



**RETURN BIDS TO:**

**RETOURNER LES SOUMISSIONS À:**

Bid Receiving Public Works and Government  
Services Canada/Réception des soumissions Travaux  
publics et Services gouvernementaux Canada  
800 Burrard Street, Room 219  
800, rue Burrard, pièce 219  
Vancouver  
British Columbia  
V6Z 0B9  
Bid Fax: (604) 775-9381

**SOLICITATION AMENDMENT  
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise  
indicated, all other terms and conditions of the Solicitation  
remain the same.

Ce document est par la présente révisé; sauf indication contraire,  
les modalités de l'invitation demeurent les mêmes.

**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 - Pacific  
Region  
800 Burrard Street, Room 219  
800, rue Burrard, pièce 219  
Vancouver  
British C  
V6Z 0B9

<b>Title - Sujet</b> Environmental Drilling	
<b>Solicitation No. - N° de l'invitation</b> EZ897-210530/A	<b>Amendment No. - N° modif.</b> 001
<b>Client Reference No. - N° de référence du client</b>	<b>Date</b> 2020-08-05
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$PWY-036-8801	
<b>File No. - N° de dossier</b> PWY-0-43045 (036)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2020-08-14</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Pacific Daylight Saving Time PDT
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Martin (PWY), Delia	<b>Buyer Id - Id de l'acheteur</b> pwy036
<b>Telephone No. - N° de téléphone</b> (778) 707-2139 ( )	<b>FAX No. - N° de FAX</b> (604) 775-6633
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> PWGSC - Alaska Hwy Sites - Alaska Highway, BC	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

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

Solicitation. - N° de l'off. à comm.  
EZ897-210530/A

Amd. No. - N° de la modif.  
001

Buyer ID - Id de l'acheteur  
pwy036

Client Ref. No. - N° de réf. du client

File No. - N° du dossier  
PWY-0-43045

CCC No./N° CCC - FMS No/ N° VME

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**Les documents français seront disponibles sur demande.**

This Amendment #001 is raised to:

- 1: Issue Virtual Site Visit Attendee List
- 2: Issue Virtual Site Visit Presentation

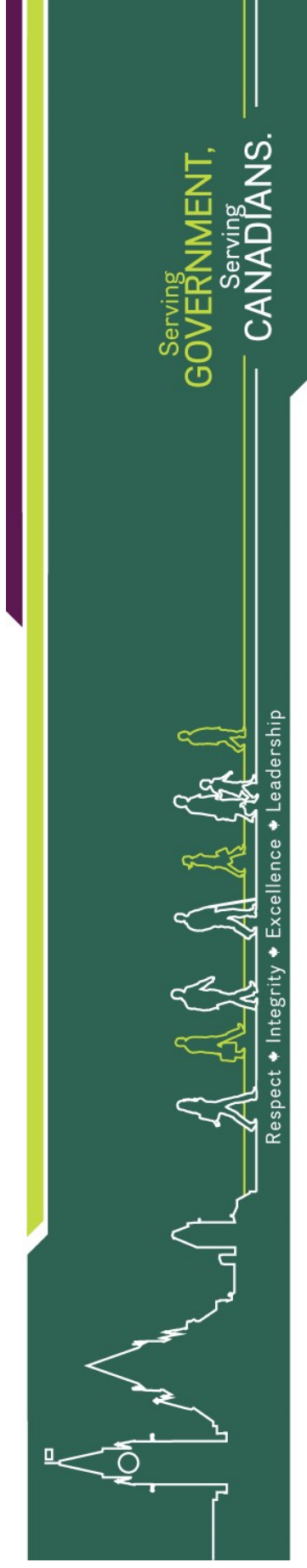
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1: Site Visit Attendee List:

- Blue Max Drilling Inc.
- Ernco Environmental
- Gateway Drilling Ltd
- Associated Environmental Consultants Inc
- Canadian Geo Drilling & Surveying Services
- Ashburn Drilling Ltd
- Downrite Drilling
- Geotech Drilling
- Metro Drilling
- Omega Environmental Drilling
- Nelson Earthworks

2: Virtual Site Visit presentation is attached below.

