

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Réception des soumissions - TPSGC / Bid
Receiving - PWGSC
1550, Avenue d'Estimauville
1550, D'Estimauville Avenue
Québec
Québec
G1J 0C7

INVITATION TO TENDER
APPEL D'OFFRES

**Tender To: Public Works and Government Services
Canada**

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

**Soumission aux: Travaux Publics et Services
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici et sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Vendor/Firm Name and Address
**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution
TPSGC-PWGSC
601-1550, Avenue d'Estimauville
Québec
Québec
G1J 0C7

Title - Sujet Dragage Grosse-Ile	
Solicitation No. - N° de l'invitation EE517-141183/A	Date 2013-09-12
Client Reference No. - N° de référence du client EE517-14-1183	GETS Ref. No. - N° de réf. de SEAG PW-\$QCM-008-15596
File No. - N° de dossier QCM-3-36155 (008)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2013-09-30	
Time Zone Fuseau horaire Heure Avancée de l'Est HAE	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Rochette, Jean	Buyer Id - Id de l'acheteur qcm008
Telephone No. - N° de téléphone (418) 649-2834 ()	FAX No. - N° de FAX (418) 648-2209
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: TRAVAUX PUBLICS ET SERVICES GOUVERNEMENTAUX CANADA R.060442.103 GROSSE-ILE R.059325.001 RIMOUSKI Québec Canada	

Instructions: See Herein

Instructions: Voir aux présentes

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

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INVITATION TO TENDER

TITLE : DREDGING - GROSSE-ÎLE AND RIMOUSKI

IMPORTANT NOTICE TO BIDDERS

CLAUSES REFERRED TO BY NUMBER (I.E. R2890D) CAN BE FOUND AT THE FOLLOWING WEB SITE

<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

INSURANCE TERMS

The Insurance Terms for this solicitation are amended. Refer to the Supplementary Conditions.

DREDGES AND OTHER FLOATING EQUIPMENT

The Floating Plant Clause (FPC) and the General Instructions to Bidders GI06 Registry and Pre-qualification of Floating Plant are mandatory conditions with which bids for federal government dredging projects must comply. Canada is bound by these obligations.

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GENERAL INSTRUCTIONS TO BIDDERS (GI) - R2710T (2013-06-27)

The following GI's are included by reference and are available at the following Web Site

<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

GI01	Code of Conduct and Certification - Bid
GI02	Completion of Bid
GI03	Identity or Legal Capacity of the Bidder
GI04	Applicable Taxes
GI05	Capital Development and Redevelopment Charges
GI06	Registry and Pre-qualification of Floating Plant
GI07	Listing of Subcontractors and Suppliers
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GI09	Submission of Bid
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GI12	Bid Costs
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GI17	Conflict of Interest-Unfair Advantage

SUPPLEMENTARY CONDITIONS (SC)

SC01	Insurance Terms
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CONTRACT DOCUMENTS (CD)

BID AND ACCEPTANCE FORM (BA)

BA01	Identification
BA02	Business Name and Address of Bidder
BA03	The Offer
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BA08 Signature

APPENDICES

Appendix 1 Combined price form
Appendix 2 Complete list of each individual who are currently Directors of the bidder
Appendix 3 Floating plant description
Appendix 4 Positioning system description

ANNEX

Annex 1 : Request for Certificate of qualification of floating plant

SPECIAL INSTRUCTIONS TO BIDDERS (SI)

SI01 CODE OF CONDUCT AND CERTIFICATIONS - RELATED DOCUMENTATION

By submitting a bid, the Bidder certifies that the Bidder and its affiliates are in compliance with the provisions as stated in Section 01 Code of Conduct and Certifications - Bid of Standard Instructions R2710T (2013-06-07). The related documentation therein required will assist Canada in confirming that the certifications are true.

SI02 BID DOCUMENTS

1. The following are the bid documents:
 - a. Invitation to Tender - Page 1;
 - b. Special Instructions to Bidders;
 - c. General Instructions to Bidders R2710T (2013-06-27);
 - d. Clauses & Conditions identified in "Contract Documents";
 - e. Drawings and Specifications;
 - f. Bid and Acceptance Form and related Appendice(s); and
 - g. Any amendment issued prior to solicitation closing.

Submission of a bid constitutes acknowledgement that the Bidder has read and agrees to be bound by these documents.

2. General Instructions to Bidders is incorporated by reference and is set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>

SI03 ENQUIRIES DURING THE SOLICITATION PERIOD

1. Enquiries regarding this bid must be submitted in writing to jean.rochette@tpsgc-pwgsc.gc.ca, the Contracting Officer named on the Invitation to Tender - Page 1 as early as possible within the solicitation period. Except for the approval of alternative materials as described in GI16 of R2710T "General Instructions to Bidders", enquiries should be received no later than 5 business days prior to the date set for solicitation closing to allow sufficient time to provide a response. Enquiries received after that time may not result in an answer being provided.
2. To ensure consistency and quality of the information provided to Bidders, the Contracting Officer shall examine the content of the enquiry and shall decide whether or not to issue an amendment.
3. All enquiries and other communications related to this bid sent throughout the solicitation period are to be directed ONLY to the Contracting Officer named on the Invitation to Tender - Page 1. Failure to comply with this requirement may result in the bid being declared non-responsive.

SI04 SITE VISIT

Not applicable

SI05 REVISION OF BID

A bid may be revised by letter or facsimile in accordance with GI11 of R2710T "General Instructions to Bidders". The facsimile number for receipt of revisions is (418) 648-2209.

SI06 BID RESULTS

1. A public bid opening will be held in the office designated on the Front Page "Invitation to Tender" for the receipt of bids shortly after the time set for solicitation closing.
2. Following solicitation closing, bid results may be obtained by calling at (418) 649-2888.

SI07 INSUFFICIENT FUNDING

In the event that the lowest compliant bid exceeds the amount of funding allocated for the Work, Canada in its sole discretion may

- a. cancel the solicitation; or
- b. obtain additional funding and award the Contract to the Bidder submitting the lowest compliant bid; and/or
- c. negotiate a reduction in the bid price and/or scope of work of not more than 15% with the Bidder submitting the lowest compliant bid. Should an agreement satisfactory to Canada not be reached, Canada shall exercise option (a) or (b).

SI08 BID VALIDITY PERIOD

1. Canada reserves the right to seek an extension to the bid validity period prescribed in BA04 of the Bid and Acceptance Form. Upon notification in writing from Canada, Bidders shall have the option to either accept or reject the proposed extension.
2. If the extension referred to in paragraph 1. of SI07 is accepted, in writing, by all those who submitted bids, then Canada shall continue immediately with the evaluation of the bids and its approvals processes.
3. If the extension referred to in paragraph 1. of SI07 is not accepted in writing by all those who submitted bids then Canada shall, at its sole discretion, either
 - a. continue to evaluate the bids of those who have accepted the proposed extension and seek the necessary approvals; or
 - b. cancel the invitation to tender.
4. The provisions expressed herein do not in any manner limit Canada's rights in law or under GI12 of R2710T "General Instructions to Bidders".

SI09 CONSTRUCTION DOCUMENTS

Not applicable

SI10 SECURITY RELATED REQUIREMENTS

Not applicable

SI11 TRANSMISSION OF THE BID BY FACSIMILE OR EMAIL

Bids transmitted by facsimile or email are not accepted.

SI12 BID MANDATORY REQUIREMENTS

Bids shall comply with all of the mandatory requirements in the invitation to tender documents in order to be declared responsive, including the mandatory requirements set out in other sections of the invitation to tender documents.

If Canada requests that the bidder submit information or documents within a time period specified in this clause or in a written request made to the bidder, failure to provide these documents or this information at Canada's request within the specified time period will result in the bid being deemed non-responsive.

The lowest compliant bid shall be recommended for a contract award.

<i>Mandatory requirements at bid closing Mandatory documents to be supplied with the bid</i>	
	<i>Reference</i>
<i>If any of the following documents relative to criteria 1.1 to 1.5 is missing at bid closing, the bid will be deemed non-responsive.</i>	
1.1 Bidders shall complete the <u>Combined Price Table</u> .	Appendix 1 herein
1.2 Bid security, in accordance with GI09 BID SECURITY REQUIREMENTS of the General Instructions to Bidders (R2710T).	<ul style="list-style-type: none"> • Clause GI09 of General Instructions to Bidders, R2710T • Clauses BA04 and BA07 of the Bid and Acceptance Form • See the bid bond form at the following Internet link: http://www.pwgsc.gc.ca/acquisitions/text/forms/pdf/504.pdf
1.3 In order to comply with clause GI07, Registry and Pre-qualification of Floating Plant, of the General Instructions to bidders no R2710T:	

<p>1.3.1 Submit a bid on the basis that the dredges or other floating plant to be used for the work are registered in Canada.</p> <p>Bidders shall identify the dredge(s) and other floating plant, (scows, tug(s) and supply vessel(s) and support equipment), that will be used by filling out Appendix 3 and shall provide it with the bid.</p> <p>If necessary, bidders shall be able to demonstrate, within 48 hours of receipt of Canada's written request, that the dredges or floating plant are registered in Canada.</p>	<ul style="list-style-type: none"> • Clause GI07 of General Instructions to Bidders, R2710T • Appendix 3 herein
<p>1.3.2 Append to its bid a copy of the <u>certificate of qualification issued by Industry Canada if the dredge(s) or other floating plant to be used for the work IS NOT (ARE NOT) MANUFACTURED IN CANADA.</u></p> <p>If at bid closing this certificate is not appended to the bid for any of the dredges or equipment not manufactured in Canada indicated in Appendix 3, the bid will be deemed <u>non-responsive.</u></p> <p>See Industry Canada certificate application in Annex 1.</p>	<ul style="list-style-type: none"> • Clause GI0 of General Instructions to Bidders, R2710T • Annex 1 herein
<p>1.4 <u>Mandatory Specifications of the equipment</u> Bidder shall take note that the dredging shall be executed with equipment stated in Article 2.1 from section 35 20 23 of the specifications.</p> <p>Bidder shall provide a description of the dredge(s) and dump scows to be used to do the work, which will allow Canada to verify if the proposed floating plants are compliant with specifications requirements. Include in Appendix 3 the information on the dredge(s) and dump scows used.</p> <p>Failure to identify the dredge(s) and dump scows or to attach Appendix 3 to the bid shall make the bid <u>non-responsive.</u></p>	<ul style="list-style-type: none"> • Article 2.1 from section 35 20 23 of the specifications • Appendix 3 herein
<p>1.5 <u>Experience of the Superintendent</u></p> <p>The proposed Superintendent shall have accumulated a minimum of twelve (12) months of experience in dredging work as Superintendent performed on floating equipment since January 2006 in commercial waterways and/or commercial ports.</p> <p>In order to demonstrate that this requirement is met, the Bidder shall fill out and submit with its bid Appendix 4. Clients identified as references may be contacted. If the Bidder does not submit the requested information within the prescribed time frame, or does not meet the minimum requirements, the bid will be <u>non-responsive.</u></p>	<ul style="list-style-type: none"> • Appendix 4 to this Invitation to Tender
<p>1.6 <u>Positioning system</u> The bidder shall describe the positioning system that be used to performed the work.</p>	<ul style="list-style-type: none"> • Appendix 5 to this Invitation to Tender

SI13 WEB SITES

The connection to some of the Web sites in the solicitation documents is established by the use of hyperlinks. The following is a list of the addresses of the Web sites:

Treasury Board Appendix L, Acceptable Bonding Companies

<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=14494§ion=text#appL>

Contracts Canada (Buy and Sell) <https://www.achatsetventes-buyandsell.gc.ca/eng/welcome>

Canadian economic sanctions <http://www.international.gc.ca/sanctions/index.aspx?lang=eng>

Contractor Performance Evaluation Report (Form PWGSC-TPSGC 2913)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913.pdf>

Bid Bond (form PWGSC-TPSGC 504)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/504.pdf>

Performance Bond (form PWGSC-TPSGC 505)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/505.pdf>

Labour and Material Payment Bond (form PWGWSC-TPSGC 506)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/506.pdf>

Certificate of Insurance (form PWGSC-TPSGC 357)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/357.pdf>

Standard Acquisition Clauses and Conditions (SACC) Manual

<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>

Schedules of Wage Rates for Federal Construction Contracts

http://www.rhdcc-hrsdc.gc.ca/eng/labour/employment_standards/contracts/schedule/index.shtml

PWGSC, Industrial Security Services <Http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html>

PWGSC, Code of Conduct and Certifications

<Http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/index-eng.html>

PWGSC Consent to a Criminal Record Verification (PWGSC-TPSGC 229)

<Http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/229.pdf>

SUPPLEMENTARY CONDITIONS (SC)

SC01 INSURANCE TERMS

SC01.1 Insurance requirements

The Contractor must comply with the insurance requirements specified in SC01 - Insurance terms. The Contractor must maintain the required insurance coverage for the duration of the Contract. Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract.

The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

The Contractor must forward to the Contracting Authority within ten (10) days after the date of award of the Contract, a Certificate of Insurance evidencing the insurance coverage and confirming that the insurance policy complying with the requirements is in force. Coverage must be placed with an Insurer licensed to carry out business in Canada. The Contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

SC01.2 Marine liability insurance

1. The Contractor must obtain Protection & Indemnity (P&I) insurance that must include excess collision liability and pollution liability. The insurance must be placed with a member of the International Group of Protection & Indemnity Associations or with a fixed market in an amount of \$ 50,000,000.00. Coverage must include crew liability, if it is not covered by Worker's Compensation as detailed in paragraph 2 below.
2. The Contractor must obtain Worker's Compensation insurance covering all employees engaged in the Work in accordance with the statutory requirements of the Territory or Province or state of nationality, domicile, employment, having jurisdiction over such employees. If the Contractor is assessed any additional levy, extra assessment or super-assessment by a Worker's Compensation Board, as a result of an accident causing injury or death to an employee of the Contractor or subcontractor, or due to unsafe working conditions, then such levy or assessment must be paid by the Contractor at its sole cost.
3. The Protection and Indemnity insurance policy must include the following:
 - (a) Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada as additional insured should read as follows: Canada, represented by Public Works and Government Services Canada.
 - (b) Waiver of Subrogation Rights: Contractor's Insurer to waive all rights of subrogation against Canada as represented by Transport Canada and Public Works and Government Services Canada for any and all loss of or damage to the watercraft however caused.
 - (c) Notice of Cancellation : The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of cancellation.

- (d) Cross Liability/Separation of Insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.

SC01.3 Commercial General Liability Insurance

1. The Contractor must obtain Commercial General Liability Insurance, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$2,000,000 per accident or occurrence and in the annual aggregate.
2. The Commercial General Liability policy must include the following:
 - (a) Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada should read as follows: Canada, as represented by Public Works and Government Services Canada.
 - (b) Bodily Injury and Property Damage to third parties arising out of the operations of the Contractor.
 - (c) Products and Completed Operations: Coverage for bodily injury or property damage arising out of goods or products manufactured, sold, handled, or distributed by the Contractor and/or arising out of operations that have been completed by the Contractor.
 - (d) Personal Injury: While not limited to, the coverage must include Violation of Privacy, Libel and Slander, False Arrest, Detention or Imprisonment and Defamation of Character.
 - (e) Cross Liability/Separation of Insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.
 - (f) Blanket Contractual Liability: The policy must, on a blanket basis or by specific reference to the Contract, extend to assumed liabilities with respect to contractual provisions.
 - (g) Employees and, if applicable, Volunteers must be included as Additional Insured.
 - (h) Employers' Liability (or confirmation that all employees are covered by Worker's compensation (WSIB) or similar program)
 - (i) Broad Form Property Damage including Completed Operations: Expands the Property Damage coverage to include certain losses that would otherwise be excluded by the standard care, custody or control exclusion found in a standard policy.
 - (j) Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of policy cancellation.
 - (k) If the policy is written on a claims-made basis, coverage must be in place for a period of at least 12 months after the completion or termination of the Contract.

