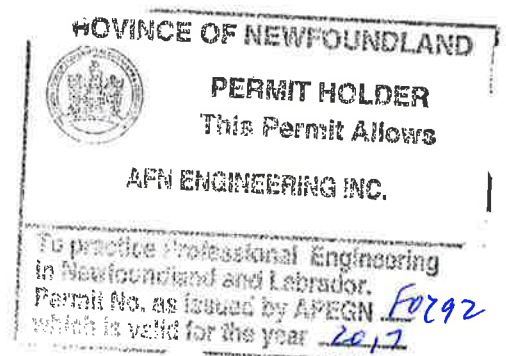


SPECIFICATION
BASIN MAINTENANCE DREDGING
SANDY COVE, NL

Project Number: 722063

PREPARED FOR
Fisheries and Oceans Canada

DATE
May 5, 2017



LIST OF DRAWINGS

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DRAWING NO

TITLE

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C2 of 4	Dredge Site Plan
C3 of 4	Sections
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Appendix A: Diving Probe Report

Appendix B: Regulatory Review

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- 1.1 SCOPE .1 The work consists of the furnishing of all plant, labour, equipment and material for dredging at Sandy Cove, NL, in strict accordance with specifications and accompanying drawings and subject to all terms and conditions of the Contract.
- 1.2 DESCRIPTION OF WORK .1 In general, work under this contract will consist of, but will not necessarily be limited to, the following:
- .1 Dredging of Class "A" and Class "B" material and disposal to an approved waste site.
- 1.3 SITE OF WORK .1 Work will be carried out at Sandy Cove, NL, in the location shown on the accompanying drawings.
- 1.4 DATUM .1 Datum used for this project is Lowest Normal Tide (LNT). Confirm a bench mark with the Departmental Representative prior to construction.
- .2 Bidders are advised to consult the Tide Tables issued by Fisheries and Oceans in order to make sure of the tidal conditions affecting work.
- 1.5 FAMILIARIZATION WITH SITE .1 Before submitting a bid, it is recommended that bidders visit the site and its surroundings to review and verify the form, nature and extent of the work, materials needed for the completion of the work, the means of access to the site, severity, exposure and uncertainty of weather, soil conditions, any accommodations they may require, and in general shall obtain all necessary information as to risks, contingencies and other circumstances which may influence or

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affect their bid or costs to do the work. 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.

.2 Contractors, bidders or those they invite to site are to review specification Section 01 35 29 - Health and Safety Requirements before visiting site. Take all appropriate safety measures for any visit to site, either before or after acceptance of bid.

.3 Obtain prior permission from the Departmental Representative before carrying out such site inspection.

1.6 CODES AND STANDARDS

.1 Perform work in accordance with the latest edition of the National Building Code of Canada, FCC Standard 373 - Standard for Piers and Wharves (http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/373/page00.shtml), and any other code of provincial or local application including all amendments up to project bid 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.

1.7 TERM ENGINEER

.1 Unless specifically stated otherwise, the term Engineer where used in the Specifications and on the Drawings shall mean the Departmental Representative as defined in the General Conditions of the Contract.

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1.8 SETTING OUT
WORK

- .1 Set grades and layout work in detail from control points and grades established by Departmental Representative.
- .2 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated or as directed by Departmental Representative.
- .3 Provide devices needed to layout and construct work.
- .4 Supply such devices as straight edges and templates required to facilitate Departmental Representative's inspection of work.
- .5 Supply stakes and other survey markers required for laying out work.

1.9 COST BREAKDOWN

- .1 Before submitting first progress claim submit breakdown of Contract price in detail as directed by Departmental Representative and aggregating contract price.
- .2 Provide cost breakdown in same format as the numerical and subject title system used in this specification project manual and thereafter sub-divided into major work components as directed by Departmental Representative.
- .3 Upon approval by Departmental Representative, cost breakdown will be used as basis for progress payment.
- .4 All work items not designated in the unit price table as a measurement for payment, are to be included in the lump sum arrangement, as noted on the Bid and Acceptance Form.

