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Environmental Drilling

Solicitation No. - N° de l'invitation: EZ897-212719/A

Environmental Services

Public Services and Procurement Canada - Pacific Region



Public Services and
Procurement Canada

Services publics et
Approvisionnement Canada

Canada

Agenda

- List of RSVP'd Bidders
- Introductions
- Solicitation Review
- Common Bid Errors
- Project Overview
- Specifications – Highlights
- Summary of Combined Price Form
- Questions



Introductions

- RSVP'd Bidders
- PSPC:
 - Environmental Services PM
 - William Govenlock
 - Contracting Authority
 - Donna Fung
 - donna.fung@pwgsc.gc.ca
- Keystone Environmental:
 - Program Coordinator
 - Greg Frank



Solicitation Review

- Bid Documents
 - <https://buyandsell.gc.ca/procurement-data/tender-notice/PW-PWY-025-8975>
 - Review and submit all documents as per instructions
- Enquiries
 - In writing to donna.fung@pwgsc.gc.ca
- Bid and Acceptance
 - Closing Date:
 - 2021/06/08 14:00 Pacific Daylight Time (PDT)



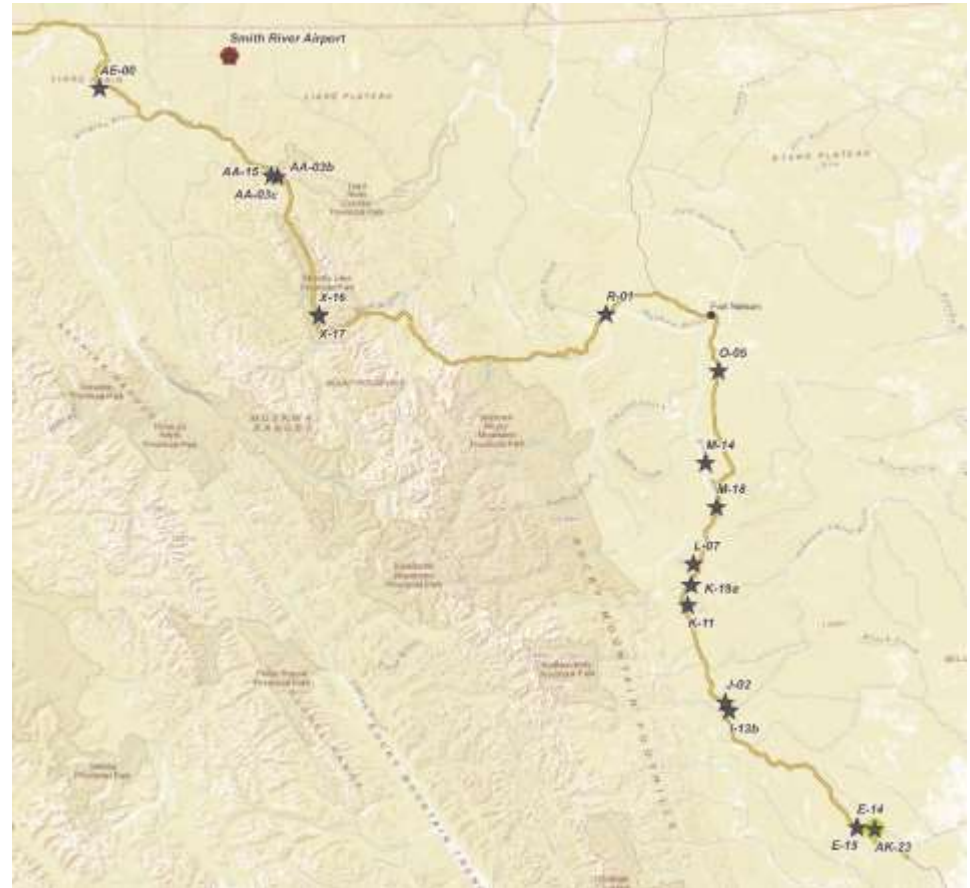
Common Bid Errors

- Bidder includes conditions with bid
- Bidder does not provide prices for all UPT items, Base Work and Optional Work
- Bidders must use most up to date versions of all forms, notably the UPT if any edits are made during the tender period
- Bid Security must be included



Project Overview

- ❖ 2 x Tracked Sonic Drill Rigs
- ❖ Drill 60-95 boreholes
- ❖ Install 50-65 Vapour probes
- ❖ ~16 sites
- ❖ Alaska Highway between Fort St John and the Yukon border.
 - Active highway maintenance yards.
 - Abandoned camps adjacent to the old highway alignment.
 - Abandoned airstrips.
 - Military Fuel Depots.
 - Former Landfills.



