



**RETURN BIDS TO:**

**Canadian Nuclear Safety Commission (CNSC)**

**Send by email to:** [solicitation-demandedesoumission@cnsccsn.gc.ca](mailto:solicitation-demandedesoumission@cnsccsn.gc.ca)

**Bid solicitation**

**Proposal to: Canadian Nuclear Safety Commission (CNSC)**

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 and services listed herein and on any attached sheets at the price(s) set out thereof.

**Instructions:** See herein

**Supplier name and address:**

**Issuing office:** CNSC

<b>Title:</b> R691.10 – Safety aspects in the near-field of a deep geological repository for used fuel – corrosion processes affecting the container	
<b>Solicitation no.:</b> 5000065708	<b>Date:</b> April 14, 2022
<b>Solicitation closes:</b> At 2 p.m. / 14 h May 26, 2022	<b>Time zone:</b> Eastern Daylight Savings Time (EDST)
<b>Address inquiries to:</b> Luc Bonhomme	
<b>Telephone:</b> 613-293-0419	
<b>Email:</b> <a href="mailto:solicitation-demandedesoumission@cnsccsn.gc.ca">solicitation-demandedesoumission@cnsccsn.gc.ca</a>	
<b>Destination:</b> See herein	

<b>Delivery required:</b>	<b>Delivery offered:</b>
<b>Supplier name and address:</b>	
<b>Telephone:</b>	
<b>Fax:</b>	
<b>Name and title of person authorized to sign on behalf of supplier (type or print):</b>	
<b>Signature</b>	<b>Date</b>



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## **PART 1 - GENERAL INFORMATION**

### **1.1 Introduction**

The bid solicitation is divided into seven parts plus attachments and annexes, as follows:

Part 1 General Information: provides a general description of the requirement;

Part 2 Bidder Instructions: provides the instructions, clauses and conditions applicable to the bid solicitation;

Part 3 Bid Preparation Instructions: provides Bidders with instructions on how to prepare their bid;

Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, and the basis of selection;

Part 5 Certifications and Additional Information: includes the certifications and additional information to be provided;

Part 6 Security, Financial and Other Requirements: includes specific requirements that must be addressed by Bidders; and

Part 7 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The Annexes include the Statement of Work, the Basis of Payment, and the Security Requirements Checklist.

### **1.2 Summary**

The Canadian Nuclear Safety Commission (CNSC) is looking for a scientific Contractor to perform one component of a three-component project on THMC-Co processes in the near field of a deep geological repository (DGR) for used nuclear fuel. It focuses on corrosion processes affecting the container.

The objective is to further understand corrosion processes and estimate the corrosion rate of the container based on the most recent conceptual design from the Nuclear Waste Management Organization (NWMO) for a Deep Geological Repository (DGR) for used fuel (UF) From Canadian Nuclear Power Plants (NPP).

### **1.3 Debriefings**

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

A de-brief is intended to:

1. Provide the Bidder with feedback on their proposal and the solicitation process;
2. Review the evaluation of the Bidder's proposal and explain where they met or failed to meet the criteria;
3. Identify strengths and weaknesses in the Bidder's proposal to assist them with preparing future proposals.

A de-brief is not an opportunity for the Bidder to debate the evaluation or request a re-evaluation of the proposal.



## **PART 2 - BIDDER INSTRUCTIONS**

### **2.1 Standard Instructions, Clauses and Conditions**

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The [2003](#) (2020-05-28) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation. The following changes are made:

a) With the exception of sections 1 and 3 of the 2003 (2020-05-28) Standard Instructions – Goods or Services – Competitive Requirements, all references to Public Works and Government Services (PWGSC) is deleted and replaced with the Canadian Nuclear Safety Commission (CNSC).

b) Revise subsection 2d of section 5, Submission of Bids, to read:

*“send its bid only to the CNSC email address as specified on page 1 of the bid solicitation”.*

c) Revise subsection 4 of section 5, Submission of Bids, as follows:

Delete: sixty (60) days

Insert: one hundred and eighty (180) days

d) Delete section 8, Transmission by Facsimile or by epost Connect, in its entirety.

e) Add the following paragraphs to section 18, Conflict of Interest – Unfair Advantage:

#### Conflict of Interest – Performance of the Work

- i. The CNSC reserves the right to review real, potential or apparent conflict(s) of interest. Bidders must disclose any of their activities related to the subject of the statement of work that are licensed by the CNSC. Bidders are also required to disclose any involvement in previous, current or planned work undertaken for a CNSC licensee that is or may be related to the subject of the statement of work. Such activities or work are not in themselves grounds for rejection; however, proposals to review previous work contributed by the bidder on behalf of a CNSC licensee, and proposals to make recommendations affecting the CNSC licensing decisions in which the bidder has a financial or non-financial interest may be rejected.
- ii. Bidders must address in detail, in their submitted bids, any real, potential or apparent conflict(s) of interest they may encounter while performing the work, and must substantiate which measures they are taking to prevent the conflict(s). If in doubt about a particular situation, bidders may contact the Contracting Authority before bid closing. The CNSC reserves the right to reject any bids in which a real, potential or apparent conflict of interest exists.

### **2.2 Submission of Bids**

2.2.1 Bids must be submitted only to the CNSC by the date and time indicated on page 1 of the bid solicitation.

2.2.2 Due to the nature of the bid solicitation, bids transmitted by facsimile to the CNSC will not be accepted.



### 2.3 Former Public Servant

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, bidders must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply with Canada’s request and meet the requirement within the prescribed time frame will render the bid non-responsive.

Refer to Part 5 for Former Public Servant Certification.

### 2.4 Enquiries - Bid Solicitation

All inquiries must be submitted in writing to the contracting authority no later than the dates indicated in the table below. Inquiries received after that time may not be answered.

