limits shown on Drawings. All layouts are to be field verified by Departmental Representative prior to excavation.
- .2 Remove all surface debris prior to excavation.
- .3 Contractor to disconnect existing fuel storage tank.
- .4 Dewater ponded contaminated soil areas, as required. Maintain soil excavations free of standing water during soil removal, confirmatory sampling and backfilling activities. Comply with the requirements of the Wastewater Discharge Criteria indicated in Section 01 35 15 - Special Project Procedures for Contaminated Sites.

- .5 Decontaminate the equipment and tools used for the excavation of Hydrocarbon Contaminated Soil in accordance with Section 01 35 15 - Special Project Procedures for Contaminated Site before commencing contaminated soil excavation at another location.
- .6 Do not operate equipment in contaminated soil areas that have been excavated until Departmental Representative has confirmed, based on the results of confirmatory testing, that no further excavation of contaminated soil in the area is required.
- .7 Work practices must prevent the movement of dust and fines beyond the work area. Excavation activities must be conducted in a manner that minimizes unnecessary ground disturbances. Cover excavated areas with tarps to help reduce melting of permafrost.
- .8 Stockpiles must be placed to avoid burying or destroying vegetation and to avoid silt washing into water bodies or wetlands.

3.2 Erosion, Sediment and Drainage Controls

- .1 Prior to commencement of the work, install temporary erosion, sediment and drainage controls to prevent siltation and disruption of water bodies in accordance with this Section and Section 01 35 15 - Special Project Procedures for Contaminated Sites and Section 01 35 43 - Environmental Procedures.
- .2 Erosion, sediment and drainage controls are to be maintained during all stages of work.
- .3 Do not remove erosion, sediment and drainage controls, until directed by Departmental Representative.

3.3 Containerization, Storage and Offsite Disposal Contaminated Soil

- .1 Dispose of contaminated soil at an approved offsite facility. Contractor to submit name of disposal facility to Departmental Representative within two weeks of contractor award. Contractors will be required to provide proof of disposal such as waste manifests or proof of acceptance at an approved disposal facility.

3.4 Containerization, Storage and Offsite Disposal of Recovered Water

- .1 Containerize and dispose of petroleum contaminated water at an approved offsite facility. Contractor to submit name of disposal facility to Departmental Representative within two weeks of contractor award. Contractors will be required to provide proof of disposal such as waste manifests or proof of acceptance at an approved disposal facility.

END OF SECTION

PART 1 - GENERAL

1.1 Description

- .1 This Section specifies the requirements for underground tank removal.

1.2 Qualifications

- .1 Be thoroughly familiar with and knowledgeable about existing site conditions, scope of work and requirements of the Specification.
- .2 Only Contractor's personnel capable of demonstrating a history of satisfactory experience in the area of underground storage tank removal and who can satisfy Federal and Territorial requirements will be permitted to carry out the work of this Section.
- .3 Contractor's personnel trained as described in this Section are to instruct and direct all workers with respect to the waste management procedures and labour and safety practices to be followed in carrying out the work.
- .4 Provide workers, Departmental Representative, and Departmental Representative's Authorized Personnel with protection appropriate to the potential type and level of exposure. Establish specific safety protocols in the Site Specific Health and Safety Plan prior to commencing clean-up activities.
- .5 Provide suitable safety clothing and equipment as required during the course of the work.

1.3 Protection

- .1 Meet safety requirements of Occupational Safety and Health, Canada Labour Code Part II and Regulations for Construction Projects and Public Health Act, R.S.N.W.T. 1988, c.P-12.
- .2 Disconnect or remove source of ignition from vicinity of tanks.
- .3 Provide temporary protection for safe movement of personnel and vehicle traffic.
- .4 Cut, braze or weld metal only in monitored areas established to be free of ignitable vapour concentrations.
- .5 Ground and bond metal equipment, including tanks and transfer pipes, before operating equipment or transferring flammable materials.
- .6 Use non-sparking tools and intrinsically safe electrical equipment.
- .7 Smoking is not permitted.

1.4 Delivery, Storage and Handling

- .1 Separate waste materials.
- .2 Divert metal materials from landfill to metal recycling facility approved by Departmental Representative.
- .3 Segregate and deliver non-salvageable or non-recyclable materials, including waste liquids and sludges to Territorially licensed waste facility.

1.5 Measurement for Payment

- .1 Include all direct costs for the removal and disposal of the underground storage tank in the lump sum price for Removal and Disposal of Tank, item 02 65 00 – 1 as indicated in the Basis of Payment Schedule.

PART 2 - PRODUCTS

- .1 Not Used.

