

<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	14
	35 20 23A Contaminated sediments management	3
<u>DRAFT</u>		
	Draft no. QU-13001-M – Sounding before dredging	1
<u>ANNEXES</u>		
Annex A	Dredging and disposal sites information	1
Annex B	Open water site localization	1
Annex C	Grain size of materials to be dredged.	1
Annex D	Example of ASCII computer file (bathymetric data).	1
Annex E	Physico-chemical characterization of sediments	3
Annex F	Mitigation measures	8
Annex G	Forecast of cruise ships schedule	1
Annex H	Allocated area for the transshipment and temporary storage	1

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 The work consists in dredging a portion of the commercial harbour, as shown in drawing QU-13001-M. The volume to be dredged, based on the July 2013 soundings, is 3,458 cubic metres place measurement (CMPMs). 196 CMPMs of this volume are contaminated sediment.
- .2 Uncontaminated sediment (volume of 3 262 CMPMs):
 - .1 Uncontaminated dredged material must be disposed of at the open-water disposal site provided for that purpose (see Appendix B).
 - .2 A portion of this sediment must first be dredged and disposed of at the open-water disposal site so that it may be recovered at the open-water disposal site (see Appendices A and B).
- .3 Contaminated sediment (volume of 196 CMPMs):
 - .1 The contaminated sediment must be disposed of on an authorized site on land.
 - .2 The sediment characteristics of the contaminated portion (see Appendix E) show an exceedance of the 2008 *Criteria for the Assessment of Sediment Quality in Quebec and Application Frameworks: Prevention, Dredging and Remediation* of the federal Department of Environment and the Quebec Department of Environment, Sustainable Development and Parks.
 - .3 The location of final disposal of the contaminated dredged material must be an authorized site on land.
 - .4 This part of the work must be carried out in such a way as to minimize the re-suspension of sediment and to limit the migration of contaminated sediment outside the area of operations and in accordance with acts and regulations in effect.
 - .5 The dredging work and subsequent handling of the contaminated sediment must be carried out with limited dilution of contamination levels through mixing.

- .6 The Contractor will be provided with an undeveloped site in the Baie-Comeau port facilities to serve as a temporary area for the dredged material prior to its final disposal (see Appendix H).
- .7 The method of transport, management and final disposal of the contaminated sediment will be the Contractor's responsibility.
- .2 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 coordinator 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 with 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 (plus an additional depth of 0,1 m) 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 Item No. 1.1: Floating equipment
 - .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.
 - .2 Item No. 1.2: Other equipment (on land)
 - .1 The Contractor agrees to provide within 48 hours prior to the contract award, 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 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 Item No. 2.1: Dredging of uncontaminated sediment
 - .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.
- .2 Item No. 2.2 – Dredging of contaminated sediment
 - .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 Following 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 All equipment, tools and labour, etc. required to carry out the work are included in the unit price.
 - .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 Item No. 3.1: Evacuation (disposal) in open water
 - .1 The submitted unit price for the disposal in open water of uncontaminated dredged material will be the volume payable referred to in Subsection No. 2.1 (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.
 - .2 The dredged material will be evacuated in accordance with the requirements set out herein, the mitigation measures and other contract documents.
 - .3 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. 3.2: Evacuation to land
 - .1 The submitted unit price for the evacuation of dredged material will be the volume payable referred to in Subsection No. 2.2 (CMPM) and shown in the table of unit prices.
 - .2 The dredged material will be evacuated in accordance with the requirements set out herein and other contract documents.
 - .3 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
- .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 equipment : 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.
 - .2 Land equipment : In accordance with clause 1.2.3.2 (and sub clauses), when set ups on land are completed, 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 m^3pm volume dredged, multiplied by the unit price for dredging.
- .3 Disposal
 - .1 Open-water : Pursuant the herein clause 1.2.5 (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 $m^3mp.km$ volume-distance disposed.
 - .2 On Land : Pursuant the herein clause 1.2.5 (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 $m^3mp.km$ 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 $3.0m^3$.
- .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 m^3pm : volume of material measured in place, in cubic metres.
- .8 m^3sm : 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, two (2) weeks in advance, notify the Departmental representative of the date it will be arriving at the site.
- .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 on the North shore of the St-Lawrence river specifically in the community of Baie-Comeau.
- .2 The location of materials to be dredged is set out in the drawing QU-13001-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 The vast majority of 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.
- .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 Baie-Comeau, the tidal fall can range 4,3 m, and the water level can be between -0,1 and 4,2m above the 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-13001-M.
- .7 The environmental study 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 is the one provided with the tender documents. Before starting work, the Contractor shall confirm in writing to the Departmental representative he did the usual checks and accepts the results of this survey. 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 after dredging 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 drawing no. QU-13001-M plus an additional depth of 0,1 m.
- .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 (plus the additional depth of 0,1m) 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 property must be kept clean throughout the work.
- .32 In Baie-Comeau, no wharf work (unloading, transshipment, transport, handling, etc) may be done and no temporary set-ups may be erected (or installed) while a cruise ship is at the wharf. For information purposes, the actual schedule of expected cruise ships is provided in Appendix G.
- .33 Under the surfaces to be dredged, the Contractor shall dredge an additional depth of 0,1 m.
- .34 The uncontaminated material shall be dredged in the sequence to be specified by the Departmental representative just before work begins.