Question Period (QP)	Closing Date of QP	Expected Response Date
QP-1	April 22, 2022	April 29, 2022
QP-2	May 6, 2022	May 13, 2022

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as “proprietary” will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

### 2.5 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.



## **PART 3 - BID PREPARATION INSTRUCTIONS**

### **3.1 Bid Preparation Instructions**

The Bidder must submit its bid electronically by email. Canada requests that the Bidder submits its bid in accordance with section 08 of the 2003 standard instructions. Bidders should provide their bid in a single transmission, subject to a 15MB limitation.

The bid must be gathered per section and separated as follows:

- Section I: Technical Bid
- Section II: Financial Bid
- Section III: Certifications

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) letter format;
- (b) use a numbering system that corresponds to the bid solicitation.

#### **Section I: Technical Bid**

In their technical bid, Bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability and describe their approach in a thorough, concise and clear manner for carrying out the work.

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

#### **Section II: Financial Bid**

**3.1.1** Bidders must submit their financial bid in accordance with the "Pricing Schedule in Attachment 1 of Part 3

#### **Section III: Certifications**

Bidders must submit the certifications and additional information required under Part 5.



**ATTACHMENT 1 to PART 3 OF THE BID SOLICITATION**

**Pricing Schedule**

1. The Bidder must complete this pricing schedule and include it in its Financial Bid.
  
2. In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid an all-inclusive firm price for a cost of \$ \_\_\_\_\_. Customs duties are included and Applicable Taxes are extra.
  
3. Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.



## **PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION**

### **4.1 Evaluation Procedures**

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

#### **4.1.1 Technical Evaluation**

Point rated technical evaluation criteria are included in Attachment 1 to Part 4 of this bid solicitation.

#### **4.1.2 Financial Evaluation**

- a) Refer to Attachment 1 to Part 3 of this bid solicitation.
- b) For bid evaluation and contractor(s) selection purposes only, the evaluated price of a bid will be determined in accordance with the Pricing Schedule detailed in Attachment 1 to Part 3 of this bid solicitation.
- c) The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

#### **4.1.3 Maximum Funding**

The maximum funding available for the Contract resulting from the bid solicitation is \$100,000.00, (Applicable Taxes extra). Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit the CNSC to pay the maximum funding available.

### **4.2 Basis of Selection**

#### **4.2.1 Basis of Selection – Highest Combined Rating of Technical and Price**

1. To be declared responsive, a bid must:
  - a. comply with all the requirements of the bid solicitation; and
  - b. meet the Maximum Funding requirement; and
  - c. meet all mandatory technical evaluation criteria; and
  - d. obtain the required minimum of 70 % overall for the technical evaluation criteria which are subject to point rating. The rating is on 110 points. Please see scoring grid in Attachment 1 of Part 4.
2. Bids not meeting (a) or (b) or (c) or (d) will be declared non-responsive.
3. The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 70 % for the technical merit and 30 % for the price.
4. To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of points available multiplied by the ratio of 70%.
5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 30 %.





6. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.
7. Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 70/30 ratio of technical merit and price, respectively. The total available points equals 135 and the lowest evaluated price is \$45,000 (45).

**Basis of selection – Highest combined rating technical merit (70%) and price (30%)**

		Bidder 1	Bidder 2	Bidder 3
<b>Overall technical score</b>		115/135	89/135	92/135
<b>Bid evaluated price</b>		\$55,000.00	\$50,000.00	\$45,000.00
<b>Calculations</b>	<b>Technical merit score</b>	$115/135 \times 70 = 59.63$	$89/135 \times 70 = 46.15$	$92/135 \times 70 = 47.70$
	<b>Pricing score</b>	$45/55 \times 30 = 24.54$	$45/50 \times 30 = 27.00$	$45/45 \times 30 = 30.00$
<b>Combined rating</b>		84.17	73.15	77.70
<b>overall rating</b>		1st	3rd	2nd



**ATTACHMENT 1 to PART 4 OF THE BID SOLICITATION**

## Technical Evaluation

### Evaluation Disclaimer

The Technical Evaluation of the proposals will be performed in two phases as follows:

### Evaluation Phase 1: Mandatory Technical Criteria

The mandatory criteria will be evaluated on a “Met/Not Met” (i.e. compliant/non-compliant) basis. Bids must demonstrate compliance with all of the following Mandatory requirements and must provide the necessary documentation to support a determination of compliance. Proposals that fail to meet any mandatory requirements will be deemed non-compliant and will be given no further consideration.

### Evaluation Phase 2: Point Rated Technical Criteria

The Bidder must obtain the required minimum number of points specified for the point rated technical criteria.

Overall Maximum Points Available	110
Overall Minimum Points Required	77

For each of the point rated requirements listed below, the Bidder must provide, for each proposed resource, a copy of the resource curriculum vitae (CV) as well as summaries of projects outlining the qualifications and experience listed below, for both corporate related criteria and resources related criteria. It is the responsibility of the Bidder to indicate in the “Reference to Bidder’s Bid”, where in the Bid, the information can be found.

Summaries of project outlining the corporate and resources experience to support compliance should include:

- a. Project Title
- b. Description of project
- c. List of tasks performed by the resource
- d. Start and end date of project (if end date applies) (dates must include month and year)
- e. Start and end date when the resource actually worked in this capacity on this project (dates must include month and year)
- f. Reference contact information that includes name and email. The reference must be a person who was either the Project or Technical Authority, or the supervisor or employer of the resource, if an employee.

Indicate the location in your bid where the requested information can be found for both the mandatory and point rated requirements.

**Merely stating the experience is not sufficient and the bid will be deemed non-compliant.**

Example: If the mandatory and point rated criteria demands experience in gathering, analyzing and validating findings, it is not sufficient just to state the resource has experience gathering, analyzing and validating findings. The experience must be demonstrated and a reference made to the specific location in the resume where corroborating information can be located in the manner indicated above.