PART 3 - EXECUTION

3.1 Preparation Safety and Security

- .1 Conform to or exceed Federal and Territorial codes, local municipal by-laws, by-laws, and codes and regulations of utility authorities having jurisdiction.
- .2 Prior to commencement of work, Contractor shall visit and examine the site and note all characteristics that may affect the Work of this Section.
- .3 Contractor to notify Town and Fire Authority at least seven (7) days in advance prior to commencing tank removal.
- .4 Notify all utilities including sewer, power, gas, telephone and others. Utilize a private utility locator to verify location of lines as well as to locate private utilities or services.

3.2 Draining

- .1 Drain and flush piping into tank.
- .2 Pump out liquid from tank.
 - .1 Use explosion proof, air driven or hand pump.

- .3 Remove sludge from tank bottom.
 - .1 Dispose of product and sludge in accordance with local, Provincial and Territorial regulations using waste disposal carrier licensed by Provincial/Territorial Environmental Agency having jurisdiction.

3.3 Excavation, Trenching, and Backfill

- .1 Do work in accordance with Section 31 22 15 – Grading.
- .2 Provide protective material around excavation.
- .3 Provide constant supervision during excavation and backfilling.
- .4 Excavations:
 - .1 Cut pavement neatly along limits of proposed excavation in order that surface may break evenly and cleanly.
 - .2 Excavate until top of tank and connections and openings are exposed.
 - .3 Disconnect piping:
 - .1 Remove fill tube.
 - .2 Disconnect fill gauge, product and vent lines.
 - .3 Cap or plug open ends of lines that are not to be used further.
 - .4 Remove piping from ground.
 - .4 Temporarily plug tank openings.
 - .5 Continue excavation until tank is completely exposed.
 - .6 Temporarily stockpile on site soil in vicinity of tank, until waste classification can be established prior to final disposal. In the event sampling proves the material is uncontaminated, material can be reused for backfilling upon approval from the Departmental Representative.
- .5 Prevent movement, settlement or damage of adjacent structures, services, paving, landscaping and adjacent grades. Provide bracing, shoring as required.

3.4 Tank Removal

- .1 Remove tank and place in secure location in accordance with CCME Code of Practice PN 1326, Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations (Environment Canada (EC)) 2008 and/or applicable territorial standards and regulations.
- .2 Block tank to prevent movement.
- .3 Notify the Departmental Representative immediately if there is evidence of contamination in tank excavation, stop Work until further notice.

- .4 Contractor to assist Departmental Representative in obtaining soil samples from the perimeter of the excavation after the storage tanks have been removed. In the event that contaminated material is identified, Departmental Representative will provide direction to Contractor.
- .5 Once the tanks have been removed from the excavation, remove concrete anchor base (if present) and dispose offsite.

3.5 Vapour Removal

- .1 Before a tank can be exhumed, the concentration of combustible vapours in the tank must be reduced to less than ten (10%) percent of the lower explosive limit (vapour freeing or purging; LEL), or the oxygen concentration reduced to less than five (5 %) percent by volume (inerting).
- .2 Combustible vapour concentrations and/or oxygen levels within the tank are to be measured by the Contractor using an appropriately calibrated combustible gas meter or oxygen meter. Contractor to provide the necessary meters to verify the atmosphere within the tank. If requested, Contractor to provide Departmental Representative with calibration records for combustible gas and/or oxygen meters.
- .3 Tank is to be vapour freed or inerted prior to removal from ground. Chosen method will depend on the product stored, availability of suitable disposal facilities, disposal costs, the condition of tank, etc. Acceptable methods include:
 - .1 Inerting or vapour freeing tank using dry ice or forced air ventilation are temporary measures. Combustible vapours will generally re-accumulate within the tank with time. It is the Contractor's responsibility to ensure that tank atmosphere is re-monitored at appropriate intervals and that an adequate audit of conditions within the tank is maintained. When requested by Departmental Representative, Contractor will monitor conditions within tank and inert or vapour free tank as deemed required to safely complete Work of this Section.
 - .4 Ensure fumes are properly vented away from area personnel and potential ignition sources. Exercise care to prevent the accumulation of combustible vapours in confined spaces.
 - .5 Departmental Representative to advise Consultant of the proposed vapour freeing or inerting method and obtain approval prior to proceeding.

3.6 Capping

- .1 Cap holes after tank has been freed of vapours and before tank is moved from site.
 - .1 Leave vents open.
- .2 Plug corrosion leak holes using screwed (boiler) plugs.