- 1.10 WORK SCHEDULE
- .1 Submit within 7 work days of notification of acceptance of bid, a construction schedule showing commencement and completion of all work within the time stated on the Bid and Acceptance Form and the date stated in the bid acceptance letter.
 - .2 Provide sufficient details in schedule to clearly illustrate entire implementation plan, depicting efficient coordination of tasks and resources, to achieve completion of work on time and permit effective monitoring of work progress in relation to established milestones.
 - .3 As a minimum, work schedule to be prepared and submitted in the form of Bar (GANTT) Charts, indicating work activities, tasks and other project elements, their anticipated durations and planned dates for achieving key activities and major project milestones provided in sufficient details and supported by narratives to demonstrate a reasonable plan for completion of project within designated time. Generally Bar Charts derived from commercially available computerized project management system are preferred but not mandatory.
 - .4 Submit schedule updates on a minimum monthly basis and more often, when requested by Departmental Representative, due to frequent changing project conditions. Provide a narrative explanation of necessary changes and schedule revisions at each update.
 - .5 The schedule, including all updates, shall be to Departmental Representative's approval. Take necessary measures to complete work within approved time. Do not

change schedule without Departmental Representative's approval.

- .6 All work on the project will be completed within the time indicated on the Bid and Acceptance Form.

1.11 ABBREVIATIONS

- .1 Following abbreviations of standard specifications have been used in this specification and on the drawings:

CGSB - Canadian Government Specifications Board

CSA - Canadian Standards Association

NLGA - National Lumber Grades Authority

ASTM - American Society for Testing and Materials

- .2 Where these abbreviations and standards are used in this project, latest edition in effect on date of bid call will be considered applicable.

1.12 QUARRY AND EXPLOSIVES

- .1 Make own arrangements with Provincial authorities and owners of private properties, for the quarrying and transportation of rock and all materials and machinery necessary for work over their property, roads or streets as case may be.

1.13 SITE OPERATIONS

- .1 Arrange for sufficient space adjacent to project site for conduct of operations, storage of materials and so on. Exercise care so as not to obstruct or damage public or private property in area. Do not interfere with normal day-to-day operations in progress at site. All arrangements for space and access will be made by Contractor.

- .2 Remove snow and ice as required to maintain safe access in a manner that does not damage existing structures or interfere with the operations of others.

1.14 PROJECT MEETINGS

- .1 Departmental Representative will arrange project meetings and assume responsibility for setting times and recording minutes.
- .2 Project meetings will take place on site of work unless so directed by the Departmental Representative.
- .3 Departmental Representative will assume responsibility for recording minutes of meetings and forwarding copies to all parties present at the meetings.
- .4 Have a responsible member of firm present at all project meetings.

1.15 PROTECTION

- .1 Store all materials and equipment to be incorporated into work to prevent damage by any means.
- .2 Repair or replace all materials or equipment damaged in transit or storage to the satisfaction of Departmental Representative and at no cost to Canada.

1.16 EXISTING SERVICES

- .1 Where work involves breaking into or connecting to existing services, carry out work at times directed by governing authorities, with minimum of disturbance to site operations, pedestrian, vehicular traffic and tenant operations.
- .2 Before commencing work, establish location and extent of service lines in area of work and notify Departmental Representative of findings.

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- .3 Submit schedule to and obtain approval from Departmental Representative for any shut-down or closure of active service or facility. This includes disconnection of electrical power and communication services to tenant's operational areas. Adhere to approved schedule and provide notice to affected parties.
- .4 Provide temporary services when directed by Departmental Representative to maintain critical facility systems.
- .5 Provide adequate bridging over trenches which cross walkways or roads to permit normal traffic.
- .6 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
- .7 Protect, relocate or maintain existing active services as required. When inactive services are encountered, cap off in manner approved by authorities having jurisdiction over service. Record locations of maintained, re-routed and abandoned service lines.