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 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 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. 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 If required, the final dredged material management plan must cover the operations that will take place at the temporary storage site, where the storage and/or treatment operations may be carried out without contravening any municipal, provincial or federal regulations.
 - .3 Transport and dispose of the dredged material in accordance with the environmental regulations in effect and in accordance Subsection 1.4.3 of Section 01 11 11.
 - .4 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.
 - .5 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.

- .6 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.
- .7 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.
- .8 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.
- .9 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.
- .10 Install adequate signage during the work period.
- .11 The Contractor will be fully liable for damage it causes to structures during unloading operations.
- .12 The material may only be unloaded in the area shown in Appendix H.
- .13 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 and the temporary storage of the dredged material on the wharf, comply with the standard maximum live load surcharge of 30 kPa or the axle loads of CL-625 trucks as per the CAN/CSA S6-00 Canadian standard.

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 contaminated material. The volume of contaminated material to be dredged is evaluated at 196 m³.
- .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, within the two (2) days following the award of contract, must provide the Department Representative with his preliminary plan of management of dredged material.
- .3 The Contractor must provide a final plan of management of dredged material to the PWGCS at least four (4) 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 control noise and dust emission (tarpaulin spread over the top of the box, use of dust control agent if necessary).

3.3 TEMPORARY STORAGE SITE

- .1 The Contractor will have access to a temporary storage site (see annex H). The Contractor shall use it according to the regulations.
- .2 The dredged material has different levels of contamination according to the Soil Protection Rehabilitation of Contaminated Sites. Most of the material contaminated with HAP and metal is from categories A-B and B-C (see appendices E).
- .3 The installations will have to be adequate in order to avoid any contamination of the temporary storage site. The Contractor will have to clean all zones where work took place. Waste and debris must be disposed of outside the worksite in an area authorized by the Quebec Ministry of Sustainable Development, Environment and Parks (MSDEWP), according to the regulation in force and in accordance with the instructions of this contract. Photos will be taken before, during and after the work to help the rehabilitation of the area. The Contractor will then have to leave the site in its initial condition, and if necessary, by proceeding with soil characterization before and after the work.

3.4 TREATMENT OF DREDGED MATERIAL (IF NECESSARY)

- .1 The treatment of dredged material comprise, if required, the final disposal, drying of material on the site of temporary storage, as well as the salvage and adequate disposal of leachate. It is important to make note of the possibility of contamination of the leachate with HAP, as well as the presence of salts since these waters come from sea sediments. The Contractor is responsible for verifying the water contamination.
- .2 In the event that the drying is not required, the presentation of the rehabilitation work, if needed, will have to be adjusted accordingly. Also, if no temporary storage site is necessary, the items requested in section 3.2 will not be required and will be replaced by any item judged pertinent to the comprehension of the proposed solution.

3.5 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.

3.6 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 The project been the object of an environmental evaluation (characterization of the dredged material), as well as of and environmental assessment in accordance with the Canadian Environmental Assessment Act. The interested bidders will be able to consult these reference documents by contacting the contracting authority.