- .3 Leave 3 mm vent hole in one plug to prevent tank from being subjected to excessive pressure differential caused by extreme temperature change.

3.7 Securing and Removal from Site

- .1 Check vapour levels prior to transport.
 - .1 Remove vapour if required.
- .2 Dispose of tank in accordance with local, Provincial, Federal or Territorial regulations.
- .3 Truck removal:
 - .1 Secure tank on truck for transport to disposal site.
 - .2 Cut suitable openings in tank sides to render tank unusable.
 - .3 Drill 3 mm vent hole located at uppermost point on tank.

3.8 Workmanship and Disposal

- .1 Tanks destined for disposal:
 - .1 Dismantle, cut sufficient openings or otherwise render unusable.

END OF SECTION

PART 1 - GENERAL

1.1 Description

.1 This section specifies the requirements for concrete reinforcing including wire mesh as required for the sidewalk replacement related to the Underground Storage Tank (UST) Removal at the RCMP Building in Hay River, Northwest Territories, including:

- .1 Wire mesh.
- .2 Steel rebar

1.2 Related Work

.1 Section 03300 - Cast-in-Place Concrete.

1.3 References

.1 American Concrete Institute (ACI)

- .1 ACI 315R-80, Manual of Engineering and Placing Drawings for Reinforced Concrete Structure.
- .2 American National Standards Institute/American Concrete Institute (ANSI/ACI)
 - .1 ANSI/ACI 315-80, Details and Detailing of Concrete Reinforcement.
- .3 American Society for Testing and Materials (ASTM)
 - .1 ASTM A 775/A 775M- 91c, Specification for Epoxy-Coated Reinforcing Steel Bars.
- .4 Canadian Standards Association (CSA)
 - .1 CAN/CSA-A23.1-94, Concrete Materials and Methods of Concrete Construction.
 - .2 CAN3-A23.3-94, Design of Concrete Structures for Buildings.
 - .3 CSA G30.3-M1983(R1991), Cold Drawn Steel Wire for Concrete Reinforcement.
 - .4 CSA G30.5-M1983(R1991), Welded Steel Wire Fabric for Concrete Reinforcement.
 - .5 CSA G30.14-M1983(R1991), Deformed Steel Wire for Concrete Reinforcement.
 - .6 CSA G30.15-M1983(R1991), Welded Deformed Steel Wire Fabric for Concrete Reinforcement.
 - .7 CAN/CSA-G30.18-M92, Billet-Steel Bars for Concrete Reinforcement.
 - .8 CAN/CSA-G40.21-M92, Structural Quality Steels.
 - .9 CAN/CSA-G164-M92, Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .10 CSA W186-M1990, Welding of Reinforcing Bars in Reinforced Concrete Construction.

1.4 Shop Drawings

- .1 Submit shop drawings including placing of reinforcement in accordance with Section 01340-Shop Drawings, Product Data, Samples and Mock-ups.
- .2 Indicate on shop drawings, bar bending details, lists, quantities of reinforcement, sizes, spacings, locations of reinforcement and mechanical splices, with identifying code marks to permit correct placement without reference to structural drawings. Indicate sizes, spacings and locations of chairs, spacers and hangers. Prepare reinforcement drawings in accordance with Reinforcing Steel Manual of Standard Practice - by Reinforcing Steel Institute of Canada. ANSI/ACI 315 and ACI 315R, Manual of Engineering and Placing Drawings for Reinforced Concrete Structure.
- .3 Detail lap lengths and bar development lengths to CAN3-A23.3, unless otherwise indicated. Provide type A B C tension lap splices where indicated unless otherwise indicated.

1.5 Measurement for Payment

- .1 Work under this section will not be measured. Include all costs in Item BOPC-1, Balance of Project Costs in the Basis of Payment Schedule. Indicate the cost of this Work as a separate line item in the Cost Breakdown specified in Section 01 32 18 –Construction Progress Schedules - Bar (GANTT) Chart.

PART 2 - PRODUCTS

2.1 Materials

- .1 Reinforcing steel: billet steel, grade 400, deformed bars to CAN/CSA-G30.18, unless indicated otherwise.
- .2 Reinforcing steel: weldable low alloy steel deformed bars to CAN/CSA-30.18.
- .3 Cold-drawn annealed steel wire ties: to CSA G30.3.
- .4 Deformed steel wire for concrete reinforcement: to CSA G30.14.
- .5 Welded steel wire fabric: to CSA G30.5. Provide in flat sheets only.
- .6 Epoxy coating of non-prestressed reinforcement: to ASTM A 775/A 775M.
- .7 Chairs, bolsters, bar supports, spacers: to CAN/CSA-A23.1.
- .8 Mechanical splices: subject to approval of Engineer.
- .9 Plain round bars: to CAN/CSA-G40.21.

