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H2 of 2 – Malpeque Bar	Sept. 29, 2020

1.1 DESCRIPTION OF WORK

- .1 A requirement has been identified by the Department of Fisheries and Oceans (DFO) for the need to dredge channel and point, located at Malpeque Harbour, PEI. The contract will be for a Two (2) year period for the Spring Dredge Only, with optional 3rd year.

1.2 GENERAL

- .1 Due to Covid-19, note that there will be restrictions and guidelines in order to adhere to public health measures.
- .2 Scope of work under this contract includes but shall not be limited to the provision of all labour and equipment required to perform dredging and ocean disposal of dredged materials as specified herein at Malpeque Harbour, Malpeque, PEI, inside(point) and outside(bar/channel) sections.
- .3 Immediately upon award of contract, the Contractor will submit a schedule of work to the Departmental Representative, showing anticipated progress stages and final completion of work within time required by contract documents. All entries contained in unit price table will be entered on schedule using a horizontal bar graph method.
 - .1 Mobilization to site and Construction (Dredging) period April 1, 2021 to June 18, 2021, for the Spring 2021 Dredge and April 1, 2022 to June 17, 2022 for the Spring 2022 Dredge. If dredging equipment is to be transported by way of water, equipment **MUST** be on site in Malpeque Harbour prior to ice-in, this winter 2020 for spring 2021 Dredge and winter 2021 for the Spring 2022 Dredge. Mobilization payment will be paid to contractor once all equipment is confirmed onsite.
 - .2 A survey of soundings will be taken as soon as ice is gone and coordinates/data will be provided to the contractor immediately following computation of survey data.
 - .3 The Malpeque Bar/Channel and Point is expected to be accessible (ice out) by April 1, 2021/April 1, 2022. Ice conditions will be monitored starting two weeks prior to April 1, 2021/22 and the Departmental Representative will be in communication with the Contractor. If the ice is not out by April 1, 2021/22, dredging is to commence as soon as the ice leaves.
 - .4 The dredging priority is to dredge a channel and ensure the channel is navigable, 10 m wide, 1.6m deep both at the point and through the bar/channel identified in drawings by April 29, 2021/22, the day prior to the expected date of 2021/22 lobster setting day.
 - .5 The remainder of the dredging will be completed during fishing season and within time provided by Contract, without impediment to the fishing vessels. Final dredge depths will be between -1.5m to -1.8m for both inside and outside, with an approximate 30m width. This will be identified to the contractor by Departmental Representative, after pre-dredge soundings take place.
- .4 The required dredge depth will range from -1.5 to -1.8 metres below chart datum (low normal tide). Typically, the required dredge depth will be -1.8 metres.
- .5 The estimated quantity of material to be dredged will be approximately 25,000 cubic meters place measure (CMPM).
- .6 The contract will terminate when the end of any further requirements for dredging or when the authorized contract quantities have been reached. Additional dredging may be requested by the Departmental Representative after areas have been cleared based on unit price rates in the unit price table.
- .7 The Departmental Representative will identify the areas to be dredged for each request. The dredging areas will usually take place where maintenance dredging has been previously carried out. However, the Departmental Representative may request dredging in other areas.

- .8 The disposal areas will usually be located at sea. The distance from the loading area to the disposal area may range from 400 to 2,000 metres away or further. Booster pumps may be required to reach approved disposal locations identified to the Contractor, and are considered incidental to the dredging work and will not be measured separately for payment. Contractors should familiarize themselves with the requirements prior to bidding. Water depths in the disposal areas will normally range from +1.0 metre to -3.0 metres relative to chart datum. Coordination of exact location of disposal to be determined once pre-survey is completed and will be communicated to the contractor. No deviation from disposal locations will be accepted unless approved by Departmental Representative. It should be noted that no dredged material will be disposed of in the Darnley Basin area (bottom section of dredge/disposal zone).
- .9 The contractor will be required to provide coordinates (UTM NAD 83) at any time of the exact location of the dredging vessel and/or the disposal location.
- .10 The contractor is to provide at their expense a GPS unit to record and report position in UTM coordinates. The contractor is to report the position of loading and disposal locations on a daily basis during all dredging activities to the Departmental Representative.
- .11 Prior to submitting their bid, it is recommended that interested bidders satisfy themselves as to the form and nature of the work and materials necessary for the completion of the work, the means of access to the site, the accommodation required, and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. No allowance shall be made subsequently in this connection on account of error or negligence to properly observe and determine the conditions that will apply.
- .12 Contractors are to account for additional costs associated with the mobilization and demobilization of equipment during times when weight restrictions are in effect.
- .13 Obtain prior permission from the Departmental Representative before carrying out such site inspections.

1.3 QUANTITIES

- .1 The dredging quantities may not be increased without the written permission of the Departmental Representative. No payment will be made for over dredging/under dredging of the amount specified in the contract or the total amount listed on the Ocean Disposal permit unless the Departmental Representative has given his permission in writing.

1.4 DRAWINGS

- .1 Departmental Representative will provide a site location drawing showing the dredge area limits (loading area) and the disposal location (dumping area) for this contract. The Departmental Representative may furnish additional drawings to assist proper execution of work. These drawings will be issued for clarification only.
- .2 New bathymetry will be collected in April as soon as the survey vessel can navigate the channel and work areas. The new data will replace that which is shown on the Contract plans.

1.5 STANDARDS

- .1 Perform work in accordance with the National Building Code of Canada and any other code of provincial or local application including all amendments up to project tender closing date provided that in any case of conflict or discrepancy, the more stringent requirements shall apply.
- .2 Materials and workmanship must meet or exceed requirements of specified standards, codes and referenced documents.

1.6 PROTECTION OF EXISTING SERVICES AND FACILITIES

- .1 It is the responsibility of the Contractor to become fully acquainted with the existing services and facilities and take necessary steps to protect them during the work.
- .2 The Contractor will bear the cost of making good all damage to existing structures and facilities at the site resulting from their operations under this contract. All repairs will be with new materials approved by the Departmental Representative.
- .3 The Contractor will immediately restore any existing service disrupted as a result of their operations at no cost to the Department or Owner.

1.7 SETTING OUT WORK

- .1 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated.
- .2 Provide devices needed to layout and construct work.
- .3 Supply such devices as straight edges and templates required to facilitate the Departmental Representative's inspection of the work.
- .4 Supply stakes and other survey markers required for laying out the work.
- .5 Supply GPS Coordinates.
- .6 At no such time should the contractor move or alter the location of any buoys which they do not own. If the contractor is using buoys to set out work, then they must follow industry standards, see Section 35 20 23, 1.8 – Navigation Co-ordination for further information.

1.8 INTERPRETATION OF DOCUMENTS

- .1 Supplementary to the General Conditions, the Division 01 sections of the Specifications take precedence over technical specifications in other Divisions of the Specifications.

1.9 MEASUREMENT FOR PAYMENT

- .1 Notify the Departmental Representative sufficiently in advance of operations to permit required measurements for payment.

1.10 DOCUMENTS REQUIRED

- .1 Maintain at job site, one copy each of the following:
 - .1 Contract Drawings
 - .2 Specifications
 - .3 Addenda
 - .4 Change Orders
 - .5 Other Modifications to Contract
 - .6 Permits and Approvals
 - .7 Copy of Approved Work Schedule
 - .8 Health and Safety Plan and other safety related documents
 - .9 Other documents, as stipulated elsewhere in the Contract Documents

1.11 PERMITS

- .1 Obtain and pay for permits, certificates, and/or licenses as required by municipal, provincial and federal authorities.
- .2 Provide appropriate notifications of project to municipal, provincial and/or federal inspection authorities.
- .3 Obtain compliance certificates as prescribed by legislative and regulatory provisions of municipal, provincial and federal authorities as applicable to the performance of the work.
- .4 Submit to the Departmental Representative, a copy of application submissions and approval documents received for above referenced authorities.
- .5 The Contractor is responsible to obtain any Provincial Watercourse/Wetland Alteration permit, if required.
- .6 The Departmental Representative is responsible to obtain the ocean dumping permit(s) and provide NavWarn for the commencement of each dredging operation.
- .7 The Contractor is to abide by all conditions as described in any such permits.

1.12 INTERFERENCE, SECURITY AND SIGNAGE

- .1 Execute work with least possible interference or disturbance to Harbour operations, fishers, public and normal use of premises. Arrange with the Departmental Representative to facilitate execution of work.
- .2 Where security has been reduced by work of Contract, provide temporary means to maintain security.
- .3 Provide temporary dust screens, barriers or warning signs in locations where work is adjacent to areas which will be operative during such work, where and when required.

1.13 CONTRACTOR'S USE OF SITE

- .1 The Contractor's use of site is limited to the locations of the dredging operations and as specified herein.
- .2 Access to work site is to be provided over existing wharf approach.
- .3 The Contractor is to note that access being provided over existing structures is to be used by other wharf users. As a result, the Contractor is to co-operate with the Departmental Representative and schedule their use of this access to permit usage by other wharf users. The Contractor should also note that access may be limited to one lane of traffic to the location of work depending on wharf activity.
- .4 The Contractor will be responsible, at the Contractor's expense, to move and replace lobster traps, electrical wires, power lines, derricks, poles, sheds, fuel lines, pumps or any obstacles which may hinder the work progress.

1.14 CO-OPERATION AND ASSISTANCE TO DEPARTMENTAL REPRESENTATIVE

- .1 Co-operate with the Departmental Representative on inspection work and provide any assistance requested.

- .2 On request of the Departmental Representative, furnish use of such boats, equipment, labour and materials forming ordinary and usual part of dredging as may be reasonably necessary to inspect the work. The Contractor will provide an approved duty boat under this contract. The boat will be on duty at all times throughout the duration of the contract. It will be also available for the use of the Departmental Representative and/or their inspector when required.

1.15 CLEANING

- .1 Before work can be accepted, the Contractor must clean up the site and leave it in a condition which is acceptable to the Departmental Representative.
- .2 The contractor should take appropriate measures to avoid the spread of any invasive species.

1.16 INSPECTION OF SITES

- .1 Prior to submitting their tender, the Contractor will familiarize themselves with existing conditions and to examine all other details which could affect the cost of the work. Ignorance of local conditions shall not at any time constitute a valid reason for claiming extra costs.

1.17 DATUM

- .1 All elevations shown on plans, or mentioned in the specifications are expressed in "Metres" and are referred to chart datum of Low Normal Tide (LNT) which is taken as elevation 0.0 metre.

1.18 PROJECT MEETINGS

- .1 The Departmental Representative will arrange project meetings and assume responsibility for setting times and recording and distributing minutes.

1.19 HARBOUR AUTHORITY

- .1 The Contractor is to contact the wharfinger or representatives of the Harbour Authorities prior to commencement of work.
- .2 Contact Harbour Authorities in advance of mobilization and negotiate berthage fees (if applicable) and access at facility.

1.20 TAXES

- .1 Pay applicable Federal, Provincial and Municipal taxes. Refer to the "Notice to Tenderers" regarding the Goods and Services tax.

END OF SECTION

1.1 SECTION INCLUDES

- .1 Fire Safety Requirements.
- .2 Hot Work Permit.
- .3 Existing Fire Protection and Alarm Systems.

1.2 RELATED SECTIONS

- .1 Section [01 35 29]: Health and Safety Requirements.