END OF SECTION

ANNEX A

DREDGING AND DISPOSAL SITES INFORMATION

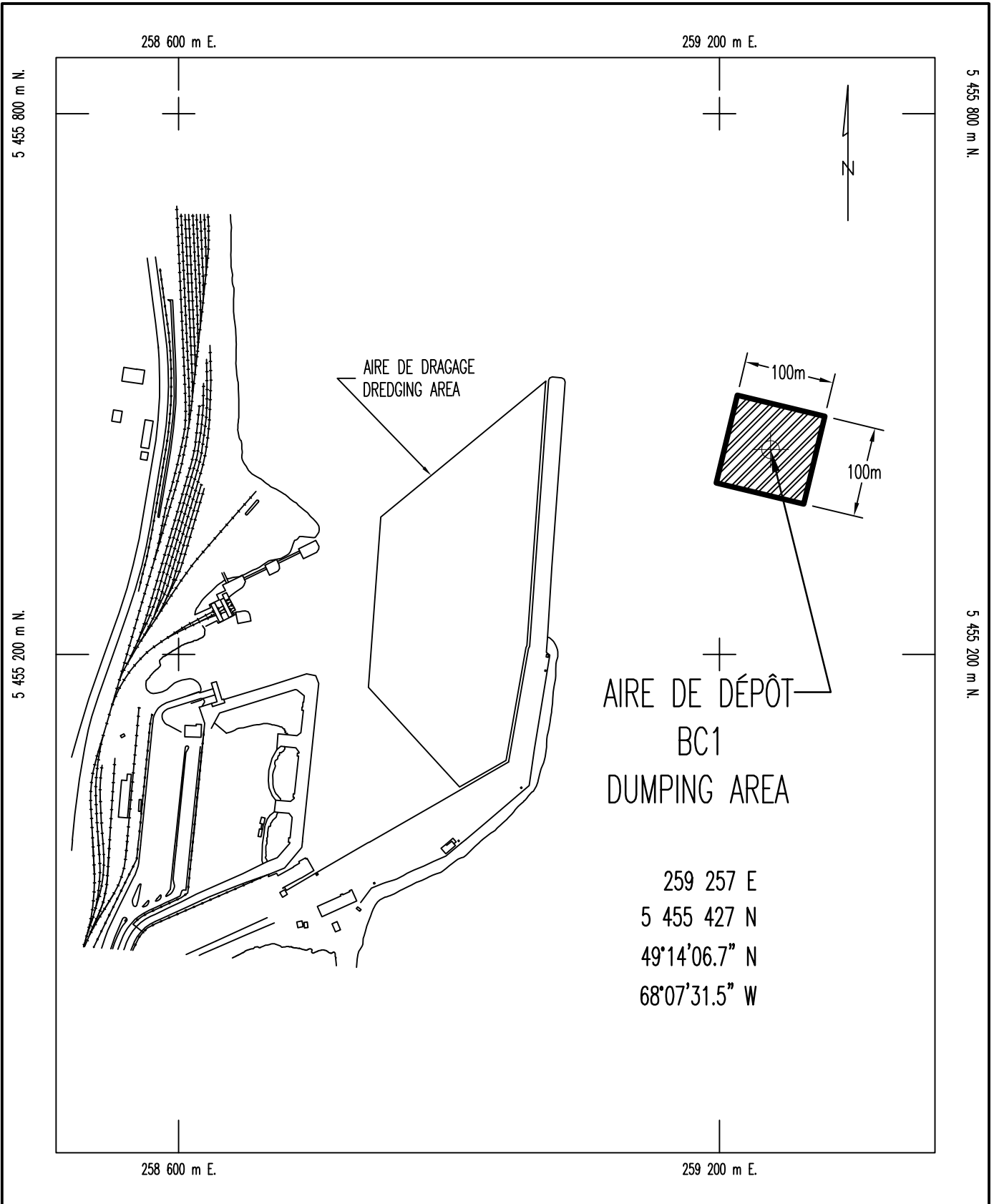
This annex forms part of the contract documents.


BAIE-COMEAU, Manicouagan county

-	Volume to be dredged (m ³ pm)	:	3 458
-	Distance to dump site	:	0,5 km
-	Environmental restriction period	:	None
-	Ocean dumping permit	:	Not requested
-	Dumping site (NAD83)	:	Lat: 49° 14' 06.7'' N Long: 68° 07' 31.5'' W

ANNEX B

OPEN WATER SITE LOCALIZATION




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

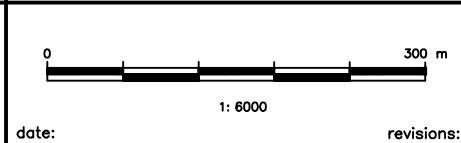
Titre du dessin: Drawing title:
AIRE DE DÉPÔT BC1 DUMPING AREA

conçu par: date:
 designed by:

dessiné par: date:
 drawn by:

approuvé par: date:
 approved by:

BAIE-COMEAU



no. du projet: dessin no.:
 project no. dwg. no.