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CONTRACT DOCUMENTS (CD)

1. The following are the contract documents:
 - a. Contract Page when signed by Canada;
 - b. Duly completed Bid and Acceptance Form and any Appendices attached thereto;
 - c. Drawings and Specifications;
 - d. General Conditions and clauses

GC1 General Provisions	R2810D	(2013-04-25)
GC2 Administration of the Contract	R2820D	(2012-07-16);
GC3 Execution and Control of the Work	R2830D	(2010-01-11);
GC4 Protective Measures	R2840D	(2008-05-12);
GC5 Terms of Payment	R2850D	(2010-01-11);
GC6 Delays and Changes in the Work	R2860D	(2013-04-25);
GC7 Default, Suspension or Termination of Contract	R2870D	(2008-05-12);
GC8 Dispute Resolution	R2880D	(2012-07-16);
GC9 Contract Security	R2890D	(2012-07-16);
GC10 Insurance	R2900D	(2008-05-12);
Supplementary Conditions		
Insurance Terms	R2910D	(2008-12-12);
Fair Wages and Hours of Labour - Labour Conditions	R2940D	(2012-07-16);
Allowable Costs for Contract Changes Under GC6.4.1	R2950D	(2007-05-25);
 - e. Any amendment issued or any allowable bid revision received before the date and time set for solicitation closing;
 - f. Any amendment incorporated by mutual agreement between Canada and the Contractor before acceptance of the bid; and
 - g. Any amendment or variation of the contract documents that is made in accordance with the General Conditions.
2. The documents identified by title, number and date above are incorporated by reference and are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site:
<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>
3. Schedules of Wage Rates for Federal Construction Contracts is included by reference and may be accessed from the Web site:
http://www.rhdcc-hrsdc.gc.ca/eng/labour/employment_standards/contracts/schedule/index.shtml.
4. The language of the contract documents is the language of the Bid and Acceptance Form submitted.

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BID AND ACCEPTANCE FORM (BA)

BA01 IDENTIFICATION

The work consists in dredging on both sides of the Grosse-Île (QC) wharf and the Rimouski (QC) East basin entrance and also a portion of this basin.

Solicitation no : EE517-141183/A

Project no : R.060442.001 (Grosse-Île)

Project no : R.059325.001 (Rimouski)

BA02 BUSINESS NAME AND ADDRESS OF BIDDER

Name: _____

Address: _____

Telephone: _____ Fax: _____ PBN: _____

Email: _____

BA03 THE OFFER

The Bidder offers to Canada to perform and complete the Work for the above named project in accordance with the Bid Documents for the **TOTAL BID AMOUNT INDICATED IN APPENDIX 1**.

BA04 BID VALIDITY PERIOD

The bid shall not be withdrawn for a period of sixty [60] days following the date of solicitation closing.

BA05 ACCEPTANCE AND CONTRACT

Upon acceptance of the Contractor's offer by Canada, a binding Contract shall be formed between Canada and the Contractor. The documents forming the Contract shall be the contract documents identified in Contract Documents (CD).

BA06 CONSTRUCTION TIME

The work period is from the aeadr date to October 31, 2013.

BA07 BID SECURITY

The Bidder is enclosing bid security with its bid in accordance with GI09 - Bid Security Requirements of R2710T - General Instructions to Bidders.

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BA08 SIGNATURE

Name and title of person authorized to sign on behalf of Bidder (Type or print)

Signature

Date

APPENDIX 1 - COMBINED PRICE FORM

- 1) The prices per unit shall govern in establishing the Total Extended Amount. Any arithmetical errors in this Appendix will be corrected by Canada.
- 2) Canada may reject the bid if any of the prices submitted do not reasonably reflect the cost of performing the part of the work to which that price applies.

LUMP SUM

The Lump Sum Amount designates Work to which a Lump Sum Arrangement applies.

- a) Work included in the Lump Sum Amount represents all work not included in the unit price table.

Grosse-Île

Item	Specification Reference	Description	Firm Total Amount
G1	35 20 23	Mobilization and Demobilization	_____ \$
LUMP SUM AMOUNT (LSA-G) Excluding GST and QST			_____ \$

Rimouski

Item	Specification Reference	Description	Firm Total Amount
R1	35 20 23	Mobilization and Demobilization	_____ \$
LUMP SUM AMOUNT (LSA-R) Excluding GST and QST			_____ \$

UNIT PRICE TABLE

The Unit Price Table designates Work to which a Unit Price Arrangement applies.

- a) Work included in each item is as described in the referenced specification section.
- b) The Price per Unit shall not include any amounts for Work that is not included in that unit price Item.

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Grosse-île

Item	Specification Reference	Class of Labour, Plant or Material	Unit of Measurement	Estimated Quantity (EQ)	Price per Unit GST/HST extra (PU)	Extended amount (EQ x PU) GST/HST extra
G2	35 20 23	Dredging	cmpm	5 400	_____ \$	_____ \$
G3	35 20 23	Evacuation (disposal) in open water	cmpm/km	43 200	_____ \$	_____ \$
G4	35 20 23	Evacuation to land	cmpm	20	_____ \$	_____ \$
TOTAL EXTENDED AMOUNT (TEA-G) Excluding GST and QST						_____ \$

Rimouski

Item	Specification Reference	Class of Labour, Plant or Material	Unit of Measurement	Estimated Quantity (EQ)	Price per Unit GST/HST extra (PU)	Extended amount (EQ x PU) GST/HST extra
R2	35 20 23	Dredging	cmpm	5 700	_____ \$	_____ \$
R3	35 20 23	Evacuation (disposal) in open water	cmpm/km	28 500	_____ \$	_____ \$
TOTAL EXTENDED AMOUNT (TEA-R) Excluding GST and QST						_____ \$

TOTAL BID AMOUNT

TOTAL BID AMOUNT (LSA-G + LSA-R +TEA-G +TEA-R) Excluding GST / HST	
--	--

Solicitation No. - N° de l'invitation

EE517-141183/A

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

EE517-14-1183

Amd. No. - N° de la modif.

File No. - N° du dossier

QCM-3-36155

Buyer ID - Id de l'acheteur

qcm008

CCC No./N° CCC - FMS No/ N° VME

**APPENDIX 2 - COMPLETE LIST OF EACH INDIVIDUAL WHO ARE CURRENTLY
DIRECTORS OF THE BIDDER**

NOTE TO BIDDERS

WRITE DIRECTOR'S SURNAMES AND GIVEN NAMES IN BLOCK LETTERS

<i>SURNAME</i>	<i>NAME</i>	<i>TITLE</i>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

APPENDIX 3 - FLOATING PLANT DESCRIPTION

Dredges and Other Floating Equipments

The Bidder declares, by the fact of filling in the following tables, that the named equipments are entirely at his disposal, and that he is able to meet performances and capacities as stated below considering the materials and conditions related to this project. The Bidder must understand that a contract award from Public Works & Government Services Canada does not imply an acceptance of the claimed performances or capacities but only confirms that the equipments meet the requirements of the floating plant clauses.

DREDGE (S)

	<i>Main dredge</i>	<i>Secondary dredge (if required)</i>
<i>Dredge name</i>		
<i>Registration number</i>		
<i>Type of dredge</i>		
<i>If trailing suction hopper dredge: Hopper Capacity (m³)</i>		
<i>Draft (m)</i>		
<i>Dredging depth (m)</i>		
<i>Dredging capacity (m³/h)</i>		
<i>Manufacturing place *</i>		

Solicitation No. - N° de l'invitation
EE517-122515/A
 Client Ref. No. - N° de réf. du client
 EE517-12-2515

Amd. No. - N° de la modif.
 File No. - N° du dossier
 QCM-1-34774

Buyer ID - Id de l'acheteur
 qcm008
 CCC No./N° CCC - FMS No./N° VME

Appendix 3 (continued)

SCOW (S) / SELF-PROPELLING SCOW (S)

Name	Registration number	Capacity (m ³)	Draft (m)	Manufacturing Place *

TUG (S)

Name	Registration number	Engine (HP)	Draft (m)	Manufacturing Place *

SUPPLY VESSELS AND OTHERS FLOATING EQUIPMENT

Name	Registration number	Purpose	Draft (m)	Manufacturing Place *

* If manufacturing place is not Canada, append to your bid the certificate issued by Industry Canada.

Solicitation No. - N° de l'invitation

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Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

qcm008

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

EE517-12-2515

File No. - N° du dossier

QCM-1-34774

CCC No./N° CCC - FMS No./N° VME

Appendix 3 (continued)

CERTIFICATE OF QUALIFICATION

Each floating equipment to be used in the course of the works **must be of Canadian manufacture and Canadian registry**. The Bidder must obtain a certificate of qualification from Industry Canada for any floating equipment which is not of Canadian manufacture. **A certified copy of the certificate must accompany the bid.** Requests related to the certification must be sent to :

Defence and Marine Director
Aerospace, Defence and Marine Branch
INDUSTRY CANADA
C.D. Howe Building – room 733C
235 Queen Street
Ottawa, ON
K1A 0H5

Attention : Mr. Émile Rochon
Phone : (613) 954-3468
Fax : (613) 998-6703
E-mail : rochon.emile@ic.gc.ca

The Director must have received any request at least fourteen (14) days before the closing bid date. The Industry Canada evaluated and recognized floating equipments may be accepted to work out a dredging project. Requests for certificates of qualification may be submitted by completing the Annex 1 here after.

Solicitation No. - N° de l'invitation

EE517-122515/A

Amd. No. - N° de la modif.

File No. - N° du dossier

QCM-1-34774

Buyer ID - Id de l'acheteur

qcm008

CCC No./N° CCC - FMS No./N° VME

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

EE517-12-2515

APPENDIX 4 - POSITIONNING SYSTEM DESCRIPTION

Describe the positioning system that will be used to performed the Work. Specify trade-mark, model, precision, etc.

ANNEX 1

REQUEST FOR CERTIFICATE OF QUALIFICATION OF FLOATING PLANT

(The Bidder will use a separate sheet for each unit of floating plant.)

1. Name and address of owner:

2. Name and address of operator:

3. Name of unit:

4. Canadian registry no.:

5. Type of unit (dredge, tug, scow, pontoon, etc.):

6. Date of Canadian registry:

7. Date unit originally built:

8. Shipyard where unit originally built:

9. Record of work done to unit in Canada. For each major job, show:
Date:
Shipyard:
Type of work:
Cost:
Country of origin of equipment installed:

10. If unit has changed ownership, show name and current address of previous owner(s) for each modification referred to in item 9 on a separate page.

Signature

Date

<u>DIVISIONS</u>	<u>SECTIONS</u>	<u>NUMBER OF PAGES</u>
<u>DIVISION 01</u>	General requirements	
	01 11 11 Work Description Summary	2
	01 33 00 Submittal Procedures	2
	01 35 30(D) Health and Safety Requirements - Dredging	5
	01 35 43 Environmental Procedures	3
	01 52 00 Construction Facilities	1
<u>DIVISION 35</u>	Waterway and Marine Construction	
	35 20 23 Dredging	13
	35 20 23A Contaminated sediments management	2
<u>DRAFT</u>		
	Grosse-Île (Montmagny)	1
	Drawing no. QU-13005 – Dredging forecast	
	Rimouski	1
	Drawing no. QU-13004 – Dredging forecast	
<u>ANNEXES</u>		
Annex A	Dredging and disposal sites information	1
Annex B	Open water disposal sites localization	2
Annex C	Grain size of materials to be dredged.	4
Annex D	Example of ASCII computer file (bathymetric data).	1
Annex E	Mitigation measures	5
Annex F	Physico-chemical characterization of sediments Grosse-Île (Montmagny)	2

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Work covered by contract documents.
- .2 Contractor use of premises.

1.2 PRECEDENCE

- .1 Division 01 Sections take precedence over technical specification sections in other Divisions of this Project Manual.

1.3 RELATED SECTIONS

- .1 Section 35-20-23 - Dredging

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- .1 Grosse-île (Montmagny) :
 - .1 The work consists in dredging on both sides of the Grosse-Île wharf. Based on the July 2013 soundings, the volume to be dredged is estimated to 5,400 cubic metres place measurement (m³pm).
 - .2 The dredged material will be placed mainly at the open-water disposal site provided (see Appendices A and B). Because of a lead contamination (Class A-B), a volume of about 20 m³pm must be disposed on land at an authorized site.
- .2 Rimouski :
 - .1 The work consists in dredging the East basin entrance and also a portion of this basin. Based on the July 2013 soundings, the volume to be dredged is estimated to 5 700 m³pm.
 - .2 The spoil must be disposed of at the open-water disposal site provided for that purpose (see appendices A and B).
- .3 The Contractor shall complete the work according to the dates indicated in the contract documents.

1.5 CONTRACTOR USE OF PREMISES

- .1 The Contractor may use the work location until the work is completed.
- .2 Contractor shall limit use of premises for work and for access, to allow:
 - .1 Use of site by the Department.
 - .2 Public usage.
 - .3 Mariners' usage.
- .3 Co-ordinate use of premises under direction of Departmental representative.
- .4 Take all necessary action and safety precautions to protect persons, property and structures from accident or damage in the course of the work.
- .5 Carry out the work in such a way as not to interfere with normal use or activities or to compromise the safety of users.

- .6 The Contractor must make every possible effort to ensure the safety of all vessel crossings. The contractor must communicate properly with Marine Communications and Traffic Services (MCTS) at all times.
- .7 Perform all work needed to ensure the continuity of existing services and allow authorized persons and vehicles to access the property.

Part 2 Products

2.1 NOT USED

Part 3 Execution

3.1 NOT USED

END OF SECTION

Part 1 General

1.1 REFERENCES

- .1 Public Works Government Services Canada (PWGSC)
 - .1 PWGSC Standard Acquisition Clauses and Conditions (SACC) (See tenderer document).

1.2 ADMINISTRATIVE

- .1 Submit to Departmental representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Do not proceed with Work affected by submittal until review is complete.
- .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4 Review submittals prior to submission to Departmental representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.
- .5 Notify Departmental representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .6 Verify field measurements and affected adjacent Work are co-ordinated.
- .7 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental's representative review of submittals.
- .8 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental representative review.
- .9 Keep one reviewed copy of each submission on site.
- .10 Accompany submissions with transmittal letter, containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each document.
 - .5 Other pertinent data.

1.3 CERTIFICATES AND TRANSCRIPTS

- .1 Immediately after award of Contract, submit to the Departmental representative the document required by the public agency having jurisdiction over workers protection in case of work-related accident.

Part 2 Products

2.1 NOT USED

Part 3 Execution

3.1 NOT USED

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 The Contractor shall manage his operations so that safety and security of the public and of construction site/work place workers always take precedence over cost and scheduling considerations.

1.2 REFERENCES

According to the context, the most recent of the following codes shall be used.