The Contracting Authority reserves the right to request reference(s) from any of the listed projects to verify and validate the information stated in the bid. If the reference is unable to verify or validate the information stated in the proposal, the bid will be deemed non-compliant.

**Definitions**

A. Experience Time Frame

All experiences time-frames provided for evaluation is experience gained by bid closing date. Any experience described after bid is closed will not count towards experience.

**Phase 1: Mandatory Criteria**

No.	Mandatory Criteria	Met/Not Met	Bidder's Cross Reference in the Proposal
M1	The Bidder must have been independent from and not having performed any work for the Nuclear Waste Management Organization (NWMO) within the last five (5) years		

**Phase 2: Point-Rated Technical Criteria**

#	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	Bidder Self Score	Bidder's cross-reference to proposal
R1	The Bidder should demonstrate their depth of understanding of the objective and scope.	10	<p><b>0 Points</b> – incorrect understanding of scope and objective</p> <p><b>2 Point</b> – given verbatim from the bid solicitation (RFP) and understanding is not fully demonstrated</p> <p><b>6 Points</b> – good understanding of scope and objectives</p> <p><b>10 Points</b> – in-depth understanding of scope and objective fully demonstrated, by illustrating with supporting references and/or evidence from his past experience that he/she has dealt with projects with similar scope and objective.</p>		



#	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	Bidder Self Score	Bidder's cross-reference to proposal
R2	The Bidder should identify potential major issues and/or obstacles that could affect the outcome of the work; and provide solutions to mitigate these issues.	10	<p><b>0 Points</b> – fails to identify any potential issues  <b>1 Points</b> – 1 potential major issue identified.  <b>2 Points</b> –2 potential major issues identified.  <b>3 Points</b> – 3 potential major issues identified.  <b>4 Points</b> –4 potential major issues identified.  <b>5 Points</b> – 5 or more potential major issues identified,</p> <p><b>Proposed Solutions to Mitigate Above Identified Issues:</b></p> <p>1 point to propose a solution to mitigate the issues for each of the above identified major issues. Maximum of 5 points</p> <p><b>Additional Score If less than 5 major issues can be identified:</b></p> <p>If the Bidder can <u>fully demonstrate</u> no other major issues beyond those identified above is possible:</p> <p>X point(s) = 5-(# points for identified major problems) x2</p>		



#	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	Bidder Self Score	Bidder's cross-reference to proposal
R3	<p><b>Proposed approach and methodology</b></p> <p>The Bidder should provide two (2) relevant project descriptions to demonstrate experience successfully executing similar projects. The Bidder's response should include the following elements for each project example:</p> <ul style="list-style-type: none"> <li>a) the scope of the project</li> <li>b) the approach and methodology applied to complete the work</li> <li>c) challenges or issues encountered while completing the project and the solutions to mitigate them</li> <li>d) outcomes of the project and level of success achieved</li> </ul>	40	<p><b>0 Point</b> – one or more of the elements a) to d) was not addressed</p> <p><b>8 Points</b> - all four element from (a) to (d) are addressed; standard approach/methodology applied with an adequate level of success achieved</p> <p><b>12 Points</b> - all four element from (a) to (d) are addressed; standard approach/methodology applied with a high level of success achieved</p> <p><b>16 Points</b> - all four element from (a) to (d) are addressed; novel benchmarking approach/methodology applied with an adequate level of success achieved</p> <p><b>20 Points</b> - all four element from (a) to (d) are addressed; novel benchmarking approach/methodology applied with a high level of success achieved</p> <hr/> <p>A maximum of 20 points will be awarded per project example.</p>		



#	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	Bidder Self Score	Bidder's cross-reference to proposal
R4	The Bidder should demonstrate that the proposed resource has experience in geochemistry.	10	<b>0 Points</b> – no demonstrated experience <b>2 Points</b> – less than 2 years of demonstrated experience <b>4 Points</b> – from 2 to less than 4 years demonstrated experience <b>8 Points</b> – from 4 to less than 8 years demonstrated experience <b>10 Points</b> – 8 years or more demonstrated experience		
R5	Demonstrated applicable experience of the proposed resource with contaminant transport.	10	<b>0 Points</b> – no demonstrated experience <b>2 Points</b> – less than 2 years of demonstrated experience <b>4 Points</b> – from 2 to less than 4 years demonstrated experience <b>8 Points</b> – from 4 to less than 8 years demonstrated experience <b>10 Points</b> – 8 years or more demonstrated experience		
R6	The Bidder should demonstrate that the proposed resource has experience and ability to devise and carry out experimental work at conditions relevant for the project, as outlined in the Statement of Work.	10	<b>0 Points</b> – no demonstrated experience <b>2 Points</b> – less than 2 years of demonstrated experience <b>4 Points</b> – from 2 to less than 4 years demonstrated experience <b>8 Points</b> – from 4 to less than 8 years demonstrated experience <b>10 Points</b> – 8 years or more demonstrated experience		
R7	The Bidder should demonstrate that the proposed resource has experience in applying computer codes to develop numerical models.	10	<b>0 Points</b> – no demonstrated experience <b>2 Points</b> – less than 2 years of demonstrated experience <b>4 Points</b> – from 2 to less than 4 years demonstrated experience <b>8 Points</b> – from 4 to less than 8 years demonstrated experience <b>10 Points</b> – 8 years or more demonstrated experience		