**All other terms and conditions remain unchanged.**



# Environmental Drilling

Solicitation No. - N° de l'invitation: EZ897-210530/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
- Project Overview
- Specifications – Highlights
- Summary of Combined Price Form
- No questions will be taken today over the phone

# Introductions

- RSVP'd Bidders
- PSPC:
  - Environmental Services PM
    - William Govenlock
  - Contracting Authority
    - Delia Martin
    - [Delia.Martin@pwgsc.gc.ca](mailto:Delia.Martin@pwgsc.gc.ca)
- Keystone Environmental:
  - Departmental Rep Consultants
    - Greg Frank

# Solicitation Review

- Bid Documents
  - <https://buyandsell.gc.ca/procurement-data/tender-notice/PW-PWY-036-8801>
  - Review and submit all documents as per instructions
- Enquiries
  - In writing to [Delia.Martin@pwgsc.gc.ca](mailto:Delia.Martin@pwgsc.gc.ca)
- Bid and Acceptance
  - Closing Date:
    - 2020/08/14 14:00 Pacific Daylight Time (PDT)

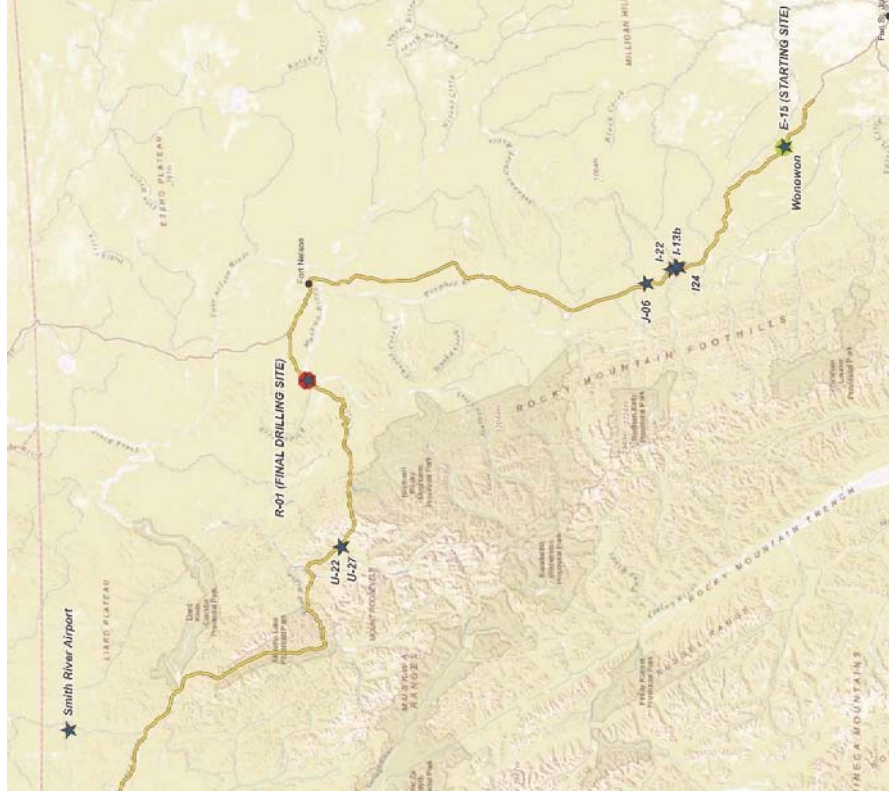
# Project Overview

- ❖ Drill 60-80 boreholes
  - ❖ Install 50-60 Vapour probes
  - ❖ Nine (9) 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.



# Project Overview

Line	Site Name	Location
1	Smith River	North of Liard River, 38km off of the Alaska Highway
2	R01	260m N of Kledo Creek Bridge near Fort Nelson
3	U-22	18km NW of Summit Lake Campground
4	U27	18km NW of Summit Lake Campground
5	J06	South of Buckinghorse
6	I-22	North of Sikanni Chief River Bridge
7	I-13B	South of Sikanni Chief River Bridge
8	I24	South of Sikanni Chief River Bridge
9	E15	Wonowon



# 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 2020 .
- All Work Completed: no later than 1 December 2020.

# 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 Methods

- Solid Stem Auger.
- Hollow Stem Auger.
- Air Hammer.
- Sonic.

### Surface Completions

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



# Specifications - Highlights

## Environmental Drilling (Section 32 21 10)

### Drilling Equipment - 4x4 Truck Mounted Rotary Drill Unit:

- Capable of drilling and installing 50mm (2inch) wells up to 50m (165 ft) BGS
- Wheeled or truck mounted and Capable of 4x4 operation.
- Torque not less than 10.8 kN-m (8,000 ft-lbs).
- Pull back force not less than 106.7 kN (24,000 lbs).
- Tower not less than 9.1 m (30ft).
- Rotary with air compressor not less than 82 L/s (175 cfm).
- Hollow and Solid Stem Tooling.
  - Hollow stem boreholes not less than 200mm (8 inch) nominal diameter.
  - Solid stem boreholes not less than 150mm (6 inch) nominal diameter.
- Air Hammer Tooling:
  - Boreholes with 95 mm (3.75 inch) nominal diameter.
  - Unit with air rotary casing not less than 95 mm (3.75 inch) nominal diameter.