- .1 Canadian Labour Code - Part II, Canadian Occupational Safety and Health Regulations.
- .2 Canadian Standards Association (CSA)
- .3 Act Respecting Occupational Health and Safety, R.S.Q. Chapter S-2.1 (2001).
- .4 Construction Safety Code, S-2.1, r.6 (2002).
- .5 Any other Health and Safety act or regulation that could be apply under the company status or the work execution context.

1.3 SUBMITTALS

- .1 Submit required documents according to the section 01-33-00.
- .2 Submit to Departmental representative, the construction site/work place-specific safety program, as outlined in 1.8 - Safety and Health Management at least 10 days prior to start of work. The Contractor must review his program during the course of the project if any change occurs in work methods or construction site/work place conditions. The Departmental representative may, after receiving the program or at any time during the project, ask the Contractor to update or modify the program in order to better reflect the reality of the construction site/work place and activities. The Contractor must make the required changes before work begins.
- .3 Submit to Departmental representative the construction site/work place inspection sheet, duly completed, at the intervals indicated in 1.12. Inspection of Construction site/work place and Correction of Hazardous Situations
- .4 Submit to Departmental representative within 24 hours a copy of any inspection report, correction notice or recommendation issued by federal or provincial inspectors.
- .5 Submit to Departmental representative within 24 hours an investigation report for any accident involving injury and any incident exposing a potential hazard.
- .6 Submit to Departmental representative all safety data sheets for hazardous material to be used at the construction site/work place at least three (3) days before they are to be used.
- .7 Submit to Departmental representative copies of all training certificates required for application of the safety program, in particular:
 - .1 First aid in the workplace and cardio-pulmonary resuscitation;
 - .2 Work in confined spaces;
 - .3 Lockout procedures;
 - .4 Wearing and fitting of individual protective gear;
 - .5 Any other requirement of Regulations or the safety program.

- .8 Medical examinations: wherever legislation, regulations, directives or a safety program require medical examinations, the Contractor shall:
 - .1 Prior to start-up, submit to Departmental representative certificates of medical examination for all supervisory staff and employees whom will be on duty when the construction site/work place opens.
 - .2 There after submit without delay certificates of medical examination for any newly hired personnel as and when they start work at the construction site/work place.
- .9 Emergency plan: The emergency plan, as defined in 1.8.3 - Safety and Health Management, shall be submitted to Departmental representative at the same time as the construction site/work place-specific safety program.
- .10 Permits: Obtain all required municipal, provincial and federal permits according to contractual clauses. Send a copy of each permit to Departmental representative without delay.
- .11 Plans and certificates of compliance: Submit to Departmental representative a copy signed and sealed by Departmental representative of working methods, of all plans and certificates of compliance in the following case:
 - .1 Any modification to an equipment or to a part of a machine construction unauthorized by the builder. Maintain copies of these documents at the construction site/work place for the duration of the project.

1.4 SAFETY ASSESSMENT

- .1 The Contractor shall identify all hazards inherent in each task to be carried out at the construction site/work place.
- .2 The Contractor shall plan and organize work so as to eliminate hazards at source or to promote mutual protection so that reliance on individual protective gear can be kept to a minimum. Where individual protection against falling is required, workers shall use safety harness that meets standard CAN-CSA-Z259.10-M90. Safety belts shall not be used as protection against falling.
- .3 Equipment, tools and protective gear which cannot be installed, fitted or used without compromising the health or safety of workers or the public shall be deemed inadequate for the work to be executed.
- .4 All mechanical equipment shall be inspected before delivery to the construction site/work place. Before using any mechanical equipment, submit to Departmental representative a certificate of compliance signed by a qualified mechanic. Whenever he suspects a defect or accident risk, Departmental representative may at any time order the immediate shut-down of equipment and require a new inspection by a specialist of his own choosing.

1.5 MEETINGS

- .1 The Contractor decisional representative must attend any meeting at which construction site/work place safety and health issues are to be discussed.
- .2 The Contractor shall set up a Health and Safety Committee, and convene meetings every two weeks. At least one contractor decision-making representative and one representative for each trade or group of workers shall attend those meetings. The purpose of the Health and Safety Committee is to monitor the application of the contractor's safety program and make sure that appropriate safety actions are taken to correct any situation that could result in an accident or compromise the health of the workers.

1.6 REGULATORY REQUIREMENTS

- .1 Comply with all legislation, regulations and standards applicable to the construction site/work place and its related activities.

1.7 PROJECT/SITE CONDITIONS

- .1 At the construction site/work place, take account of the following specific conditions:
 - .1 Risks related to trans-shipment, movements and boarding of floating equipments, and manual labour around an excavator or a dragline in the course of dredging operations.
 - .2 Risks related to an accidental over-board spill of petroleum and the cleaning operations.

1.8 SAFETY AND HEALTH MANAGEMENT

- .1 The Contractor shall acknowledge and assume all the tasks and obligations which customarily devolve upon a principal Contractor and to the employer under the terms of Acts and regulations on Occupational Health and Safety that could be applied to the Contractor.
- .2 The Contractor shall develop a construction site/work place-specific safety program based on the hazards identified and apply it from the start of project work until close-out is completed. The safety program must take account of all information appearing in 1.7 – Project/Site Conditions, and must be submitted to all parties concerned, in accordance with the provisions set forth in 1.3 - Submittals. At a minimum, the construction site/work place-specific safety program must include:
 - .1 Company safety and health policy;
 - .2 A description of the work, total costs, schedule and projected workforce curve;
 - .3 Flow chart of safety and health responsibility;
 - .4 The physical and material layout of the construction site/work place;
 - .5 First-aid and first-line treatment standards;
 - .6 Identification of construction site/work place-specific hazards;
 - .7 Risk assessment for the tasks to be carried out, including preventive measures and the procedures for applying them;
 - .8 Training requirements;
 - .9 Procedures in case of accident or injury;
 - .10 Written commitment from all parties to comply with the prevention program.
 - .11 A construction site/work place inspection schedule based on the preventive measures in the said program.
- .3 The Contractor shall draw up an effective emergency plan based on the characteristics and constraints of the construction site/work place and its surroundings. Submit the emergency plan to all parties concerned, pursuant to the provisions of 1.3 - Submittals. The emergency plan must include:
 - .1 Evacuation procedure;
 - .2 Identification of resources (police firefighters, ambulance services, etc.);
 - .3 Identification of persons in charge at the construction site/work place;
 - .4 Identification of those with first-aid training;
 - .5 Training required for those responsible for applying the plan;

- .6 Any other information needed, in the light of the construction site/work place characteristics.

1.9 RESPONSIBILITY

- .1 No matter the size of the construction site/work place or how many workers are on the site, the Contractor shall designate a competent person to supervise and take responsibility for health and safety. Take all necessary measures to ensure health and safety of persons and property at or in the immediate vicinity of the construction site/work place and likely to be affected by any of the work.
- .2 Take all necessary measures to ensure application of and compliance with the safety and health requirements of the contract documents, contractor's applicable federal and provincial regulations and standards as well as the construction site/work place-specific safety program, complying without delay with any order or correction notice issued by an inspector.
- .3 Take all necessary measures to keep the construction site/work place clean and in good order throughout the course of the work.

1.10 COMMUNICATIONS AND POSTING

- .1 Make all necessary arrangements to ensure effective communication of safety and health information at the construction site/work place. As they arrive on construction site/work place, all workers must be informed of their rights and obligations pertaining to the construction site/work place-safety program. The Contractor must insist on their right to refuse to perform work which they feel may threaten their own health, safety or physical integrity or that of other persons at the construction site/work place. The Contractor must keep and update a written record of all information transmitted with signatures of all affected workers.
- .2 The following information and documents must be posted in a location readily accessible to all workers:
 - .1 Identification of employer and/or the principal Contractor;
 - .2 Company OSH policy;
 - .3 Construction site/work place-specific safety program;
 - .4 Emergency plan;
 - .5 Data sheets for all hazardous material used at the construction site/work place;
 - .6 Minutes of construction site/work place committee meetings;
 - .7 Names of Construction site/work place committee representatives;
 - .8 Names of those with first-aid training;
 - .9 Action reports and correction notices issued by inspectors.

1.11 UNFORSEEN CIRCUMSTANCES

- .1 Whenever a source of danger not defined in the specifications or identified in the preliminary construction site/work place inspection arises as a result of or in the course of the work, immediately suspend work, take appropriate temporary measures to protect the workers and the public and notify Departmental representative, both verbally and in writing. Then the Contractor must notify or update the construction site/work place-specific safety program in order to resume work in safe conditions.

1.12 INSPECTION OF CONSTRUCTION SITE/WORK PLACE AND CORRECTION OF HAZARDOUS SITUATIONS

- .1 Inspect the work construction site/work place and complete the construction site/work place inspection sheet at least once a week.
- .2 Immediately take all necessary measures to correct any lapses from legislative or regulatory requirements and any hazards identified by a government inspector, by the Departmental representative, by the construction site/work place safety and health co-ordinator of PWGSC or during routine inspections.
- .3 Submit to Departmental representative written confirmation of all measures taken to correct lapses and hazardous situations.
- .4 Work Interruption: Give to the person assigned by the Contractor to safety and health responsibilities, full authority to order interruption and resuming of work as and when deemed necessary or desirable in the interests of safety and health. This person should always act so that the safety and health of the public and construction site/work place workers and environmental protection take precedence over cost and scheduling considerations. Without limiting the scope of section "Safety and Health Management" and section "Responsibilities", Departmental representative or any other person designated by Public Works and Government Services Canada to manage or supervise the project may order cessation of work if, in his view, there is any hazard or threat to the safety or health of construction site/work place personnel or the public or to the environment.

1.13 BLASTING

- .1 Blasting and other use of explosives are forbidden unless authorized in writing by Departmental representative.

Part 2 Products

2.1 NOT USED

Part 3 Execution

3.1 NOT USED

END OF SECTION

Part 1 General

1.1 PRECEDENCE

- .1 Division 01 Sections take precedence over technical specification sections in other Divisions of this Project Manual.

1.2 FIRES

- .1 Fires and burning of rubbish on site/work place not permitted.

1.3 DISPOSAL OF WASTES

- .1 The disposal of refuse and/or volatile materials, such as oil, mineral spirits or thinners for oil or paint directly into streams, storm drains or sanitary sewers is prohibited. These materials shall be disposed of in accordance with the requirements of local authorities.

1.4 POLLUTION CONTROL

- .1 Control emissions from equipment and plant to local authorities emission requirements.
- .2 Prevent fine material and other extraneous materials from contaminating air beyond application area.
- .3 Maintain absorbents at all times on the site to be able to process quickly with a spill of hazardous material.
- .4 In case of accidental oil spill, the Contractor shall report the spill immediately to the Canadian Coast Guard emergency office 1-800-363-4735 and take all requested actions to correct the situation and to limit the impact on the environment.
- .5 The Contractor shall also have on the dredge a spill kit. This spill kit should include at least the following components:
 - .1 1 285 litres (75 US Gallons) plastic overpack;
 - .2 100 Sorbent pads of 340 g (12 oz or more);
 - .3 15 Sorbent socks 7,5 cm X 120 cm or more;
 - .4 4 Sorbent booms 12 cm x 300 cm or more;
 - .5 9 kg Granular sorbent minimum;
 - .6 1 Drain cover;
 - .7 1 Shovel;
 - .8 Disposal bags;
 - .9 Epoxy sticks.

The Contractor should use the spill kit in the case of a hydrocarbon spill and apply the above article 1.4.4.

- .6 With respect to the transportation, handling and storage of dangerous goods on vessels or floating plant, the Contractor shall comply with the Canada Shipping Act (CSA) and all regulations made under the CSA.
- .7 Dredged material, waste or debris shall not be disposed of in waterways.
- .8 Petroleum products or any other hazard substances shall not be stored within 30 metres of the shore.

- .9 Vehicle maintenance and fuelling shall not be done within 30 metres of the shore.

1.5 INVASIVE SPECIES

.1 An exotic invasive species is, by definition, a foreign species to the ecosystem in which it finds itself, but able to reproduce and can have harmful effects on the economy, the environment or human health. This type of pest includes, in addition to plants, some animals, fungi and microorganisms that also represent a threat to the biodiversity.

.2 Marine ecosystems are vulnerable to the onset of alien and invasive species, namely during the carrying out of construction activities requiring floating equipments. In order to avoid introduction of alien invasive species into the natural ecosystem during marine construction works involving floating equipment, the following measures will be mandatory. The risks to introduce invasive species are minimized by utilizing clean marine equipment that would have been stored on dry land previously to their use. Hence:

.1 Concerning the equipment that have been cleaned and stored on dry land right before the beginning of construction, the contractor shall

.1 provide, in writing to the Departmental representative, a **list** of these equipments, the storage **place** and the planned launch **date**. The Departmental representative must be able to check whether the equipments were quite clean and stored on dry land before the beginning of the construction work.

.2 Concerning the use of equipments already on water, the contractor is required to demonstrate, at his own expenses, that these floating equipments are clean and free from invasive species right before mobilizing them towards the working site. Hence:

.1 The Contractor will have to provide a written inspection report immediately before the mobilisation of the latter towards the working site, certifying that they are free from invasive species. The inspection report will have to be prepared by a biologist qualified in the identification of benthic fauna. Sampling will have to be carried out by divers. The report will have to present, without limiting itself to it, the following information: the **list** of the inspected equipments (tug boats, barges, etc), the **date** and **place** of the inspection, a summary of the sampling and identification protocols, the list of the samples, a table showing the results and a confirmation as to the presence or absence of invasive species. The report shall present photographs and will have to be signed by the qualified biologist before being transmitted to the Departmental representative along with the other required contractual documents and this, before the mobilisation of the equipment.

.2 Should the inspection report confirm the presence of invasive species, the contractor is required to replace the equipment or to conduct a thorough cleaning of the equipment, at his own expenses. The description of the cleaning work will have to be included in the new inspection report (after cleaning) with all the relevant information mentioned previously.

.3 The Ministry has full right to carry out a second assessment at any time. Should invasive species be detected, the contractor will have to stop the work and conduct the cleaning of the involved equipment at his own expenses after which he will have to follow the above mentioned procedure.

Part 2 Products

2.1 NOT USED

Part 3 Execution

3.1 MITIGATION MEASURES

- .1 Throughout the work, the Contractor must thoroughly implement all of the requirements set out in this section in addition to those set out in the Table of Mitigation Measures in Appendix F.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Office.

1.2 PRECEDENCE

- .1 Division 01 Sections take precedence over technical specification sections in other Divisions of this Project Manual.

1.3 OFFICES

- .1 The Contractor shall provide to the Departmental representative a reasonable space on the dredge to be used as the Engineer's office and all pertinent facilities must be available.

1.4 SANITARY FACILITIES

- .1 Provide sanitary facilities for work force/employee accordance with governing regulations and ordinances.
- .2 Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.