#	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	Bidder Self Score	Bidder's cross-reference to proposal
R8	<p>The Bidder should demonstrate that the proposed resource has experience in providing quality of written skills on scientific subjects.</p> <p>The Bidder must provide a sample of scientific documentation that the proposed resource has written.</p>	5	<p><b>5 Points - Excellent:</b> The candidate's written communication is clear, concise and easily understood. It is brief and to the point. Ideas are developed logically and presented in a prescribed and reasonable sequence. The information is accurate, informative and complete. It is grammatically correct.</p> <p><b>4 Points - Very Good:</b> The candidate has no difficulty communicating in writing. Occasional overuse of vocabulary and occasional grammatical difficulties may exist but does not detract from the overall message. Communication is clear, logical and accurate. It is concise, effective and understood.</p> <p><b>3 Points - Good:</b> The candidate has a little difficulty in communicating in writing. Some areas may be vague or unclear. Sentences are logical and in an appropriate sequence. There may be occasional use of overly complex structures; some grammatical errors may occur and certain words may be overused. This does not detract from the overall message. Communication is effective and understood.</p> <p><b>1 Point - Weak:</b> The candidate has some difficulty with written communication. Some areas are unclear and difficult to understand. Some sentences are run-on; some information is inaccurate or incomplete. Some grammatical errors exist and impact on the overall message. Nevertheless, the message is basically understood. Overall, written communication is the minimum required for the performance of the duties.</p> <p><b>0 Point –</b> No sample of scientific documentation that the proposed resource has written was provided.</p>		



#	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	Bidder Self Score	Bidder's cross-reference to proposal
R9	<p>The Bidder should demonstrate that the proposed resource has experience in providing quality of oral presentation skills on scientific subjects.</p> <p>The Bidder must provide the contact information of a scientist who attended one of the proposed resource's presentations.</p> <p>This will be verified through a telephone interview with the named scientist.</p>	5	<p><b>1 Point</b> - accuracy, clarity, logic, conciseness and usage (level of language, vocabulary, grammar; for speaking: posture, non-verbal communication, etc.).</p> <p><b>1 Point</b> - Listens to his or her audience, highlights the key points and facilitates understanding.</p> <p><b>1 Point</b> - Expresses himself or herself clearly, makes appropriate comments and holds others' attention.</p> <p><b>1 Point</b> - Develops ideas logically and links them together coherently.</p> <p><b>1 Point</b> - Distinguishes essential from non-essential information.</p>		
	<b>Total</b>	<b>/110</b>	Minimum Pass Score: 77/100		





## **PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION**

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue, whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

### **5.1 Certifications Required with the Bid**

Bidders must submit the following duly completed certifications as part of their bid.

#### **5.1.1 Integrity Provisions - Declaration of Convicted Offences**

In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, **if applicable**, the Integrity declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

### **5.2 Certifications Precedent to Contract Award and Additional Information**

The certifications and additional information listed below should be submitted with the bid but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame specified will render the bid non-responsive.

#### **5.2.1 Integrity Provisions – Required Documentation**

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real procurement agreement of the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

#### **5.2.2 Status and Availability of Resources**

The Bidder certifies that, should it be awarded a contract as a result of the bid solicitation, every individual proposed in its bid will be available to perform the Work as required by Canada's representatives and at the time specified in the bid solicitation or agreed to with Canada's representatives. If for reasons beyond its control, the Bidder is unable to provide the services of an individual named in its bid, the Bidder may propose a substitute with similar qualifications and experience. The Bidder must advise the Contracting Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the Bidder: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.

If the Bidder has proposed any individual who is not an employee of the Bidder, the Bidder certifies that it has the permission from that individual to propose his/her services in relation to the Work to be performed and to submit his/her résumé to Canada. The Bidder must, upon request from the Contracting Authority, provide a written



confirmation, signed by the individual, of the permission given to the Bidder and of his/her availability. Failure to comply with the request may result in the bid being declared non-responsive.

### 5.2.3 Education and Experience

The Bidder certifies that all the information provided in the résumés and supporting material submitted with its bid, particularly the information pertaining to education, achievements, experience and work history, has been verified by the Bidder to be true and accurate. Furthermore, the Bidder warrants that every individual proposed by the Bidder for the requirement is capable of performing the Work described in the resulting contract.

### 5.2.4 Former Public Servant

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, bidders must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

### Definitions

For the purposes of this clause, "former public servant" is any former member of a department as defined in the [Financial Administration Act](#), R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- a. an individual;
- b. an individual who has incorporated;
- c. a partnership made of former public servants; or
- d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the [Public Service Superannuation Act](#) (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the [Supplementary Retirement Benefits Act](#), R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions payable pursuant to the [Canadian Forces Superannuation Act](#), R.S., 1985, c. C-17, the [Defence Services Pension Continuation Act](#), 1970, c. D-3, the [Royal Canadian Mounted Police Pension Continuation Act](#), 1970, c. R-10, and the [Royal Canadian Mounted Police Superannuation Act](#), R.S., 1985, c. R-11, the [Members of Parliament Retiring Allowances Act](#), R.S. 1985, c. M-5, and that portion of pension payable to the [Canada Pension Plan Act](#), R.S., 1985, c. C-8.

### Former Public Servant in Receipt of a Pension

**As per the above definitions, is the Bidder a FPS in receipt of a pension?**

Yes  No



**If so**, the Bidder must provide the following information, for all FPSs in receipt of a pension, as applicable:

- a. name of former public servant;
- b. date of termination of employment or retirement from the Public Service.

By providing this information, Bidders agree that the successful Bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with [Contracting Policy Notice: 2012-2](#) and the [Guidelines on the Proactive Disclosure of Contracts](#).

### **Work Force Adjustment Directive**

**Is the Bidder a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive?**

Yes  No

**If so**, the Bidder must provide the following information:

- a. name of former public servant;
- b. conditions of the lump sum payment incentive;
- c. date of termination of employment;
- d. amount of lump sum payment;
- e. rate of pay on which lump sum payment is based;
- f. period of lump sum payment including start date, end date and number of weeks;
- g. number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.



## **PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS**

### **6.1 Security Requirements**

1. There is no security requirement.



## **PART 7 - RESULTING CONTRACT CLAUSES**

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

### **7.1 Statement of Work**

The contractor must perform the work in accordance with the statement of work in Annex A.