1.17 DOCUMENTS
REQUIRED

- .1 Maintain at job site, one copy each of the following:
 - .1 Contract Drawings
 - .2 Specifications
 - .3 Addenda
 - .4 Reviewed Shop Drawings
 - .5 List of outstanding shop drawings
 - .6 Change Orders
 - .7 Other modifications to Contract
 - .8 Field Test Reports
 - .9 Copy of Approved Work Schedule
 - .10 Site specific Health and Safety Plan and other safety related documents

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.11 Other documents as stipulated elsewhere in the Contract Documents.

1.18 PERMITS

- .1 Obtain and pay for all permits, certificates and licenses as required by Municipal, Provincial, Federal and other Authorities.
- .2 Provide appropriate notifications of project to municipal and provincial 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 work.
- .4 Submit to Departmental Representative, copy of application submissions and approval documents received for above referenced authorities.
- .5 Submit to Departmental Representative, copy of quarry permit, prior to start of quarry operations.
- .6 Comply with all requirements, recommendations and advice by all regulatory authorities unless otherwise agreed in writing by Departmental Representative. Make requests for such deviations to these requirements sufficiently in advance of related work.

1.19 CUTTING,
FITTING AND
PATCHING

- .1 Execute cutting, including excavation, fitting and patching required to make work fit properly.
- .2 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work. This

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includes patching of openings in existing work resulting from removal of existing services.

- .3 Do not cut, bore, or sleeve load-bearing members.
- .4 Make cuts with clean, true, smooth edges. Make patches inconspicuous in final assembly.

1.20 LOCATION OF
EQUIPMENT

- .1 Location of work shown or specified shall be considered as approximate. Actual location shall be as required to suit conditions at time of installation and as is reasonable. Obtain approval of Departmental Representative.
- .2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety, access and maintenance.
- .3 Inform Departmental Representative when impending installation conflicts with other new or existing components. Follow directives for actual location.
- .4 Submit field drawings to indicate relative position of various services and equipment when required by Departmental Representative.

1.21 FISH HABITAT

- .1 This work is being conducted in an area where fish habitat may be affected. Perform work to conform with rules and regulations governing fish habitat and in accordance with authorization for work or undertakings affecting fish habitat.

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- .2 Contact the local Department of Fisheries and Oceans detachment at least 48 hours in advance of starting any work on site. Submit confirmation to the Departmental Representative that DFO have been contacted.

1.22 NOTICE TO
SHIPPING/MARINERS

- .1 Notify the Marine Communications and Traffic Services' Centre, of Fisheries and Oceans Canada, at (709) 772-2083, ten (10) days prior to commencement and upon completion of the work, in order to allow for the issuance of Notices to Shipping/Mariners.
- .2 During construction any vessels or barges utilized must be marked in accordance with the provisions of the Canada Shipping Act Collision Regulations.

1.23 ACCEPTANCE

- .1 Prior to the issuance of the Certificate of Substantial Performance, in company with Departmental Representative, make a check of all work. Correct all discrepancies before final inspection and acceptance.

1.24 WORKS
COORDINATION

- .1 Responsible for coordinating the work of the various trades, where the work of such trades interfaces with each other.
- .2 Convene meetings between trades whose work interfaces and ensure that they are fully aware of the areas and the extent of where interfacing is required. Provide each trade with the plans and specifications of the interfacing trade, as required, to assist them in planning and carrying out their respective work.
- .3 Canada will not be responsible for or held

accountable for any extra costs incurred as a result of the failure to carry out coordination work. Disputes between the various trades as a result of their not being informed of the areas and extent of interface work shall be the sole responsibility of the General Contractor and shall be resolved at no extra cost to Canada.