Part 2 Products

2.1 NOT USED

Part 3 Execution

3.1 NOT USED

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 01 11 11 – Work Description Summary
- .2 Section 01 35 43 – Environmental procedures

1.2 MEASUREMENT PROCEDURES

- .1 Only material excavated above grade planes and within side slopes indicated or specified will be measured.
- .2 The quantities shown on the price list are approximate amounts and may not be increased without the written authorization from Public Works and Government Services Canada (PWGSC). No payment will be made for additional quantities unless authorized in writing by PWGSC.
- .3 Mobilization/Demobilization:
 - .1 Items No. G1 and R1: Floating and land based equipments
 - .1 The Contractor agrees to provide within 48 hours, if the Departmental Representative requests it, the following information relative to the lump-sum amount defined in this subsection:
 - .1 location of the equipment
 - .2 distances to be covered (or distances covered) in km
 - .3 itinerary
 - .4 approximate dates.
 - .2 The lump-sum amount must represent the costs incurred by Her Majesty relative to the installation/putting into service of the Contractor's equipment at the dredging site and to the dismantling/demobilization of the Contractor's equipment when the work is completed as well as all costs of set-ups and dismantling of set-ups that the Contractor will have to carry out on land.
 - .3 The worksite organization costs are included in this amount.
 - .4 Dredging:
 - .1 Items No. G2 and R2: Dredging
 - .1 The Contractor must submit a unit price per cubic metre place measurement (CMPM) to be applied to the volume of dredged material. The Contractor may submit a payment request once the Completion Certificate is signed by the Departmental Representative on the site.
 - .2 Should the work take longer than thirty (30) days, a progress payment based on the CMPM quantities may be accepted.
 - .3 The dredging sector is defined by the lateral boundaries and depth levels indicated on the plans and includes lateral slopes with a ratio of 3 horizontal to 1 vertical, as defined in Subsection 1.3.9 of this section.
 - .4 The dredged material will be measured in cubic metres place measurement. The volume will be determined in accordance with the bathymetric surveys carried out before and after the complete dredging of the demarcated areas on the plans.

- .5 Further to the soundings carried out prior to the dredging, the Department reserves the right to modify the horizontal and/or vertical boundaries at any time in order to arrive as close as possible to the estimated quantities in the table of unit prices.
 - .6 Sweeping and levelling of the dredged areas will be included in the unit price for the dredging and all equipment, tools and labour, etc. required to carry out the work.
 - .7 All operations associated with setting up the dredging equipment will be deemed to be related to the work and will not involve a separate payment.
 - .8 Prior to acceptance of the work, backfilling and sedimentation may occur in areas where the work has not been completed, or where dredging was previously carried out. The Contractor is responsible and must remove this material and complete the dredging work in all of the areas shown on the plan and to the specified depth in order to obtain the Certificate of Completion. The removal of backfilling or sedimentation material during the dredging work will not be measured separately for payment purposes.
 - .9 In its unit price, the Contractor must include all costs associated with dredged material removed below the dredging level and outside the dredging boundaries.
- .5 Disposal:
- .1 Items No. G3 and R3: Evacuation (disposal) in open water
 - .1 The submitted unit price for the disposal in open water dredged material will be the volume payable referred to items No. G2 and R2 (CMPM) and shown in the table of unit prices, multiplied by the shortest navigable distance in kilometres (km) (Appendix A) between the dredging site and the authorized site for disposal in open water. The Contractor may submit a payment request once the Completion Certificate is signed by the Departmental Representative on the site.
 - .2 Should the work take longer than thirty (30) days, a progress payment based on the CMPM quantities may be accepted.
 - .3 The dredged material will be evacuated in accordance with the requirements set out herein, the mitigation measures and other contract documents.
 - .4 All operations associated with the evacuation of dredged material to the open-water disposal site will be deemed to be related to the work and will not involve a separate payment.
 - .2 Item No. G4: Evacuation to land (applicable to Grosse-Île site only)
 - .1 The submitted unit price for the evacuation of the contaminated sediments will be measured in place. (CMPM) and shown in the table of unit prices. . The Contractor may submit a payment request once the Completion Certificate is signed by the Departmental Representative on the site.
 - .2 Should the work take longer than thirty (30) days, a progress payment based on the CMPM quantities may be accepted.
 - .3 The dredged material will be evacuated in accordance with the requirements set out herein and other contract documents.

- .4 All operations associated with the evacuation of dredged material and its final disposal at a site authorized by the competent authorities will be deemed to be related to the work and will not involve a separate payment
- .6 Miscellaneous considerations:
 - .1 The lump sum and the unit prices shall include all materials, transportation, leasing, installation of equipment, equipment, tools, labour and costs to carry out work not specifically described in the plans, the specifications or any other bid documents but deemed necessary to ensure that the work is performed to professional standards.
 - .2 All of the work described in these specifications, represented in the plans or necessary to complete the work covered by these specifications but not defined as a separate component entitling the Contractor to a lump sum or a single payment shall be deemed directly or indirectly related to the general purpose of the contract, and no separate payment shall be made in respect of any such work; the cost of all work related directly or indirectly to the purpose of this contract shall, however, be included in the unit price.
 - .3 There shall be no additional payment for temporary structures used during dredging operations.
 - .4 There shall be no additional payment for delays attributable to fishing seasons or fishing gear located at the dredging sites or the disposal site.
 - .5 There shall be no additional payment for delays resulting from vessel traffic.
 - .6 There shall be no additional payment for down time.
 - .7 There shall be no additional payment for mooring and anchoring facilities for the dredge or any other floating equipment.
 - .8 There shall be no additional payment for down time resulting from operational adjustment of performance.
 - .9 There shall be no additional payment for lost time resulting from temperature conditions.
- .7 Bidders shall present their bids by filling out the unit price table included in the tender documents and this is for each dredging sites.
- .8 Obstructions
 - .1 The removal of debris and obstructions, previously authorized by the Departmental Representative, will be remunerated based on the number of hours effectively spent on removing the debris and obstructions, multiplied by the hourly rate calculated by the Departmental Representative in accordance with the method described in the following subsection.
 - .2 The hourly rate will be calculated at the end of the contract by dividing the amount paid for the dredging and evacuation of the dredged material, excluding mobilization and demobilization expenses, by the number of dredging operational hours during the contract (excluding stoppages due to repairs, bad weather conditions, etc). Periods of less than a half hour for the dredging and/or disposal of obstructions will not be taken into consideration
- .9 Spread of payments
 - .1 Her Majesty shall pay the Contractor as follows:
 - .1 Mobilization/Demobilization

- .1 Floating and land based equipments : In accordance with clause 1.2.3.1 (and sub clauses), when the dredge arrives at the site and dredging operations are carried out, fifty percent (50%) of the lump-sum amount for Mobilization/Demobilization entered in the bid document. The remaining 50% shall be included in the final contract payment after the “Completion Certificate” is signed.
- .2 Dredging
 - .1 Pursuant to the herein clause 1.2.4 (and sub-clauses thereof), with monthly progress payment based on the Departmental representative evaluation, or after the “Completion Certificate” is signed for 100% of the amount determined by the m³pm volume dredged, multiplied by the unit price for dredging.
- .3 Disposal
 - .1 Open-water : Pursuant the herein clause 1.2.5.1 (and sub-clauses thereof), with monthly progress payment based on the Departmental representative evaluation , or after the “completion Certificate” is signed for 100% of the amount determined by the m³mp.km volume-distance disposed.
 - .2 On Land : Pursuant the herein clause 1.2.5.2 (and sub-clauses thereof), with monthly progress payment based on the Departmental representative evaluation, or after the “completion Certificate” is signed for 100% of the amount determined by the m³mp.km volume-distance disposed.

1.3

DEFINITIONS

- .1 Dredging: excavating, transporting and disposing (on land and in open-water site) of underwater materials .
- .2 Removal: transportation and disposal in a land disposal area of excavated materials.
- .3 Class B material: loose or shale rock, silt, sand, quick sand, mud, shingle, gravel, clay, sand, gumbo, boulders, hardpan and debris of individual volumes less than 3.0m³.
- .4 Debris: pieces of wood, wire rope, scrap steel, pieces of concrete and other waste materials.
- .5 Grade: plane above which all material is to be dredged.
- .6 Dredging area: surface covered by material to be dredged at grade depth.
- .7 m³pm: volume of material measured in place, in cubic metres.
- .8 m³sm: volume of material measured on scow, in cubic metres.
- .9 Side slope: surface or plane sloped relative to the dredging level, located at the side boundary of the dredged area and extending to the intersection with the natural level of the bottom outside that side boundary; the slope is expressed as the ratio between the horizontal and vertical dimensions.
- .10 DGPS-RTK Technology: A technology that provides a position within the centimetres accuracy level in X,Y,Z dimensions.
- .11 Chart datum: reference level set sufficiently low to ensure that the water level in tidal and non-tidal waters is rarely lower.
- .12 Coordinate system

- .1 MTM project: modified transverse Mercator projection.
- .2 MTM coordinates: plane rectangular coordinates used for graphic representation where a grid is applied to the MTM projection. The coordinates are the horizontal reference parameters.
- .13 “Instantaneous depth” mode: operating mode of bathymetric survey equipment whereby the system stores in memory every depth reading over the entire pass.
- .14 Matrix cell: Each dredging area is represented as a certain number of 2.0 m x 2.0 m or 4.0 m x 4.0 m cells. Depending on where the bathymetric surveys are done, a given cell may contain several depths.
- .15 “Shallowest depths” plan: bathymetric survey plan on which the depths indicated are the shallowest depths measured in each cell in the matrix.
- .16 Verified area: dredging area deemed to comply with the plans and specifications.
- .17 Completion Certificate: letter or memorandum given to the Contractor by the Department’s on-site representative certifying that dredging at the particular site has been completed.

1.4 REGULATORY REQUIREMENTS

- .1 The Contractor shall, and shall ensure that all its employees, both actual and de facto, including its subcontractors, honour all third-party rights and privileges and comply with all federal, provincial and municipal laws, regulations and orders.
- .2 Mark floating equipment with lights in accordance with Regulations for the Prevention of Collisions and Rules of the Road for the Great Lakes.

1.5 SCHEDULING

- .1 Not later than 2 weeks after the reception of the Notification of acceptance of the offer, , submit to the Departmental representative for approval a schedule of work that includes the projected length of each phase up to completion of the work.
- .2 In addition to the schedule required by the previous paragraph, the Contractor shall, three (3) weeks in advance, notify the Departmental representative of the date it will be arriving at the site. Departmental Representative shall, during this period, conduct a before dredging bathymetric survey and inform the Contractor of the results
- .3 The Contractor shall abide by the established calendar and take immediate action to correct any deviation by modifying the dredging work under way or transporting and moving other equipment. The Departmental representative shall be informed of the corrective measures to be taken.
- .4 The work shall be completed according to the date indicated in the contract documents.

1.6 LOCATION

- .1 The work to be performed is located
 - .1 On the south shore of the St-Lawrence river, in the Rimouski-Neigette–Témiscouata–Les Basques county, more precisely in the Rimouski locality.
 - .2 In the federal county of Montmagny—L'Islet—Kamouraska—Rivière-du-Loup, specifically at the Grosse-Île located in the Montmagny archipelago.

- .2 The preliminary location of materials to be dredged is set out in the drawing QU-13004-M and QU-13005-M. Appendices A and B give details of the authorised open-water disposal site.

1.7 INTERFERENCE WITH NAVIGATION

- .1 Be familiar with vessel movements and fishery activities in area affected by dredging operations.
- .2 Plan and execute work in a manner that will not interfere with fishing operations, marina operations, construction activities at wharf sites, or access to wharves by land or water.
- .3 The Department will not be responsible for loss of time, equipment, material or any other cost related to interference with moored vessels in dredging site or due to other Contractor's operations.
- .4 At least forty-eight (48) hours in advance if possible, the Contractor shall advise the Departmental representative of any special relocation of dredging equipment (for refuelling, repair, etc).
- .5 The Contractor shall continuously and accurately report all dredge movements to Marine Communications and Traffic Services (MCTS) of Fisheries and Oceans Canada.
- .6 Should any equipment belonging to the Contractor cause interference with navigation for any reason, the Contractor shall immediately:
 - .1 advise the Departmental representative and Marine Communications and Traffic Services (MCTS) of the Canadian Coast Guard (CCG);
 - .2 comply with article 3.1.14 hereof;
 - .3 remove the plant immediately at its own expense. Should the Contractor fail to comply with the above requirement, removal will be undertaken by the Department and all costs related thereto shall be charged to the Contractor.

1.8 DATUM, WATER GAUGES AND TARGETS

- .1 Depths and grades used in this specification and contract drawings are in metres referred to Chart datum.
- .2 Depths (soundings) will be adjusted to chart datum using DGPS-RTK technology. Contractor will be responsible for obtaining, by his own means and at his own expense, all relevant water level data needed for performance of the work.

1.9 FLOATING PLANT

- .1 The Contractor shall supply and maintain all dredging equipment with sufficient capacity to excavate, load, transport and dispose of all materials mentioned in the specification, taking into account settling of materials and excess dredged materials as applicable.
- .2 All equipment used to execute the dredging contract shall be at all times satisfactory to the Departmental representative.
- .3 The Contractor shall, under this contract, use barges so constructed as to prevent dredged material from falling when the barged is being loaded or towed.

1.10 INSPECTION OF SITE

- .1 Before submitting its bid, it is the responsibility of the Contractor to visit the work site and obtain all of the information necessary regarding the nature and scope of the work as well as all of the conditions that could influence the execution of said work.

- .2 By submitting its tender, the Contractor acknowledges that it is aware of the following: the nature and location of the project, general and local conditions, particularly weather or climatic conditions, the degree of agitation of the water surface, the tide levels, and physical conditions associated with the location of the project, the nature of the underwater soil and riverbed, the nature of the materials to be dredged, and all other circumstances that could affect the conditions of execution of the contract and on the value of the work.

1.11 SITE INFORMATION

- .1 Take necessary steps to become fully familiar with potential inclement weather and sea conditions in this area.
- .2 The particle size of the surface materials is shown in Annex C.
- .3 In Rimouski, the dredging area has never been dredged. The material to be dredged can be compacted and therefore offer greater resistance than in the case of a recurring dredging. At Grosse Ile, the last dredging has been done in 1996. Based on these works and the last characterization campaign, the contractor should expect to find material compacted and offering resistance to its removal, mainly on the west side of the wharf.
- .4 Given by different hydrodynamic phenomena and climate events, the Contractor can expect to encounter sediment transport while doing the work and possibly sediment deposit in the dredging area (reference: clause 1.2.4 hereof).
- .5 In Rimouski, the tidal range can vary from 3.2 to 4.6m, and the water level can be between 0.2 and 4.8m above chart datum. At Grosse Ile, the tidal range can vary between 4.9 and 6.4 m and the water level can be between 0.1 and 6.5m above chart datum. Daily tide forecasts can be obtained from the following Web site: www.waterlevels.gc.ca.
- .6 The location of the materials to be dredged and the grade depth are indicated on draft no. QU-13004-M and QU-13005-M..
- .7 The environmental studies is available for consultation in the Quebec City office of Public Works and Government Services Canada.
- .8 The Contractor shall research historical temperature and wave conditions and assess any problems that may be encountered.

1.12 SURVEYS AND ACCEPTANCE OF WORK

- .1 Bathymetric surveys will be made by the Department before the beginning of dredging to confirm the location of materials to be dredged as accurately as possible and to determine the quantity.
- .2 The before dredging bathymetric survey will be executed inside a three (3) weeks period, before the beginning of work.. No claim for additional amounts will be accepted during the term of the contract (that is, after the pre-dredging soundings are accepted).
- .3 During the bathymetric surveys, a qualified representative of the Contractor shall attend with the Department's survey team so that the soundings are officially accepted by both parties.
- .4 The Departmental representative shall provide the Contractor in ASCII digital format (see Annex D) the basic data required for the work (pre- and post-dredging bathymetric surveys); these digital files will be sent to the Contractor by e-mail.