ANNEXE/APPENDIX B

ANNEX C

GRAIN SIZE OF MATERIALS TO BE DREDGED

Grain size and sedimentometry

Sample ⁽¹⁾	<u>Sedimentometry results (%)</u>				
	Pebble	Gravel	Sand	Silt	Clay
BP-SE-11 ⁽²⁾	0.0%	0.0%	96.4%	3.6%	0.0%

Sample ⁽¹⁾	<u>Grain size results (%)</u>				
	Pebble	Gravel	Sand	Silt	Clay
BP-SE-03	0.0%	1.2%	96.7%	2.1%	
BP-SE-04	0.0%	0.0%	98.8%	1.2%	
BP-SE-05 (50 à 100 cm)	0.0%	0.0%	96.6%	3.4%	
BP-SE-05 (100 à 160 cm)	0.0%	0.0%	97.6%	2.4%	
BP-SE-07	0.0%	0.0%	98.4%	1.6%	
BP-SE-08 (0 à 50 cm)	0.0%	0.0%	98.2%	1.8%	
BP-SE-08 (50 à 80 cm)	0.0%	0.0%	97.8%	2.2%	
BP-SE-09	0.0%	13.1%	85.3%	1.6%	
BP-SE-10	0.0%	5.1%	92.1%	2.8%	
BP-SE-13	0.0%	0.1%	98.1%	1.8%	

(1) : For the localization of the sample, refer to the annex E

(2) : According to the sedimentometry analysis, this sample is composed mainly of fine sand

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

PHYSICO-CHEMICAL CHARACTERIZATION OF SEDIMENTS

5 455 000 m N.

5 455 200 m N.

5 455 400 m N.

5 455 600 m N.

Tapis parafouille de béton
Profondeur app. 9.0 m

QUAI TRAVERSIER-RAIL
FERRY-RAILWAY WHARF

Limite de dragage à 9.0 m

QUAI DONOHUE-QUNO WHARF

SE-01 Sédiments (Entraco, 2008)

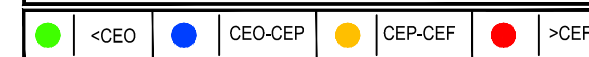
BACD-1 Sédiments (Envirolab, 2000)

Sédiments (Biogénie, 2010)

Sédiments non-prélevés (Biogénie, 2010)

Sédiments à disposer en milieu terrestre

Critères pour l'évaluation de la qualité des sédiments marins
- concentration produisant un effet occasionnel (CEO)



NOTE :
Il est à noter que le niveau global de contamination est illustré sur cette figure. Veuillez consulter les tableaux pour le détail des résultats d'analyses de chaque paramètre.

258 800 m E.

259 000 m E.

258 800 m E.

259 000 m E.

5 455 000 m N.

5 455 200 m N.

5 455 400 m N.

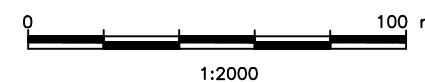
5 455 600 m N.

AutoCAD 11 X 17

Notes de référence :

Système de Positionnement :

Référence géodésique : N.A.D. 1983 Projection : M.T.M.



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

Carnet de notes :

Méridien Central : 67° 30' Fuseau : 6

Date(s) des sondages :

BAIE-COMEAU

Mode de collecte :

Station(s) de référence :
Nom Org. Coord. Nord Coord. Est

Mise en plan :

Mise en plan : 2013-07-31

Cellule :

Dimension :

Traçé :

Référence Verticale : Zéro des cartes

Approuvé Date :

LOCALISATION DES ÉCHANTILLONS

Courbes de niveau :

Intervalle :

Nom Org. Élévation (mètre)
Name Org. Elevation (meter)

Numéro de Projet :
R.058580.001

DESSIN No. :
ANNEXE E

FEUILLE No.
1/1



Tableau V : Résultats d'analyses chimiques des sédiments à titre indicatif pour la gestion terrestre
HP (C₁₀-C₂₀), HAP, Métaux et BPC - Selon les critères de la Politique du MENV pour le sol

TRANSPORTS CANADA
Port de Baie-Comeau
Baie-Comeau (Québec)