### **7.2 Standard Clauses and Conditions**

All clauses and conditions identified in the Contract by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

#### **7.2.1 General Conditions**

2035 (2021-12-02) , General Conditions - Higher Complexity - Services, apply to and form part of the Contract.

a) Replace the text of section 34 with the following:

- i. The contractor acknowledges that individuals who are subject to the provisions of the *Conflict of Interest Act* (S.C. 2006, c. 9, s. 2) the *Conflict of Interest Code for Members of the House of Commons*, the *Values and Ethics Code for the Public Sector*, the *Treasury Board Policy on Conflict of Interest and Post-Employment*, the *CNSC Values and Ethics Code*, the *CNSC Conflict of Interest and Post-Employment Policy*, the *CNSC Directive on Reporting and Managing Financial Conflicts of Interest* and/or all other codes of conduct applicable within specific federal organizations cannot derive any direct benefit resulting from the contract.
- ii. Contractors, subcontractors, or any of their respective employees working full-time on CNSC premises must comply with the *Values and Ethics Code for the Public Sector*, the *Treasury Board Policy on Conflict of Interest and Post-Employment*, the *CNSC Values and Ethics Code*, the *CNSC Conflict of Interest and Post-Employment Policy* and the *CNSC Directive on Reporting and Managing Financial Conflicts of Interest*.
- iii. Post-employment procedures apply to individuals who have left the public sector.
- iv. The *CNSC Values and Ethics Code*, *CNSC Conflict of Interest and Post-Employment Policy* and the *CNSC Directive on Reporting and Managing Financial Conflicts of Interest* can be found at <http://www.nuclearsafety.gc.ca/eng/about-us/values-and-ethics/index.cfm>

#### **7.2.2 Supplemental General Conditions**

4006 (2010-08-16) Contractor to Own Intellectual Property Rights in Foreground Information, apply to and form part of the Contract.

### **7.3 Security Requirements**

There is no security requirement applicable to the Contract.



**7.4 Term of Contract**

**7.4.1 Period of the Contract**

The period of the Contract is from date of the Contract award to \_\_\_\_\_, inclusive. [Fill in at contract award](#)

**7.5 Authorities**

**7.5.1 Contracting Authority**

The Contracting Authority for the Contract is:

Name: Luc Bonhomme  
 Title: Senior Contracting Specialist  
 Telephone: 613-293-0419  
 E-mail:

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

**7.5.2 Project Authority**

The Project Authority for the Contract is:

[Fill in at contract award](#)

Name: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Telephone: \_\_\_\_ - \_\_\_\_ - \_\_\_\_  
 E-mail: \_\_\_\_\_

The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority; however, the Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

**7.5.3 Contractor's Representative**

[Fill in at contract award](#)

Name: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Telephone: \_\_\_\_ - \_\_\_\_ - \_\_\_\_  
 E-mail: \_\_\_\_\_

**7.6 Proactive Disclosure of Contracts with Former Public Servants**

By providing information on its status, with respect to being a former public servant in receipt of a [Public Service Superannuation Act](#) (PSSA) pension, the Contractor has agreed that this information will be reported on departmental



websites as part of the published proactive disclosure reports, in accordance with [Contracting Policy Notice: 2012-2](#) of the Treasury Board Secretariat of Canada.

## 7.7 Payment

### 7.7.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid an all-inclusive firm price as specified in Annex B. Customs duties are included and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

### 7.7.2 Milestone Payments

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Annex B – Basis of Payment and the payment provisions of the Contract if:

- a. all work associated with the milestone and as applicable any deliverable required has been completed and accepted by Canada.
- b. an accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;

### 7.7.3 T1204 - Information reported by Contractor

7.7.3.1 Pursuant to paragraph 221 (1)(d) of the [Income Tax Act](#), R.S.C. 1985, c.1 (5<sup>th</sup> Supp.), payments made by departments and agencies to contractors under applicable services contracts (including contracts involving a mix of goods and services) must be reported on a T1204 Government Service Contract Payments slip.

7.7.3.2 To enable departments and agencies to comply with this requirement, the contractor must provide the following information prior to signature of the contract:

- a. the legal name of the contractor, i.e. the legal name associated with its business number or social insurance number (SIN), as well as its address and postal code;
- b. the status of the contractor, i.e. an individual, a sole proprietorship, a corporation, or a partnership;
- c. the business number of the contractor if the contractor is a corporation or a partnership and the SIN if the contractor is an individual or a sole proprietorship. In the case of a partnership, if the partnership does not have a business number, the partner who has signed the contract must provide its SIN;
- d. in the case of a joint venture, the business number of all parties to the joint venture who have a business number or their SIN if they do not have a business number.

7.7.3.3 The information must be sent to the contracting authority. If the information includes a SIN, the information should be provided in an envelope marked "Protected".

## 7.8 Invoicing Instructions

7.8.1 Invoices must be emailed to [finance@cnsccsn.gc.ca](mailto:finance@cnsccsn.gc.ca) .

7.8.2 Original receipts are required for reimbursable travel expenses if these expenses are included in the basis of payment found in Annex B attached to this contract. The Contractor must identify the actual travel costs separately on any invoice issued pursuant to the Contract. Travel costs must be itemized by: airfare, train, car rental, personal vehicle, other transportation, accommodation, meals and other. Incidentals are not reimbursable.



**7.8.3** The Contractor shall include the contract number and appropriate Applicable Taxes registration number on all invoices pertaining to the contract.

**7.8.4** The last and final invoice under the contract shall be clearly marked "final invoice".

## **7.9 Certifications and Additional Information**

### **7.9.1 Compliance**

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

### **7.9.2 Specific Persons**

The Contractor must provide the services of the following person(s) to perform the Work as stated in the Contract: \_\_\_\_\_ (*insert name(s) of person(s) at time of contract award*).

## **7.10 Applicable Laws**

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in \_\_\_\_\_ (*insert the name of the province or territory as specified by the Bidder in its bid, if applicable*).

