



Procurement Hub – Fredericton
301 Bishop Drive
Fredericton, NB E3C 2M6

February 21, 2022

30002006

ADVANCED CONTRACT AWARD NOTICE

TITLE: Microchemistry analyses of Walrus and Narwhal Tusks

INTRODUCTION:

The purpose of this Advance Contract Award Notice (ACAN) is to signal the government's intention to award a contract for these services to the University of Manitoba, Ultra Clean Trace Element Laboratory, Department of Environment and Geography, located at 537A Wallace Building, Winnipeg, MB, R3T 2N2. Before awarding a Contract, however, the government would like to provide other suppliers with the opportunity to demonstrate that they are capable of satisfying the requirements set out in this Notice, by submitting a statement of capabilities during the ACAN posting period.

If other potential suppliers submit a statement of capabilities during this ACAN posting period that meets the requirements set out in the ACAN, the government will proceed to a full tendering process on either GETS or through traditional means, in order to award the standing offer.

If no other supplier submits, on or before the closing date, a statement of capabilities meeting the requirements set out in the ACAN, a standing offer will be awarded to the pre-selected supplier.

The aim is to ensure the safe examination and/or necropsy of whales or small cetaceans, or other marine animals, when deemed safe to do so, thus providing scientific information on marine species, with an emphasis on species currently listed under the *Species at Risk Act (SARA)*, and informing mitigation measures for the protection of marine species. This project is also an opportunity to collect data safely, that may contribute to scientific studies to improve our understanding of these species.

OBJECTIVE

The purpose of the this contract is to define stock discrimination and individual movement patterns.

BACKGROUND, ASSUMPTIONS AND SPECIFIC SCOPE OF THE REQUIREMENT

Trace element analyses of annual growth layers in marine mammal teeth is a relatively new approach to studying individual movement and stock discrimination. The underlying premise is that different geological regions vary in the amount of naturally occurring elements and stable isotope ratios of certain heavy metal such as lead. Teeth with incremental growth (e.g., dentine annuli) undergo little to no alteration once formed, and therefore can permanently archive trace elements, or the naturally occurring elements in low concentrations, that an animal has been exposed to. Thus the analyses of trace element profiles along the tooth annuli may reflect geographic regions used by an animal and its long-term movement patterns.

Atlantic walrus in northern Hudson Bay and Davis Strait are managed as one stock (HBDS – Hudson Bay-Davis Strait stock) with increasing evidence suggesting further subdivision of the stock. Isotopic (lead; ^{206}Pb , ^{207}Pb , ^{208}Pb) and trace element profiles of tooth dentine annuli from tusks from individual walruses harvested from the HB-DS stock by will be measured.

New methods are needed to help delineate Baffin Bay narwhal stocks that have no distinctive genetic differences. A previous study (Watt CA, Hornby C., and Ferguson SH. 2019. Trace element and stable isotope analysis elucidate stock structure in a narwhal *Monodon Monoceros* population with no genetic substructure) demonstrate the potential of the use of trace elements in skin for stock discrimination. This



study will explore the use of trace elements and heavy metal isotopes (Pb, Hg) in dentine annuli for reconstructing narwhal long-term movement and assessing the substructure of Baffin Bay narwhals.

REQUIREMENTS

SCOPE OF WORK

Teeth of 17 walrus and 5 narwhals from DFO's archived collections have been processed for sampling. Powdered dentine samples (n = 440) from these specimens will be analysed for lead stable isotopes and trace element concentrations using inductively coupled plasma mass spectrometry (ICP-MS). Measurements will be recorded in a spreadsheet in an electronic database (Microsoft Excel format). A written account outlining work completed and documenting methodology will be provided.

CLIENT RESPONSIBILITIES

The Department of Fisheries and Oceans will prepare and deliver samples for analysis. A DFO employee will complete time-sensitive sample extraction as required prior to analyses.

CONTRACTOR RESPONSIBILITIES

The Contractor is responsible for appropriate insurance and compensation coverage to cover injury, loss of employment income, and damage or loss of equipment.

The Contractor will be required to administer the contract, and ensure that the requirements of the contract are understood. The Contractor is also responsible to ensure that they have appropriate employment coverage (Workers Compensation) and insurance to cover equipment loss.

The Contractor shall report immediately, any problems to the Project Authority so the appropriate action can be taken to ensure the contract can be completed within the contract period.

LANGUAGE OF WORK

English shall be the working language of all deliverables under this contract.

SECURITY REQUIREMENTS

There is no requirement for security clearance because all work will occur offsite at a non-DFO facility and there is no classified or protected information arising from this work.

TRAVEL AND LIVING

No travel or living expenses will be paid as a result of any standing offer awarded.

REPORTING AND INVOICING REQUIREMENTS

Payment will be made upon submission of a satisfactory invoice duly supported by specified release of an Excel spreadsheet with trace element concentration and isotope (Pb) data of all analysed samples, including standards and laboratory reference materials, as well as a detailed account of the sample analysis protocol that was followed. DFO shall pay the invoice within thirty (30) days of receipt of the invoice.

MINIMUM MANDATORY REQUIREMENTS

- The proposed resource must have a minimum of 10 years' experience in conducting trace element concentration and Pb isotope analysis, and must have appropriate standards for calibrating analysis of bioapatite and/or dentine;
 - metal-free, cleanroom (Class 100) laboratory with Class 10 enclosure (or better);
 - Agilent 8900 Triple Quadrupole ICP-MS (or instrument with similar or better capabilities);
- The proposed resource must have appropriate insurance and liability coverage to conduct the specified labwork.

TRADE AGREEMENTS APPLICABILITY OR OTHER OBLIGATIONS:

The requirement is subject to the Canada-Korea Free Trade Agreement (CKFTA) and the Canadian Free Trade Agreement (CFTA).



GOVERNMENT CONTRACTS REGULATIONS EXCEPTION AND LIMITED TENDERING REASONS:

The following policy requirements are applicable to this ACAN process:

Applicable Exceptions to Soliciting Bids under the Government Contracting Regulations (GCRs)
(Section 6):

Section 10.2.1 Section 6 (d) only one person or firm is capable of performing the work applies to this ACAN for the following reasons:

There are no known alternative sources of supply. The University of Manitoba is the only known supplier in the Arctic region for this service.

CONTRACTING PERIOD:

The contracting period is estimated to be from contract award through to March 31, 2023 with a one year option period.

ESTIMATED VALUE:

The total estimated value of this contract is \$60,000.00 each year for a total potential value of \$120,000.00 excluding all applicable taxes.

INSURANCE

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Standing offer 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 Standing offer.

SUPPLIER'S RIGHT TO SUBMIT A STATEMENT OF CAPABILITIES:

Suppliers who consider themselves fully qualified and available to provide the services described herein, may submit a Statement of Capabilities in writing to the Contracting Officer identified in this Notice on or before closing date. The Statement of Capabilities must clearly demonstrate how the supplier meets the advertised requirements.

CLOSING DATE FOR SUBMITTING STATEMENT OF CAPABILITIES:

Thursday, March 17, 2021 at 2:00 p.m. (Atlantic Time)

Inquiries and statements of capabilities are to be directed to:

Kimberly Walker

Senior Contracting Officer

Procurement Hub – Fredericton, NB

Email: DFOtenders-soumissionsMPO@dfo-mpo.gc.ca