Echantillon	Profondeur (m)	Date d'échantillonnage (aa-mm-jj)	Unité	Critères généraux du MENV (révision en 2007)																						
				BP-SE-03 0,00 - 0,50 10-10-04	BP-SE-04 0,00 - 0,50 10-10-04	BP-SE-05 (60 à 100) 0,50 - 1,00 10-10-04	BP-SE-05 (100 à 160) 1,00 - 1,60 10-10-04	BP-SE-06 0,00 - 0,50 10-10-04	BP-SE-06-TT 0,00 - 0,50 10-10-04	BP-SE-07 0,00 - 0,50 10-10-04	BP-SE-08 (0 à 50) 0,00 - 0,50 10-10-04	BP-SE-08 (50 à 80) 0,50 - 0,80 10-10-04	BP-SE-09 0,00 - 0,50 10-10-04	BP-SE-10 0,00 - 0,50 10-10-04	BP-SE-11 0,00 - 0,50 10-10-04	BP-SE-12 0,00 - 0,50 10-10-04	BP-SE-12-TT 0,00 - 0,50 10-10-04	BP-SE-13 0,00 - 0,50 10-10-04	BP-SE-14 0,00 - 0,50 10-10-04	A ⁽¹⁾	B ⁽²⁾	C ⁽³⁾				
Hydrocarbures aromatiques polycycliques (HAP)																										
Acénaphtène	mg/kg	<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	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Acénaphthylène	mg/kg	<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	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Anthracène	mg/kg	<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	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Benzo (a) anthracène	mg/kg	0,03	<0,01	<0,01	0,07	0,08	0,08	0,04	0,04	0,02	0,02	0,19	0,08	0,08	0,50	0,29	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Benzo (a) pyréne	mg/kg	0,04	<0,01	<0,01	0,10	0,10	0,05	0,05	0,03	0,02	0,84	0,25	0,12	0,84	0,45	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Benzo (b+kk) fluoranthène	mg/kg	0,08	<0,01	0,18	0,18	0,18	0,19	0,10	0,10	0,06	0,47	0,05	0,05	0,19	0,73	0,73	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Benzo (c) phénanthrène	mg/kg	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,02	<0,01	0,06	0,06	0,03	0,03	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Benzo (ghi) perylene	mg/kg	0,03	<0,01	0,06	0,08	0,08	0,06	0,03	0,03	0,02	0,02	0,02	0,02	0,15	0,08	0,57	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Chrysène	mg/kg	0,03	<0,01	0,08	0,08	0,08	0,06	0,03	0,03	0,02	0,02	0,02	0,02	0,10	0,56	0,33	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Dibenzo (a,h) anthracène	mg/kg	<0,01	<0,01	0,01	0,01	0,02	0,02	<0,01	<0,01	<0,01	0,04	0,04	0,02	0,02	0,13	0,07	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Dibenzo (a,i) pyréne	mg/kg	<0,01	<0,01	0,01	0,01	0,02	0,02	<0,01	<0,01	<0,01	0,04	0,04	0,02	0,02	0,20	0,08	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Dibenzo (a,h) pyréne	mg/kg	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,02	0,02	0,07	0,03	0,03	0,03	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Diméthyl-1,3 naphthalène	mg/kg	<0,01	<0,01	0,02	0,02	0,02	0,02	<0,01	<0,01	<0,01	0,06	0,06	0,02	0,02	0,11	0,11	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Diméthyl-7,12 Benzo (a) anthracène	mg/kg	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,02	0,02	0,07	0,03	0,03	0,03	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Fluoranthène	mg/kg	0,04	<0,01	0,09	0,09	0,09	0,06	0,03	0,03	0,03	0,24	0,03	0,03	0,12	0,69	0,36	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Fluorène	mg/kg	0,03	<0,01	0,05	0,05	0,08	0,08	0,03	0,03	0,01	0,20	0,07	0,07	0,08	0,62	0,33	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Indéno (1,2,3-cd) pyréne	mg/kg	<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	0,02	0,02	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Méthyl-1 naphthalène	mg/kg	<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	0,02	0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Méthyl-2 naphthalène	mg/kg	<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	0,04	0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Méthyl-3 cholanthrène	mg/kg	<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	0,04	0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Naphthalène	mg/kg	<0,01	<0,01	<0,01	0,04	0,04	0,04	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,11	0,02	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	5	50
Phénanthrène	mg/kg	0,02	<0,01	0,02	0,02	0,03	0,02	0,03	0,02	0,01	0,11	0,01	0,01	0,11	0,05	0,50	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	5	50
Pyréne	mg/kg	0,05	<0,01	0,11	0,11	0,11	0,08	0,08	0,04	0,04	0,32	0,02	0,02	0,14	0,86	0,44	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	10	100
Triméthyl-2,3,5 naphthalène	mg/kg	<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	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	<0,01	0,1	1	10
Métaux																										
Aluminium (Al)	mg/kg	2 600	2 060	2 070	2 780	2 720	2 960	2 190	2 250	2 540	2 500	1 600	3 260	2 200	1 970	2 430	2 170	-	2	20	40	-	-	-	-	-
Argent (Ag)	mg/kg	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5	<0,5
Arsenic (As)	mg/kg	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Barium (Ba)	mg/kg	22	<20	20	23	25	22	<20	<20	<20	<20	<20	22	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	200	500
Cadmium (Cd)	mg/kg	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	<0,9	0,9	5
Cobalt (Co)	mg/kg	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	15	50
Chrome total (Cr)	mg/kg	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	45	250
Cuivre (Cu)	mg/kg	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	40	500
Étain (Sn)	mg/kg	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	5	50
Fer (Fe)	mg/kg	9 900	5 410	5 400	6 690	7 460	5 430	6 690	6 260	6 240	7 080	4 950	8 060	7 020	6 010	6 390	6 260	-	1 000	1 000	1 000	-	-	-	-	-
Manganèse (Mn)	mg/kg	82	82	85	98	84	86	76	79	85	92	83	86	87	97	89	101	-	4	4	4	-	-	-	-	-
Mercure (Hg)	mg/kg	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2	<0,2
Molybdène (Mo)	mg/kg	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Nickel (Ni)	mg/kg	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
Plomb (Pb)	mg/kg	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
Sélénium (Se)	mg/kg	<1,0	<1,0	<1,0	<1,0																					

