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**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**

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Gatineau, Québec K1A 0S5

<b>Title - Sujet</b> SENSITIVE MOBILE RADIATION DETECTOR	
<b>Solicitation No. - N° de l'invitation</b> W6399-160289/A	<b>Amendment No. - N° modif.</b> 004
<b>Client Reference No. - N° de référence du client</b> W6399-160289	<b>Date</b> 2016-01-21
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$PV-940-68621	
<b>File No. - N° de dossier</b> pv940.W6399-160289	<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 2016-01-25</b>	
<b>Time Zone</b> Fuseau horaire Eastern Standard Time EST	
<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> Hooper, Marlyn	<b>Buyer Id - Id de l'acheteur</b> pv940
<b>Telephone No. - N° de téléphone</b> (613) 219-8478 ( )	<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b>	<b>Delivery Offered - Livraison proposée</b>
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<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>

This amendment is raised to publish all answers to the questions received as of January 14, 2016 and to and modify Annex B and H

### **Questions & Answers**

Q.1 3.0 Technical Requirements, Section 3.1.1.4: Quantity one (1) Neutron Detector:  
Does it mean one (1) Neutron detector consisting of 4 He-3 tubes (detectors)?

A.1 The interpretation is correct - Each Neutron Detector must contain 4 He-3 Tubes.

Q.2 On page 33, Section 3.1.1.3.1 Tellurium (TI) doped ....

**Is it supposed to read Thallium (TI) doped...?**

A.2 Please replace reference to Tellurium with Thallium (TI). See below

Q.3 In Annex B, Section 2.1.1 addresses identification in a 500 nSv/h field and list Cf-252 as one of the isotopes to be identified. We assume in this context identification of Cf-252 mean detection of neutrons. Can CANADA confirm this assumption or clarify?

A.3 This interpretation is correct - compliance with this requirement involves detecting a Cf-252 source with a similar neutron emission rate.

Q.4 Annex H, Item 2. Suggest replacing "... detect the 137Cs source" with "...detects the 252Cf source"

A.4 Please replace "detects the 137Cs source" with "detects the 252Cf source" See answer to # 5 for corrected English versions. See below

Q.5 Annex H, Item 2 and Item 4. The section quantifies the neutron source in mutually inconsistent ways; as 104 n/s and as 0.018 n/s/cm<sup>2</sup> and as 0.050 n/s/cm<sup>2</sup> (in French version). Would it be possible to get the source uniquely defined, preferable as source strength in neutrons/s.

A.5 Please see below for corrected versions of Item 2 and 4. The neutron flux is the value that takes precedence for the purposes of this trial, as the exact emission rate of the 252Cf source (or its surrogate) cannot be guaranteed. The distance between the source and the sensor may be modified to achieve the target neutron flux of 0.050 n/s/cm<sup>2</sup> based upon the source emission rate. With a maximum neutron flux of 0.050 n/s/cm<sup>2</sup> at 3m, the source activity should read ~5.6 x 10<sup>4</sup> n/s.

Q.6 Section 4.1.1 subsection 6.2.3.4  
"a given type of shielding" is not an objective verifiable requirement. We request that CANADA either deletes section 6.2.3.4 or specify the shielding scenarios including shielding material, geometry, thickness and source to be shielded.

A.6 Delete subsection 6.2.3.4 - language is misleading. The shielding is only employed to achieve the requisite gamma and neutron intensities described in Annex H. See below

Solicitation No. - N° de l'invitation  
W6399-160289/A  
Client Ref. No. - N° de réf. du client  
W6399-160289

Amd. No. - N° de la modif.  
004  
File No. - N° du dossier  
pv940.W6399-160289

Buyer ID - Id de l'acheteur  
pv940  
CCC No./N° CCC - FMS No/N° VME

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## **Delete**

Part 4 Section 4.1.1 subsection 6.2.3.4 in its entirety

## **Annex B**

### **Delete**

Mandatory Specification 3.1.1.3.1 in its entirety

### **Add**

Mandatory Specification

**3.1.1.3.1** Thallium (TI) doped Sodium Iodide (NaI) scintillation detectors;

## **Annex H**

### **Delete**

Item 2 in its entirety

### **Add**

Item 2

Response to neutron radiation: The SMRD provides a neutron-detection alarm when the detector travels past a 252 Cf source ( $\sim 5.6 \times 10^4$  n/s,) at 8 kph (5 mph) and the SMRD's PoCA is approximately 3 m (10 ft), equivalent to a maximum neutron flux of 0.050 n/s/cm<sup>2</sup>. The test will be repeated ten (10) times and the requirement will be achieved when the SMRD correctly detects the 252 Cf source in at least nine (9) out of ten (10) passes.

### **Delete**

Item 4 in its entirety

### **Add**

Item 4

Neutron indication in the presence of photons (True): The SMRD provides a neutron-detection alarm when, in the presence of a 0.2 mSv/hr 137Cs gamma-ray field, the detector travels past a 252 Cf source ( $\sim 5.6 \times 10^4$  n/s) at 8 kph (5 mph). The SMRD's PoCA is approximately 3 m (10 ft), equivalent to a maximum neutron flux of 0.050 n/s/cm<sup>2</sup>. The test will be repeated ten (10) times and the requirement will be achieved when the SMRD corrected detects the 252 Cf source in at least nine (9) out of ten (10) passes.

All other terms and conditions remain unchanged