1.3 REFERENCES

- .1 National Fire Code 2015
- .2 National Building Code 2015

1.4 DEFINITIONS

- .1 Hot Work defined as:
 - .1 Welding work.
 - .2 Cutting of materials by use of torch or other open flame devices.
 - .3 Grinding with equipment which produces sparks.
 - .4 Use of open flame torches such as for roofing work.

1.5 SUBMITTALS

- .1 Submit copy of Hot Work Procedures and sample of Hot Work permit to Departmental Representative for review, within [14] calendar days of acceptance of bid.

1.6 FIRE SAFETY REQUIREMENTS

- .1 Implement and follow fire safety measures during Work. Comply with following:
 - .1 National Fire Code 2010.
 - .2 National Building Code 2010.
 - .3 Federal and Provincial Occupational Health and Safety Acts and Regulations.
- .2 In event of conflict between any provisions of above authorities the most stringent provision

will apply. Should a dispute arise in determining the most stringent requirement, Departmental Representative will advise on the course of action to be followed.

1.7 HOT WORK AUTHORIZATION

- .1 Obtain Departmental Representative's written "Authorization to Proceed" before conducting any form of Hot Work on site.
- .2 To obtain authorization submit to Departmental Representative:
 - .1 Contractor's typewritten Hot Work Procedures to be followed on site as specified below.
 - .2 Description of the type and frequency of Hot Work required.
 - .3 Sample Hot Work Permit to be used.
- .3 Upon review and confirmation that effective fire safety measures will be implemented and followed during performance of hot work, Departmental Representative will give authorization to proceed as follows:
 - .1 Issue one written "Authorization to Proceed" covering the entire project for duration of work or;
 - .2 Subdivide the work into pre-determined, individual activities, each activity requiring a separately written authorization to proceed.
- .4 Requirement for individual authorization will be based on:
 - .1 Nature or phasing of work;
 - .2 Risk to Facility operations;
 - .3 Quantity of various trades needing to perform hot work on project or;
 - .4 Other situation deemed necessary by Departmental Representative to ensure fire safety on premises.
- .5 Do not perform any Hot Work until receipt of Departmental Representative's written "Authorization to Proceed" for that portion of work.
- .6 In tenant occupied Facility, coordinate performance of Hot Work with Facility Manager through the Departmental Representative. When directed, perform Hot Work only during non-operative hours of the Facility. Follow Departmental Representative's directives in this regard.

1.8 HOT WORK PROCEDURES

- .1 Develop and implement safety procedures and work practices to be followed during the performance of Hot Work.
- .2 Hot Work Procedures to include:
 - .1 Requirement to perform hazard assessment of site and immediate work area beforehand for each hot work event in accordance with Safety Plan specified in section [01 35 29].
 - .2 Use of a Hot Work Permit system with individually issued permit by Contractor's

Superintendent to worker or subcontractor granting permission to proceed with Hot Work.

.3 Permit required for each Hot Work event.

.4 Designation of a person on site as a Fire Safety Watcher responsible to conduct a fire safety watch for a minimum duration of [60] minutes immediately following the completion of the Hot Work.

.5 Compliance with fire safety codes, standards and occupational health and safety regulations specified.

.6 Site specific rules and procedures in force at the site as provided by the Facility Manager.

.3 Generic procedures, if used, must be edited and supplemented with pertinent information tailored to reflect specific project conditions. Label document as being the Hot Work Procedures for this contract.

.4 Procedures shall clearly establish responsibilities of:

.1 Worker performing hot work,

.2 Person issuing the Hot Work Permit,

.3 Fire Safety Watcher,

.4 Subcontractor(s) and Contractor.

.5 Brief all workers and subcontractors on Hot Work Procedures and of Permit system. Stringently enforce compliance.

1.9 HOT WORK PERMIT

.1 Hot Work Permit to include the following:

.1 Project name and project number;

.2 Building name and specific room or area where hot work will be performed;

.3 Date of issue;

.4 Description of hot work type needed;

.5 Special precautions to be followed, including type of fire extinguisher needed;

.6 Name and signature of permit issuer.

.7 Name of worker to which the permit is issued.

.8 Permit validity period not to exceed 8 hours. Indicate start time/date and termination time/date.

.9 Worker's signature with time/date of hot work completion.

.10 Stipulated time period of safety watch.

.11 Fire Safety Watcher's signature with time/date.

.2 Permit to be typewritten form. Industry Standard forms shall only be used if all data specified above is included on form.

.3 Each Hot Work Permit to be completed in full, signed and returned to Contractor's Superintendent for safe keeping on site.

1.10 FIRE PROTECTION AND ALARM SYSTEMS

- .1 Fire protection and alarm systems shall not be:
 - .1 Obstructed.
 - .2 Shut-off, unless approved by Departmental Representative.
 - .3 Left inactive at the end of a working day or shift.
- .2 Do not use fire hydrants, standpipes and hose systems for purposes other than firefighting
- .3 Costs incurred, from the fire department, Facility owner [and tenants], resulting from negligently setting off false alarms will be charged to the Contractor in the form of financial progress payment reductions and holdback assessments against the Contract.

1.11 DOCUMENTS ON SITE

- .1 Keep Hot Work Permits and Hazard assessment documentation on site for duration of Work.
- .2 Upon request, make available to Departmental Representative or to authorized safety Representative for inspection.

END OF SECTION

1.1 SECTION INCLUDES

- .1 Procedures to isolate and lockout electrical facility and other equipment from energy sources.

1.2 RELATED SECTIONS

- .1 Section [01 35 29]: Health and Safety

1.3 REFERENCES

- .1 CSA C22.1-12, Canadian Electrical Code, Part 1, Safety Standard for Electrical Installations.
- .2 CAN/CSA-C22.3 No.1-06, Overhead Systems.
- .3 CSA C22.3 No.7-06, Underground Systems.
- .4 COSH: Canada Occupational Health and Safety Regulations made under Part II of the Canada Labour Code.

1.4 DEFINITIONS

- .1 Electrical Facility: means any system, equipment, device, apparatus, wiring, conductor, assembly or part thereof that is used for the generation, transformation, transmission, distribution, storage, control, measurement or utilization of electrical energy, and that has an amperage and voltage that is dangerous to persons.
- .2 Guarantee of Isolation: means a guarantee by a competent person in control or in charge that a particular facility or equipment has been isolated.
- .3 De-energize: in the electrical sense, that a piece of equipment is isolated and grounded, e.g. if the equipment is not grounded, it cannot be considered de-energized (DEAD).
- .4 Guarded: means that an equipment or facility is covered, shielded, fenced, enclosed, inaccessible by location, or otherwise protected in a manner that, to the extent that is reasonably practicable, will prevent or reduce danger to any person who might touch or go near such item.
- .5 Isolate: means that an electrical facility, mechanical equipment or machinery is separated or disconnected from every source of electrical, mechanical, hydraulic, pneumatic or other kind of energy that is capable of making it dangerous.

- .6 Live/alive: means that an electrical facility produces, contains, stores or is electrically connected to a source of alternating or direct current of an amperage and voltage that is dangerous or contains any hydraulic, pneumatic or other kind of energy that is capable of making the facility dangerous to persons.

1.5 COMPLIANCE REQUIREMENTS

- .1 Comply with the following in regards to isolation and lockout of electrical facilities and equipment:
 - .1 Canadian Electrical Code.
 - .2 Federal and Provincial Occupational Health and Safety Acts and Regulations.
 - .3 Regulations and code of practise as applicable to mechanical equipment or other machinery being de-energized.
 - .4 Procedures specified herein.
- .2 In event of conflict between any provisions of above authorities the most stringent provision will apply.

1.6 SUBMITTALS

- .1 Submit copy of lockout procedures, sample of lockout permit and lockout tags proposed for use. Submit within [14] calendar days of acceptance of bid.

1.8 LOCKOUTS

- .1 De-energize, isolate and lockout electrical facility, mechanical equipment and machinery from all potential sources of energy prior to working on such items.
- .2 Develop and implement clear and specific lockout procedures to be followed as part of the Work.
- .3 Prepare typed written Lockout Procedures describing safe work practices, procedures, worker responsibilities and sequence of activities to be followed on site by workforce to safely isolate an active piece of equipment or electrical facility and effectively lockout and tagout it's sources of energy.
- .4 Include as part of the Lockout Procedures a system of lockout permits managed by Contractor's Superintendent or other qualified person designated by him/her as being "in-charge" at the site.
 - .1 A lockout permit shall be issued to specific worker providing a Guarantee of Isolation before each event when work must be performed on a live equipment or electrical facility.
 - .2 Duties of person managing the permit system to include:
 - .1 Issuance of permits and lockout tags to workers.
 - .2 Determining permit duration.
 - .3 Maintaining record of permits and tags issued.
 - .4 Making a Request for Isolation to Departmental Representative when required as specified above.

- .5 Designating a Safety Watcher, when one is required based on type of work.
 - .6 Ensuring equipment or facility has been properly isolated.
 - .7 Collecting and safekeeping lockout tags returned by workers as a record of the event.
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- .5 Clearly establish, describe and allocate responsibilities of:
 - .1 Workers.
 - .2 Person managing the lockout permit system.
 - .3 Safety Watcher.
 - .4 Subcontractor(s) and General Contractor.
 - .6 Generic procedures, if used, must be edited and supplemented with pertinent information to reflect specific project requirements.
 - .1 Incorporate site specific rules and procedures in force at site as provided by Facility Manager through the Departmental Representative.
 - .2 Clearly label the document as being the Lockout procedures applicable to work of this contract.
 - .7 Use energy isolation lockout devices specifically designed and appropriate for type of facility or equipment being locked out.
 - .8 Use industry standard lockout tags.
 - .9 Provide appropriate safety grounding and guards as required.

1.9 CONFORMANCE

- .1 Brief all workers and subcontractors on requirements of this section. Stringently enforce use and compliance.

1.10 DOCUMENTS ON SITE

- .1 Post Lockout Procedures on site in common location for viewing by workers.
- .2 Keep copies of Request for Isolation forms and lockout permits and tags issued to workers on site for full duration of Work.
- .3 Upon request, make available to Departmental Representative or to authorized safety representative for inspection.

END OF SECTION

Part 1 General

1.1 REFERENCES

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .3 Province of Prince Edward Island
 - .1 Occupational Health and Safety Act, R.S.P.E.I. [2004], PEI Regulations
- .4 Fire Safety and Lockout

1.2 DEFINITIONS

- .1 COSH: Canada Occupational Health and Safety Regulations made under Part II of the Canada Labour Code.
- .2 Competent Person: means a person who is:
 - .1 Qualified by virtue of personal knowledge, training and experience to perform assigned work in a manner that will ensure the health and safety of persons in the workplace, and;
 - .2 Knowledgeable about the provisions of occupational health and safety statutes and regulations that apply to the Work and;
 - .3 Knowledgeable about potential or actual danger to health and safety associated with the Work.
- .3 Medical Aid Injury: any minor injury for which medical treatment was provided and the cost of which is covered by Worker's Compensation Boards of Prince Edward Island.
- .4 PPE: personal protective equipment
- .5 Work Site: where used in this section shall mean areas, located at the premises where Work is undertaken, used by Contractor to perform all of the activities associated with the performance of the work.