## **7.11 Priority of Documents**

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) the supplemental general conditions 4006 (2010-08-16) Contractor to Own Intellectual Property Rights in Foreground Information
- (c) the general conditions 2035 (2020-05-28)\_Higher Complexity – Services;
- (d) Annex A, Statement of Work;
- (e) Annex B, Basis of Payment;
- (f) the Contractor's bid dated \_\_\_\_\_, (*insert date of bid*) (*If the bid was clarified or amended, insert at the time of contract award:* ", as clarified on \_\_\_\_\_ " **or** ", as amended on \_\_\_\_\_ " *and insert date(s) of clarification(s) or amendment(s)*).

## **7.12 Intellectual Property**

### **7.12.1**

The general conditions are amended by deleting in its entirety the section entitled "Copyright", and replacing it with the following:

"Without affecting any existing intellectual property rights or relating to information or data supplied by Canada for purposes of the Contract, copyright in anything conceived, developed, or produced as part of the Work under the Contract will belong to the Contractor."





#### 7.12.2

1. In this section, "Material" means anything that is created or developed by the Contractor as part of the Work under the Contract, and in which copyright subsists.
2. The Contractor grants to Canada a non-exclusive, perpetual, irrevocable, world-wide, fully-paid and royalty-free license to exercise all rights comprised in the copyright in the Material, for any government purposes. Canada may use independent contractors in the exercise of Canada's license pursuant to this clause.
3. Copyright in any translation of the Material made by or for Canada belongs to Canada. Canada agrees to reproduce the Contractor's copyright notice, if any, on all copies of the Material, and to acknowledge the Contractor's title to the copyright in the original Work on all copies of translations of the Material effected by or for Canada.
4. No restrictions other than those set out in this section must apply to Canada's use of copies of the Material or of translated versions of the Material.
5. At the request of Canada, the Contractor must provide to Canada, at the completion of the Work or at such other time as Canada may require, a written permanent waiver of moral rights, in a form acceptable to Canada, from every author that contributed to the Material. If the Contractor is an author of the Material, the Contractor permanently waives its moral rights in respect of the Material.

#### 7.13 Foreign Nationals (Canadian Contractor)

The Contractor must comply with Canadian immigration requirements applicable to foreign nationals entering Canada to work temporarily in fulfillment of the Contract. If the Contractor wishes to hire a foreign national to work in Canada to fulfill the Contract, the Contractor should immediately contact the nearest Service Canada regional office to enquire about Citizenship and Immigration Canada's requirements to issue a temporary work permit to a foreign national. The Contractor is responsible for all costs incurred as a result of non-compliance with immigration requirements.

or

#### 7.13 Foreign Nationals (Foreign Contractor)

The Contractor must comply with Canadian immigration legislation applicable to foreign nationals entering Canada to work temporarily in fulfillment of the Contract. If the Contractor wishes to hire a foreign national to work in Canada to fulfill the Contract, the Contractor should immediately contact the nearest Canadian Embassy, Consulate or High Commission in the Contractor's country to obtain instructions, information on Citizenship and Immigration Canada's requirements and any required documents. The Contractor is responsible to ensure that foreign nationals have the required information, documents and authorizations before performing any work under the Contract in Canada. The Contractor is responsible for all costs incurred as a result of non-compliance with immigration requirements.

#### 7.14 Insurance

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any insurance acquired or maintained by the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.



## **7.15 Third-Party Information**

7.15.1 The contractor acknowledges that all third-party technical documents supplied for the purpose of this contract belong to the third party. The contractor shall return these technical documents to the originator upon completion of the contract.

7.15.2 The contractor acknowledges that proprietary third-party technical documents belong to the third party and shall be treated as confidential. No physical copies or digital records of technical documents shall be retained by the contractor after completion of the contract.

7.15.3 Upon completion of the contract, the contractor shall immediately return all proprietary technical documents to the originator, and shall provide the CNSC with a certificate of a senior officer of the contractor certifying such return and that no copies of proprietary technical documents, or any part thereof, in any form remain in the possession or control of the contractor.

## **7.16 Government Site Regulations**

The Contractor must comply with all regulations, instructions and directives in force on the site where the Work is performed.



## **ANNEX "A" - STATEMENT OF WORK**

### **1.0 TITLE**

R691.10 – Safety aspects in the near-field of a deep geological repository for used fuel – corrosion processes affecting the container

### **2.0 OBJECTIVE OF THE CONTRACT**

This research proposal is one component of a three-component project on THMC-Co processes in the near field of a deep geological repository (DGR) for used nuclear fuel. It focuses on corrosion processes affecting the container.

The objective is to further understand corrosion processes and estimate the corrosion rate of the container based on the most recent conceptual design from the Nuclear Waste Management Organization (NWMO) for a Deep Geological Repository (DGR) for used fuel (UF) From Canadian Nuclear Power Plants (NPP).

### **3.0 BACKGROUND**

In Canada, the NWMO is currently performing site characterization at two sites in Ontario for the potential deep geological disposal of UF resulting from the operation of Canadian NPPs. The potential DGR would be located at a nominal depth of 500m, in crystalline rock of the Canadian Shield at one site (Ignace, Ontario), and in sedimentary rocks of the Michigan Basin at the other (Huron, Ontario). The NWMO plans to select one of the two sites by 2024, and apply to the CNSC for a licence to prepare the site as a preliminary stage for the next stages of construction, waste emplacement (operation) and closure. The NWMO's conceptual design [1] of the DGR, consistent with international best practice and guidance, relies on a multiple barrier system to contain and isolate the used fuel for periods of up to one million years. The multiple barrier system consist of the engineered barriers (the waste form, the container, the buffer, and other sealing systems) and the natural barrier (the host rock). The current NWMO's conceptual design is shown in Figure 1 and would be applicable to both rock types. The protection of the near-surface environment from the harmful effects of the disposed UF, for periods up to one million years after the DGR is closed, relies on the long-term performance of the barrier system. As required by the CNSC [2] and consistent with international best practice [3], the level of protection provided by the DGR must be shown in a documented collection of arguments and evidence called a safety case. The NWMO has provided several iterations of generic safety cases for both rock types, the most recent ones documented in [4] for sedimentary rocks and [5] for crystalline rocks. For either rock type selected, the engineered barrier system provides an important contribution to the long-term safety of the DGR. The NWMO's design has many distinctive features, as compared to the ones proposed in other countries:

1. The container would consist of a steel tube for structural resistance, coated with a 3mm of copper for corrosion resistance. The container has different shape and dimensions as compared other international designs.
2. The containers would be encased in pre-fabricated bentonite boxes, prior to emplacement in the underground rooms. The gaps between the bentonite blocks and the host rock would be filled with bentonite pellets.
3. The cross-sections of emplacement rooms would be rectangular
4. The groundwater for the two sites being considered could be very saline, especially for the sedimentary rock site where total dissolved solids could be in the order of 300 g/l

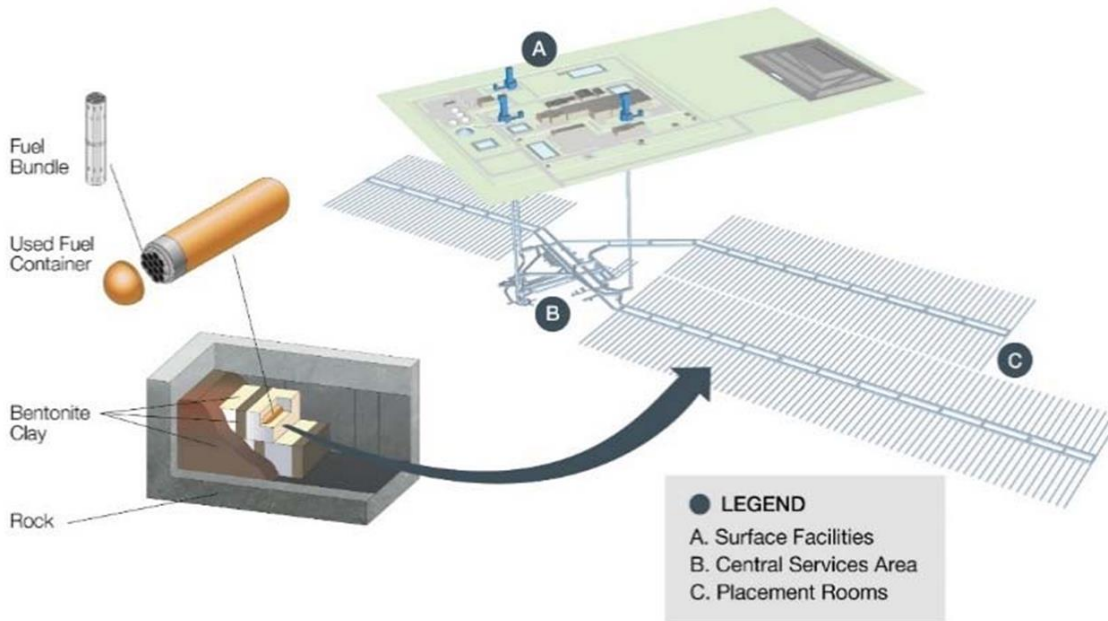


Figure 1. Current NWMO's conceptual design for a DGR for UF (based on [1])

The system of in-room engineered barriers and the host rock in the vicinity of the rooms is herein called “the near-field of the DGR”. In preparation for the review of the licence application from the NWMO, anticipated for 2024-2025, the CNSC is conducting independent research, in order to independently assess the long-term safety features related to the near-field and far-field geosphere. The CNSC’s research program focuses on the near-field and comprises of three components:

1. Corrosion processes associated with the NWMO’s copper-coated container
2. Coupled THMC processes in the near-field and their safety implications on the buffer
3. Gas generation and migration in the near-field and shaft(s)

This project concerns the first component, focusing on corrosion processes that could affect the containment function of the container. The NWMO[8.9] has identified stress corrosion, uniform or general corrosion, localized corrosion and microbial induced corrosion as the possible mechanisms of corrosion of the container. The NWMO has also identified general or uniform corrosion as the potentially most important process, especially when important sulphide concentration is present in the groundwater when it comes in contact with the container. If higher than expected sulphide concentration are present due to unforeseen circumstances, the corrosion rate of the copper coating could increase, eventually exposing the steel that would also corrode and generate hydrogen gas due to the corrosion process. Microbially induced corrosion is also a process retained in the NWMO’s safety assessment for crystalline rocks [4] although it was discarded for sedimentary rocks [5] due to the very high salinity of the groundwater. In this research, the contractor will review existing experimental data, and mathematical model(s) for the evaluation of the corrosion rate of the container. The contractor could also propose and conduct additional experiments. Eventually, mathematical model(s) will be developed and used to simulate the corrosion rate of the container, under the specific conditions of the DGR being proposed by the NWMO.

#### 4.0 SCOPE OF WORK

To assess the processes that could impact the corrosion barrier in the NWMO’s current design. This would include evaluating those processes already identified by the NWMO and identifying other possibilities. This should also include consideration of conditions in a Canadian DGR setting (e.g. waste form, temperature, groundwater salinity). The scope of work will include both experimental and modeling components, the results of which will inform an assessment of the corrosion barrier performance.