2.2 Fabrication

- .1 Fabricate reinforcing steel in accordance with CAN/CSA-A23.1, ANSI/ACI 315, and Reinforcing Steel Manual of Standard Practice by the Reinforcing Steel Institute of Canada or ACI 315R, Manual of Engineering and Placing Drawings for Reinforced Concrete Structures unless indicated otherwise.
- .2 Obtain Engineer's approval for locations of reinforcement splices other than those shown on placing drawings.
- .3 Upon approval of Engineer, weld reinforcement in accordance with CSA W186.
- .4 Ship bundles of bar reinforcement, clearly identified in accordance with bar bending details and lists.

2.3 Source Quality Control

- .1 Upon request, provide Engineer with certified copy of mill test report of reinforcing steel, showing physical and chemical analysis, minimum 4 weeks prior to commencing reinforcing work.
- .2 Upon request inform Engineer of proposed source of material to be supplied.

PART 3 - EXECUTION

3.1 Field Bending

- .1 Do not field bend or field weld reinforcement except where indicated or authorized by Departmental Representative.
- .2 When field bending is authorized, bend without heat, applying a slow and steady pressure.
- .3 Replace bars which develop cracks or splits.

3.2 Placing Reinforcement

- .1 Place reinforcing steel as indicated on approved placing drawings and in accordance with CAN/CSA-A23.1.
- .2 Use plain round bars as slip dowels in concrete. Paint portion of dowel intended to move within hardened concrete with one coat of asphalt paint. When paint is dry, apply a thick even film of mineral lubricating grease.
- .3 Prior to placing concrete, obtain Engineer's approval of reinforcing material and placement.

- .4 Ensure cover to reinforcement is maintained during concrete pour.
- .5 Protect epoxy and paint coated portions of bars with covering during transportation and handling.

3.3 Field Touch-up

- .1 Touch up damaged and cut ends of epoxy coated or galvanized reinforcing steel with compatible finish to provide continuous coating.

END OF SECTION

PART 1 - GENERAL

1.1 Description

.1 This Section specifies the requirements for all materials, equipment, tools and temporary forms for the following:

.1 Construction of a replacement sidewalk related to the removal of an Underground Storage Tank at the RCMP Building in Hay River, Northwest Territories. Replacement sidewalk to match original.

1.2 Related Sections

.1 Section 03200 - Concrete Reinforcement.

1.3 References

.1 American Society for Testing and Materials (ASTM)

.1 ASTM C109/C109M-95, Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2 in. or 50-mm Cube Specimens).

.2 ASTM C260-94, Specification for Air-Entraining Admixtures for Concrete.

.3 ASTM C309-94, Specification for Liquid Membrane-Forming Compounds for Curing Concrete.

.4 ASTM C332-87(1991), Specification for Lightweight Aggregates for Insulating Concrete.

.5 ASTM C494-92, Specification for Chemical Admixtures for Concrete.

.6 ASTM C827-95a, Test Method for Change in Height at Early Ages of Cylindrical Specimens from Cementitious Mixtures.

.7 ASTM C939-94a, Test Method for Flow of Grout for Preplaced-Aggregate Concrete.

.8 ASTM D412-92, Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension.

.9 ASTM D624-91, Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomer.

.10 ASTM D1751-83(1991), Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types).

.11 ASTM D1752-84(1992), Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction.

.2 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-37.2-M88, Emulsified Asphalt, Mineral Colloid-Type, Unfilled, for Dampproofing and Waterproofing and for Roof Coatings.

.2 CAN/CGSB-51.34-M86, Vapour Barrier, Polyethylene Sheet for Use in Building Construction.

.3 CGSB 81-GP-1M-77, Flooring, Conductive and Spark Resistant.

- .3 Canadian Standards Association (CSA)
 - .1 CAN/CSA-A5-93, Portland Cement.
 - .2 CAN/CSA-A23.1-94, Concrete Materials and Methods of Concrete Construction.
 - .3 CAN/CSA-A23.2-94, Methods of Test for Concrete.
 - .4 CAN/CSA-A23.5-M86(R1992), Supplementary Cementing Materials.
 - .5 CAN/CSA A363-M88(R1996), Cementitious Hydraulic Slag.