1.3 SUBMITTALS

- .1 Submit site-specific Health and Safety Plan prior to commencement of Work. Health and Safety Plan must include at least:
 - .1 Results of site specific safety hazard assessment.
 - .2 Results of safety and health risk or hazard analysis for site tasks and operation.
 - .3 Departmental Representative will review Health and Safety Plan and provide comments.
 - .4 Revise the Plan as appropriate and resubmit within 2 working days after receipt of comments.
 - .5 Submit revisions and updates made to the Plan during the course of Work.
 - .6 Due to the current global pandemic of COVID-19 Site Specific Safety Plan to incorporate, at minimum:
 - .1 Communication and Awareness – signage reflecting the requirements and maintenance of health and safety protocols and updates as they occur
 - .2 Recommended practices for reducing the risk of transmission
 - .3 Posters for hand hygiene/hand washing/protection of others

- .4 Self-Screening protocols
- .5 Fit for Duty/Worker Prescreening Protocols; **IMPORTANT:** Fit for Duty includes **“YOU or Anyone in your Household”**
- .6 Social/Personal Distancing Protocols
- .7 Personal Hygiene Stations (hand was stations/hand sanitization stations)
- .8 Enhanced Cleaning Protocols/Worksite Cleaning Guidelines
- .9 Reporting processes and procedures to follow if feeling ill while at the job site
- .10 PPE Requirements for workers
- .11 Prevention Measures to be taken by workers
- .12 Protocols on management of a reported case of COVID-19 at the job site
- .13 Access to/from construction site
- .14 Limiting and removing internal touch areas
- .15 Compartmentalization
- .16 Site operation procedures
- .17 Daily Audit Protocols

Note: These items are not a prescriptive requirement, rather a suggestion on the items to be included at minimum in the Contractor Site Specific Safety Plan

- .7 Departmental Representative’s review and comments made of the Plan shall not be construed as an endorsement, approval or implied warranty of any kind by Canada and does not reduce Contractor’s overall responsibility for Occupational Health and Safety of the Work.
- .2 Submit name of designated Health and Safety Site Representative and support documentation specified in the Safety Plan.
- .3 Submit building permit, compliance certificates and other permits obtained.
- .4 Submit copy of Letter of Good Standing from Provincial Workers Compensation or other department of labour organization
 - .1 Submit update of Letter of Good Standing whenever expiration date occurs during the work period.
- .5 Submit copies of Contractor's authorized representative's work site health and safety inspection reports to the Departmental Representative and/or inspector daily.
- .6 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .7 Submit copies of incident and accident reports.
- .8 Submit WHMIS and MSDS Data Sheets.
- .9 Departmental Representative’s review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .10 On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.

1.4 COMPLIANCE REQUIREMENTS

- .1 Comply with Occupational Health and Safety Act for Province of Prince Edward Island, and Occupational Health and Safety Regulations made pursuant to the Act.

- .2 Comply with Canada Labour Code – Part II (entitled Occupational Health and Safety) and the Canada Occupational Health and Safety Regulations (COSH) as well as any other regulations made pursuant to the Act.
 - .1 The Canada Labour Code can be viewed at <http://laws-lois.justice.gc.ca/eng/acts/L-2/FullText.html>
 - .2 COSH can be viewed at: <http://laws-lois.justice.gc.ca/eng/regulations/SOR-86-304/index.html>
 - .3 A copy may be obtained at: Canadian Government Publishing Public Works & Government Services Canada Ottawa, Ontario, K1A 0S9. Tel: (819) 956-4800 (1-800-635-7943). Publication No. L31-85/2000 E or F).
- .3 Observe construction safety measures of:
 - .1 Part 8 of National Building Code
 - .2 Municipal by-laws and ordinances
- .4 In case of conflict or discrepancy between above specified requirements, the more stringent shall apply.
- .5 Maintain Workers Compensation Coverage in good standing for duration of Contract. Provide proof of clearance through submission of Letter in Good Standing prior to commencement of work.
- .6 Medical Surveillance: Where prescribed by legislation or regulation, obtain and maintain worker medical surveillance documentation.

1.5 RESPONSIBILITY

- .1 Be responsible for health and safety for health and safety of persons on site, of property and for protection of persons and public circulating adjacent to work operations to extent that they may be affected by conduct of the Work.
- .2 Comply with and enforce compliance by all workers, sub-contractors and other persons granted access to work site with safety requirements of Contract Documents, applicable Federal, Provincial, and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.6 SITE CONTROL AND ACCESS

- .1 Control the Work and entry points to Work Site. Approve and grant access only to workers and authorized persons. Immediately stop and remove non-authorized persons.
 - .1 The Departmental Representative will provide names of those persons authorized by the Departmental Representative to enter onto Work Site and will ensure that such authorized persons have the required knowledge and training on Health and Safety pertinent to the reason for being at the site, however, Contractor remains responsible for the health and safety of authorized persons while at the Work Site.
- .2 Isolate Work Site from other areas of the premises by use of appropriate means.
 - .1 Erect fences, hoarding, barricades and temporary lighting as required to effectively delineate the Work Site, stop non-authorized entry, and to protect pedestrians and vehicular traffic around and adjacent to the Work and create a safe environment.
 - .2 Post signage at entry points and other strategic locations indicating restricted access and conditions for access.
 - .3 Use professionally made signs with bilingual message in the 2 official languages or internationally known graphic symbols.

- .3 Provide safety orientation session to persons granted access to Work Site. Advise of hazards and safety rules to be observed while on site.
- .4 Ensure persons granted site access wear appropriate PPE. Supply PPE to inspection authorities who require access to conduct tests or perform inspections.
- .5 Secure Work Site against entry when inactive or unoccupied and to protect persons against harm. Provide security guard where adequate protection cannot be achieved by other means.

1.7 PROTECTION

- .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.
- .2 Should unforeseen or peculiar safety related hazard or condition become evident during performance of the Work, immediately take measures to control or rectify situation and prevent damage or harm. Immediately advise the Departmental Representative verbally and in writing.

1.8 FILING OF NOTICE

- .1 File Notice of Project and other Notices with Provincial authorities prior to beginning of Work.
 - .1 Departmental Representative will assist in locating address for Filing Notice of Project if needed.

1.9 PERMITS

- .1 Obtain permits, licenses, compliance certificates as specified in Section 01 10 10 before and during progress of Work. Post on site.
- .2 Where particular permit or compliance certificate cannot be obtained at the required stage of work, notify the Departmental Representative in writing and obtain the Departmental Representative's approval to proceed prior to carrying out that portion of the work.

1.10 HAZARD ASSESSMENTS

- .1 Perform site specific safety hazard assessment related to project.
- .2 Carry out initial assessment prior to commencement of Work with further assessments as needed during progress of work, including when new trades and subcontractors arrive on site.
- .3 Record results and address in Health and Safety Plan.
- .4 Keep documentation on site for entire duration of the Work.
- .5 Provide a copy of the site specific health and safety hazard assessment to the Departmental Representative.

1.11 PROJECT/SITE CONDITIONS

- .1 Following are potential health, environmental and safety hazards at the site for which Work may involve contact with:
 - .1 Existing hazardous and controlled products stored on site.
 - .2 Existing hazardous substances or contaminated building materials.
 - .3 Facility on-going operations.
 - .4 Marine/fishing traffic

- .5 Existing or potential weather; ie. Slippery conditions.
- .6 Working on or near water
- .7 Vehicular and pedestrian traffic
- .2 Above items shall not be construed as being complete and inclusive of potential health and safety hazards encountered during Work.
- .3 Include above items in the hazard assessment of the Work.
- .4 MSDS of pertinent hazardous and controlled products stored on site can be obtained from Owner

1.12 MEETINGS

- .1 Attend pre-construction health and safety meeting, convened and chaired by the Departmental Representative, prior to commencement of Work, at time, date and location determined by the Departmental Representative. Ensure attendance of:
 - .1 Superintendent of Work
 - .2 Designated Health and Safety Site Representative
 - .3 Subcontractors
- .2 Conduct regularly scheduled tool box and safety meetings during the Work in conformance with Occupational Health and Safety regulations
- .3 Keep documents on site.
- .4 Provide copies to the Departmental Representative.

1.13 HEALTH AND SAFETY PLAN

- .1 Prior to commencement of Work, develop written Health and Safety Plan specific to the Work. Implement, maintain, and enforce Plan for entire duration of Work and until final demobilization from site.
- .2 Health and Safety Plan shall include the following components:
 - .1 List of health risks and safety hazards identified by hazard assessment.
 - .2 Control measures used to mitigate risks and hazards identified.
 - .3 On-site Contingency and Emergency Response Plan as specified below.
 - .4 On-site Communication Plan as specified below.
 - .5 Name of Contractor's designated Health and Safety Site Representative and information showing proof of his/her competence and reporting relationship in Contractor's company.
 - .6 Names, competence and reporting relationship of other supervisory personnel used in the Work for occupational health and safety purposes.
- .3 On-site Contingency and Emergency Response Plan shall include:
 - .1 Operational procedures, evacuation measures and communication process to be implemented in the event of an emergency.
 - .2 Evacuation Plan: site and floor plan layouts showing escape routes, marshalling areas. Details on alarm notification methods, fire drills, location of firefighting equipment and other related data.
 - .3 Name, duties and responsibilities of persons designated as Emergency Warden(s) and deputies.
 - .4 Emergency Contacts: name and telephone number of officials from:

- .1 General Contractor and subcontractors.
- .5 Emergency Contacts:
 - .1 Pertinent Federal and Provincial Departments and Authorities having jurisdiction.
 - .2 Local emergency resource organizations.
- .6 Spill kit and MSDS sheets.
- .7 Harmonize Plan with Facility's Emergency Response and Evacuations Plan. Departmental Representative will provide pertinent data including name of the Departmental Representative and Facility Management contacts.
- .4 On-site Communication Plan:
 - .1 Procedures for sharing of work related safety information to workers and subcontractors, including emergency and evacuation measures.
 - .2 List of critical work activities to be communicated with Facility Manager which have a risk of endangering health and safety of Facility users.
 - .3 Include ship to shore communication and evacuation plans.
 - .4 Ensure harmony of emergency communication with land based stakeholders.
- .5 Address all activities of the Work including those of subcontractors.
- .6 Review Health and Safety Plan regularly during the Work. Update as conditions warrant to address emerging risks and hazards, such as whenever new trade or subcontractor arrive at Work Site.
- .7 The Departmental Representative will respond in writing, where deficiencies or concerns are noted and may request re-submission of the Plan with correction of deficiencies or concerns.
- .8 Post copy of the Plan, and updates, prominently on Work Site.

1.14 SAFETY SUPERVISION

- .1 Employ Health and Safety Site Representative responsible for daily supervision of health and safety of the Work.
- .2 Health and Safety Site Representative may be the Superintendent of the Work or other person designated by Contractor and shall be assigned the responsibility and authority to:
 - .1 Implement, monitor and enforce daily compliance with health and safety requirements of the Work
 - .2 Monitor and enforce Contractor's site-specific Health and Safety Plan.
 - .3 Conduct site safety orientation session to persons granted access to Work Site.
 - .4 Ensure that persons allowed site access are knowledgeable and trained in health and safety pertinent to their activities at the site or are escorted by a competent person while on the Work Site.
 - .5 Stop the Work as deemed necessary for reasons of health and safety
- .3 Health and Safety Site Representative must:
 - .1 Be qualified and competent person in occupational health and safety.
 - .2 Have site-related working experience specific to activities of the Work.
 - .3 Be on Work Site at all times during execution of the Work.
- .4 All supervisory personnel assigned to the Work shall also be competent persons.
- .5 Inspections:

- .1 Conduct regularly scheduled safety inspections of the Work on a minimum weekly basis. Record deficiencies and remedial action taken.
- .6 Cooperate with Facility's Occupational Health and Safety Representative should one be designated by the Departmental Representative.
- .7 Keep inspection reports and supervision related documentation on site.
- .8 Provide copies to the Departmental Representative.