Specifications - Highlights

Summary of Work (Section 01 11 00)

Environmental drilling:

- Borehole drilling
- Well installation and completion
- Soil sampling
- Vapour probe installation

Management of contaminated soil and water:

- Containment and disposal of contaminated soil cuttings
- Supply of barrels for containment of contaminated water
- Disposal of contaminated groundwater (purge water)



Specifications - Highlights

Summary of Work (Section 01 11 00)

Schedule Requirements

- Work to be initiated: as soon as practical.
- Pre-Mobilization Submittals: 10 Working Days prior to
- Submit all documents required for mobilization, minimum:
 - Site-specific Project Health and Safety Plan, including your Covid 19 procedures
 - Emergency Procedures.
- Field Work Completed no later than 1 November 2021.
- All Work Completed: no later than 1 December 2021.



Specifications - Highlights

Summary of Work (Section 01 11 00)

Hours of Work

- Working Days: Monday to Saturday.
- Working Hours: 07:00 to 17:00.
- Work outside of Working Days and Working Hours is at Department Representative's sole discretion, and must be accepted in writing by Departmental Representative by Submission.



Specifications - Highlights

Environmental Drilling (Section 32 21 10)

Drilling Method

- Sonic.

Surface Completions

- Sub-surface.
- Flush-mount.
- Stick-up



Specifications - Highlights

Environmental Drilling (Section 32 21 10)

Drilling Equipment - Sonic Unit:

- Capable of drilling and installing 50mm (2inch) wells up to 75m (250 ft) BGS.
- Track mounted with roll over protective structure.
- Sonic: Boreholes 150mm (6 inch) and 200 mm (8 inch) nominal diameter.
- Sonic rig and support vehicles complete with all auger, air tooling and sample tooling for 75 m (250 feet) maximum depth.
- Sonic Unit:
 - Drilling head drive motor not less than 150 kW.
 - Pull Back Force not less than 65 kN.
 - Down Force not less than 35 kN.
 - Output Force @ 75 Hz not less than 200 kN.

Specifications - Highlights

Environmental Drilling (Section 32 21 10)

Departmental Representative Responsibilities

Departmental Representative will provide as a minimum:

- Site location and Site Plan showing drilling location(s) and significant site features.
- Proposed start date.
- Typical well design drawing(s).
- Sampling method.
- Sampling interval.
- Drill Rig requirements.
- Mobility issues.
- Safety issues.
- Potential Contaminant(s).
- Locator's Schedule.



Specifications - Highlights

Environmental Drilling (Section 32 21 10)

Departmental Representative Responsibilities

- Departmental Representative responsible for utility clearance and providing documentation prior to drilling.
- Departmental Representative will provide access for drill rigs movement including:
 - Preparing the ground and route to drilling locations.
 - With the exception of X16/17 for which the successful bidder will install
 - Permission and liaison with other consultants, site owners and operators.

On-site Vehicle Recovery

- Contractor responsible for inspection of prepared route and drilling locations and may require improvements prior to entering the site or moving equipment to drilling locations.
- Contractor responsible for recovery of contractor's vehicles and mobile equipment.



Specifications - Highlights

Environmental Drilling (Section 32 21 10)

Monitoring Wells

- Well materials manufactured and approved specifically for groundwater monitoring wells.
- All materials pre approved by Departmental Representative.

Installing Monitoring Wells

Departmental Representative confirm well design details prior to construction at each borehole:

- Screen slot size and length.
- Sand pack / Backfill / well seal
- Well protector.



Specifications - Highlights

Environmental Drilling (Section 32 21 10)

Vapour Probes

Departmental Representative provides Vapour Probe Screen and Tubing.

- Filter pack compatible with 20 Slot Screen.

Installing Vapour Probes

Departmental Representative confirm probe design details prior to construction at each probe location:

- Screen length.
- Bentonite Granules.
- Sand pack.
- Backfill.
- Well seal.
- Well protector completion.