1.4 Certificates

- .1 Submit certificates in accordance with Section 01340 - Shop Drawings, Product Data, Samples and Mock-ups.
- .2 Minimum 4 weeks prior to starting concrete work submit to Departmental Representative's manufacturer's test data and certification by qualified independent inspection and testing laboratory that following materials will meet specified requirements:
 - .1 Portland cement.
 - .2 Supplementary cementing materials.
 - .3 Admixtures.
 - .4 Aggregates.
 - .5 Water.
 - .6 Joint filler.
- .3 Provide certification that mix proportions selected will produce concrete of quality, yield and strength as specified in concrete mixes, and will comply with CAN/CSA-A23.1.
- .4 Provide certification that plant, equipment, and materials to be used in concrete comply with requirements of CAN/CSA-A23.1.

1.5 Waste Management and Disposal

- .1 Use trigger operated spray nozzles for water hoses.
- .2 Designate a cleaning area for tools to limit water use and runoff.
- .3 Carefully coordinate the specified concrete work with weather conditions.
- .4 Ensure emptied containers are sealed and stored safely for disposal away from children.
- .5 Prevent plasticizers, water-reducing agents and air-entraining agents from entering drinking water supplies or streams. Using appropriate safety precautions, collect liquid or solidify liquid with an inert, noncombustible material and remove for disposal. Dispose of all waste in accordance with applicable local, provincial and national regulations.
- .6 Choose least harmful, appropriate cleaning method which will perform adequately.

1.6 Measurement for Payment

- .1 The Construction of the Replacement Sidewalk will be measured for payment by the square meter as determined from field measurements collected by the Departmental Representative. Construction of the Replacement Sidewalk will be paid under Item 03 30 00-1 in Basis of Payment Schedule.
- .2 The scope of work for Item 03 30 00-1, Construction of Replacement Sidewalk is to include:
 - .1 Supply of materials, including of all forms, steel reinforcing and concrete and provision of all labour to construct the replacement sidewalk. Replacement sidewalk to match original.
 - .3 Except as indicated above, work under this section will not be measured. Include all costs in Item BOPC-1, Balance of Project Costs in the Basis of Payment Schedule. Indicate cost of the work of this section as a separate line item in the Contract Work Breakdown Structure (CWBS) specified in Section 01 32 18 - Construction Progress Schedules - Bar (GANTT) Chart.

PART 2 - PRODUCTS

2.1 Materials

- .1 Portland cement Type 50 up to 40% fly ash replacement: to CAN/CSA-A5.
- .2 Supplementary cementing materials: to CAN/CSA-A23.5.
- .3 Cementitious hydraulic slag: to CAN/CSA-A363.
- .4 Water: to CAN/CSA-A23.1.
- .5 Aggregates: to CAN/CSA-A23.1. Coarse aggregates to be normal density.
- .6 Air entraining admixture: to ASTM C260.
- .7 Chemical admixtures: to ASTM C494. Engineer to approve accelerating or set retarding admixtures during cold and hot weather placing.
- .8 Premoulded joint fillers:
 - .1 Asphalt impregnated fiberboard: to ASTM D1751.

2.2 Mixes

- .1 Proportion normal density concrete in accordance with CAN/CSA-A23.1, Alternative 1 for all concrete as indicated.

- .1 Cement:
 - .1 Type 50 Portland cement.
 - .2 Minimum compressive strength at 28 days: 32 MPa.
 - .3 Maximum water/cementing ration: 0.45.
 - .4 Class of exposure: C-2.
 - .5 Nominal size of coarse aggregate: 20 mm.
- .6 Slump at time and point of discharge: 40 to 80 mm.
- .7 Air content: 5 to 7%.
- .8 Chemical admixtures: following admixtures in accordance with ASTM C494, type, quantity, water reducing strength increasing, accelerating strength increasing, air entraining.

PART 3 – EXECUTION

3.1 Preparation

- .1 Obtain Departmental Representatives approval before placing concrete. Provide 24 h ours notice prior to placing of concrete.
- .2 Pumping of concrete is permitted only after approval of equipment and mix.
- .3 Ensure reinforcement and inserts are not disturbed during concrete placement.
- .4 Prior to placing of concrete obtain Departmental Representatives approval of proposed method for protection of concrete during placing and curing in adverse weather.
- .5 Maintain accurate records of poured concrete items to indicate date, location of pour, quality, air temperature and test samples taken.
- .6 In locations where new concrete is dowelled to existing work, drill holes in existing concrete. Place steel dowels of deformed steel reinforcing bars and pack solidly with shrinkage compensating grout to anchor and hold dowels in positions as indicated.
- .7 Do not place load upon new concrete until authorized by Departmental Representative.