1.15 TRAINING

- .1 Use only skilled workers on Work Site who are effectively trained in occupational health and Safety procedures and practices pertinent to their assigned task.
- .2 Maintain employee records and evidence of training received. Make data available to the Departmental Representative upon request.
- .3 When unforeseen or peculiar safety-related hazard(s), or condition(s) occur during performance of the Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction and advise The Departmental Representative verbally and in writing.

1.16 MINIMUM SITE SAFETY RULES

- .1 Notwithstanding requirement to abide by federal and provincial health and safety regulations; ensure the following minimum safety rules are obeyed by persons granted access to Work Site.
 - .1 Wear appropriate PPE pertinent to the Work or assigned task.
 - .2 Immediately report any unsafe condition at site, near-miss accident, injury and damage.
 - .3 Maintain site and storage areas in a tidy condition free of hazards causing injury.
 - .4 Obey warning signs and safety tags.
- .2 Brief all persons of disciplinary protocols to be taken for non-compliance of the safety rules. Post rules on site.

1.17 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by the Departmental Representative.
- .2 Provide the Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 The Departmental Representative may stop Work if non-compliance of health and safety regulations is not corrected.

1.18 INCIDENT REPORTING

- .1 Investigate and report the following incidents to the Departmental Representative in a timely manner:
 - .1 All near misses, incidents, or hazardous occurrences.
 - .2 Medical Aid injuries.
 - .3 Property damage.

- .4 Interruptions to Facility operations resulting in an operational lost to a Federal department.
- .2 Submit report in writing.

1.19 HAZARDOUS PRODUCTS

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS).
- .2 Keep MSDS data sheets for all products delivered to site.
 - .1 Post on site.
 - .2 Submit copy to the Departmental Representative.

1.20 RESPONSIBILITY

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.21 CONFINED SPACES

- .1 Abide by Occupational Health and Safety regulations regarding work in confined spaces.
- .2 Obtain and Entry Permit in accordance with Part XI of the Canada Occupational Health and Safety Regulations for entry into an existing identified confined space located at the Facility or premises of Work.
 - .1 Obtain permit from Facility Manager.
 - .2 Keep copy of permit issued.
- .3 Safety for Inspectors:
 - .1 Provide PPE and training to the Departmental Representative and other persons who require entry into confined space to perform inspections.
 - .2 Be responsible for efficacy of equipment and safety of persons during their entry and occupancy in the confined space.

1.22 SITE RECORDS

- .1 Maintain on Work Site copy of safety related documentation and reports stipulated to be produced in compliance with Acts and Regulations of authorities having jurisdiction and of those documents specified herein.
- .2 Upon request, make available to the Departmental Representative or authorized Safety Officer for inspection.

1.23 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Prince Edward Island having jurisdiction, and in consultation with the Departmental Representative.
- .2 Post other documents as specified herein, including but not limited to:

- .1 Site specific Health and Safety Plan
- .2 Material Safety data sheets
- .3 Emergency contact information
- .4 Acts and Regulations

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Environmental and Waste Management Plans: Section 01 74 21.
- .2 Dredging: Section 35 20 23.

1.2 REFERENCES

- .1 WHMIS: Workplace Hazardous Materials Information System, Health Canada.
- .2 Transportation of Dangerous Goods Act. Transport Canada, update 2008-02-21.
- .3 MBCA: Migratory Birds Convention Act, Environment Canada, 1994.
- .4 Canadian Coast Guard Regulations, Department of Fisheries and Oceans Canada.
- .5 Canadian Shipping Act, Transport Canada, 2001.
- .6 AWWPA: American Wood Preserver Association.

1.3 DEFINITIONS

- .1 Hazardous Material: Product, substance, or organism that is used for its original purpose; and that is either dangerous goods or a material that may cause adverse impact to the environment or adversely affect health of persons, animals, or plant life when released into the environment.
- .2 Wetlands: land where the water table is at, near or above the surface or which is saturated for a long enough period to promote such features as wet-altered soils and water tolerant vegetation. Wetlands include organic wetlands or "peatlands," and mineral wetlands or mineral soil areas that are influenced by excess water but produce little or no peat.
- .3 Watercourse: refers to the bed and shore of a river, stream, lake, creek, pond, marsh, estuary or salt-water body that contains water for at least part of each year.
- .4 Alien species: refers to a species or subspecies introduced outside its normal distribution whose establishment and spread threaten ecosystems, habitats or species with economic or environmental harm.
- .5 Buffer Zone: a vegetated land that protects watercourses from adjacent land uses. It refers to the land adjacent to watercourses, such as streams, rivers, lakes, ponds, oceans, and wetlands, including the floodplain and the transitional lands between the watercourse and the drier upland areas.

1.4 TRANSPORTATION

- .1 Transport hazardous materials and hazardous waste in compliance with Federal Transportation of Dangerous Goods Act.
- .2 Ensure that machinery arrives on site in a clean condition and is maintained free of fluid leaks, invasive species and noxious weeds.
- .3 Do not overload trucks when hauling material or equipment. Secure contents against spillage.

- .4 All trucks transporting dredged material will have watertight boxes.
- .5 Maintain trucks clean and free of mud, dirt and other foreign matter.
- .6 Clean and disinfect all equipment before (and after) entering a water body to avoid the transfer and spreading of aquatic invasive species.
- .7 Avoid potential release of contents and of any foreign matter into waterways, onto highways, roads and access routes used for the Work. Take extra care when hauling (if applicable) dredged material and other hazardous materials. Inspect disposal pipeline (if applicable) on a regular basis. Immediately clean any spillage and spoils and report any incidences to the Departmental Representative.
- .8 Before commencement of work, advise the Departmental Representative of the existing roads and temporary routes proposed to be used to access work areas and to haul material/equipment to and from the site, including roads to the dredged disposal field (if applicable). Also communicate with local stakeholders regarding transport of materials.

1.5 DISPOSAL OF DREDGED MATERIAL

- .1 Obtain applicable permit from the Departmental Representative for approved site selected for disposal.
- .2 Control disposal and runoff of water containing suspended materials or other harmful substances in accordance with requirements of authority having jurisdiction.
- .3 Suction Dredging:
 - .1 Routinely inspect pipe for any potential breach in the sediment train and keep in good leak free condition at all times.
 - .2 Should leakage occur along the pipeline immediately cease dredging operations and repair leak.

1.6 HAZARDOUS MATERIAL HANDLING

- .1 Handle and store hazardous materials on site in accordance with WHMIS procedures and requirements.
- .2 Store all hazardous liquids in location and manner to prevent their spillage into the environment.
- .3 Maintain written inventory of all hazardous materials kept on site. List product name, quantity and storage date.
- .4 Keep MSDS data sheets on site for all items.
- .5 Workers in contact with hazardous materials must be provided with, and use regulated personal protective equipment and must have the necessary training to know how to handle the different hazardous materials for Health and Safety and according to Environmental Regulations.

1.7 PETROLEUM, OIL AND LUBRICANTS

- .1 Comply with Federal and Provincial laws, regulations, codes and guidelines for the storage of fuel and petroleum products on site.
- .2 Do not place fuel storage tanks or store fuel or other petroleum products within a 30 metre buffer zone of watercourses and wetlands. Do not fuel or lubricate equipment within this 30 metre buffer zone. Obtain approval from the Departmental Representative and/or Facility Manager of

acceptable location on site for fuel storage and equipment service. Wash, refuel and service machinery and store fuel and other materials for the machinery in such a way as to prevent any deleterious substances from entering the water body.

- .3 Do not, dump, spill or waste petroleum products or any other deleterious substances on ground or in the water.
- .4 Be diligent and take all necessary precautions to avoid spills that may contaminate the soil and water (both surface and subsurface) when handling petroleum products on site and during fueling and servicing of vehicles and equipment.
- .5 Maintain on site appropriate emergency spill response equipment consisting of at least one 250 litre (55 gallon) overpack spill kit for containment and cleanup of spills.
- .6 Maintain vehicles and equipment in good working order to prevent leaks on site.
- .7 In the event of a petroleum spill, immediately notify Departmental Representative and the Canadian Coast Guard (CCG) at 1-800-565-1633 (24 hour report line). Perform clean-up in accordance with all regulations and procedures stipulated by authority having jurisdiction.

1.8 DISPOSAL OF WASTES

- .1 Do not bury rubbish, demolition debris and waste materials on site.
- .2 Dispose and recycle demolition debris and waste materials in accordance with project waste management requirements.
- .3 Do not dispose of hazardous waste, volatile materials (such as mineral spirits, paints, thinners etc) and petroleum products into waterways, storm or sanitary sewers or in waste landfill sites.
- .4 Dispose of hazardous waste in accordance with applicable federal and provincial laws, regulations, codes and guidelines.
- .5 Develop and submit to the *Departmental Representative* an Emergency Response Plan that is to be implemented immediately in the event of a sediment release or spill of a deleterious substance. Include Provincial Environmental Emergency Contact information, and Departmental Representative's contact information.

1.9 WATER QUALITY

- .1 Conduct dredging of a watercourse in such a manner to limit turbidity and reduce sediment suspension in the water to an absolute minimum at all times.
 - .1 Maintain appropriate production speed and momentum of the dredging equipment. Make adjustments as required and as approved by the Departmental Representative.
 - .2 Strategically position excavation equipment and haul vehicles to avoid over the water swings of finer material [dredged material] whenever possible.
 - .3 [if applicable for dredging] Restrict the amount of material dredged to the area and depth required for navigation.
- .2 Where work may affect the water quality adjacent to water intake lines used by Lobster Holding Facilities, Fish Processing Facilities and other harbour users, schedule work in cooperation with the Harbour Authority as directed by The Departmental Representative to minimize interference and impact to harbour users.
- .3 Visually monitor the water turbidity of the surrounding areas adjacent to the work and up to the established dredge limit of 200 metres.

- .1 Should excessive change occur in the turbidity beyond the dredge limit which differs from existing conditions of the surrounding water bodies, such as a distinct color difference; notify the Departmental Representative to obtain appropriate mitigation measures to be followed.
- .4 Water quality during suction dredging:
 - .1 Minimize out-fall of the dredge material at the disposal site by placing the pipeline outtake at or near the water level surface.
 - .2 Restrict vessel traffic adjacent to the disposal site to an absolute minimum to avoid the re-suspension of dredged material from propeller wash.
- .5 Water contamination by preservative treated wood:
 - .1 Preservative treated lumber and timber, whether plant or site treated, shall be cured for a minimum of 30 days from date of the treatment application before their installation in areas which will be in contact with the water.
 - .2 Do not cut treated wood lumber over the surface of a watercourse or wetland.
 - .3 Do not use liquid applied preservative products over the surface of a watercourse or wetland.
 - .4 Wood treated with Chromate Copper Arsenate (CCA) or Ammoniac Copper Zinc Arsenate (ACZA) must be CSA or AWWA approved.
 - .5 Do not use timber and lumber treated with creosote, petroleum and pentachlorophenol for any part of the Work.
- .6 Do not wash down equipment within a 30 metre buffer zone of a wetland, watercourse or other identified environmentally sensitive area.
- .7 Where required, install effective sediment control measures before starting work to prevent the entry or re-suspension of sediment in the water body. Inspect sediment control measures regularly to ensure they are functioning properly, and make all necessary repairs if any damage occurs. Upon completion of use, remove these control measures in a way that prevents the escape of settled sediment.