- .5 The Contractor shall submit an official request five (5) days in advance so that post-dredging soundings can be done when the work is finished. The temperature determines whether or not the bathymetric survey can be carried out.
- .6 When the work is complete, the Department will, if necessary, conduct two bathymetric surveys, namely a verification survey and a final post-dredging survey. Any additional surveys and standby time will be billed to the Contractor on an hourly basis as follows:
 - .1 Hourly rate of \$250.00/hour.
 - .2 Time deemed standby time shall be any period exceeding 24 hours between the end of the verification survey and the start of the final post-dredging survey.
 - .3 Standby time shall be counted by the Department's on-site representative at the rate of eight (8) hours a day, that is, from 8:00 a.m. to 4:00 p.m. If surveys are required by the Contractor outside that period, they will be billed to the Contractor as standby time.
- .7 In all cases, the bathymetric surveys will be carried out in daylight. Accordingly, the Department's vessel will dock at sundown.
- .8 The execution of bathymetric surveys depends on weather conditions.
- .9 The Department will not conduct any pre- or post-dredging surveys if there is ice present. There will be no additional payment for delays caused by such conditions or situations.
- .10 If, after the verification surveys or subsequent surveys have been done, there are still materials above the prescribed dredging level, the Contractor shall return to the site in order to complete the work to the satisfaction of the Departmental representative.
- .11 Bathymetric survey equipment:
 - .1 Positioning System:
 - .1 Global positioning system (DGPS).
 - .2 Equipment: Trimble 5700 or equivalent.
 - .2 Sounding System:
 - .1 Multi-transducer system (2 or more) or multibeam system.
 - .2 Vertical accuracy: ± 0.1 meter.
 - .3 Frequency: between 200 and 400 kHz.
 - .3 Sounding Mode:
 - .1 Instantaneous depths.
 - .4 Depths representation:
 - .1 Under matrix form.
 - .2 Cell dimensions: 2.0 m x 2.0 m (1:500) or 4.0 m x 4.0 m (1 :1000).
 - .3 Drawn: Least depth of each cell.
 - .5 Acceptance of work:
 - .1 An ASCII file or paper plan based on the instantaneous depths will be given to the Contractor showing the locations where the prescribed depth was not met.
 - .6 Calculation of volumes:
 - .1 Using a digital ground model generated using all of the instantaneous depths.
- .12 In order for the work to be accepted, a general cleanup of the work area shall be done and the place left in a condition satisfactory to the Departmental representative.

1.13 SYSTEM OF UNITS

- .1 Relevant data such as bathymetric surveys, water levels, distances, areas and volumes, vertical benchmarks (referenced to CD), etc. mentioned in this specification and during the execution of work will be in the International System of Units (SI).

Part 2 Products

2.1 DREDGING EQUIPMENT AND POSITIONING

- .1 The work shall be done with a clamshell dredge and/or a hydraulic shovel dredge.
- .2 By its dimensions, characteristics and draft, the dredge shall be appropriate to complete the work.

Part 3 Execution

3.1 GENERAL

- .1 Before commencing works, the Contractor must obtain a written works schedule approval from the Departmental representative.
- .2 The Contractor shall dredge sediments to the depth level indicated on drawings no. QU-13004-M and QU-13005-M. For information purposes, the location of material to be dredged is preliminarily shown in these drawings.
- .3 Total area above depth level, as shown on the plan, shall be dredged.
- .4 The Contractor shall dredge as close as feasible to the specified dredging level in a manner that clears up the area over the horizontal plan. Subgrade dredging is of the Contractor responsibility at his own expense.
- .5 While dredging, the Contractor shall navigate using a computerized system capable of accurately displaying on a monitor the position of the dredge and relevant bathymetric data (locations and thickness of material to be dredged) and the dredging template.
- .6 The coordinates of control points to determine the horizontal limits of the sectors to be dredged will be provided by the Departmental representative.
- .7 The Contractor is responsible for providing on his own the horizontal positioning of his dredge.
- .8 The Departmental representative, at his discretion, can check the accuracy of any positioning systems used by the Contractor.
- .9 The Contractor shall be solely responsible for all primary, intermediate or secondary points (X, Y), (X, Y, Z) and (Lat, Long) used by it, whether determined by it or provided by the Departmental representative or any other party and at its own risk.
- .10 The dredge and the additional equipment shall be kept in good repair and maintained in proper working order while used on the contract.
- .11 Demobilization: The Contractor may demobilize its dredging equipment only after receiving the authorization to do so from the Departmental representative. Said authorization shall be provided after final acceptance of the work.
- .12 Buoys necessary for the contract: The Contractor shall supply, place in position, moor and maintain at its own expense all buoys/markers required to properly execute the work. In the event that any of these buoys/markers sink or go adrift by chance or by accident,

they shall be re-floated and/or recovered by the Contractor at its own expense to the satisfaction of the Departmental representative. The Contractor shall assume responsibility for all accidents of any kind whatsoever due to the buoys/markers being improperly placed or insufficiently visible during the day or improperly lighted during the night or for any other reason.

- .13 Navigation buoys: The Contractor shall not at any time remove or relocate any main navigation buoys. Relocation of the said buoys, where warranted, will be done by the Department of Fisheries and Oceans; requests for such service must be made to the Departmental representative at least five (5) business days in advance. The Departmental representative reserves the right to determine whether such requests by the Contractor are warranted.
- .14 Keep all signals and lights required to be installed on all dredging equipment required for the work in accordance with the Collision Regulations and the Navigation Safety Regulations on the St-Lawrence River. All equipment required for the work shall be properly identified and/or visible at all times.
- .15 Subject to the Departmental representative authorization, disposal of dredged material in any other area than the one designated herein are not permitted.
- .16 Mark floating equipment with lights in accordance with International Rules of Road and maintain radio watch on board.
- .17 The Contractor shall complete daily activity reports. The forms will be provided by the Departmental representative before the start of work.
- .18 Perform the work in such a way that no damage is caused to fishing gear, and minimize interference with fishing operations when dredging in the identified areas.
- .19 Assume liability for any damage to fishing gear in the identified areas if the damage is caused by dredging. Assume responsibility for repair costs and the cost of lost fishing opportunity.
- .20 All equipment used must be seaworthy and in good condition.
- .21 While the work is being carried out, if in the opinion of the Departmental representative, the equipment provided is not, suitable and sufficient to perform properly or the Contractor has delayed work schedule, the Contractor shall, within 15 days following receipt of a written notice from the Departmental representative, provide other equipment as previously approved by the Departmental representative.
- .22 Install and maintain tide gauges or water level indicators in order to be able to determine the appropriate depth of the dredging work. Place the tide gauges or water level indicators such that they are clearly visible.
- .23 Remove any stockpile of material that might occur during by the work at no additional cost to the Crown.
- .24 Remove any material deposited in area next to the work site and dispose of it like the dredged material. Unless otherwise authorized by the Departmental representative, material shall not be deposited in the vicinity of the work.
- .25 Notify the Departmental representative immediately upon finding any object, including blocks of stone 3,0 m³ or bigger or solid rock, that could be considered debris or an obstruction. Move around the object after clearly indicating the location using buoys made prior to the start of work, give the Departmental representative the MTM coordinates, then carry on with the work.
- .26 Provide and assume the cost of anchors for the dredging equipment.

- .27 Take the precautions needed to protect existing structures located in the vicinity of the work. Any damage to such structures shall be repaired at the Contractor's expense.
- .28 Unless authorized in writing by the Departmental representative, dredging shall not be carried out within 3.0 metres of any existing structure. The intersection between side slope and original bottom line shall be 3.0 metres away of any structure. Unless otherwise indicated on the plan, side slopes shall be of one vertical to three horizontal, distance being measured perpendicular to the face of a structure.
- .29 Port operations will always take priority over dredging and unloading operations.
- .30 Dredging and unloading operations must be coordinated with the port authorities.
- .31 Transport Canada properties must be kept clean throughout the work.

3.2 CLASS 'A' REMOVAL

- .1 No Class A material is expected to be found in the areas to be dredged. Should any be encountered, the Departmental representative may require the overlying material to be removed.
- .2 If any Class A material is encountered, the Departmental representative will assess the additional work; at the Departmental representative's request, the Contractor shall supply the necessary and appropriate dredging plant to dredge, load, transport and dispose of the said Class A material to the satisfaction of the Departmental representative. The cost of the work supplementary to the contract (dredging Class A material) will be determined in advance by the Contractor and the Departmental representative.

3.3 DISPOSAL OF DREDGED MATERIAL

- .1 Open-water disposal (uncontaminated sediments) :
 - .1 Dispose dredged material exclusively approved by the Departmental representative and according to the environmental requirements.
 - .2 Demarcate the disposal site area with lighted and reflective market buoys.
 - .3 Buoys demarcating the disposal area must be anchored within 15 metres of the theoretical position given by the Departmental representative.
 - .4 Dumping shall be done according to a dumping pattern defined by the Departmental representative. The pattern shall be at the Contractor hand prior to begin dredging work.
 - .5 Dumpings shall be positioned along with DGPS positioning system within a ± 5 metres accuracy.
 - .6 In rough seas, the Contractor will have to limit the overload of the scows.
 - .7 The dumping operation will have to be executed as fast as possible.
- .2 Land based disposal (contaminated sediments)
 - .1 A minimum of two (2) weeks prior to the commencement of the work, the Contractor must provide the Departmental Representative with its final dredged material management plan of dredged material to be deposited on land All contaminated dredged material (except for some debris, if applicable) removed during the dredging work must be managed in accordance with the management plan submitted to the Departmental Representative. This sediment management plan must comply with the requirements set out in Section # 35 20 23A of these Specifications.

- .2 Transport and dispose of the dredged material in accordance with the environmental regulations in effect and in accordance Subsection 1.4.1.2 of Section 01 11 11.
- .3 Material may be transported on public highways from Monday to Saturday, inclusive, unless notified otherwise by the competent authorities. Transport will be prohibited on Sundays and statutory holidays.
- .4 Material may be transported through the City between 7:00 am and 7:00 pm, Monday to Friday, and between 8:00 am and 5:00 pm on Saturdays, or in accordance with municipal standards. The work will be halted on Sundays and statutory holidays, unless there is a prior agreement with the local authorities.
- .5 The Contractor must ensure the proper operation of the trucks that are used. Any truck and other transportation vehicle that is deemed by the Departmental Representative to have an above normal noise level, must not be allowed to transport material and must be repaired or modified to have an acceptable noise level.
- .6 The truck boxes must be leak proof to prevent water from discharging onto traffic lanes, and a tarpaulin must be placed over the tops of truck boxes carrying dredged material.
- .7 The Contractor must co-operate with the municipality, the Departmental Representative and other competent authorities in order to minimize the impact of the transport of material on the regular lives of residents in the vicinity of the truck route and the work site.
- .8 Road surfaces and traffic lanes between the wharf transshipment site and the disposal site must be kept clean and free of dirt that may have been deposited during the transport of dredge sediment.
- .9 Install adequate signage during the work period.
- .10 The Contractor will be fully liable for damage it causes to structures during unloading operations.
- .11 Two weeks after notification of acceptance of the bid, the Contractor must submit to the Departmental Representative for approval a plan signed and sealed by an engineer who is a member of the Ordre des ingénieurs du Québec, certifying that the Contractor's work methods, including the use of machinery, comply with the bearing capacity of the infrastructure to be used for unloading materials.

3.4 RE-DREDGING

- .1 Re-dredge up to the Departmental representative's approval any area that does not meet contract criteria.

3.5 CO-OPERATION AND ASSISTANCE TO DEPARTMENTAL REPRESENTATIVE

- .1 Co-operate with the Departmental representative on inspection of work and provide assistance requested.
- .2 The Contractor shall supply necessary and satisfactory marine transportation to the Departmental representative or his representative from a local wharf to the dredge for site inspections or for any other reason that the Departmental representative considers appropriate.

- .3 The Contractor shall expect to supply wharf facilities and obtain at his own expense the required safe places (on land and water, as applicable) for his floating plant during the period of works

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 01 11 11 – Work Description Summary
- .2 Section 01 35 43 – Environmental Procedures
- .3 Section 35 20 23 – Dredging

1.2 WORK DESCRIPTION

- .1 Material characterization have shown lead contaminated material associated within the class A-B criterion of the Policy Soil Protection and Rehabilitation of Contaminated Sites. The volume of contaminated material to be dredged is evaluated at 20 m³pm.
- .2 Public Works and Government Services Canada (PWGSC) were named to dredge contaminated material found. Therefore, the services of a contractor are required in order to proceed with this rehabilitation as specified in this document. The present contract includes: management, necessary treatments (if required) and disposal of final contaminated material.

Part 2 Products

2.1 GENERAL REALISATION CONDITIONS AND DELIVERABLES:

- .1 During the course of the rehabilitation works, the Contractor must respect the provincial and municipal applicable regulations. Among others, he must respect the Soil Protection and Rehabilitation of Contaminated Sites and the Regulation Respecting Contaminated Soil Storage and Contaminated Soil Transfer Stations of the Québec government.

Part 3 Execution

3.1 SPECIFIC PROCEDURES

- .1 The Contractor can present items of management and of disposal of material different from those presented herewith if he judges them of better value or more pertinent.
- .2 The Contractor must provide a final plan of management of contaminated material to the PWGCS at least two (2) weeks before the start of work. This plan must include all required permits and authorizations. The Contractor must wait to receive acceptance from the PWGCS before starting any work.

3.2 TRANSPORTATION

- .1 The Contractor must assume the transportation of all dredged material. The Contractor must provide all weighing reports certifying the quantity of material transported to the site of final disposal.
- .2 The transportation of dredged material must be done according to the environmental regulation in force. The transportation of material on public roads must be carried out according to the guidelines, laws and regulations in force and

by taking adequate measures to prevent the waterflow from the sediment on the roads, to control noise and dust emission (tarpaulin spread over the top of the box, use of dust control agent if necessary).

3.3 FINAL DISPOSAL SITE

- .1 In the case of the contaminated soils, the final disposal site will have to be authorized by the MSDEWP. Upon request, the MSDEWP can provide information of the sites in operation in the area.
- .2 In all cases, contaminated soils or not, the Contractor will have to provide the Department Representative with all accounting proofs of the disposal site(s) chosen with the quality of soils to dispose of as well as all documents required authorizing the disposal at these sites (municipal, MSDEWP, etc.). For sites authorized by the MSDEWP, a copy of the authorizations and permits obtained with the owners or administrators of the storage sites will have to be provided to the TPSGC with the final plan of management of dredged material.

3.4 MATERIAL AND EQUIPMENT

- .1 The Contractor will provide all material and equipment necessary to the accomplishment of the work and will sustain there good working condition during the course of the work.

Part 4 Reference

4.1 REFERENCE DOCUMENTS

- .1 NOT USED

END OF SECTION

ANNEX A

DREDGING AND DISPOSAL SITES INFORMATION

This annex forms part of the contract documents.