1.25 CONTRACTOR'S
USE OF SITE

- .1 Construction operations, including storage of materials for this contract, not to interfere with the fishing activity and/or operations at this harbour facility.
- .2 Responsible for arranging the storage of materials on or off site, and any materials stored at the site which interfere with any of the day to day activities at or near the site will be moved promptly at the Contractor's expense, upon request by Departmental Representative.
- .3 Contractor will take adequate precautions to protect existing concrete decks and asphalt when operating tracked equipment. Note that no heavy equipment will be permitted atop the existing wharf.
- .4 Exercise care so as not to obstruct or damage public or private property in the area.
- .5 At completion of work, restore area to its original condition. Damage to ground and property will be repaired by Contractor. Remove all construction materials, residue, excess, etc., and leave site in a condition acceptable to Departmental Representative.

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1.26 WORK
COMMENCEMENT

- .1 Mobilization to project site is to commence immediately after acceptance of bid and submission of Site Specific Safety Plan and insurance documentation, unless otherwise agreed by Departmental Representative.
- .2 Project work on site is to commence as soon as possible, with a continuous reasonable work force, unless otherwise agreed by Departmental Representative.
- .3 Weather conditions, short construction season, delivery challenges and the location of the work site may require the use of longer working days and additional work force to complete the project within the specified completion time.
- .4 Make every effort to ensure that sufficient material and equipment is delivered to site at the earliest possible date after acceptance of bid and replenished as required.

1.27 FACILITY
SMOKING ENVIRONMENT

- .1 Comply with smoking restrictions.

1.28 INTERPRETATION
OF DOCUMENTS

- .1 Supplementary to the Order of Precedence article of the General Conditions of the Contract, the Division 01 sections take precedence over the technical specification sections in other Divisions of the Specification Manual.

1.29 WORKING ADJACENT
TO COMMUNITY ROADS

1. The Contractor will be responsible to restore any damage to existing roadways.

PART 1 - GENERAL

- 1.1 SECTION INCLUDES .1 Inspecting and testing by inspecting firms or testing laboratories designated by Departmental Representative.
- 1.2 RELATED REQUIREMENTS SPECIFIED ELSEWHERE .1 Particular requirements for inspection and testing to be carried out by testing laboratory designated by Departmental Representative are specified under various sections.
- 1.3 APPOINTMENT AND PAYMENT .1 Departmental Representative will appoint and pay for services of testing laboratory except for the following:
.1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.
.2 Inspection and testing performed exclusively for Contractor's convenience.
.3 Mill tests and certificates of compliance.
.4 Tests specified to be carried out by Contractor under the supervision of Departmental Representative.
.5 Tests requested by Departmental Representative to confirm material specifications when the applicable manufacturer's documentation or test results are unavailable.
.6 Additional tests specified in the following paragraph.
- .2 Where tests or inspections by designated testing laboratory reveal Work not in accordance with contract requirements, pay costs for additional tests or inspections as required by Departmental Representative to verify acceptability of corrected work.

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1.4 CONTRACTOR'S
RESPONSIBILITIES

- .1 Provide labour, equipment and facilities to:
 - .1 Provide access to Work to be inspected and tested.
 - .2 Facilitate inspections and tests.
 - .3 Make good Work disturbed by inspection and test.
 - .4 Provide storage on site for laboratory's exclusive use to store equipment, where required.
- .2 Notify Departmental Representative sufficiently in advance of operations to allow for assignment of laboratory personnel and scheduling of test.
- .3 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
- .4 Pay costs for uncovering and making good Work that is covered before required inspection or testing is completed and approved by Departmental Representative.

PART 2 - PRODUCTS

- 2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

- 3.1 NOT USED .1 Not Used.

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PART 1 - GENERAL

1.1 SECTION
INCLUDES

- .1 Shop drawings and product data.
- .2 Samples.
- .3 Certificates.