1.10 SOCIOECONOMIC RESTRICTION

- .1 Abide by municipal and provincial regulations for any restriction on work performed during the night time and on flood lighting of the site. Obtain applicable permits.
- .2 Place flood lights in opposite direction of adjacent residential and business areas.
- .3 Use equipment and machinery with purposely designed mufflers to reduce noise on site to lowest possible level. Maintain mufflers in good operating condition at all times.
- .4 The use of solid-burning or slow pulsing warning lights at night must be avoided. The use of strobe lights at night, at the minimum intensity and minimum number of flashes per minute (longest duration between flashes) allowable by Transport Canada, is recommended. Lights should completely turn off between flashes.
- .5 LED lights must be used instead of other types of lights where possible. LED light fixtures are less prone to light trespass (i.e., are better at directing light where it needs to be, and do not bleed light into the surrounding area).

1.11 BIRD AND BIRD HABITAT

- .1 Become knowledgeable with and abide by the Migratory Birds Convention Act (MBCA) in regards to the protection of migratory birds, their eggs, nests and their young encountered on site and in the vicinity.
- .2 Minimize disturbance to all birds on site and adjacent areas during the entire course of the Work.
- .3 Do not approach concentrations of seabirds, waterfowl and shorebirds when anchoring equipment, accessing wharves or ferrying supplies.
- .4 During night time work, position flood lights in opposite direction of nearby bird nesting habitat.
- .5 Do not use beaches, dunes, and other natural previously undisturbed areas of the site to conduct work unless specifically approved by the Departmental Representative.
- .6 Should nests or chicks of migratory birds in wetlands be encountered during work, immediately stop work in that area and notify Departmental Representative for directives to be followed.
 - .1 Do not disturb nest site and neighbouring vegetation until nesting is completed.
 - .2 Minimize work immediately adjacent to such areas until nesting is completed.
 - .3 Protect these areas by following recommendations of Canadian Wildlife Service.

1.12 FISH AND FISH HABITAT

- .1 Be aware if the risk for contamination of the fish habitat at the site as a result of alien species being introduced in the water.
- .2 Weather conditions are to be assessed on a daily basis to determine the risk of extreme weather in the project areas. Avoid work during periods which ECCC has issued rainfall or wave warning for the work area.
- .3 Ensure that all in-water activities, or associated in-water structures, do not interfere with fish passage, constrict the channel width, or reduce flows.
- .4 Screen any water intakes or outlet pipes to prevent entrainment or impingement of fish. Entrainment occurs when a fish is drawn into a water intake and cannot escape. Impingement occurs when an entrapped fish is held in contact with the intake screen and is unable to free itself.
- .5 To minimize the possibility of fish habitat contamination, all construction equipment which will be immersed into the water of a watercourse, or has the possibility of coming into contact with such water during the course of the work, must be cleaned and washed to ensure that they are free of marine growth and alien species.
 - .1 Equipment shall include boats, barges, cranes, excavators, haul trucks, pumps, pipe lines and all other miscellaneous tools and equipment previously used in a marine environment.
- .6 Cleaning and washing of equipment shall be performed immediately upon their arrival at the site and before use in or over the body of water.
- .7 Conduct cleaning and washing operations as follows:
 - .1 Inspect and remove fouling plants and animals from boat, motor, anchor, trailer and equipment.
 - .2 Scrape and remove heavy accumulation of mud and dispose appropriately.
 - .3 Wash all surfaces of equipment by use of a pressurized fresh water supply.

- .4 Immediately follow with application of a heavy sprayed coating of undiluted vinegar or other environmentally approved cleaning agent to thoroughly remove all plant matter, animals and sediments.
- .5 Clean hull and dispose of removed material far from the water.
- .6 Check and remove all plant, animal and sediment matter from all bilges and filters.
- .7 Drain standing water from equipment and let fully dry before use.
- .8 Upon removal from the water, drain standing water from your motor, bilge and wells. If possible, let equipment dry completely before removal off the site.
- .9 Use environment friendly anti-fouling paint or products on your boat hull.
- .8 Do not perform cleaning and wash down within a 30 metre buffer zone of a wetland, watercourse or other identified environmentally sensitive area.
- .9 Record of Assurance Logbook:
 - .1 Maintain an on-going log of past and present usage and wash downs of all equipment to illustrate mitigation measures undertaken against fish habitat contamination by alien species.
 - .2 Write data in a hard cover bound logbook,
 - .3 Include the following:
 - .1 Date and location where equipment was previously used in a watercourse or wetland;
 - .2 Type of work performed.
 - .3 Dates of wash down for each piece of equipment;
 - .4 Cleaning method and cleaning agent(s) used.
 - .4 Upon request, submit logbook to Departmental Representative for review.
- .10 Abide by requirements and recommendations of the Federal Department of Environment and the Department of Fisheries and Oceans – Fisheries Protection Program (FPP) in cleaning and wash down of equipment.

1.13 AIR QUALITY

- .1 Keep airborne dust and dirt resulting from the work on site to an absolute minimum.
- .2 Apply dust control measures to roads, parking lots and work areas.
- .3 Spray surface with water or other environmentally approved product. Use purposely suited equipment or machinery and apply in sufficient quantity and frequency to provide effective result and continued dust control during the entire course of the work.
- .4 Do not use oil or any other petroleum products for dust control.
- .5 To reduce emissions of air contaminants and Greenhouse Gas, implement an idling policy which includes:
 - .1 Diesel construction equipment will be turned off when not in active use.
 - .2 Vehicles idling more than 5 minutes will be turned off. Morning vehicle warm-ups will be restricted to 3-5 minutes. A staging zone will be established for trucks that are waiting to load/unload to minimize public exposure to emissions. Idling restrictions will not apply when:
 - .1 The engine is required to power auxiliary equipment (e.g., hoist, lift, computers, safety lights, etc);

- .2 Extreme weather conditions (-10 degrees Celsius or below / +30 degrees Celsius or above) or any other circumstance where heating or air conditioning is required for worker's health and safety;
- .3 The original equipment manufacturer specifically recommends a longer idling period for normal and efficient operation of the motor vehicle in which case such recommended period shall not be exceeded;
- .4 Vehicle/equipment maintenance and diagnostic purposes;
- .5 Where the unit is not expected to restart due to mechanical issues.

1.14 FIRES

- .1 Fires and burning of rubbish on site is not permitted.

1.15 DREDGING WITH A DISPOSAL AT SEA PERMIT

- .1 Dispose of dredge material at the approved Disposal at Sea (DAS) site in accordance with any/all conditions of the Canadian Environmental Protection Act (CEPA) Disposal at Sea Permit. A copy of the CEPA Disposal at Sea Permit must be kept on site at all times. Dredge disposal operations are to comply with the requirements of the Disposal at Sea Permit issued for the project.
- .2 A DMDP (Dredge Material Disposal Plan) required by ECCC as part of permit conditions, is to be prepared by the Contractor and submitted to the *Departmental Representative* for review by ECCC within 10 days of award. Requirements will include but not limited to: equipment details, schedule and reporting requirements including provisions of electronic positioning equipment of the tug to verify position of all disposal events.
- .3 If a marine mammal (whales, porpoises) is identified within the vicinity of the project, work shall stop until the animal is gone.
- .4 The first disposal event conducted under the authority of the DAS permit shall not exceed VOLUME scow measure. After the first disposal event, the quantity of material disposed during a single event shall not be limited. Should disposal activities stop for more than 24 hours, the first disposal event of the new day shall not exceed VOLUME scow measure, after which the quantity of material disposed at a single event shall not be limited.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Environmental Procedures: Section 01 35 43.
- .2 Dredging: Section 35 20 23.

1.2 GENERAL

- .1 Carry out work placing maximum emphasis on the areas of:
 - .1 Waste Reduction;
 - .2 Diversion of waste from landfill and;
 - .3 Material Recycling.

1.3 WASTE MANAGEMENT PLAN

- .1 Prior to commencement of work, prepare Waste Management Workplan.
- .2 Workplan to include:
 - .1 Waste reduction practices.
 - .2 Material source separation process.
 - .3 Procedures for sending recyclables to recycling facilities.
 - .4 Training and supervising workforce on waste management at site.
- .3 Submit copy of Work Plan to the Departmental Representative for review.

1.4 WORKER TRAINING AND SUPERVISION

- .1 Provide adequate training to workforce, through meetings and demonstrations, to emphasize purpose and worker responsibilities in carrying out Waste Management Plan.
- .2 Post a copy of Plan in a prominent location on site for review by workers.

1.5 ENVIRONMENTAL PROTECTION PLAN

- .1 A sample Environmental Protection Plan is included as Appendix "B".

1.6 DISPOSAL REQUIREMENTS

- .1 Burying of burning of rubbish and waste materials is prohibited.
- .2 Disposal of waste, volatile materials, mineral spirits, oil, or paint thinner into waterways, storm, or sanitary sewers is prohibited.
- .3 Dispose of waste only at approved waste processing facility approved by authority having jurisdiction.
- .4 Contact the authority having jurisdiction prior to commencement of work, to determine what, if any, waste materials have been banned from disposal. Take appropriate action to isolate such banned materials at site of work and dispose in strict accordance with provincial and municipal regulations.

- .5 Transport waste in separated condition, following rules in support of the effort to divert, recycle and reduce amount of solid waste placed in landfill.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 01 10 10 – General Instructions.
- .2 Section 01 35 29 – Health and Safety Requirements.
- .3 Section 01 35 43 – Environmental Procedures, Marine Work.
- .4 Section 01 74 21 – Environmental and Waste Management Plans.

1.2 GENERAL DESCRIPTION

- .1 This section specifies requirements for excavating Class “B” underwater materials in Malpeque Harbour, Channel and Point Sections, and placing dredged material at the ocean disposal site.
- .2 The material to be dredged is classified as a Class B material and is generally found to be mostly sand with some silt and clay and seaweed.

1.3 MEASUREMENT PROCEDURES

- .1 Only material excavated above grade plane and within limits indicated or specified will be measured.
- .2 The quantities shown on the price list are approximate amounts and may not be increased without written authorization from the Departmental Representative. No payment will be made for additional quantities unless authorized in writing by the Departmental Representative.
- .3 Dredging will be measured in Cubic Metres, In-place Measurement [CMPM] basis as follows:
volume to be measured from existing seabed elevations established from sounding survey down to grade depth elevation specified.
 - .1 For purpose of quantity computation, existing seabed elevation will be represented by “Average” sounding for each matrix block of survey by Departmental Representative as soon as practical after Contract award. Post dredging elevation for quantity computations will be shallowest of grade, bedrock or “Average of Instantaneous” sounding for each matrix block.
- .4 Measurement for payment of material dredged will be based on sounding surveys performed by the Contractor. It is the sole responsibility of the Contractor to engage a qualified Surveyor, Licensed to survey in the Province of Prince Edward Island. The cost associated with the surveyor will be considered incidental to the work and will not be measured separately for payment. Certification will have to be submitted to the Departmental Representative prior to commencement of the work. The Contractor will determine when they want areas cleared and organize the soundings with their surveyor. The documentation from the licensed surveyor that identifies areas dredged and the soundings for that area will be provided to the Departmental Representative. The volume shall be determined based on the initial bathymetric surveys carried out before dredging commences and after reports of cleared areas are received from the Contractor. The Departmental Representative will verify that the dredging Contractor has performed dredging to the specified grade depth with each sectional area. If the survey shows that grade depth has not been obtained, the Contractor is to re-dredge to obtain grade depth. Once the dredge depth is approved, the sectional area will be signed off by both the Departmental Representative and Contractor. Once the entire area is dredged completely, a final survey will be performed to confirm the work is complete. The Contractor may be asked to dredge infilled areas at the cost of unit price table.
- .5 All operations in connection with field positioning of dredging equipment will be considered incidental to the work and will not be measured separately for payment.
- .6 No extra payment will be made for Contractor's survey vessel, equipment and crew or diving services and safety requirements.