Grosse-Île, Montmagny-L'Islet-Kamouraska-Rivière-du-Loup County

-	Volume to be dredged (m ³ pm)	:	5 400 m ³
-	Distance to dump site	:	8,0 km
-	Environmental restriction period	:	None
-	Ocean dumping permit	:	Not requested
-	Dumping site (X-02 part)	:	Lat. North 47° 03' 45.4'' Long. West 70° 41' 03.8''

Rimouski, Rimouski-Neigette-Témiscouata-Les Basques County

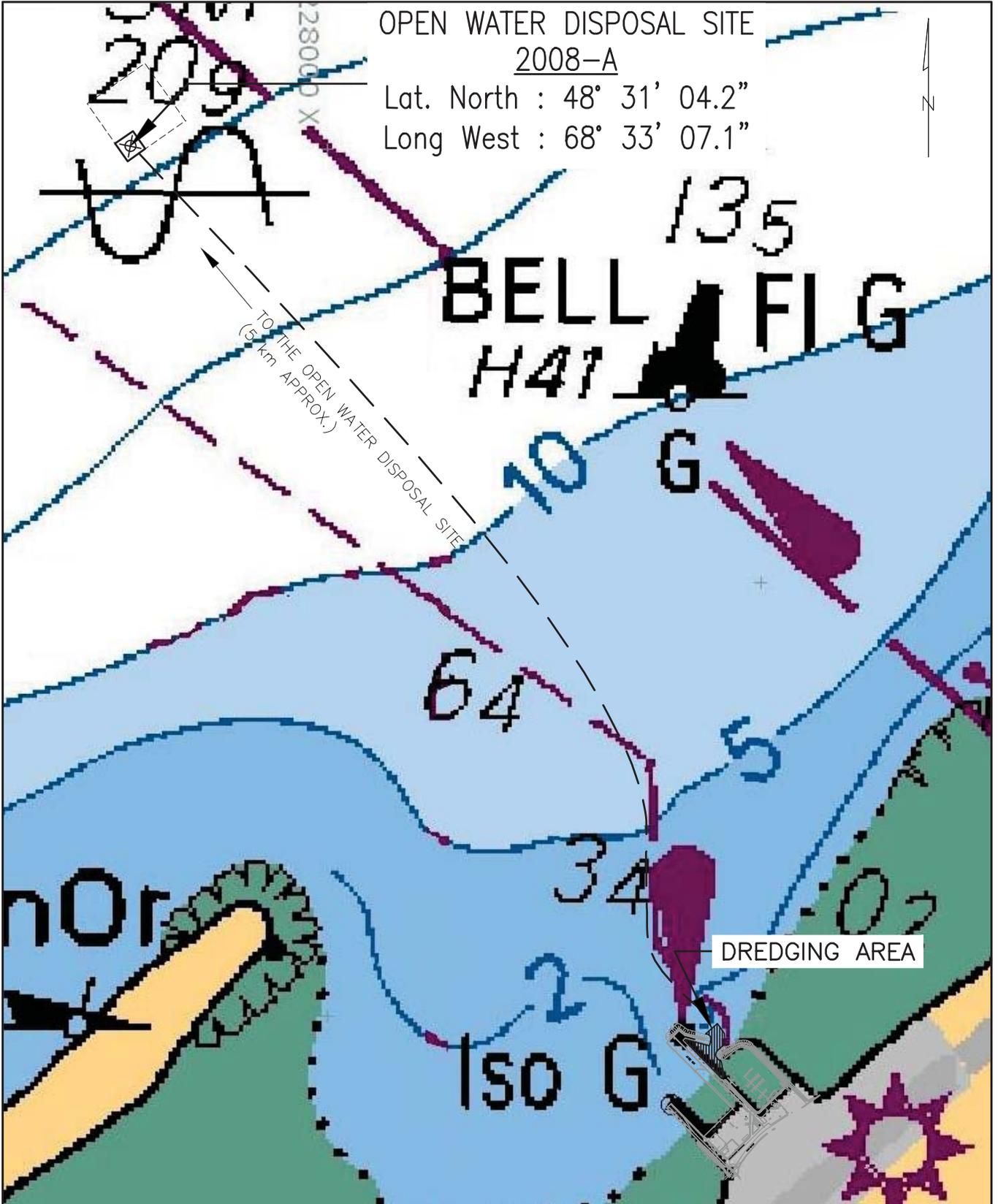
-	Volume to be dredged (m ³ pm)	:	5 700 m ³
-	Distance to dump site	:	5,0 km
-	Environmental restriction period	:	May 15 th to June 30 th
-	Ocean dumping permit	:	Not requested
-	Dumping site (2008-A)	:	Lat. North 48° 31' 04.2'' Long. West 68° 33' 07.1''

ANNEX B

OPEN WATER SITES LOCALIZATION

OPEN WATER DISPOSAL SITE
2008-A

Lat. North : 48° 31' 04.2"
Long West : 68° 33' 07.1"




 Travaux publics et Services gouvernementaux Canada
 Public Works and Government Services Canada

Titre du dessin: Drawing title:
 OPEN WATER DISPOSAL AREA
 2013/2014

conçu par: designed by: _____ date: _____
 dessine par: drawn by: _____ date: _____

approuvé par: approved by: _____ date: _____

RIMOUSKI



no. du projet: project no. _____
 dessin no. dwg. no. _____
 R.059325.001

ANNEX C

GRAIN SIZE OF MATERIALS TO BE DREDGED

GranulométrieGROSSE-ÎLE (Montmagny)

Échantillon (profondeur)	Résultats - Analyse granulométrique (%)		
	Gravier	Sable	Silt
GI2-1 (0 à 20cm)	0.0%	76.7%	23.3%
GI 3-3 (50 à 100cm)	0.0%	37.8%	62.2%
GI 3-5 (150 à 200cm)	0.0%	62.9%	37.1%
GI 4-1 (0 à 20cm)	0.0%	8.6%	91.4%

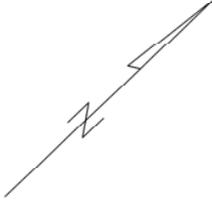
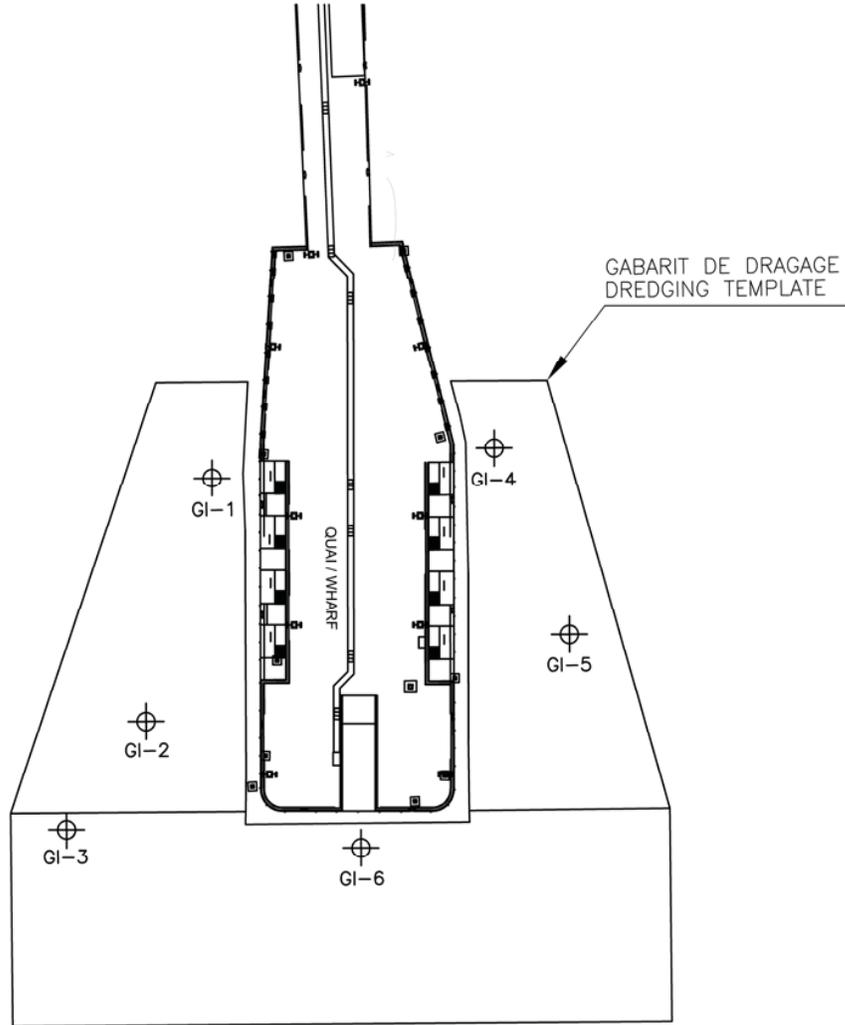


TABLEAU DES COORDONNEES COORDINATES LISTING NAD83				
POINTS	Coord. NORD NORTHING	Coord. EST EASTING	LATITUDE	LONGITUDE
GI-1	5 208 922.0	291 777.7	47°01.1775'	70°40.2780'
GI-2	5 208 892.0	291 796.1	47°01.1613'	70°40.2634'
GI-3	5 208 873.4	291 799.6	47°01.1513'	70°40.2606'
GI-4	5 208 953.6	291 801.7	47°01.1946'	70°40.2591'
GI-5	5 208 943.3	291 827.8	47°01.1890'	70°40.2385'
GI-6	5 208 901.7	291 829.6	47°01.1666'	70°40.2370'



FLEUVE SAINT-LAURENT
ST. LAWRENCE RIVER



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Canada

Titre du dessin: Drawing title:

LOCALISATION DES ÉCHANTILLONS
JUN/JUNE 2013
SAMPLES LOCATION

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dessin no.
dwg. no.
ANNEXE/APPENDIX
C

GROSSE-ÎLE
(Montmagny)



1: 1000

date:

revisions:

Granulométrie et SédimentométrieRIMOUSKI

Échantillon (profondeur)	<u>Résultats - Analyses granulométrique & sédimentométrique (%)</u>		
	Gravier	Sable	Silt et Argile
R1 (0 à 40cm)	3.4%	22.7%	73.9%
R1 (40 à 80cm)	2.4%	29.1%	68.5%
R2 (0 à 40 cm)	0.2%	31.6%	68.2%
R3 (0 à 40cm)	0.0%	18.9%	81.1%
R4 (0 à 40cm)	0.0%	25.4%	74.6%
R4 (40 à 80cm)	0.0%	22.8%	77.2%
R5 (0 à 40cm)	0.0%	19.8%	80.2%
R5 (40 à 80cm)	0.0%	19.5%	80.5%
R6 (0 à 40cm)	0.0%	3.7%	96.3%
R8 (0 à 40cm)	0.0%	2.2%	97.8%

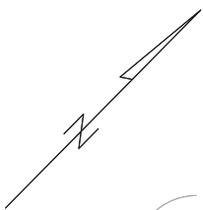
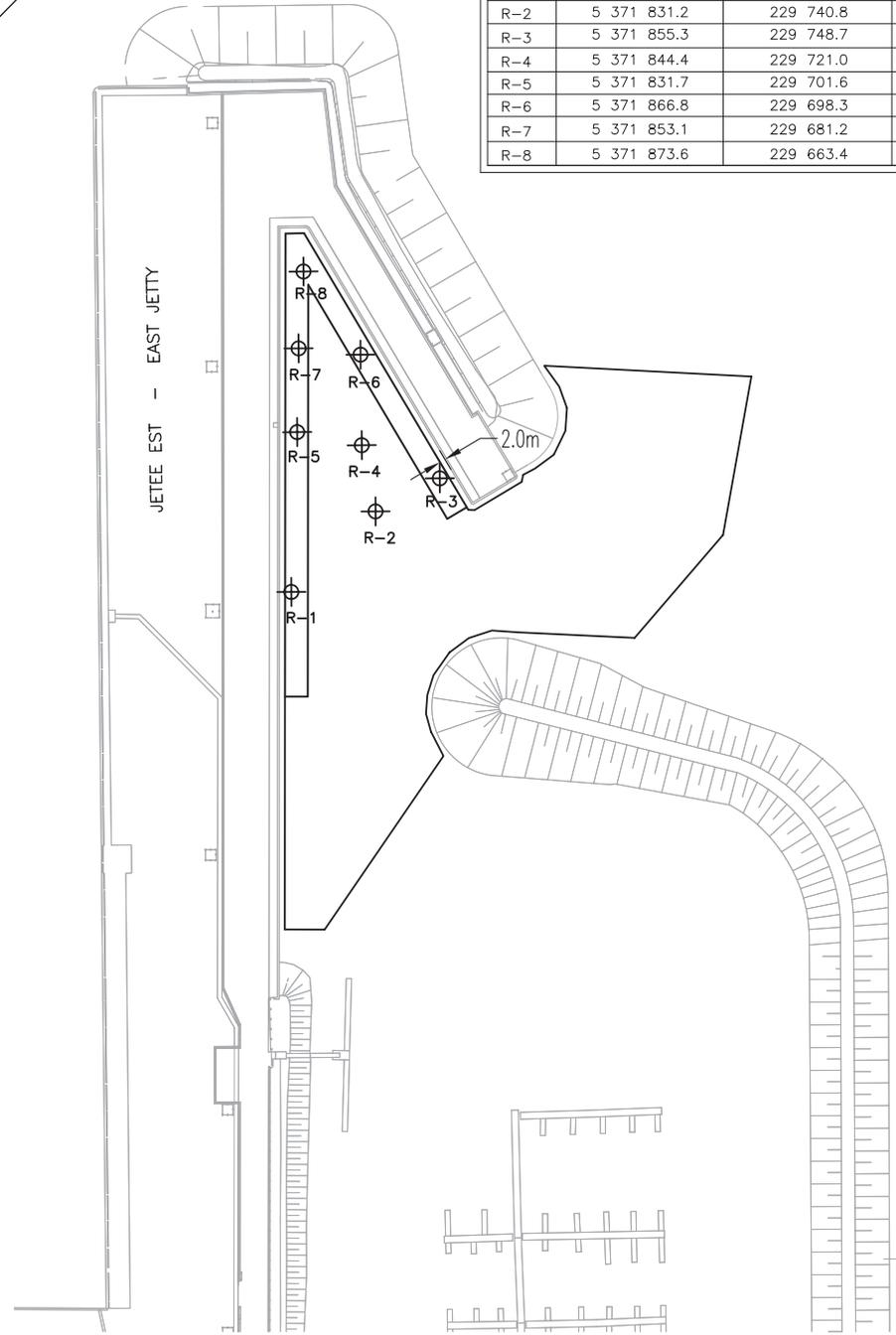


TABLEAU DES COORDONNEES COORDINATES LISTING NAD83				
POINTS	Coord. NORD NORTHING	Coord. EST EASTING	LATITUDE	LONGITUDE
R-1	5 371 790.2	229 739.6	48°28.8152'	68°30.9238'
R-2	5 371 831.2	229 740.8	48°28.8373'	68°30.9233'
R-3	5 371 855.3	229 748.7	48°28.8504'	68°30.9171'
R-4	5 371 844.4	229 721.0	48°28.8443'	68°30.9395'
R-5	5 371 831.7	229 701.6	48°28.8373'	68°30.9551'
R-6	5 371 866.8	229 698.3	48°28.8562'	68°30.9581'
R-7	5 371 853.1	229 681.2	48°28.8486'	68°30.9718'
R-8	5 371 873.6	229 663.4	48°28.8596'	68°30.9865'




 Travaux publics et
Services gouvernementaux
Canada

Public Works and
Government Services
Canada

Titre du dessin: Drawing title:
**LOCALISATION DES ÉCHANTILLONS
SEPT. 2012
SAMPLES LOCATION**

conçu par: designed by: _____ date: _____

dessiné par: drawn by: _____ date: 2013-09-03

approuvé par: approved by: _____ date: _____

RIMOUSKI
BASSIN EST

0  125 m
 1: 2500
 date: _____ revisions: _____

no. du projet: project no. R.058580.001
 dessin no. dwg. no. ANNEXE/APPENDIX C

ANNEX D

EXAMPLE OF ASCII COMPUTER FILE

This appendix is part and parcel of the contract.