3.2 Construction

- .1 Do cast-in-place concrete work in accordance with CAN/CSA-A23.1.
- .2 Finishing.
 - .1 Finish concrete in accordance with CAN/CSA-A23.1.
 - .2 Use procedures acceptable to Departmental Representative or those noted in CAN/CSA-A23.1 to remove excess bleed water. Ensure surface is not damaged.

- .3 Provide swirl-trowelled finish unless otherwise indicated.
- .4 Rub exposed sharp edges of concrete with carborundum to produce 3 mm radius edges unless otherwise indicated.

3.3 Joint fillers.

- .1 Furnish filler for each joint in single piece for depth and width required for joint, unless otherwise authorized by Departmental Representative. When more than one piece is required for a joint, fasten abutting ends and hold securely to shape by stapling or other positive fastening.
- .2 Locate and form isolation construction expansion joints as indicated. Install joint filler.
- .3 Use 12 mm thick joint filler to separate slabs-on-grade from vertical surfaces and extend joint filler from bottom of slab to within 12 mm of finished slab surface unless indicated otherwise.

3.4 Site Tolerance

- .1 Concrete tolerance in accordance with CAN/CSA-A23.1.

3.5 Field Quality Control

- .1 Inspection and testing of concrete and concrete materials will be carried out by a Testing Laboratory designated by Departmental Representative in accordance with CAN/CSA-A23.1 and Section 01450 - Quality Control.
- .2 Owner will pay for costs of tests as specified in Section 01410 - Testing Laboratory Services.
- .3 Departmental Representative will take additional test cylinders during cold weather concreting. Cure cylinders on job site under same conditions as concrete which they represent.
- .4 Non-destructive Methods for Testing Concrete shall be in accordance with CAN/CSA-A23.2.
- .5 Inspection or testing by Departmental Representative will not augment or replace Contractor quality control nor relieve him of his contractual responsibility.

3.6 Sidewalk Construction

- .1 Place, process, finish, and cure concrete according to CSA standards.
- .2 Slope sidewalks away from structures at 20 mm per meter, unless noted otherwise.
- .3 At locations where the new sidewalk is to abut existing concrete, saw concrete for a depth of 5 cm, chip the old concrete down to sound material and a plane surface, clean the surface, and apply a neat cement paste just prior to pouring the new sidewalk.
- .4 Place preformed asphalt expansion joints at intervals not exceeding 13.7 m or less than 4.6 m where the sidewalk ends at a curb, and around posts, poles, or other objects protruding through the sidewalk. Place expansion joints between sidewalks and building or other structures.

- .5 Provide contraction joints transversely to the walks at locations opposite the contraction joints in the curb and at intervals along the sidewalk such that the distance between contraction joints does not exceed 1.5 times the sidewalk width. These joints shall be 4 mm by one-fourth of the slab thickness weakened plane joints. They shall be straight and at right angles to the surface of the walk.
- .6 Broom sidewalk surface with a fine-hair broom at right angles to the length of the walk and tool at all edges, joints, and markings. Mark the walks transversely at 1.5 m intervals with a jointing tool, unless noted otherwise. Upon completion of the finishing, apply a curing compound to exposed surfaces.
- .7 Finished sidewalk shall present a uniform appearance for both grade and alignment. Remove any section of sidewalk showing abrupt changes in alignment or grade or that is more than 5 cm away from its location as staked and construct new sidewalk in its proper location.

END OF SECTION

PART 1 - GENERAL

1.1 Description

- .1 This Section specifies requirements for:
 - .1 Excavating soil to facilitate removal of the underground storage tank.
 - .2 Backfilling excavation following underground storage tank removal.
 - .3 Restoring grassed area and sidewalk

1.2 Definitions

- .1 Clean Soil: Soil that has been sampled, analysed and determined to have contaminant concentrations below those outlined in Section 02 55 13 – Contaminated Soil.
- .2 Imported Fill: Material obtained from approved off-site areas and required for backfill requirements.
- .3 Backfill: Backfill soils consisting of Clean Soil or Imported Fill.
- .4 SPMDD: Standard Proctor Maximum Dry Density determined by the Standard Proctor Method in accordance with ASTM D698 and applicable if less than 30% of the material is retained on the ASTM 19 millimetre sieve. Corrected Maximum Dry Density is applicable if more than 30% of the material is retained on the ASTM 19 millimetre sieve.

1.3 Site Conditions

- .1 Suspend operations whenever climatic conditions are unsatisfactory for grading to conform with this Specification.
- .2 Do not operate equipment in work areas until the material has dried sufficiently to prevent excessive rutting.
- .3 Areas to be backfilled are to be free from debris and excessive snow, ice or standing water.