Specifications - Highlights

Temporary Barriers and Enclosures (Section 01 56 00)

Installation and Removal of Clear Span Bridges

- installation and removal of clear span bridges over Washouts 1, 2 and 3.
- Temporary clear span bridge: Small scale bridge structures that completely span the watercourse, do not alter the stream bed or bank, and are a maximum of one lane wide. The bridge structure (including bridge approaches, abutments, footings, and armoring) is built entirely above the ordinary high water mark.

Operation and Maintenance of the Bridge Structures

- weekly rate price established for bridge rental and maintenance for the duration of the time required for site access.

Schedule Requirements

- Notification of Instream Work by Departmental Representative will be submitted 45 days prior to drilling start date.



Specifications - Highlights

Submittals (All Sections)

General

- Submit via email
- Word form for working documents
- PDF format final approved documents
- Pre-Mobilization Submittals: at least 10 Working Days prior to mobilization to Site, Submit all documents required for mobilization, including at a minimum the Contractor's site-specific project Health and Safety Plan, including Covid 19 procedures and emergency procedures.

01 11 55 General Instructions

- Permits: at least 10 Working Days prior to mobilization to Site...
- Daily Work Records: at the end of each shift Submit daily Work records...
- Cash Flow: with each Progress Payment...
- Quality Management Plan: within 10 Working Days after Contract award



Specifications - Highlights

Submittals (All Sections)

01 41 19 Project Meetings

- Preconstruction Meeting Minutes: within 2 Working Days of the Meeting.
- Progress Meeting Minutes: within 2 Working Days of a Progress Meeting.
- Submit revised minutes within 2 Working Days of receiving comments by Departmental Representative.
- Information for Progress Meetings: at least 2 Working Days prior.
- Final Site Inspection Minutes: within 2 Working Days.
- Closeout Meeting Minutes: within 2 Working Days.



Specifications - Highlights

Submittals (All Sections)

01 35 13.43 Special Project Procedures for Contaminated Sites

Contaminated Soil and Water Management Plan: within 10 Working Days after Contract award and prior to mobilization to Site, Submit methods, means, and sequences for Contaminated Soil and Contaminated Water Management onsite for compliance with: applicable permits, certificates, approvals, or any other form of authorizations; other federal, provincial, or municipal requirements; and in accordance with the Contract. Include:

- Personnel and equipment decontamination.
- Segregation of different Classifications.

Specifications - Highlights

Submittals (All Sections)

01 35 29.14 Health and Safety for Contaminated Sites

- Submit to Departmental Representative Submittals listed for review.
- Work affected by Submittal must not proceed until review is complete.
- Site Specific Health and Safety Plan: within 7 Working Days after Contract award and prior to mobilization to Site, Submit a health and safety plan. Include:
 - Results of site-specific safety hazard assessment.
 - Results of safety and health risk or hazard analysis for site tasks and operation found in work plan.
 - Covid 19 procedures
- Submit digital copy of Contractor's authorized representative's work site health and safety inspection reports to Departmental Representative.
- Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- Submit copies of incident and accident reports.

Specifications - Highlights

Submittals (All Sections)

01 35 29.14 Health and Safety for Contaminated Sites

- Departmental Representative will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 10 days after receipt of plan. Revise plan as appropriate and resubmit plan to Departmental Representative within 10 days after receipt of comments from Departmental Representative.
- Departmental Representative's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- Medical Surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to Departmental Representative.

Specifications - Highlights

Submittals (All Sections)

01 35 29.14 Health and Safety for Contaminated Sites

- On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.
- Submit:
 - Complete set of Material Safety Data Sheets (MSDS), and all other documentation required by Workplace Hazardous Materials Information System (WHMIS) requirements.
 - Emergency Procedures.
 - Notice of Project.

Specifications - Highlights

Submittals (All Sections)

01 35 43 Environmental Procedures

- Environmental Protection Plan: within 10 Working Days after Contract award and prior to mobilization to Site, Submit a plan detailing protection of the environment.
- Submit amended Environmental Protection Plan if there are changes to the assumed site conditions, changes to the Work procedures, or in the event that any methods and procedures are inadequate as directed by the Departmental Representative.
- Submit Spill and Response Report for all Spills.
- After hours work: at least 5 Working Days prior to commencing after hours work



Specifications - Highlights

Submittals (All Sections)

01 56 00 Temporary Barriers and Enclosures

- Pre-Mobilization Submittals: within 7 Working Days of Contract Award
 - Site Access plan
 - Sediment and Erosion Control plan
- Notification of Instream Work will be submitted to the Ministry of Forests, Lands, Natural Resource Operations and Rural Development by Departmental Representative 45 days prior to project start date.