1.2 SUBMITTAL
GENERAL REQUIREMENTS

- .1 Submit to Departmental Representative for review submittals listed, including shop drawings, samples, certificates and other data, as specified in other sections of the Specifications.
- .2 Submit with reasonable promptness and in orderly sequence so as to allow for Departmental Representative's review and not cause delay in Work. Failure to submit in ample time will not be considered sufficient reason for an extension of Contract time and no claim for extension by reason of such default will be allowed.
- .3 Do not proceed with work until relevant submissions are reviewed by Departmental Representative.
- .4 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .5 Where items or information is not produced in SI Metric units, provide soft converted values.
- .6 Review submittals prior to submission to Departmental Representative. Ensure during review that necessary requirements have been determined and verified, required field measurements or data have been taken, and that each submittal has been checked and

co-ordinated with requirements of Work and Contract Documents.

.1 Submittals not stamped, signed, dated and identified as to specific project will be returned unexamined by Departmental Representative and considered rejected.

.7 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.

.8 Verify field measurements and affected adjacent work and coordinate.

.9 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.

.10 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative's review.

.11 Submittal format: paper originals, or alternatively clear and fully legible photocopies of originals. Facsimiles are not acceptable, except in special circumstances pre-approved by Departmental Representative. Poorly printed non-legible photocopies or facsimiles will not be accepted and be returned for resubmission.

.12 Make changes or revision to submissions which Departmental Representative may require, consistent with Contract Documents and resubmit as directed by Departmental Representative. When resubmitting, notify Departmental Representative in writing of any revisions other than those requested.

- .13 Keep one reviewed copy of each submittal document on site for duration of Work.

1.3 SHOP DRAWINGS
AND PRODUCT DATA

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, product data, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2 Number of Shop Drawings: submit sufficient copies of shop drawings which are required by the General Contractor and sub-contractors plus 2 copies which will be retained by Departmental Representative. Ensure sufficient numbers are submitted to enable one complete set to be included in each of the maintenance manuals specified, if applicable.
- .3 Shop Drawings Content and Format:
 - .1 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where items or equipment attach or connect to other items or equipment, confirm that all interrelated work have been coordinated, regardless of section or trade from which the adjacent work is being supplied and installed.
 - .2 Shop Drawings Format:
 - .1 Opaque white prints or photocopies of original drawings or standard drawings modified to clearly illustrate work specific to project requirements. Maximum sheet size to be 1000 x 707 mm.
 - .2 Product Data from manufacturer's standard catalogue sheets, brochures, literature, performance charts and diagrams, used to illustrate standard

- manufactured products, to be original full colour brochures, clearly marked indicating applicable data and deleting information not applicable to project.
- .3 Non or poorly legible drawings, photocopies or facsimiles will not be accepted and returned not reviewed.
 - .3 Supplement manufacturer's standard drawings and literature with additional information to provide details applicable to project.
 - .4 Delete information not applicable to project on all submittals.
- .4 Allow 10 calendar days for Departmental Representative's review of each submission.
 - .5 Adjustments or corrections made on shop drawings by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, advise Departmental Representative in writing prior to proceeding with Work.
 - .6 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections and comments are made, fabrication and installation may proceed upon receipt of shop drawings. If shop drawings are rejected and noted to be Resubmitted, do not proceed with that portion of work until resubmission and review of corrected shop drawings, through same submission procedures indicated above.
 - .7 Accompany each submission with transmittal letter, containing:
 - .1 Date.
 - .2 Project title and project number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.

-
- .5 Other pertinent data.
 - .8 Submissions shall include:
 - .1 Date and revision dates.
 - .2 Project title and project number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Cross references to particular details of contract drawings and specifications section number for which shop drawing submission addresses.
 - .6 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Single line and schematic diagrams.
 - .10 Relationship to adjacent work.
 - .9 After Departmental Representative's review, distribute copies.
 - .10 The review of shop drawings by the Departmental Representative or their delegated representative is for sole purpose of ascertaining conformance with general concept. This review shall not mean that the

Departmental Representative approves the detail design inherent in the shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting all requirements of the construction and Contract Documents. Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of all sub-trades.