- .7 Payment will include disposal of dredge material to the designated ocean disposal site(s).
- .8 The disposal areas will usually be located at sea. The distance from the loading area to the disposal area may range from 400 to 2,000 metres away or further. Booster pumps may be required to reach approved disposal locations identified to the Contractor, and are considered incidental to the dredging work and will not be measured separately for payment.
- .9 No additional payment for delays incurred during fishing seasons, during periods when no dredging is permitted, downtime and for delays caused by vessel traffic and/or weather.
- .10 There will be no additional payment for any accumulation of seaweeds and/or kelp which may hamper the dredging operation.
- .11 Arrange and pay for mooring facilities for dredge plant (if applicable).
- .12 There will be no additional payment for removal of ice.
- .13 Obstructions:
 - .1 Removal of obstructions, authorized by the Departmental Representative will be measured in hours actually used in removal.
 - .2 Dredging equipment used for removal of obstructions will be paid for at a rate negotiated in advance and authorized in writing by the Departmental Representative.
- .14 All operations in connection with field positioning of dredging equipment will not be measured separately for payment.
- .15 Mobilization and demobilization of dredging equipment (dredge, support vessels, pipeline, etc.) to be paid for in lump sum. Mobilization less holdback shall be payable upon arrival of all equipment on site and the demobilization shall be payable after project completion and after the equipment is removed from the site.
 - .1 Moving off the channel to accommodate fishing vessels is incidental to the work, and will not be measured for payment.
 - .2 Any remediation to prevent the possible transport of alien/invasive species from port to port will be considered incidental to the work. Refer to Environmental Procedures, Marine Work, Section 01 35 43.
 - .3 Multiple dredging equipment used to increase production is paid as a single mobilization.
 - .4 No additional payment will be issued to compensate for adhering to the Provincial spring weight restrictions.

1.4 REFERENCES

- .1 Definitions:
 - .1 Dredging: excavating, transporting and disposing of underwater materials.
 - .2 Class A material: solid rock requiring drilling and blasting to loosen, and boulders or rock fragments of individual volumes 1.5 m³ or more.
 - .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 1.5 m³ ; .
 - .4 Obstructions: material other than Class A, having individual volumes of 1.5 m³ ; or more.
 - .5 CPM: cubic metres place measurement.
 - .6 Debris: pieces of wood, wire rope, scrap steel, pieces of concrete and other waste materials.
 - .7 Grade: plane above which material is to be dredged.
 - .8 Estimated quantity:
 - .1 Volume of material calculated to be above grade and within specified side slopes unless otherwise specified.

- .9 Side slope: inclined surface or plane from subgrade at side limit of dredging area to intersect original ground line outside of side limit and to be expressed as ratio of horizontal to vertical.
- .10 Chart Datum: permanently established plane from which soundings or tide heights are referenced, usually Lowest Normal Tide (LNT).
- .11 Universal Transverse Mercator Projection (UTM) or Modified Transverse Mercator Projection (MTM) Co-ordinates: plane rectangular coordinates used in grid system in which grid network is applied to UTM. or MTM. projection. Horizontal control information as indicated.
- .12 Minimum Mode: mode of operation of hydrographic survey equipment where minimum sounding is the shallowest depth recorded inside a matrix block. Soundings taken in this mode may be shallower than actual bottom elevations due to variations in water depths due to wave action.
- .13 Matrix Block: each dredge area is presented as number of 1.2 x 3.0 m long blocks. Dependent on position of sounding, block may have 0 to several soundings contained within it.
- .14 Least of Minimum Plan: hydrographic survey plan in which the minimum sounding in grouping of matrix blocks is plotted.
- .15 Instantaneous Average Mode: mode of operation of hydrographic survey equipment where average sounding depths observed are recorded within a matrix block.
- .16 Average of Instantaneous Plan: hydrographic survey plan in which average sounding recorded within a matrix block.
- .17 Lowest Normal Tide (LNT): plane so low that tide will seldom fall below it.
- .18 Cleared Area: area of dredging accepted as complying with plans and specifications.

1.5 SUBMITTALS

- .1 The Contractor should complete and submit a copy of the tables in Appendix "A" with their tender which list all materials and equipment the contractor proposes to use under this contract. Prior to award, the Departmental Representative will review the capabilities of the contractor to perform the work.
- .2 Submit to the Departmental Representative, prior to work, a site specific safety plan. This plan is to have emergency numbers and contacts specific to Harbour Authority, property owners, emergency response, and operators of water intakes.
- .3 Submit to the Departmental Representative, within seven days of notice to award, a schedule of work including time periods during which each operation involved in Work will be undertaken.
- .4 Adhere to schedule and take immediate action to correct any slippage by effectively altering existing dredging operations or mobilizing other equipment. Notify the Departmental Representative of corrective action to be taken.

1.6 REGULATORY REQUIREMENTS

- .1 Comply with federal, municipal, provincial and national codes and regulations relating to project.
- .2 Application for the permits for Ocean Disposal at the specified locations have been made by the Departmental Representative. The copies of the permits will be forwarded to the Contractors where required.
- .3 The Contractor shall observe and comply with all provisions, conditions and restrictions contained in the permit(s).
- .4 Mark floating equipment with lights in accordance with Regulations for the Prevention of Collisions and NavWarn.
- .5 Cooperate with and provide assistance to inspectors of the Regulatory Agencies to board and inspect equipment and operations at any time during the project.

1.7 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 21.
- .2 Metals, wood and recyclable materials removed during the dredging activities must be diverted to appropriate recycling facilities.

1.8 NAVIGATION CO-ORDINATION

- .1 Be familiar with vessel movements and fishery activities in area affected by dredging operations. Plan and execute Work in manner that will not interfere with fishing operations, marina operations, construction activities at wharf sites, or access to wharves by land or water.
- .2 Clearly mark dredging area(s), disposal area and routes to and from dredging and disposal area, during periods when fishing gear is set in areas adjacent to dredging operations with "Cautionary Buoys", in accordance with Coast Guard Standard TP968-1984. All Buoys must be colored cautionary yellow – CGSB #505-108.
- .3 The Contractor is responsible for all costs associated with the supply, installation and removal of all necessary temporary aids.
- .4 Execute the work to ensure damage does not occur to fishing gear and interference to fishing operations is minimized, by conducting operations within the areas as marked.
- .5 Be responsible for damage to fishing gear outside marked areas and, if damage occurs, assume responsibility for replacement of repair costs and cost of lost fishing opportunity.
- .6 The Departmental Representative will not be responsible for loss of time, equipment, material or any other cost related to interference with moored vessels in harbour or due to other Contractor's operations.
- .7 Keep District Manager, Canadian Coast Guard, Fisheries and Oceans, informed of dredging operations in order that necessary Notices to Mariners will be issued.
- .8 At no time without written consent from the Departmental Representative shall the contractor move any navigation buoys.

1.9 DATUM, WATER GAUGES AND TARGETS

- .1 Elevations used in this specification and contract drawings are in metres referred to LNT.
- .2 Areas to be dredged are to be referenced to vertical benchmarks for each location of dredging as indicated.

1.10 FLOATING PLANT

- .1 Dredges or other floating plants to be employed on this Work, to be of Canadian registry, make or manufacture, or, must receive certificate of qualification from Industry Canada, Marine Directorate and this certificate to accompany Bid submission. Submit this certificate with equipment information.
- .2 Requests for certification in format of attached questionnaire to be directed to Director, Defense and Marine, Directorate, Industry Canada, 235 Queen Street, 7th Floor, East Tower, Ottawa, Ontario, K1A 0H5, and to be received there not less than 14 days prior to tender closing.
- .3 The contractor shall determine the equipment required to dredge the material specified and described within this document.

1.11 SITE CONDITIONS

- .1 Contractor to visit and inspect work site and become thoroughly familiar with extent and nature of Work and conditions affecting Work before tendering.
- .2 Results of prior soundings may be available for inspection at the Departmental Representative's office.

- .3 Results of prior soundings may be made available for tendering purposes only. It should be noted that this information may differ from site condition. Take this into consideration when submitting tender.
- .4 Take necessary steps to become fully familiar with potential inclement weather and sea conditions in this area.

1.12 SURVEY REQUIREMENT

- .1 Provide, at own expense, vessel, equipment and crew to set up and maintain control for location of dredge limits and to sound areas immediately after dredging to verify that grade depth has been attained.
- .2 The contractor is to provide at their expense a GPS unit to record and report position in UTM coordinates. The contractor is to report the position of loading and disposal locations on a daily basis during all dredging activities to the Departmental Representative.

1.13 SURVEYS AND ACCEPTANCE OF WORK

- .1 Departmental Representative will arrange to complete a pre-dredge survey of all areas to be dredged. The survey will be by electronic survey equipment sounding. Survey plan at 1:500 scale plotting average soundings obtained in this survey will define actual pre-dredge seabed area.
- .2 No area will be dredged prior to the Departmental Representative and the Contractor's mutual acceptance of the pre-dredge survey for that area.
- .3 Post-dredge surveys will be completed once dredging of entire dredging channel is complete. Survey will confirm if dredging is completed as specified. Survey plan at 1:500 scale plotting "minimum" depths obtained in this survey will identify areas required for reworking to obtain following elevations using least of minimum mode.
- .4 The Contractor shall be responsible for using a licensed surveyor for post survey soundings and clearing areas.
- .5 If the survey shows that grade depth has not been obtained, the Contractor is to re-dredge to obtain grade depth. It should be noted that it is possible that infilling may occur in the dredged area(s) prior to final post-dredge survey of complete area. The removal of infilled material by whatever causes will be measured separately for payment using Dredging price from unit price table.
- .6 All elevations obtained in average of instantaneous mode within the specified areas of dredging must be at grade before the area will be considered complete.

Part 2 Products

2.1 DREDGING EQUIPMENT

- .1 Contractor is to determine required equipment necessary to dredge material specified and to dispose of dredged material at locations specified/indicated.
- .2 The equipment shall be in good condition and be environmentally safe with no leakage of petroleum products into the environment.
- .3 Due to environmental concerns and site limitations, the requirement will be for a suction dredge type of equipment. A different type of dredge may be acceptable in some cases. If the department requires a specific type, this would be specified at the time of the request.
- .4 The disposal operation would involve disposal via pipeline to the disposal site. See Section 01 10 10 for information on disposal sites.
- .5 The Contractor should complete and submit a copy of the tables in Appendix "A" with their tender which list all materials and equipment the contractor proposes to use under this contract. Prior to award, the Departmental Representative will review the capabilities of the contractor to perform the work.