## 5.0 TASKS

1. Perform a critical review of the NWMO latest case studies with focus on corrosion processes affecting the container under the thermal, chemical and biological conditions applicable to a DGR in crystalline rock and in sedimentary rocks. Perform a critical literature review on the topic in order to confirm key processes that can affect the container corrosion, to survey conceptual and mathematical models for calculating corrosion rates and to compile the data needed for the model(s). Identify additional experimental studies to help reduced uncertainties with respect to corrosion processes. This leads to deliverable 6.3 a.: Progress Report 1 on the above review.
2. Perform laboratory testing as recommended in task 1. This leads to deliverable 6.3 b.: Progress Report 2 in the form of a manuscript to be submitted to a scientific journal.
3. Develop or adapt existing mathematical model (s) to interpret experimental data performed in task 2 and available from the literature. This leads to deliverable 6.3 c.: Progress Report 3 in the form of a manuscript to be submitted to a scientific journal.
4. Evaluate the corrosion rate of the NWMO's container under different geochemical and microbial conditions, applicable for both sedimentary and crystalline rocks. There might need to be an interaction with research component 2 as defined above, in order to define the groundwater chemical composition under different scenarios. This leads to deliverable 6.3 d.: Progress Report 4 in the form of a manuscript to be submitted to a scientific journal.

## 6.0 DELIVERABLES and ASSOCIATED SCHEDULE

### 6.1 Start-up Meeting

Date: Within 14 days following award of the contract

Location: Via Tele/Videoconference

Purpose: To discuss and clarify the proposed approach, work plan and schedule to ensure achievement of the contract objectives. The contractor shall make a presentation with the above purpose in mind.

### 6.2 Progress Meetings

Dates: Every 30 days for the duration of the contract

Location(s): Via Tele/Videoconference

Purpose: To assess the degree to which the agreed project objectives are being achieved as planned and thus to facilitate timely adjustments (if necessary) to ensure the project success. Progress meetings should be followed by email correspondence summarizing the current status of the project activities and agreements made during the progress meetings.

### 6.3 Progress Reports

Due Date:

- a. Progress report 1: 6 months following award of contract
- b. Progress report 2: 12 months following award of contract
- c. Progress report 3: 24 months following award of contract
- d. Progress report 4: 38 months following award of contract

Copies: One electronic copy via email to the Project Authority

### 6.4 Draft Final Report

Due Date: 40 months following award of the contract



Copies: One electronic copy via email to the Project Authority

6.5 Presentation

Due Date: 44 months following award of the contract

Location: The CNSC Head Office, Ottawa. In the event that the COVID19 vaccination policy is still in effect, the presentation may be done virtually.

Purpose: To present the project findings, conclusions and recommendations documented in the Draft Report to CNSC staff and interested industry stakeholders.

6.6 Final Report

The report shall include the following:

- An abstract
- An executive summary that includes preliminary conclusions and recommendations
- A table of contents
- A literature review on the main topics
- Attachment consisting of the four progress reports or accepted papers

Due Date: 48 months following award of the contract

Copies: One electronic copy via email to the Project Authority

6.7 Abstract

Due Date: One week prior to contract completion date.

Copies: One electronic copy via email to the Project Authority

Format and style requirements: 300 words or less providing a stand-alone statement that conveys the essential information of the Final Report. The abstract shall include the following: a) context; b) purpose/objective of the research; c) approach/scope/method/findings. The abstract shall be written in a style that can be widely understood by the general public. The CNSC reserves the right to modify or translate the Abstract into French or English.

## 7.0 FORMAT OF DELIVERABLES

The Contractor must provide the deliverables in the following formats:

- electronic;
- using font Times New Roman 12;
- MS Office 2010 or later (Word, Project, PowerPoint, Excel, Visio);
- PDF format.

Any electronic files that cannot be read or require major formatting changes when opened are not acceptable and will be returned to the Contractor for correction at their expense.

The CNSC reserves the right to distribute the final report publicly at its discretion. CNSC publication number(s) will be provided by the CNSC.

## 8.0 LANGUAGE OF WORK

The work will be conducted in English. All deliverables will be submitted in English.

## 9.0 LOCATION OF WORK



The contractor must complete all work at the contractor's location.

## 10.0 APPLICABLE DOCUMENTS

1. NWMO (Nuclear waste Management Organization). 2016. Deep Geological Repository Conceptual Design Report. Nuclear Waste Management Design report APM APM-REP-00440-0015 R001.
2. CNSC (Canadian Nuclear safety Commission), 2020. Regulatory Document REGDOC-2.11.1, Waste Management, Volume III: Safety Case for Long-Term Radioactive Waste Management, Version 2
3. IAEA (international Atomic Energy agency). 2011. Safety Requirement SSR-5, The disposal of Radioactive waste.
4. NWMO (Nuclear Waste Management Organization). 2017. Postclosure safety assessment of used fuel repository in crystalline rock. Nuclear Waste Management Organization Technical Report NWMO TR-2017-02. Toronto, Canada.
5. NWMO (Nuclear Waste Management Organization). 2018. Postclosure safety assessment of a used fuel repository in sedimentary rock. Nuclear Waste Management Organization Technical Report NWMO TR-2018-08. Toronto, Canada.



**ANNEX B – BASIS OF PAYMENT**

**1.0 Basis of Payment – All-inclusive Firm Price *(to be completed at contract award)***

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid an all-inclusive firm price of \$\_\_\_\_\_, and will be paid in accordance with the Milestone Schedule, below. Customs duties are included and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

**2.0 Milestones Schedule**

<b>Milestone</b>	<b>Due Date</b>	<b>Firm Price for Milestone</b>
Deliverable 6.3 a. - Progress Report 1	<i>Fill at Contract award</i>	\$ (Approximately 17.5% of total)
Deliverable 6.3 b. - Progress Report 2		\$ (Approximately 17.5% of total)
Deliverable 6.3 c. - Progress Report 3		\$ (Approximately 17.5% of total)
Deliverable 6.3 d. – Progress Report 4		\$ (Approximately 17.5% of total)
Deliverable 6.4 to 6.7 – Draft & Final Report, Abstract, & Presentation		\$ (Approximately 30% of total)

**3.0 Travel and Living Expenses**

CNSC will not reimburse any travel and living expenses.