Specifications - Highlights

Submittals (All Sections)

33 21 10 Environmental Drilling

- Materials: Submit manufacturers well materials specification documents to Departmental Representative for approval.
- Submit disposal facility's acceptance to Departmental Representative prior to final waste soil and water disposal.
- Submit waste manifest to Departmental Representative withing 30 days of disposal.



Summary of Combined Price Form

- ❖ Base Work:
 - 60 BH's w/Monitoring Wells
 - 50 Vapour Probes
- ❖ Optional Work:
 - 35 BH's w/Monitoring Wells
 - 15 Vapour Probes

Summary of Combined Price Form

Specification Section	Class of Labour, Plant or Material	Unit of Measure	Base Work	Optional Work	Total Work
01 25 20	Pre-Mobilization Submittals	Lump Sum	1		1
01 25 20	Mobilization to Starting Site for each drill rig, equipment and support vehicles and crew	Each	2		2
01 25 20	Mobilization Between Drilling Sites	Km	1,800	450	2,250
01 25 20	Demobilization from Final Drilling Site for each drill rig, equipment and support vehicles and crew	Each	2		2
01 25 20	Sustainment	Crew per day	90	35	125
01 25 20	Daily Travel all crew and vehicles	Km	4,500	1,170	5,670
01 25 20	Closeout Submittals	Lump sum	1		1
33 21 10	Drill Rig Operation				
Subsection 2.1.2.	Tracked Sonic Unit	Hours	675	270	945



Summary of Combined Price Form

Specification Section	Class of Labour, Plant or Material	Unit of Measure	Base Work	Optional Work	Total Work
33 21 10	Drilling Supplies				
Subsection 2.2.	PVC Casing	m	1,524	635	2,159
Subsection 2.2.	PVC Screen	m	300	170	470
Subsection 2.2.	Bottom Well Points	Each	60	35	95
Subsection 2.2.	J-Plugs	Each	60	35	95
Subsection 2.2.	Filter Sand (25 kg bag)	Each	300	190	490
Subsection 2.2.	Backfill Sand (25 kg bag)	Each	1,500	375	1,875
Subsection 2.2.	Bentonite Chips (25 kg bag)	Each	200	230	430
Subsection 2.2.	Bentonite Granules (25 kg bag)	Each	50	30	80
Subsection 2.4.	Concrete Stone Mix (25 kg bag)	Each	75	75	150
Subsection 2.5.	Flush mount boxes	Each	50	10	60
Subsection 2.5.	Steel sub-surface well protector	Each	50	25	75
Subsection 2.5.	Stick up well protectors	Each	50	10	60



Summary of Combined Price Form

Specification Section	Class of Labour, Plant or Material	Unit of Measure	Base Work	Optional Work	Total Work
33 21 10 Subsection 3.13.	Install Vapour Probes	Each	50	15	65
33 21 10 Subsection 2.7.	Soil Cuttings Barrels	Each	60	15	75
33 21 10 Subsection 2.6.	Soil Cuttings Bags	Each	40	25	65
33 21 10 Subsection 2.7.	Purge Water Barrels	Each	30	8	38
33 21 10	Pick up and disposal of Soil Cuttings Barrels				
Subsection 3.8.	Disposal of Barrel of RL+ Contaminated Soil	Each	30	8	38
Subsection 3.8.	Disposal of Barrel of CL/IL++ Contaminated Soil	Each	30	7	37
33 21 10	Pick up and disposal of Soil Cuttings Bags				
Subsection 3.8.	Disposal of Bag of RL+ Contaminated Soil	Each	20	12	32
Subsection 3.8.	Disposal of Bag of CL/IL++ Contaminated Soil	Each	20	20	40
33 21 10 Subsection 3.8.	Pick up and disposal of Purge Water Barrels	Each	30	8	38
01 56 00	Installation and Removal of Clear Span Bridges	Lump Sum		1	1
01 56 00	Operation and Maintenance of the Bridge Structures	Weeks		3	3



QUESTIONS

Please submit all questions in writing to:

donna.fung@pwgsc.gc.ca



**Thank You for
Your Interest
and
Good Luck!**