Data files format :

- Easting(metre)<espace>Northing(metre)<espace>Depth(metre)

288183.24 5237654.78 3.79

288181.90 5237652.29 3.80

288183.81 5237652.86 3.67

N.B. : Depth value is positive under the chart datum.

ANNEX E

MITIGATION MEASURES

GROSSE-ÎLE (Montmagny)

Environmental Components Affected by Project	Mitigation Measures
1- Air quality and noise	<p>Equipment must be clean and in good working order (regular maintenance). Engines must be turned off when the machinery is not in use.</p> <p>Limit duration of work as much as possible.</p>
2- Surface water quality	<p>Raise dredging equipment operator awareness of the need to avoid unnecessary sediment re-suspension. Perform dredging work when weather conditions are favourable. To avoid sediment loss in transit, use a sealed barge. Use a sealed bottom-opening barge. To avoid sediment loss in transit and prevent accidents, do not overload the barge. To reduce the impact on potential rainbow smelt and American shad spawning, avoid open-water disposal from mid-April to mid-June. To avoid disturbing adult Atlantic sturgeon feeding grounds, it would also be preferable not to begin open-water disposal until late September.</p> <p>To contain spills, keep a complete oil spill response kit on hand. On-site employees must have the necessary spill response training. Before the work begins, the equipment must be inspected and be in good working order, clean, and not leaking oil or lubricant. An area for oil storage, refuelling and vehicle maintenance more than 30 metres from the shoreline will be designated by the site authority. For equipment operated in or on the water, a biodegradable vegetable oil specially designed for such work must be used. Characterize the soil, fill materials, sediment or water contaminated by an accidental spill, and manage the contaminated material in accordance with regulations. Notify the Canadian Coast Guard at 1-800-363-4735, Environment Canada at 1-866-283-2333 (http://www.ec.gc.ca/ee-ue/default.asp?lang=En&n=EED2E58C-1), or, at the provincial level, the Quebec Department of Sustainable Development, Wildlife, Environment and Parks at 1-866-694-5454.</p>
3- Sediment and soil	<p>Excavated material from the front of the wharf will be managed on land, possibly sent to the Grosse-Île site for road grading or elsewhere on the mainland.</p>
4- Aquatic wildlife and habitat	<p>Raise dredging equipment operator awareness of the need to avoid unnecessary sediment re-suspension. Perform dredging work when weather conditions are favourable. To avoid sediment loss in transit, use a sealed barge. Anchor the barge at the disposal site and dispose of the sediment quickly. To reduce dispersal, disposal must be carried out in suitable weather conditions (i.e. during low wind and wave conditions). To reduce the impact on potential rainbow smelt and American shad spawning, avoid open-water disposal from mid-April to mid-June. To avoid disturbing adult Atlantic sturgeon feeding grounds, it would also be preferable not to begin open-water disposal until late September.</p>

GROSSE-ÎLE (Montmagny)

Environmental Components Affected by Project	Mitigation Measures
5- Migratory birds	To the extent possible, avoid bringing equipment near flocks of birds (ducks, snow geese, Canada geese, etc.).
6- Species at risk	<p>Raise dredging equipment operator awareness of the need to avoid unnecessary sediment re-suspension.</p> <p>Perform dredging work when weather conditions are favourable.</p> <p>To avoid sediment loss in transit, use a sealed barge.</p> <p>Anchor the barge at the disposal site and dispose of the sediment quickly.</p> <p>To reduce dispersal, disposal must be carried out in suitable weather conditions (i.e. during low wind and wave conditions).</p> <p>To reduce the impact on potential rainbow smelt and American shad spawning, avoid open-water disposal from mid-April to mid-June. To avoid disturbing adult Atlantic sturgeon feeding grounds, it would also be preferable not to begin open-water disposal until late September.</p>
7- Navigation and health/safety	<p>Issue a navigational warning.</p> <p>Maintain safe access to the wharf at all times.</p> <p>If necessary, install appropriate signage on the wharf to ensure the safety of island visitors and employees.</p>

RIMOUSKI

PROJECT SECTION	MITIGATION MEASURES
1. Restricted periods	1.1. Dredging may not be done between May 15 and June 30 to avoid disturbing the fish in the area.
2. Mobilization of equipment	2.1. Use a mechanical dredger, in preference to a hydraulic dredger. 2.2. Maximize the capacity (volume) of the bucket. 2.3. Use the positioning technologies for minimizing the total volume of dredged sediments. 2.4. Take the necessary steps (sheathing, noise absorption and so on) to reduce the noise caused by the generators. 2.5. For equipment that has been cleaned and stored on dry land right before the work begins, provide in writing to the project authority a list of this equipment, the storage site and the planned launch date. 2.6. With regard to the cleaning of the equipment stored on land before the work begins: <ul style="list-style-type: none"> • Remove all traces of mud or other dirt from the watercraft and equipment. This also applies to any material that may have been in contact with infested water (e.g. cordage and water tanks). • Ensure that no organism (plants, molluscs and so on) is visible on the watercraft and equipment. • Drain and dispose of the water present in the watercraft and equipment (in motors, bilges and so on). • Once the excess water has been removed, clean all the watercraft and equipment (all parts) and anything that may have been in contact with infested water. To do the cleaning, use a high-pressure washer with hot water at a temperature above 60°C and spray all surfaces. • Dry the watercraft and equipment in the open air. 2.7. Before mobilizing equipment already in the water (not stored on land): <ul style="list-style-type: none"> • Provide a written inspection report, immediately prior to mobilization of this equipment to the work site, certifying that it is free of invasive species. • If the inspection report confirms the presence of invasive species, replace the equipment or proceed with a complete cleaning of it. • Provide a new inspection report (following the cleaning), with a description of the cleaning work done and all the hereinbefore-indicated relevant information. • The project authority reserves the right to do a counter-assessment at any time. If invasive species are observed, interrupt the work and proceed with a cleaning of the equipment involved, and follow the hereinbefore-indicated procedure.
3. Dredging operations	3.1. Train the dredge operators and increase their awareness in relation to the need to minimize the resuspension of sediments and avoid leaks. 3.2. Determine the grain size and chemical quality of the sediments dredged from the south basin and the approach channel; several indications suggest that their contamination level is similar to or lower than that of the surface sediments from the north basin. 3.3. Start the work by dredging Class 2 sediments at station R-5. 3.4. Avoid dredging in unfavourable weather conditions. 3.5(a). If a mechanical clamshell dredge is used: <ul style="list-style-type: none"> • Maximize the capacity (volume) of the bucket. • Avoid rough movements and reduce the rate of lowering and raising of the bucket (lowering and raising speed <0.6 m/s) and mechanical digger. • When filling the barges, lower the dredge bucket as far as possible into the barge.

RIMOUSKI

PROJECT SECTION	MITIGATION MEASURES
	3.5(b). If a hydraulic barge is used: <ul style="list-style-type: none"> • Make stepped cuts, rather than box cuts. • Lift the anchors before moving the dredge. • Operate the dredge by describing contiguous concentric arcs on the dredging surface and by cutting in the direction of the sweep, in order to avoid the formation of windrows. Ideally, each cut should overlap the previous one by 0.3 m. • Use a spud system to move the dredge. • Position the dredge precisely. • Limit the depth of the cuts so that it approximately matches the diameter of the cutterhead. • Limit the lateral movement speed of the dredge head. • Use adjusted and appropriate cutters. • Modify or adjust the cutterhead cutting angle. • Optimize the cutter rotation speed on the basis of the power of the pump. • Limit the cutter rotation speed to 30 rotations per minute. • Remove the cutterhead when the materials are fine and noncohesive. • Ensure that the pipeline is as watertight as possible and take the necessary steps to stop leaks. • Clean the pipeline before removing a section of pipe or adding a new section. 3.6. Avoid overfilling the barge to avoid supernatant overflow and prevent any spill.
4. Open-water disposal	4.1. Ensure that the bottom of the barges closes in a watertight fashion during transport. 4.2. Adjust the fill level of the barges to reflect the weather conditions and avoid spills during transport. 4.3. Place the sediments from station R-5 in the centre of the disposal site, keeping the barges stopped during the dumping. 4.4. Cover the sediments from station R-5 with the dredged sediments from the harbour.
5. Oil spills	5.1. Examine the emergency plan in force for Rimouski Harbour. 5.2. Develop an emergency plan that includes the names of people and authorities to contact, as well as the measures to implement in case of a spill. 5.3. Use machinery that is in good condition and ensure that it is maintained properly, in order to avoid any leaks. 5.4. Service and refuel the land machinery in a location more than 30 m from the water. If this condition cannot be met, a contingency plan must have been prepared by the contractor and supplied to TC before the work starts. This plan must indicate the area defined for these operations and the containment method planned for protecting the soil and aquatic environment. 5.5. Keep an emergency kit permanently near the machinery manoeuvring areas and in the planned refuelling areas. The kit must contain enough absorbent material to soak up the petroleum product. 5.6. If a spill occurs, immediately report the situation to the Environment Canada emergency service (1-866-283-2333), Quebec's Urgence-Environnement (1-866-694-5454) and the Canadian Coast Guard—Maritime Pollution (1-800-363-4735). Act quickly to contain the source of contamination and the hazardous materials. 5.7. Manage used oil and other contaminated waste in accordance with the regulations in force, including with respect to on-site storage, transport and disposal.

RIMOUSKI

PROJECT SECTION	MITIGATION MEASURES
6. Marine mammals	6.1. During the work, marine mammals must be monitored on the barges and the dredge by observers with sufficient experience to be able to detect marine mammals in various weather conditions.
	6.2. If marine mammals are near the barges or the dredge, do not attempt to frighten the animals by any means.
	6.3. When a marine mammal approaches to within less than 400 metres of the barges or dredge, suspend dredging or dumping operations and maintain a stationary position until the animal has moved to more than 400 metres from the barges or dredge or has dived toward the bottom.

ANNEX F

PHYSICO-CHEMICAL CHARACTERIZATION OF SEDIMENTS

GROSSE-ÎLE (Montmagny)

PARAMÈTRES	TABLEAU 1 - RÉSULTATS ANALYTIQUES DES ÉCHANTILLONS DE SÉDIMENTS PRÉLEVÉS LE 20 JUIN 2013 EN FONCTION DES CRITÈRES D'ENVIRONNEMENT CANADA ET DU MIIDEP										CRITÈRES DE QUALITÉ DES SÉDIMENTS (1)						
	GI-1 0,1200	GR-1 0,1200	GI-3 500,3100	GR-3 0,1200	GI-5 1500,1200	GR-5 0,1200	GI-10 3000,1000	GR-10 0,1200	GI-15 4500,1500	GR-15 0,1200	GI6-1** 0,1200	CER	CSE	CEO	CEP	CEF	
Profondeur associée à l'échantillon (mm)	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100						
Hydrocarbures pétroliers C₁₀ à C₂₉																	
Métaux																	
Arsenic (As)	4,9	4,7	5,5	<4,1	5,8	4,5			4,4	6,6	6,4	5,2	5,9	5,9	7,6	17	23
Cadmium (Cd)	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9			<0,9	<0,9	<0,9	<0,9	<0,9	0,33	1,70	3,50	12,00
Chrome (Cr)	35	36	36	30	39	29			<25	48	55	40	48	25	37	57	90
Cuivre (Cu)	<22	<22	<22	<22	24	<22			<22	26	29	<22	<22	22	36	63	200
Mercurie (Hg)	0,096	0,096	0,116	<0,094	0,243	<0,094			<0,094	0,140	0,142	0,099	0,119	<0,094	0,170	0,250	0,870
Nickel (Ni)	<30	<30	<30	<30	<30	<30			<30	<30	<30	<30	<30	<30	<30	<30	<30
Plomb (Pb)	<25	<25	<25	<25	145	<25			<25	<25	<25	<25	<25	71	25	35	52
Zinc (Zn)	102	103	113	<80	145	<80			88	131	146	116	135	125	80	120	170
Hydrocarbures aromatiques polycycliques (HAP)																	
Acénaphtène †	0,003	<0,003	<0,003	<0,003	0,008	<0,003			0,003	<0,003	<0,003	<0,003	<0,003	0,0037	0,0067	0,0210	0,0890
Acénaphtène †	0,005	<0,003	<0,003	<0,003	0,004	<0,003			0,004	<0,003	0,004	<0,003	<0,003	0,0033	0,0059	0,0310	0,1300
Anthracène †	0,01	<0,01	<0,01	<0,01	0,02	0,01			0,02	<0,01	<0,01	<0,01	<0,01	0,016	0,047	0,110	0,240
Benzo(a)anthracène †	0,05	0,01	0,02	0,01	0,06	0,02			0,05	0,02	0,02	0,01	0,02	0,014	0,032	0,120	0,390
Benzo(a)pyrène †	0,04	<0,01	0,01	<0,01	0,05	0,02			0,03	0,02	0,02	<0,01	0,01	0,011	0,032	0,150	0,750
Benzo(b)fluoranthène †	0,02	<0,01	0,01	<0,01	0,04	<0,01			0,02	<0,01	0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01
Benzo(k)fluoranthène †	0,02	<0,01	<0,01	<0,01	0,03	0,01			0,02	0,01	0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01
Benzo(c)fluoranthène †	0,02	<0,01	<0,01	<0,01	0,02	0,01			0,02	<0,01	0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01
Benzo(e)fluoranthène †	0,02	<0,01	<0,01	<0,01	0,02	0,01			0,02	<0,01	0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01
Benzo(g)fluoranthène †	0,02	<0,01	<0,01	<0,01	0,02	0,01			0,02	<0,01	0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01
Chrysène †	0,04	0,01	0,01	<0,01	0,03	0,01			0,02	0,01	0,02	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01
Dibenz(a,h)anthracène †	0,005	<0,003	0,02	0,03	0,06	<0,03			0,04	0,02	0,02	0,01	0,01	0,026	0,057	0,240	0,650
Dibenz(a,p)pyrène †	0,01	<0,01	<0,01	<0,01	0,01	<0,01			0,01	<0,01	<0,01	<0,01	<0,01	0,0533	0,0662	0,0430	0,1400
Dibenz(ah)anthracène †	0,01	<0,01	<0,01	<0,01	0,01	<0,01			0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01
7,12-Diméthylbenzofluoranthène	<0,01	<0,01	<0,01	<0,01	0,00	<0,01			<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01
Fluoranthène †	0,09	0,02	0,04	0,02	0,12	0,05			0,09	0,03	0,04	0,02	0,03	0,047	0,110	0,450	2,400
Fluoranthène †	<0,01	<0,01	<0,01	<0,01	0,00	<0,01			<0,01	<0,01	<0,01	<0,01	<0,01	0,010	0,021	0,061	0,140
Indeno(1,2,3-cd)pyrène †	0,03	<0,01	0,01	<0,01	0,03	<0,01			0,03	0,02	0,02	<0,01	<0,01	0,01	<0,01	<0,01	<0,01
3-méthylcholanthrène	<0,01	<0,01	<0,01	<0,01	0,00	<0,01			<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01
Naphthalène †	<0,01	<0,01	<0,01	<0,01	0,00	<0,01			<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01
Phénanthrène †	0,03	<0,01	0,02	<0,01	0,07	0,03			0,04	0,01	0,02	<0,01	0,01	0,025	0,042	0,130	0,520
Pyrène †	0,07	0,02	0,03	0,02	0,10	0,04			0,07	0,03	0,04	0,02	0,02	0,029	0,053	0,230	0,860
1-Méthylanthracène	<0,01	<0,01	<0,01	<0,01	0,00	<0,01			<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01
2-Méthylanthracène	<0,01	<0,01	<0,01	<0,01	0,00	<0,01			<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01
1,3-Diméthylanthracène	<0,01	<0,01	<0,01	<0,01	0,00	<0,01			<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01
2,3,5-Triméthylanthracène	<0,01	<0,01	<0,01	<0,01	0,00	<0,01			<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01
HAP totaux	0,47	0,08	0,19	0,07	0,65	0,18			0,48	0,20	0,25	0,08	0,15	0,01	<0,01	<0,01	<0,01
Biphényles polychlorés (BPC) totaux	<0,017	<0,017			<0,017				<0,017	<0,017				0,025	0,034	0,079	0,350
Granulométrie (%)																	
Gravier			0		0				0								
Sable			76,7		62,9	8,6			37,8								
Silt			23,3		62,2	37,1			62,2								
Argile			0		0	0			0								