1.4 SCHEDULES,
PERMITS AND
CERTIFICATES

- .1 Upon acceptance of bid, submit to Departmental Representative copy of Work Schedule and various other schedules, permits, certification documents and project management plans as specified in other sections of the Specifications.
- .2 Submit copy of permits, notices, compliance Certificates received by Regulatory Agencies having jurisdiction and as applicable to the Work.
- .3 Submission of above documents to be in accordance with Submittal General Requirements procedures specified in this section.

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- 1.1 SECTION INCLUDES .1 Fire Safety Requirements.
.2 Hot Work Permit.
- 1.2 RELATED WORK .1 Section 01 35 25 - Special Procedures on Lockout Requirements.
.2 Section 01 35 29 - Health and Safety Requirements.
- 1.3 REFERENCES .1 Fire Protection Standards issued by Fire Protection Services of Human Resources Development Canada as follows:
.1 National Fire Code - Standard for Construction Operations - latest edition (http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/301/page00.shtml).
.2 National Fire Code - Standard for Welding and Cutting - latest edition (http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/302/page00.shtml).
.3 FCC standards, may also be viewed at the Regional Labour Canada Office located at Baine Johnson Centre, 10 Fort William Place, St. John's, NL, A1C 1K4; Telephone 1-800-641-4049; fax 1-709-772-5985.
- 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.
- 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 after notification of acceptance of bid.

- .2 Submit in accordance with the Submittal General Requirements specified in Section 01 33 00.

1.6 FIRE SAFETY
REQUIREMENTS

- .1 Implement and follow fire safety measures during Work. Comply with following:
 - .1 National Fire Code, latest edition.
 - .2 Fire Protection Standards FCC 301 and FCC 302 - latest edition.
 - .3 Federal and Provincial Occupational Health and Safety Acts and Regulations as specified in Section 01 35 29.
- .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 during performance of hot work, Departmental Representative will provide authorization to proceed as follows:
 - .1 Issue one written "Authorization to Proceed" covering the entire project for

duration of work or;

.2 Separate work, or segregate certain parts of work, into individual entities. Each entity requiring a separately written "Authorization to Proceed" from Departmental Representative. Follow Departmental Representative's directives in this regard.

.4 Requirement for individual authorization 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 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 Procedures to include:

.1 Requirement to perform hazard assessment of site and immediate hot work area for each hot work event in accordance with Hazard Assessment and Safety Plan requirements of Section 01 35 29.

.2 Use of a Hot Work Permit system for each

hot work event.

.3 The step by step process of how to prepare and issue permit.

.4 Permit shall be issued by Contractor's site Superintendent, or other authorized person designated by Contractor, granting permission to worker or subcontractor to proceed with hot work.

.5 Provision of a designated person to carryout a Fire Safety Watch for a minimum of 60 minutes immediately upon completion of the hot work.

.6 Compliance with fire safety codes and standards specified herein and occupational health and safety regulations specified in Section 01 35 29.

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

.4 Hot Work Procedures shall clearly establish worker instructions and allocate responsibilities of:

.1 Worker(s),

.2 Authorized person issuing the Hot Work Permit,

.3 Fire Safety Watcher,

.4 Subcontractors and Contractor.

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

.1 Failure to comply with the established procedures may result in the issuance of a Non-Compliance Notification at Departmental Representative's discretion with possible disciplinary measures imposed as specified in Section 01 35 29.