ANNEX F

MITIGATION MEASURES



Transports
Canada

Transport
Canada

Canadian Environmental Assessment Act (CEAA)

Environmental monitoring report

Project designation	2013 Maintenance Dredging — Port of Baie-Comeau Federal Wharf
TC/CEAA File number	7075-P802-24-03
Name of developer	TRANSPORT CANADA
Person responsible for the monitoring	
Dredging start-up and completion dates	

Important

- Please note that Transport Canada (TC) must be notified of any change or modification to the work activities and/or schedule.
- This environmental monitoring form or an equivalent report shall be filled or prepared by the work site supervisor and forwarded at work completion to *Transport Canada*. Send the report or the form at the following email address martin.petit@tc.gc.ca or by fax at the following number: 418-648-7980.

Mitigation measures	Measure applied		Dates of verification	Comments (where measure was not applied, provide explanation)	Submittals **	
	Yes	No			Photo (s)	Document (s)
Surface water, sediments, soils						
Reduce operations in water to a minimum (key activities only).						
Use equipment in good working order to minimise leaks and risks of failure likely to cause spills.						
Prefer floating equipment running on type HF biodegradable oil specially designed for this type of operation.						
Pause dredging where climatic conditions threaten operational security.						
Contractor to provide PWGSC with his environmental emergency plan before work is undertaken and copy made available at the site facility.						
Implement measures to curtail accidental spill of petroleum products during refuelling or maintenance of machinery. Handle carefully hydrocarbons used on site (diesel, gasoline, engine and hydraulic oils, lubricants) in a suitable area on the mainland at least 30 metres from the shoreline where possible. Store used products safely and dispose of to prevent accidental spills into the water or on the site. Where applicable, products may be stored only for the duration of operations.						
Have on hand and know how to use an emergency spill kit. During the operations, any accidental spill shall be dealt with promptly in accordance with applicable regulations and the Contractor shall notify without delay the Transport Canada Representative (Chokri Kouki 418-648-5240).						

Mitigation measures	Measure applied		Dates of verification	Comments (where measure was not applied, provide explanation)	Submittals **	
	Yes	No			Photo (s)	Document (s)
Contaminated soils shall be disposed of in accordance with applicable regulations. A report on the situation (and remedial measures) shall be prepared by the site supervisor and submitted to Transport Canada.						
Incidents shall be reported to Environment Canada's alert system 1-866-283-2333, the Canadian Coast Guard alert system 1-800-363-4735 (in case of marine pollution) and to the site supervisor. These phone number shall be prominently displayed in all site facilities / workplaces.						
Handle contaminated sediments with extra care during dredging and transfer to the wharf. Minimise the release of contaminants into the water and on the wharf.						
During such transfer, contaminated sediments shall be stored in watertight bays or containers.						
At the transfer sites, manage contaminated water in accordance with applicable regulations. Water shall be recovered and analysed to ascertain compliance with standards before release in the harbour. Otherwise, call upon a waste contractor for disposal at an authorised site.						
Contaminated sediments shall be hauled to an authorised site in watertight dump trucks.						
Barges used to transport spoil shall be watertight and shall not be filled to capacity in order to prevent overflow during transportation.						
Ensure that no material / debris may drift or be carried by winds and rain over the water body.						

Mitigation measures	Measure applied		Dates of verification	Comments (where measure was not applied, provide explanation)	Submittals **	
	Yes	No			Photo (s)	Document (s)
Recover at once any element released in the water.						
Do not perform dredging and immersion operations in adverse weather conditions.						
The immersion site shall be clearly identified with buoys.						
Bring barge to a standstill when discharging sediments at the immersion site.						
Air quality						
Dredging equipment operators shall be made aware of the critical importance of proper maneuvers with the machinery. They shall be careful to prevent unnecessary resuspension of sediment and avoid sudden movements (jerking, bouncing) and levelling the bottom with bucket swivelling actions.						
Require that subcontractors use equipment in good working condition in accordance with applicable standards.						
Avoid needless idling.						
Vehicles and machinery shall be properly serviced and maintained in perfect working order (i.e., exhaust system).						
Use tarps for land transport of sediments.						
Optimise the movement of tugs to minimise the number of round trips.						
Noise						
In order to minimise noise emissions, use only equipment that is up to task.						
Perform off-site land transport Monday to Saturday between 07h00 and 19h00 or according to applicable regulations.						
Optimise operations in order to minimise duration.						
Avoid needless idling.						
Marine mammals						
Throughout the execution of						