Toutes les concentrations sont exprimées en mg/kg (ppm)
 - * Valeur de référence pour les sédiments (VRS) pour ce paramètre
 - † critère non défini pour ce paramètre
 † HAP entrant dans la composition des HAP totaux

- 11 Valeur dépassant la concentration d'effets rares (CER)
- 19 Valeur dépassant la concentration seuil produisant un effet (CSE)
- 42 Valeur dépassant la concentration produisant un effet probable (CEP)
- 110 Valeur dépassant la concentration d'effets occasionnels (CEO)
- 230 Valeur dépassant la concentration d'effets fréquents (CEF)

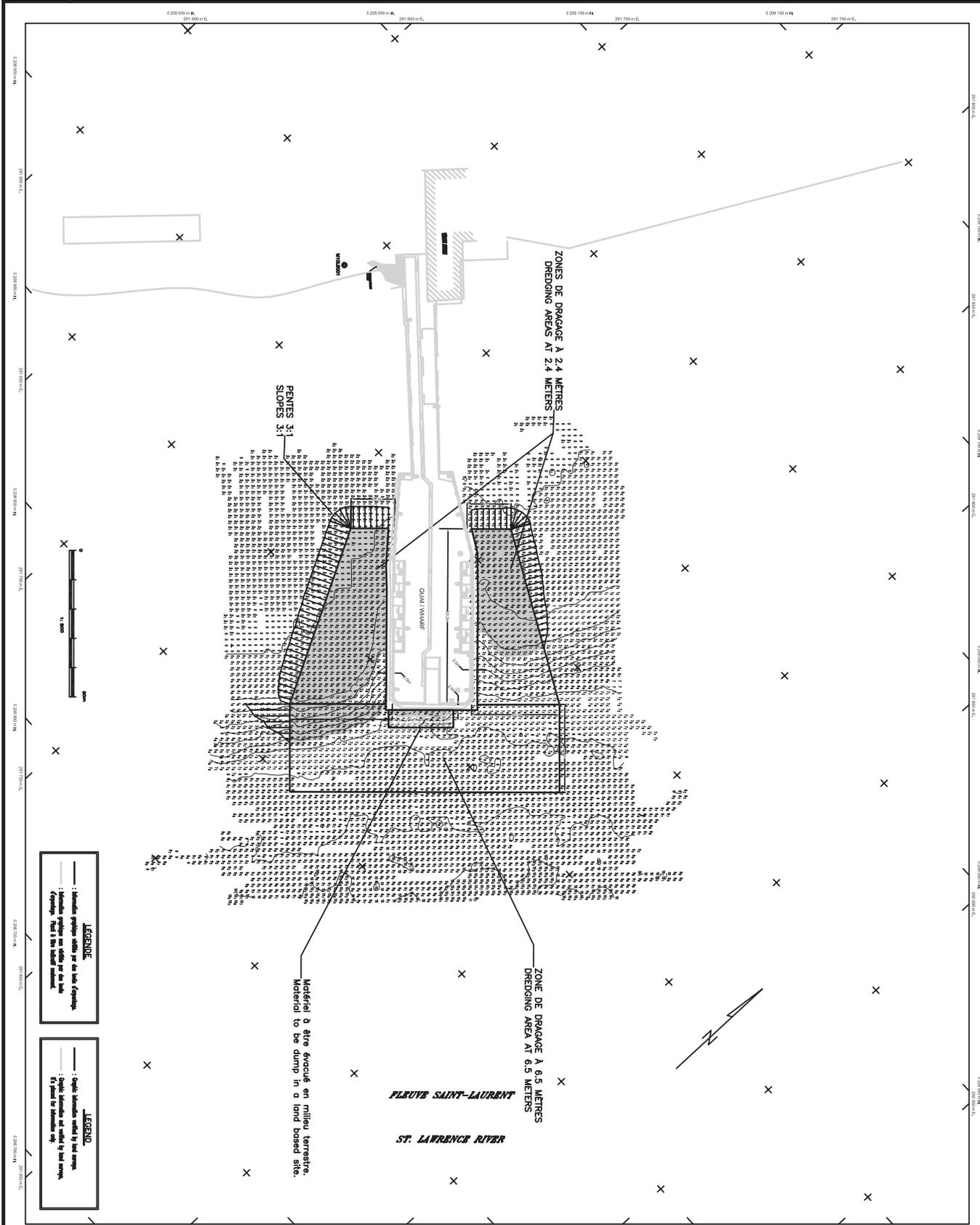
(1) Critères pour l'évaluation de la qualité des sédiments au Québec et cadres d'application; prévention, dragage et restauration, Environnement Canada et ministère du Développement durable, de l'Environnement et des Parcs du Québec, 2007, 39 pages
 * Résultat d'analyse de l'arsenic et du cadmium basé sur une moyenne de quatre analyses chimiques tandis que les résultats d'analyse des HAP sont basés sur trois analyses chimiques
 ** Résultat d'analyse du plomb basé sur une moyenne de quatre analyses chimiques

PARAMÈTRES	TABLEAU 2 : RÉSULTATS ANALYTIQUES DES ÉCHANTILLONS DE SÉDIMENTS PRÉLEVÉS LE 20 JUIN 2013 EN FONCTION DES CRITÈRES DU MDDEFP ⁽¹⁾ ET DES VALEURS LIMITES DU RESC ⁽²⁾ ET DU RIM ⁽³⁾													CRITÈRES GÉNÉRIQUES POUR LES SOLS					
	GI-1	GI-1-1	GI-1-2	GI-1-3	GI-2-1	GI-2-2	GI-2-3	GI-2-5	GI-3-3	GI-3-5	GI-5-1	GI-5-3	GI-5-11*	A	B	C	RESC	RIM	
	0,1-20	0,1-20	500,1-1000	0,1-20	0,1-20	20,1-50	500,1-1000	1500,1-2000	0,1-20	0,1-20	0,1-20	500,1-1000	0,1-20						
Hydrocarbures pétroliers C₁₀ à C₂₉	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	300	700	3 500	10 000	10 000	
Métaux																			
Aluminium (Al)	4,9	4,7	5,5	<4,1	5,8	4,5		4,4	6,6	6,4	5,2	5,9	5,9	15	30	50	250	250	
Cadmium (Cd)	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9		<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	1,3	5	20	100	100	
Chrome (Cr)	35	36	36	30	39	<25		<25	40	55	40	48	<25	75	250	800	4 000	4 000	
Cuivre (Cu)	<2,2	<2,2	<2,2	<2,2	2,4	<2,2		<2,2	2,6	2,9	<2,2	<2,2	<2,2	50	100	500	2 500	2 500	
Mercurure (Hg)	0,096	0,096	0,116	<0,094	0,243	<0,094		<0,094	0,140	0,142	0,099	0,119	<0,094	0,2	2	10	50	0,75	
Nickel (Ni)	<30	<30	<30	<30	<30	<30		<30	<30	<30	<30	<30	<30	55	100	500	2 500	2 500	
Plomb (Pb)	<25	<25	<25	<25	<25	<25		<25	<25	<25	<25	<25	<25	71	40	500	1 000	5 000	
Zinc (Zn)	102	103	113	<80	145	<80		88	131	146	116	135	125	130	500	1 500	7 500	7 500	
Hydrocarbures aromatiques polycycliques (HAP)																			
Acénaphtène †	0,003	<0,003	<0,003	<0,003	0,008	<0,003		0,003	<0,003	<0,003	<0,003	<0,003	<0,003	0,1	10	100	100	100	
Azénaphtène †	0,005	<0,003	<0,003	<0,003	0,004	<0,003		0,004	<0,003	0,004	<0,003	<0,003	<0,003	0,1	10	100	100	100	
Anthracène †	0,01	<0,01	<0,01	<0,01	0,02	0,01		0,02	<0,01	0,02	<0,01	<0,01	<0,01	0,1	10	100	100	100	
Benzofluoranthène †	0,02	<0,01	<0,01	<0,01	0,05	0,02		0,03	0,02	0,02	<0,01	<0,01	<0,01	0,1	10	100	100	100	
Benzopyrène †	0,07	0,02	0,03	0,02	0,04	<0,01		0,07	0,04	0,04	0,02	0,03	0,01	0,1	10	136	136	136	
Benzofluoranthène †	0,07	0,02	0,03	0,02	0,03	0,01		0,07	0,04	0,04	0,02	0,03	0,01	0,1	10	136	136	136	
Benzofluoranthène †	<0,01	<0,01	<0,01	<0,01	0,009	<0,01		<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100	100	100	
Benzofluoranthène †	0,02	<0,01	0,01	<0,01	0,05	0,03		0,04	0,02	0,02	<0,01	<0,01	<0,01	0,1	10	18	18	18	
Chrysène †	0,04	0,01	0,02	<0,01	0,05	0,03		0,04	0,02	0,02	<0,01	<0,01	<0,01	0,1	10	34	34	34	
Dibenzofluoranthène †	0,005	<0,003	<0,003	<0,003	0,006	<0,003		0,004	<0,003	0,003	<0,003	<0,003	<0,003	0,1	10	82	82	82	
Dibenzofluoranthène †	<0,01	<0,01	<0,01	<0,01	0,009	<0,01		<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	34	34	34	
Dibenzofluoranthène †	0,01	<0,01	<0,01	<0,01	0,01	<0,01		0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	34	34	34	
7,12-Diméthylbenzofluoranthène	<0,01	<0,01	<0,01	<0,01	0,01	<0,01		<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	34	34	34	
Fluoranthène †	0,09	0,02	0,04	0,02	0,12	0,05		0,09	0,03	0,04	0,02	0,03	<0,01	0,1	10	100	100	100	
Fluoranthène †	<0,01	<0,01	<0,01	<0,01	0,009	<0,01		<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100	100	100	
Indéno[1,2,3-cd]pyrène †	0,03	<0,01	0,01	<0,01	0,03	<0,01		0,03	0,02	0,02	<0,01	<0,01	<0,01	0,1	10	34	34	34	
3-méthylcholanthène	<0,01	<0,01	<0,01	<0,01	0,009	<0,01		<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	150	150	150	
Naphthalène †	<0,01	<0,01	<0,01	<0,01	0,009	<0,01		<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	56	56	56	
Phénanthrène †	0,03	<0,01	0,02	<0,01	0,07	0,03		0,04	0,01	0,02	<0,01	<0,01	<0,01	0,1	5	50	50	50	
Pyrene †	0,02	<0,01	<0,01	<0,01	0,03	<0,01		0,02	<0,01	0,02	<0,01	<0,01	<0,01	0,1	10	80	80	80	
1-méthylpyrène †	<0,01	<0,01	<0,01	<0,01	0,009	<0,01		<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	56	56	56	
2-Méthylpyrène †	<0,01	<0,01	<0,01	<0,01	0,009	<0,01		<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	56	56	56	
1,3-Diméthylpyrène †	<0,01	<0,01	<0,01	<0,01	0,009	<0,01		<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	56	56	56	
2,3,5-Triméthylpyrène †	<0,01	<0,01	<0,01	<0,01	0,009	<0,01		<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	56	56	56	
HAP totaux	0,47	0,08	0,19	0,07	0,65	0,18		0,48	0,20	0,25	0,08	0,15	0,01	-	-	-	2,5	2,5	
Biphényles polychlorés (BPC) totaux	<0,017	<0,017	<0,017	<0,017	<0,017	<0,017		<0,017	<0,017	<0,017	<0,017	<0,017	<0,017	0,022	0,059	0,19	0,19	0,19	
Granulométrie (%)																			
Gravier					0			0											
Sable					76,7			37,8											
Silt					23,3			62,2											
Argile					0			0											

Toutes les concentrations sont exprimées en mg/kg (ppm)
 La trace grise signifie : échantillon non analysé pour ce paramètre
 -signale : critère non défini pour ce paramètre
 † HAP entrant dans la composition des HAP totaux

- 11 Valeur dépassant le critère générique A du MDDEFP
- 19 Valeur dépassant le critère générique B du MDDEFP
- 42 Valeur dépassant le critère générique C du MDDEFP
- 110 Valeur dépassant la concentration fixée au RESC
- 230 Valeur dépassant la concentration fixée au RIM

(1) Politique de protection des sols et de réhabilitation des terrains contaminés du Québec et règlement sur l'enfouissement des sols contaminés du Québec, mise à jour en 2003.
 (2) Règlement sur l'enfouissement des sols contaminés (L.R.Q. c. Q-2, r. 18), Annexe 1 : Concentration maximale acceptable pour l'enfouissement des sols
 (3) Règlement sur l'enfouissement en mer (DORS/2001-275)
 ** Résultat d'analyse de l'arsenic et du cadmium basé sur une moyenne de quatre analyses chimiques tandis que les résultats d'analyse des HAP sont basés sur trois analyses chimiques.
 ** Résultat d'analyse du plomb basé sur une moyenne de quatre analyses chimiques.



LEGENDE

--- : Matériau profonds évacué par les dragages
--- : Matériau profonds évacué par les dragages
--- : Matériau profonds évacué par les dragages
--- : Matériau profonds évacué par les dragages

LEGENDE

--- : Simple Matériau évacué par les dragages
--- : Simple Matériau évacué par les dragages
--- : Simple Matériau évacué par les dragages
--- : Simple Matériau évacué par les dragages

LEGÈRE

--- : Simple Matériau évacué par les dragages
--- : Simple Matériau évacué par les dragages
--- : Simple Matériau évacué par les dragages
--- : Simple Matériau évacué par les dragages

<p>PROJET</p> <p>PROJET DE DRAGAGE DREDGING PROJECT</p> <p>PROJET DE DRAGAGE DREDGING PROJECT</p> <p>PROJET DE DRAGAGE DREDGING PROJECT</p>		<p>PROJET</p> <p>PROJET DE DRAGAGE DREDGING PROJECT</p> <p>PROJET DE DRAGAGE DREDGING PROJECT</p> <p>PROJET DE DRAGAGE DREDGING PROJECT</p> <p>PROJET DE DRAGAGE DREDGING PROJECT</p>	
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