- .6 Upon completion of dredging and all data has been submitted and cleared by Contractor's survey results, soundings will be taken by the Departmental Representative. In the event of infilling, the contractor may be asked to re-dredge specified areas at the cost of dredging identified in Unit Price Table.
- .7 Report all dredge quantities to the Departmental Representative at a minimum of every 24 hours. The contractor is to report the position of loading and disposal locations on a daily basis during all dredging activities to the Departmental Representative.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of location:
 - .1 Work comprises dredging of areas/harbours/channels as indicated.
- .2 The contractor will layout the work based on drawings provided by the Departmental Representative, taking into account the dynamics of the sand bars which may change from what is depicted. Similarly the disposal site(s) may change location.
- .3 All dredging (no matter location), use GPS unit to record and report position in UTM coordinates. The contractor is to report the position of loading and disposal locations on a daily basis during all dredging activities to the Departmental Representative.
- .4 Position of work may be verified in the field by the Departmental Representative.
- .5 Surveys and acceptance of work:
 - .1 Departmental Representative will arrange to complete a pre-dredge survey of all areas to be dredged prior to the commencement of any dredging activities. Surveys will be performed by electronic survey equipment sounding in average instantaneous mode.
 - .2 No area will be dredged prior to the Departmental Representative's and Contractor's mutual acceptance of pre-dredge survey for that area.
 - .3 Post-dredge survey will be undertaken by the Departmental Representative upon completion of dredging. Survey will confirm if dredging is completed.
 - .4 Contractor to re-dredge as necessary to remove all material within dredge areas which is found to be above specified dredge grade.
 - .5 All elevations obtained in minimum mode within specified areas of dredging must be at or deeper than grade before area will be considered completed.

3.2 DREDGING

- .1 Over-dredging shall not exceed 0.200m, to maintain permit requirements
- .2 Mark floating equipment with lights in accordance with International Rules of Road, Regulations for the Prevention of Collisions, Notices to Mariners and maintain radio watch on board.
- .3 Dredge equipment must have bumpers on at all times to ensure no damage to dredge or other vessels (for safety).
- .4 Minimum clearance between dredging equipment and vessels to be 5 metres (for safety).
- .5 Place and maintain buoys, ranges, markers and lights required to define work and disposal areas.
- .6 Establish and maintain tide boards in order that proper depth of dredging can be determined. Locate tide boards so as to be clearly visible.
- .7 Dredge specified areas to grade depth, typical dredge depth will be of EL -1.5 to -1.8 m LNT.
- .8 Dredge side slopes to two horizontal to one vertical.
- .9 Remove materials above specified grade depths, within limits indicated. Material removed from below subgrade depth or outside specified area or side slope is not part of Work.

- .10 Remove shoaling which occurs as result of Work at no expense to the Departmental Representative.
- .11 Casting-over of dredged material on to surrounding area is not permitted, unless the Departmental Representative has agreed to this arrangement.
- .12 Be responsible for the removal of infilling in dredge areas which occurs prior to acceptance by the Departmental Representative.
- .13 Immediately notify the Departmental Representative upon encountering object which might be classified as obstruction. By-pass the object after clearly marking its location and continue Work.
- .14 If work is to be carried out in other than the daylight hours, it will be the Contractor's responsibility to provide all light and power necessary to carry out the work.
- .15 Contractor is to notify the Departmental Representative 72 hrs prior to the commencement of any disposal at sea activities.

3.3 EXISTING NAVIGATION BUOYS

- .1 The Contractor will make arrangements with Canadian Coast Guard for the removal and re-installation of any existing buoys, as required to carry out the dredging operations.

3.4 DISPOSAL OF DREDGED MATERIAL

- .1 Dispose of dredged material by depositing in disposal areas indicated in manner approved by the Departmental Representative.
- .2 The dredging and disposal of the dredged material will be carried out in accordance with the terms and conditions set down in applicable permits.
- .3 The disposal site coordinates are indicated in ocean disposal permit.
- .4 Define area of disposal site using industry practices.

3.5 SITE QUALITY CONTROL

- .1 Site test and inspections:
 - .1 Co-operate with the Departmental Representative on inspection of Work and provide assistance requested.
 - .2 Upon request of the Departmental Representative, furnish use of such boats, equipment, labour and materials forming ordinary and usual part of dredging plant as may be reasonably necessary to inspect and supervise Work. The Contractor will provide an approved duty boat under this contract. The boat will be on duty at all times throughout the duration of the contract. It will also be available for the use of the Departmental Representative when required.
- .2 Non-conforming work:
 - .1 If, as result of incomplete Work, additional verification of depths by sounding or sweeping becomes necessary, additional costs involved shall be paid by Contractor.
 - .2 Re-dredge unsatisfactory Work and verify depths with additional sounding to approval the Departmental Representative.

3.6 DREDGING AND DISPOSAL RESTRICTIONS

- .1 Ocean Disposal permits will specify a quantity of Disposal dredged material which may not be exceeded. At the time of contract startup, the Departmental Representative will highlight to the Contractor any limits which are to be adhered to. Any and all costs for permit violation will be the contractor's responsibility.
- .2 Where applicable, only the permitted disposal sites listed in the permit, and as shown on the plans from the Departmental Representative can be used for ocean disposal of the material.

- .3 Floating dredging equipment shall not conflict with fishing vessels using the channel. The equipment is to utilize only one half of the channel at a time when dredging and move off the channel to allow vessels to pass. It may be necessary to submerge the pipeline from the suction dredge to provide continuous navigation.
- .4 The material dredged by the suction dredge is to be pumped through the pipeline to the prescribed disposal site.

END OF SECTION

Appendix “A”

TYPICAL ENVIRONMENTAL PROTECTION PLAN

ENVIRONMENTAL PROTECTION PLAN

2020 - 2021 HARBOUR MAINTENANCE DREDGING AND DISPOSAL OF DREDGED SEDIMENTS IN PRINCE EDWARD ISLAND

Summary of Mitigation Commitments

Turbidity and Sedimentation

- Visual monitoring will be conducted at the dredge and disposal sites by inspectors hired by PSPC Project Management. The purpose of this monitoring is to provide indications of significant changes in turbidity. If such changes occur, suggesting the dredging of fine-grained materials, the incident will be reported to PSPC and the dredging operations will be modified to ensure water quality returns to conditions typical to the dredging and disposal of materials that are predominantly sand.
- Visual monitoring for suspended solid must occur daily. If any changes occur in the turbidity of the water in the vicinity of the work area as a result of construction activities, the work must be immediately stopped to determine if further mitigation measures are required.
- All reasonable measures (in the opinion of the Minister) must be taken to minimize the siltation of the watercourse.
- Disposal activities will be monitored to ensure that volumes approved in DAS permits are not exceeded.

Birds and Bird Habitat

- All equipment mufflers will operate efficiently during dredging activities. Other sounds such as whistle blasts and horns will be limited or replaced with radio communication.
- Concentrations of seabirds, waterfowl or shorebirds will be avoided when anchoring equipment, accessing wharves or ferrying supplies.
- Staff, contractors and visitors should not approach concentrations of seabirds, sea ducks or shorebirds.
- Vessels will be restricted to main navigation channels, except when positioning pipelines from hydraulic dredges.
- Pipelines will be deployed and anchored at sea and will not be located on beaches or other important bird habitat. Beaching of pipelines will be avoided by ensuring moorings are secure and pipelines are moved to protected areas during periods of heavy seas.
- If an accident occurs and equipment is washed up on the beach (e.g., pipeline), it will be retrieved from the marine environment (i.e., from the vessel), rather than via the beach.
- With the exception of North Lake, dredge crews, their anchors, vehicles or equipment will not access beaches or other important bird habitat such as sandspits, dunes, intertidal flats/sandflats. Beaches will not be used as staging areas for equipment and measures will be taken to ensure that project staff and vehicles do not trample sensitive beach habitats.

- North Lake will use an existing access road to reach the dredging/disposal areas and will dispose dredged material in the lower half of the intertidal area. In addition, activities will be restricted to a small portion of the intertidal zone (situated between the breakwater and the adjacent access road). For intertidal disposal at North Lake, the dredged material will be placed and reworked to lie below the mid-tide line.
- The dredging/disposal sites will be kept clear of any food, debris or litter.
- Sightings of the following avian species at risk (as listed on Schedule 1 of SARA) are to be reported to the Departmental Representative: piping plover (*endangered*), red knot (*endangered*), and harlequin duck (*special concern*).

Species of Conservation Concern and Their Habitat

Piping Plover

- PWGSC will contact the Island Nature Trust annually to determine the presence or absence of plovers or their nests at SCH locations where spring or summer dredging is proposed within 300 m of draft critical habitat. The information will be kept on record and made available to contractors so that all parties are aware of plover presence in the event of a spill, however unlikely. If up-to-date data are not available for a particular SCH location, PWGSC may provide funds to Island Nature Trust to gather site-specific information at the time when it is needed.

Measures for Covehead

- DFO-SCH/PWGSC and Parks Canada Agency will continue to work collaboratively to monitor dredging activities, and any related effects on Piping Plovers and other birds, in order to adjust dredging activities, if required.

Fish and Fish Habitat

- Ensure that all in-water activities, or associated in-water structures, do not interfere with fish passage, constrict the channel width, or reduce flows.

Invasive Species

- All equipment will be mobilized by road and will be pressure washed before being placed in the water.
- Prior to mobilizing to the project site, the contractor will provide a work log to PSPC that shows the location of previous works. If the floating equipment has been in an area that is known to be infested with invasive species, the owner will verify that the equipment is free from invasive species by providing proof of cleaning or by diving and examining the floating equipment. Evidence of invasive species will result in a thorough cleaning which may involve complete removal of animals and plants and dry-docking the equipment.

Commercial Fisheries, Aquaculture/Transportation and Marine Navigation

- The proponent, DFO SCH will coordinate with local Harbour Authorities prior to commencement of the project activities such that the schedule with the least possible conflicts will be implemented.

- Floating equipment will be operated such that navigation in and out of harbours is maintained.

Health and Safety

- To avoid creating an attraction to swimmers, dredged material will be distributed in such a manner as to avoid the creation of an artificial sand bar.

Accidents and Malfunctions

Hazardous Materials

- The handling of hazardous materials will comply with all applicable provincial and federal legislation.

General Pollution Prevention and Emergency Response

- Basic petroleum spill clean-up equipment, including a 250 L oil spill clean-up kit, will be on site during the duration of the project. In order to ensure contaminant releases do not occur, machinery will be regularly inspected for leakage of lubricants or fuel. This will include ensuring that all hydraulic hoses, oil and fuel lines are in good condition with no leaks. Hoses and tanks are to be inspected on a regular basis to prevent fractures and breaks near the water.
- Ensure that machinery arrives on site in a clean condition and is maintained free of fluid leaks, invasive species and noxious weeds.
- In the event of an accidental spill, the Canadian Coast Guard will be notified at 1-800-565-1633 (24-hour reporting line). The source of the spill will be identified and stopped, with any released material contained immediately. Work will be halted and spill containment and cleanup will begin with the spill kit on hand.
- Fueling and servicing of equipment should not take place within 30 m of environmentally sensitive areas, including shorelines and wetlands.
- Should a small leak or drip be identified, they will be contained by using drip pans or other appropriate means until the equipment is properly repaired. Routine maintenance will be conducted offsite.