1.4 Protection

- .1 Prevent damage to benchmarks, existing buildings, surface or underground service or utility lines, which are to remain in place. Immediately repair any damage to the above or replace the above in the event of damage, at no cost to Departmental Representative.
- .2 Environmental protection measures are to be in accordance with the requirements specified in Section 01 35 43 - Environmental Procedures.

1.5 Measurement for Payment

- .1 Common excavation will be measured for payment by the cubic meter as determined from field measurements collected by the Departmental Representative. Common Excavation will be paid under Item 31 22 15-1, Common Excavation in Basis of Payment Schedule.

- .2 The scope of work for Item 31 22 15-1, Common Excavation in the Basis of Payment Schedule is to include:
- .1 Excavation of Organic Topsoil and Clean Soil to facilitate removal of the underground storage tank.
 - .2 Temporary stockpiling of the excavated Organic Topsoil and Clean Soil in separate stockpiles.
 - .3 Placement and compaction of the Clean soil into the completed excavation
 - .4 Supply, placement and compaction of the Imported Fill to completed the backfill of the excavation.
- .3 Landscape Restoration will be measured for payment by the square meter as determined from field measurements collected by the Departmental Representative. Grassed Area Restoration will be paid under Item 31 22 15-2, Landscape Restoration in Basis of Payment Schedule.
- .4 The scope of work for Item 31 22 15-2, Grassed Area Restoration in the Basis of Payment Schedule is to include:
- .1 Supply and placement of organic topsoil as indicated on the drawings
 - .2 Supply and application of grass seed, as indicated.
- .5 Except as indicated above, work under this section will not be measured. Include all costs in Item BOPC-1, Balance of Project Costs in the Basis of Payment Schedule. Indicate cost of the work of this section as a separate line item in the Contract Work Breakdown Structure (CWBS) specified in Section 01 32 18 - Construction Progress Schedules - Bar (GANNT) Chart.

PART 2 - PRODUCTS

2.1 Grass Seed

- .1 Supply one bag (25kg) of High Arctic Seed or Parks Naturalization Mix comprised of:
- 35% Fairway Crested Wheatgrass
 - 20% Nakiska Sheeps Fescue
 - 20% Durar Hard fescue,
 - 10% Nakiska Sheeps Fescue,
 - 10% Norlac Red Clover
 - 10% Birdsfoot Trefoil
 - 5% Perennial Rye Grass
- .2 Deliver seed in original containers showing analysis of seed mixture, percentage pure seed, year of production, date when bagged and location, net mass, percent germination, and name and address of supplier.

2.2 Imported Fill

- .1 Imported Fill to consist of inorganic fine grained soil, free from organic matter, stones larger than 50 mm, building debris and other foreign substances.
- .2 Identify the source of Imported Fill and provide a representative sample to the Department Representative for approval no later than two weeks prior to the start of the Work.

PART 3 - EXECUTION

3.1 Site Preparation

- .1 Identify the limits of ground disturbance and do not commence excavation until approval is provided from the Departmental Representative.

3.2 Excavating

- .1 Excavate to the lines, grades and dimensions, as indicated on the drawings or designated by the Departmental Representative.
- .2 Temporarily stockpile organic topsoil and Clean Soil on site in separate stockpiles at locations approved by the Departmental Representative.

3.3 Backfilling and Compaction of Fill Material

- .1 Do not proceed with backfilling operations until Departmental Representative has inspected excavation and determined that no further excavation is required. Departmental Representative may delay the approval to backfill the excavated area until analytical test results are available. Protect permafrost from melting by covering excavated areas with tarps and with shade screens.
- .2 Commence backfilling of excavated soil areas within one (1) day of receipt of confirmatory sampling results indicating no further excavation in the area is required. Costs for any extra work caused as a result of leaving excavations open longer will be the responsibility of Contractor.
- .3 Utilize all temporarily stockpiled clean soils for backfill of the excavation. Top up excavation with Imported Fill to allow for positive drainage and placement of topsoil and grass.
- .4 All backfill to be placed in an unfrozen state. Backfill material is to be free from debris, snow and ice. Do not place Backfill material if the outside air temperature is below 0°C, unless otherwise specified or directed by Departmental Representative.
- .5 Place specified Backfill material in uniform horizontal layers in depths to grades indicated. Compact each layer before placing succeeding layer.
- .6 Place Backfill in lifts not exceeding 300 mm in loose thickness and compact to a minimum of 95% Standard Proctor Maximum Dry Density.

- .7 Compaction equipment must be capable of obtaining required densities uniformly in the materials on the project. Hand equipment may be required due to space limitations in the excavation equipment.