Mitigation measures	Measure applied		Dates of verification	Comments (where measure was not applied, provide explanation)	Submittals **	
	Yes	No			Photo (s)	Document (s)
the work, an observer experienced in the identification of marine mammals under different weather conditions shall monitor cetaceans in situ from the barges. The observer needs not be assigned exclusively to this task. The observer shall keep a daily record of the monitoring in a format approved by the Department.						
Where cetaceans are observed within 1 000 m of the barges in any direction, do not disturb or harass the animals in order to chase them away from the work zone.						
Where cetaceans come within 400 m of the barges and dredgers, suspend dredging and sediment immersion operations and bring boats to a halt until the animals have moved beyond 400 m.						
Following work suspension due to cetacean occurrences, operations may resume only when the observer has confirmed that mammals have moved out of the exclusion zone.						
Human environment						
The machinery shall be in perfect working order (i.e., exhaust system, muffler).						
Work in terrestrial areas and outside harbour limits shall be performed during normal hours Monday to Saturday (07h00 to 19h00) and is prohibited at night, on Sundays and during public holidays. Comply with Baie-Comeau municipal by-laws.						
Where possible, sediment transport trucks shall travel Maritime Road off Route 138 which allows to bypass the centre of the city. Road transport shall comply with						

Mitigation measures	Measure applied		Dates of verification	Comments (where measure was not applied, provide explanation)	Submittals **	
	Yes	No			Photo (s)	Document (s)
Baie-Comeau municipal regulations relative to working hours, vehicle speed, etc.						
Provide advance notification to users.						
Work areas shall be clearly delineated on site in order to confine activities within.						
Unless specifically authorised, machinery shall not travel outside work areas.						
Establish a security perimeter to prevent unauthorised entry.						
The Contractor shall comply with all occupational health and safety regulations and standards pertaining to the work at hand.						
The Contractor shall accommodate the cruise activity schedule (approximately 10 boats are expected in September and October 2013). Suspend unloading operations at the wharf as well as work on land while cruise ships are docked.						
The Contractor to make necessary arrangements to allow for the docking of cruise ships at berths 1 and 2.						
Schedule the work in collaboration with the harbour master to minimise inconveniences to users. For cruise ships, coordination is also required with the City of Baie-Comeau.						
In order to ensure continuity of service at all times, Contractor to review traffic forecasts regularly with the harbour master (418-296-4296).						
Comply with the conditions for approval issued for the project under the <i>Navigable Waters Protection Act</i> , NOTICES TO SHIPPING.						
At work completion, clear work						

Mitigation measures	Measure applied		Dates of verification	Comments (where measure was not applied, provide explanation)	Submittals **	
	Yes	No			Photo (s)	Document (s)
areas of equipment, machinery parts, materials, temporary installations, waste, scrap material, rubble and spoil.						

**** Photographs and documents (specifications, site meeting records, etc.) shall be provided minimally with respect to the elements required in the table above.**

Additional comments

MONITORING (execution)

Prepared by:

Date:

Title:

Company
/Organisation

Telephone:

I hereby certify that the information provided above is accurate and complete and that it reflects my interpretation of the assignment/work.

Signature:

Date:

Prepared by:

Title or
function:

Company:

ANNEX G

FORECAST OF CRUISE SHIPS SCHEDULE

**Bateaux de croisières - Cruise ships
2013**

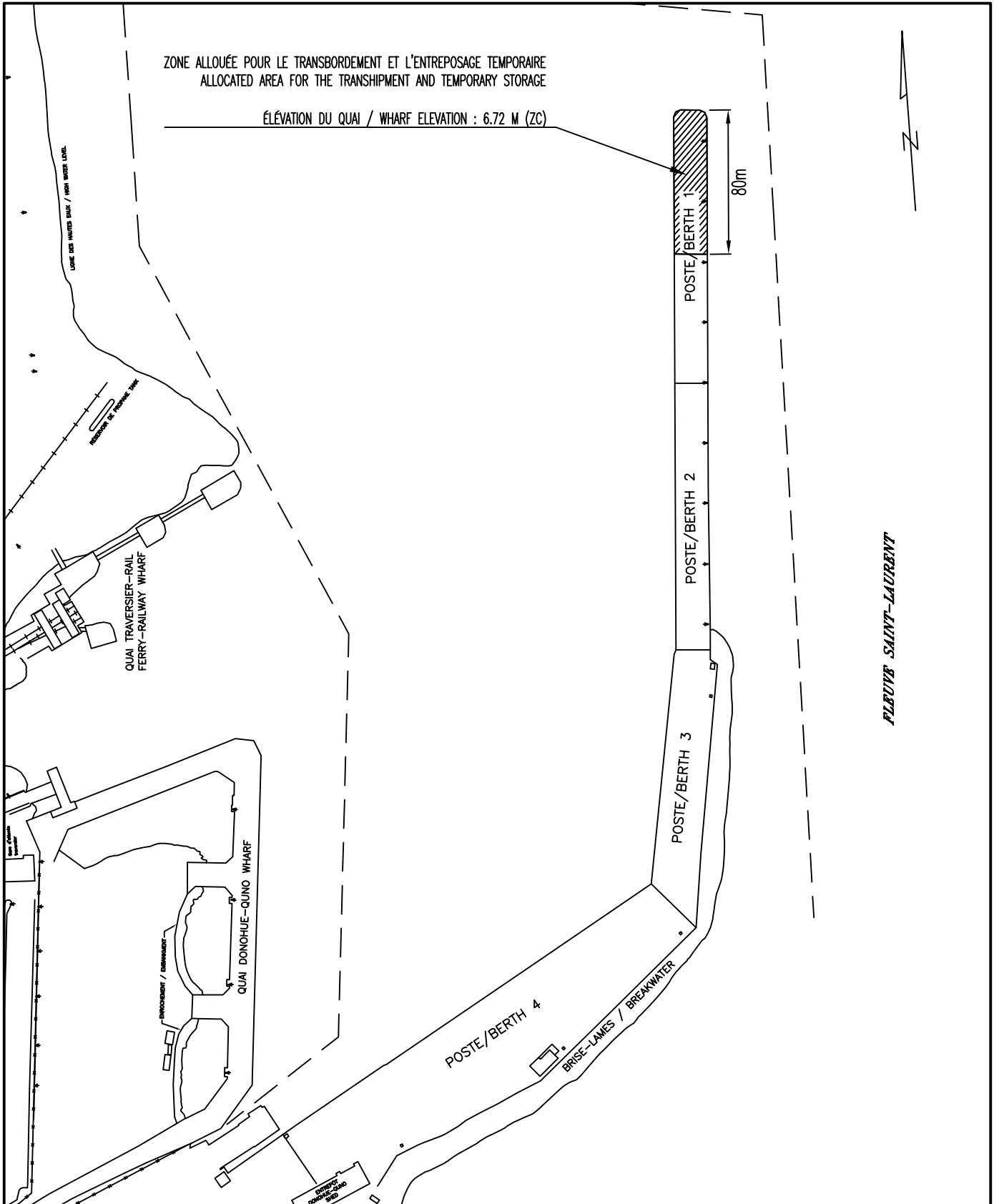
Date	Jour Day	NOM / NAME		TEMPS/PERIOD
		BATEAU / SHIP	COMPAGNIE DE CROISIÈRES CRUISE COMPANY	ACCOSTEMENT BERTHING
2013-09-22	Dimanche Sunday	CRYSTAL SYMPHONY	CRYSTAL CRUISES	8h à/to 17h
2013-09-26	Jeudi Thursday	MS SILVER WHISPER	Silversea Cruises	8h à/to 17h
2013-09-28	Samedi Saturday	SEABOURN SOJOURN	Seabourn Cruise Line	7h à/to 16h
2013-10-08	Mardi Tuesday	MAASDAM	Holland America	8h à/to 17h
2013-10-10	Jeudi Thursday	SEABOURN SOJOURN	Seabourn Cruise Line	11h à/to 19h
2013-10-15	Mardi Tuesday	EURODAM	Holland America	8h à/to 17h

ANNEX H

ALLOCATED AREA FOR THE
TRANSHIPMENT AND TEMPORARY STORAGE

ZONE ALLOUÉE POUR LE TRANSBORDEMENT ET L'ENTREPOSAGE TEMPORAIRE
 ALLOCATED AREA FOR THE TRANSHIPMENT AND TEMPORARY STORAGE

ÉLÉVATION DU QUAI / WHARF ELEVATION : 6.72 M (ZC)



Travaux publics et
 Services gouvernementaux
 Canada

Public Works and
 Government Services
 Canada

Titre du dessin:

Drawing title:

conçu par:
 designed by:

date:

POSTES À QUAI
 BERTH

dessiné par:
 drawn by:

date:

approuvé par:
 approved by:

date:

BAIE-COMEAU



1: 3000

date:

revisions:

no. du projet:
 project no.

R.058580.001

dessin no.
 dwg. no.

ANNEXE/ANNEX
 H