Additional Standard Mitigation

- All permit conditions in the NPA authorization will be followed.
- Dispose of dredge material at the approved Disposal at Sea (DAS) site in accordance with any/all conditions of the Canadian Environmental Protection Act (CEPA) Disposal at Sea Permit. A copy of the CEPA Disposal at Sea Permit must be kept on site at all times. Dredge disposal operations are to comply with the requirements of the Disposal at Sea Permit issued for the project.
- Dredge crews, dredging related vehicles or other dredging related equipment will not access beaches, sand spits, dunes, mud flats, or sand flats during any stage of the project.

Appendix “B”

DISPOSAL AT SEA PERMITS

Department of the Environment

Canadian Environmental Protection Act, 1999



Notice is hereby given that, pursuant to section 127 of the *Canadian Environmental Protection Act, 1999* (CEPA), disposal at sea permit no. ATL-00089-1 authorizing the loading for disposal and the disposal of waste or other matter at sea is approved. The permit is published on the Canadian Environmental Protection Act Registry on Tuesday, March 10, 2020.

1. Permittee: Fisheries and Oceans Canada, Moncton, New Brunswick.
2. Waste or other matter to be disposed of: dredged material.
 - 2.1. Nature of waste or other matter: dredged material consisting of gravel, sand, silt, clay and seaweed.
3. Duration of permit: permit is valid from April 1, 2020, to March 31, 2021.
4. Loading site(s): Malpeque (Darnley Basin), Prince Edward Island, at approximately 46.56083° N, 63.69333° W North American Datum of 1983 (NAD83), as described in the drawing titled "Drawing CA-AT-D043" (February 21, 2020).
5. Disposal site(s): Malpeque (Darnley Basin), Prince Edward Island, bound by 46.56399° N, 63.70386° W; 46.56409° N, 63.68729° W; 46.56095° N, 63.70424° W; 46.55813° N, 63.68904° W; 46.55697° N, 63.68781° W; and 46.55681° N, 63.68522° W (NAD83), as described in the drawing titled "Drawing CA-AT-D043" (February 21, 2020).
6. Method of loading: dredging will be carried out using a suction dredge or mechanical dredge.
7. Route to disposal site(s) and method of transport: most direct route from the loading site to the disposal site via pipeline, dump scow or sidecasting.
8. Method of disposal: disposal will be carried out by pipeline, dump scow, or sidecasting.
9. Total quantity to be disposed of: not to exceed 60 000 cubic metres, place measure.
10. Fees: the fee prescribed by the *Disposal at Sea Permit Fee Regulations* shall be paid by the permittee in accordance with those regulations as modified according to the provisions of the *Service Fees Act*. The applicable fee rates for April 1, 2019, are in effect for the duration of this permit.
11. Inspection: by accepting this permit, the permittee and its contractors accept that they are subject to inspection pursuant to Part 10 of CEPA.



12. Contractors:

12.1. The loading or disposal at sea referred to under this permit shall not be carried out by any person without written authorization from the permittee.

12.2. The permittee shall ensure that all persons involved in the loading, transport or disposal activities authorized by this permit conduct these activities in accordance with the relevant permit conditions.

13. Reporting and notification:

13.1. The permittee shall provide the following information no later than 48 hours before loading and disposal activities commence: name of the contractor, including corporate and on-site contact information, and expected period of loading and disposal activities. The above-noted information shall be submitted to:

a. Ms. Natasha Boyd
Environmental Protection Operations Directorate
Department of the Environment
Atlantic Region
6 Bruce St
Mount Pearl NL A1N 4T3

Email: natasha.boyd@canada.ca

b. Ms. Stephanie Rheault
Environmental Enforcement Directorate
Department of the Environment
Atlantic Region
33 Weldon St
Moncton NB E1C 0N5

Email: stephanie.rheault@canada.ca

c. Mr. Gilles Paulin
Department of Fisheries and Oceans
343 Université Ave
Moncton NB E1C 9B6

Email: gilles.paulin@dfo-mpo.gc.ca

13.2. The Canadian Coast Guard Marine Communication and Traffic Services (MCTS) of Sydney (navwarn.mctssydney@innav.gc.ca) is to be notified in advance of the commencement of work, and upon completion, so that appropriate navigational warnings may be issued.

13.3. The permittee shall submit a written report to the Minister, as represented by the Regional Director of the Environmental Protection Operations Directorate, Atlantic Region, care of Ms. Natasha Boyd, as identified in paragraph 13.1a, within 30 days after the expiry of the permit. This report shall contain the following information: the quantity of matter disposed of at the disposal site(s) and the dates on which disposal activities occurred.

13.4. At all times, a copy of this permit and of documents and drawings referenced in this permit shall be available at the loading site and on all powered vessels directly engaged in the loading and disposal operations.

14. Special precautions:

14.1. The permittee shall prepare a dredged material disposal plan relating to the loading and disposal at sea activities authorized by this permit. The plan shall be submitted to the Department of the Environment prior to the commencement of the first dredging operation. The plan shall include procedures to accurately measure or estimate quantities of dredged material disposed of at the disposal site, vessel tracking (for mechanical dredging only), and a schedule for use of the disposal site. The plan shall also address mitigation measures relating to Piping plover. Modifications to the plan shall be made in writing to the Department of the Environment.



Glenn Worthman
A/Regional Director
Environmental Protection Operations Directorate
Atlantic Region

On behalf of the Minister of Environment and Climate Change

Signed on: March 4/2020



Department of the Environment
Canadian Environmental Protection Act, 1999

Notice is hereby given that, pursuant to section 129(3) of the *Canadian Environmental Protection Act, 1999* (CEPA), the conditions of disposal at sea permit no. ATL-00089-1 are varied and approved as follows. The varied conditions are published on the Canadian Environmental Protection Act Registry on Tuesday, October 13, 2020.

4. Loading site(s): Malpeque (Darnley Basin), Prince Edward Island, at approximately 46.56083° N, 63.69333° W North American Datum of 1983 (NAD83), as described in the drawing titled "Drawing CA-AT-D043" (October 7, 2020).

5. Disposal site(s):

- a. Malpeque (Darnley Basin), Prince Edward Island – Zone 1, bound by 46.56399° N, 63.70386° W; 46.56409° N, 63.68729° W; 46.55681° N, 63.68522° W; 46.55697° N, 63.68781° W; 46.55813° N, 63.68904° W; 46.55929° N, 63.69532° W; 46.55856° N, 63.69498° W; and 46.56095° N, 63.70424° W (NAD83), as described in the drawing titled "Drawing CA-AT-D043" (October 7, 2020).

Jeffrey L. Corkum
Regional Director
Environmental Protection Operations Directorate
Atlantic Region

On behalf of the Minister of Environment and Climate Change

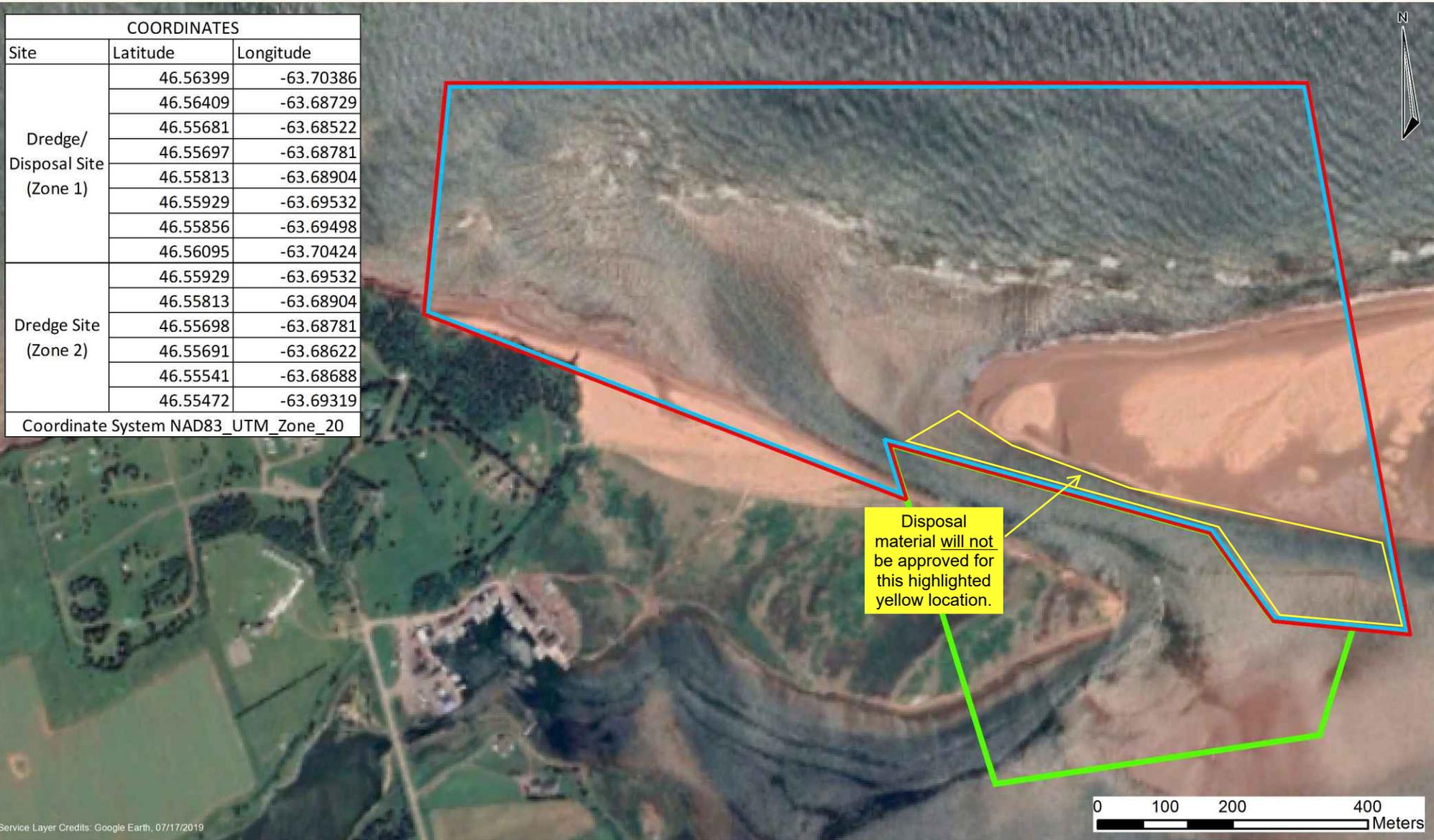
Signed on: 9 October, 2020





COORDINATES		
Site	Latitude	Longitude
Dredge/ Disposal Site (Zone 1)	46.56399	-63.70386
	46.56409	-63.68729
	46.55681	-63.68522
	46.55697	-63.68781
	46.55813	-63.68904
	46.55929	-63.69532
	46.55856	-63.69498
Dredge Site (Zone 2)	46.56095	-63.70424
	46.55929	-63.69532
	46.55813	-63.68904
	46.55698	-63.68781
	46.55691	-63.68622
	46.55541	-63.68688
	46.55472	-63.69319

Coordinate System NAD83_UTM_Zone_20



Service Layer Credits: Google Earth, 07/17/2019

Prepared by:
C. Skinner \ M. Parry

Prepared on:
October 7, 2020

Drawing:
CA-AT-D043

Malpeque (Darnley Basin) Dredge and Disposal Zones

Restriction: Both dredging and disposal activities shall be restricted to the area within the boundaries illustrated by Zones 1 & 2 and that portion of the seabed lying below the Lower Low Water, Large Tide elevation.

- Disposal Site
- Dredge Site (Zone 1)
- Dredge Site (Zone 2)

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