3.4 Topsoil Placement and Seeding

- .1 Import and place 100 mm organic topsoil on top of fill materials. Topsoil not required in filled areas located below residential building or below aboveground storage tank.
- .2 Topsoil must be free of subsoil, clay lumps, stones, live plants, roots, sticks or other extraneous matter.
- .3 Seek approval from Departmental Representative for the subgrade prior to placing topsoil and approve finished grade before the Contractor proceeds with the next phase of work.
- .4 Do not place topsoil when either topsoil or subgrade is frozen, excessively wet, extremely dry, or in a condition inhibiting proper grading, cultivation, or compaction.
- .5 Spread topsoil uniformly on prepared subsoil to achieve a minimum compacted or settled depth of 100 mm.
- .6 Cultivate topsoil to a depth of 75 mm, breaking down lumps. Remove stones larger than 50 mm, weeds, roots and other foreign matter.
- .7 Manually spread topsoil around trees and plants to prevent damage by grading and levelling equipment.
- .8 Fine grade to eliminate rough or low areas and to provide positive drainage.
- .9 Final topsoil grades for seeded areas shall be flush to finished grade at surface structures, i.e. manholes, sidewalks and curbs.
- .10 No seeding shall be done on frozen soil or when condition are not favourable for successful seed germination.
- .11 Sow at the rate of 3 kg/100 m², during calm weather and when soil moisture content is adequate for germination.
- .12 Rake or harrow seeded areas.
- .13 Water seeded areas with a fine spray to avoid seed washout. Water to provide a minimum penetration depth of 50 mm. Prior to snowfall, water as required to maintain seeded areas in a moist condition to promote seed germination.

END OF SECTION

CERTIFICATE OF INSURANCE



Travaux publics et
Services gouvernementaux
Canada

Public Works and
Government Services
Canada

Description and Location of Work Tank Pull and Remediation Hay River RCMP Detachment, Hay River, NT	Contract No. ET022-150477
	Project No. R.050125.011

Name of Insurer, Broker or Agent	Address (No., Street)	City	Province	Postal Code
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Name of Insured (Contractor)	Address (No., Street)	City	Province	Postal Code
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Additional Insured
Her Majesty the Queen in Right of Canada as represented by the Minister of Public Works and Government Services

Type of Insurance	Insurer Name and Policy Number	Inception Date D / M / Y	Expiry Date D / M / Y	Limits of Liability		
				Per Occurrence	Annual General Aggregate	Completed Operations Aggregate
Commercial General Liability				\$	\$	\$
Umbrella/Excess Liability				\$	\$	\$

I certify that the above policies were issued by insurers in the course of their Insurance business in Canada, are currently in force and include the applicable insurance coverage's stated on page 2 of this Certificate of Insurance, including advance notice of cancellation / reduction in coverage.

Name of person authorized to sign on behalf of Insurer(s) (Officer, Agent, Broker)

Telephone number

Signature _____

Date D / M / Y



Travaux publics et
Services gouvernementaux
Canada

Public Works and
Government Services
Canada

CERTIFICATE OF INSURANCE Page 2 of 2

General	Commercial General Liability
<p>The insurance policies required on page 1 of the Certificate of Insurance must be in force and must include the insurance coverages listed under the corresponding type of insurance on this page.</p> <p>The policies must insure the Contractor and must include Her Majesty the Queen in Right of Canada as represented by the Minister of Public Works and Government Services as an additional Insured.</p> <p>The insurance policies must be endorsed to provide Canada with not less than thirty (30) days notice in writing in advance of a cancellation of insurance or any reduction in coverage.</p> <p>Without increasing the limit of liability, the policies must protect all insured parties to the full extent of coverage provided. Further, the policies must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.</p>	<p>The insurance coverage provided must not be substantially less than that provided by the latest edition of IBC Form 2100.</p> <p>The policy must either include or be endorsed to include coverage for the following exposures or hazards if the Work is subject thereto:</p> <ul style="list-style-type: none">(a) Blasting.(b) Pile driving and caisson work.(c) Underpinning.(d) Removal or weakening of support of any structure or land whether such support be natural or otherwise if the work is performed by the insured contractor. <p>The policy must have the following minimum limits:</p> <ul style="list-style-type: none">(a) \$5,000,000 Each Occurrence Limit;(b) \$10,000,000 General Aggregate Limit per policy year if the policy contains a General Aggregate; and(c) \$5,000,000 Products/Completed Operations Aggregate Limit. <p>Umbrella or excess liability insurance may be used to achieve the required limits.</p>