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1.9 HOT WORK
PERMIT

- .1 Hot Work Permit to include, as a minimum, the following data:
 - .1 Project name and project number.
 - .2 Building name, address and specific room or area where hot work will be performed.
 - .3 Date when permit issued.
 - .4 Description of hot work type to be performed.
 - .5 Special precautions required, including type of fire extinguisher needed.
 - .6 Name and signature of person authorized to issue the permit.
 - .7 Name of worker (clearly printed) to which the permit is being issued.
 - .8 Time Duration that permit is valid (not to exceed 8 hours). Indicate start time and date, and completion time and date.
 - .9 Worker signature with date and time upon hot work termination.
 - .10 Specified time period requiring safety watch.
 - .11 Name and signature of designated Fire Safety Watcher, complete with time and date when safety watch terminated, certifying that surrounding area was under continual surveillance and inspection during the full watch time period specified in Permit and commenced immediately upon completion of Hot Work.
- .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 and signed as follows:
 - .1 Authorized person issuing Permit before hot work commences.
 - .2 Worker upon completion of Hot Work.
 - .3 Fire Safety Watcher upon termination of safety watch.
 - .4 Returned to Contractor's Site Superintendent for safe keeping.

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1.10 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.

- 1.1 SECTION INCLUDES .1 Procedures to isolate and lockout electrical facility or other equipment from energy source.
- 1.2 RELATED WORK .1 Section 01 35 24 - Special Procedures on Fire Safety Requirements.
- .2 Section 01 35 29 - Health and Safety Requirements.
- 1.3 REFERENCES .1 C22.1-06 - Canadian Electrical Code, Part 1, Safety Standard for Electrical Installations.
- .2 CAN/CSA C22.3 No. 1-10 - Overhead Systems.
- .3 CAN/CSA C22.3 No. 7-10 - 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 is 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 Perform lockouts in compliance with:
 - .1 Canadian Electrical Code, latest edition.
 - .2 Federal and Provincial Occupational Health and Safety Acts and Regulations as specified in Section 01 35 29.
 - .3 Regulations and code of practice 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. Should a dispute arise in determining the most stringent

requirement, Departmental Representative will advise on the course of action to be followed.

1.6 SUBMITTALS

- .1 Submit copy of proposed Lockout Procedures and sample form of lockout permit or lockout tags for review.
- .2 Submit documentation within 7 calendar days of acceptance of bid. Do not proceed with work until submittal has been reviewed by Departmental Representative.
- .3 Submit above documents in accordance with the submittal requirements specified in Section 01 33 00.
- .4 Resubmit Lockout Procedures with noted revisions as may result from Departmental Representative's review.

1.7 ISOLATION OF
EXISTING SERVICES

- .1 Obtain Departmental Representative's written authorization prior to conducting work on an existing active, energized service or facility required as part of the work and before proceeding with lockout of such services or facility.
- .2 To obtain authorization, submit to Departmental Representative the following documentation:
 - .1 Written Request for Isolation of the service or facility and;
 - .2 Copy of Contractor's Lockout Procedures.
- .3 Make a Request for Isolation for each event, unless directed otherwise by Departmental Representative, and as follows:
 - .1 Fill-out standard forms in current use

at the Facility when so directed by
Departmental Representative or;

.2 Where no form exist at Facility, make
request in writing identifying:

.1 Identification of system or
equipment to be isolated, including it's
location;

.2 Time duration, indicating Start
time and date, and Completion time and
date when isolation will be in effect;

.3 Voltage of service feed to system
or equipment being isolated;

.4 Name of person making the request.

.3 Document to be in typewritten format.

.4 Do not proceed until receipt of written
notification from Departmental
Representative granting the Isolation
Request and authorization to proceed with the
isolation of designated equipment or
facility. Departmental Representative may
designate other individual at the Facility
as the person authorized to grant the
Isolation Request.

.5 Conduct safe, orderly shut down of equipment
or facilities, de-energize and isolate power
and other sources of energy and lockout items
in accordance with requirement of clause 1.8
below.

.6 Plan and schedule shut down of existing
services in consultation with the
Departmental Representative and the Facility
Manager. Minimize impact and downtime of
facility operations.

.7 Determine in advance, as much as possible,
in cooperation with the Departmental
Representative, the type and frequency of
situations which will require a Request for
Isolation. Follow Departmental

Representative's directives in this regard.

- .8 Conduct hazard assessment as part of the planning process of isolating existing equipment and facilities. Hazard Assessments to conform with requirements of Health and Safety Section 01 35 29.