# 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).
- Drilling method.
- Wheeled or tracked drill rig.
- 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.
  - 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

## 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)

WG2

### 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.

## Slide 18

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WG2

This can be deleted  
William Govenlock, 2020-08-04

# 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)

### 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:
  - 20 BH's w/Monitoring Wells
  - 10 Vapour Probes

# Summary of Combined Price Form

Specification Reference	Class of Labour, Plant or Material	Unit of Measurement	Base Work	Optional Work	Base + Optional Work
01 25 20	Pre-Mobilization Submittals	Lump Sum	1		1
01 25 20	Mobilization to Starting Site	Lump Sum	1		1
01 25 20	Mobilization Between Drilling Sites	Km	1,800	450	2,250
01 25 20	Demobilization from Final Drilling Site	Lump Sum	1		1
01 25 20	Sustainment	Person per Day	90	22	112
01 25 20	Daily Travel all crew and vehicles	Km	4,500	1100	5,600
01 25 20	Closeout Submittals	Lump sum	1		1
01 31 19	Tailgate Safety Meetings	hours	45	12	57
<b>33 21 10</b>	<b>Drill Rig Operation</b>				0
Subsection 2.1.1.2.	4x4 Truck Mounted Rotary Drill Unit	Hour	220	80	300
Subsection 2.1.1.3.	Sonic Unit	Hour	220	100	320



# Summary of Combined Price Form

Specification Reference	Class of Labour, Plant or Material	Unit of Measurement	Base Work	Optional Work	Base + Optional Work
<b>33 21 10</b>	<b>Drilling Supplies</b>				
Subsection 2.2.	PVC Casing	m	1,524	380	1,904
Subsection 2.2.	PVC Screen	m	300	75	375
Subsection 2.2.	Bottom Well Points	Each	60	20	80
Subsection 2.2.	J-Plugs	Each	60	20	80
Subsection 2.2.	Filter Sand (25 kg bag)	Each	300	75	375
Subsection 2.2.	Backfill Sand (25 kg bag)	Each	1,500	375	1,875
Subsection 2.2.	Bentonite Chips (25 kg bag)	Each	200	50	250
Subsection 2.2.	Bentonite Granules (25 kg bag)	Each	50	14	64
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	10	60
Subsection 2.5.	Stick up well protectors	Each	50	10	60



# Summary of Combined Price Form

Specification Reference	Class of Labour, Plant or Material	Unit of Measurement	Base Work	Optional Work	Base + Optional Work
33 21 10 Subsection 3.13.	Install Vapour Probes	Each	50	10	60
33 21 10 Subsection 2.7.	Soil Cuttings Barrels	Each	60	15	75
33 21 10 Subsection 2.6	Soil Cuttings Bags	Each	40	10	50
33 21 10 Subsection 2.7.	Purge Water Barrels	Each	30	8	38
<b>33 21 10</b>	<b>Pick up and disposal of Soil Cuttings Barrels</b>				
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
<b>33 21 10</b>	<b>Pick up and disposal of Soil Cuttings Bags</b>				
Subsection 3.8.	Disposal of Bag of RL+ Contaminated Soil	Each	20	5	25
Subsection 3.8.	Disposal of Bag of CL/IL++ Contaminated Soil	Each	20	5	25
33 21 10 Subsection 3.8.	Pick up and disposal of Purge Water Barrels	Each	30	8	38

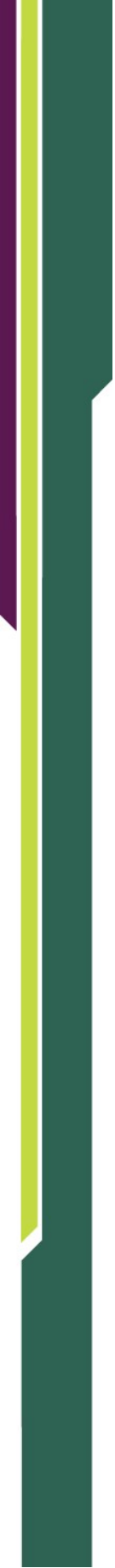


# QUESTIONS

No questions can be taken over the phone, please submit all questions in writing to:

- [Delia.Martin@pwgsc.gc.ca](mailto:Delia.Martin@pwgsc.gc.ca)





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