1.8 LOCKOUTS

- .1 Isolate and lockout electrical facilities, mechanical equipment and machinery from all potential energy sources prior to starting work on such items.
- .2 Develop and implement lockout procedures to be followed on site as an integral part of the Work.
- .3 Use energy isolation lockout devices specifically designed and appropriate for type of facility or equipment being locked out.
- .4 Use industry standard lockout tags.
- .5 Provide appropriate safety grounding and guards as required.
- .6 Prepare Lockout Procedures in writing. Describe safe work practices, work functions and sequence of activities to be followed on site to safely isolate all potential energy sources and lockout/tagout facilities and equipment.
- .7 Include within procedures a system of worker request and issuance of individual lockout permit by a person, employed by Contractor, designated to be "in-charge" and being responsible for:
 - .1 Controlling issuance of permits or tags to workers.

- .2 Determining permit duration.
- .3 Maintaining record of permits and tags issued.
- .4 Submitting a Request for Isolation to Departmental Representative when required in accordance with Clause 1.7 above.
- .5 Designating a Safety Watcher, when one is required based on type of work.
- .6 Ensuring equipment or facility has been properly isolated, providing a Guarantee of Isolation to worker(s) prior to proceeding with work.
- .7 Collecting and safekeeping lockout tags, returned by workers, as a record of the event.
- .8 Clearly establish, describe and allocate, within procedures, the responsibilities of:
 - .1 Workers.
 - .2 Designated person controlling issuance of lockout tags/permits.
 - .3 Safety Watcher.
 - .4 Subcontractors and General Contractor.
- .9 Procedures shall meet the requirements of Codes and Regulations specified in clause 1.5 above.
- .10 Generic procedures, if used, must be edited, supplemented with pertinent information and tailored to reflect specific project conditions. Clearly label as being the procedures applicable to this contract.
 - .1 Incorporate site specific rules and procedures established by Facility Manager and in force at site. Obtain such procedures through Departmental Representative.
- .11 Procedures to be in typewritten format.
- .12 Submit copy of Lockout Procedures to Departmental Representative, in accordance

with submittal requirements of clause 1.6 herein, prior to commencement of work.

1.9 CONFORMANCE

- .1 Ensure that lockout procedures, as established for project on site, are stringently followed. Enforce use and compliance by all workers.
- .2 Brief all persons working on electrical facilities, mechanical and other equipment fed by an energy source on requirements of this section.
- .3 Failure to perform lockouts in accordance with regulatory requirements or follow procedures specified herein may result in the issuance of a Non-Compliance Notification at Departmental Representative's discretion with possible disciplinary measures imposed as specified in Section 01 35 29.

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 submitted to Departmental Representative and lockout permits or tags issued to workers during the course of work for full project duration.
- .3 Upon request, make such data available to Departmental Representative or to authorized safety representative for inspection.

-
- 1.1 RELATED WORK .1 Section 01 35 24 - Special Procedures on Fire Safety Requirements.
- 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 or 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 Workers' Compensation Board of the province in which the injury was incurred.
- .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 Make submittals as directed by the Departmental Representative.
- .2 Submit site-specific Health and Safety Plan prior to commencement of Work.
- .1 Submit within 10 work days of notification of Bid Acceptance. Provide 3 copies.
- .2 Departmental Representative will review

Health and Safety Plan and provide comments.

- .3 Revise the Plan as appropriate and resubmit within 5 work days after receipt of comments.
- .4 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.
- .5 Submit revisions and updates made to the Plan during the course of Work.
- .3 Submit name of designated Health & Safety Site Representative and support documentation specified in the Safety Plan.
- .4 Submit building permit, compliance certificates and other permits obtained.
- .5 Submit copy of Letter in 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 period of Work.
- .6 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .7 Submit copies of incident reports.
- .8 Submit WHMIS MSDS - Material Safety Data Sheets.

1.4 COMPLIANCE
REQUIREMENTS

- .1 Comply with the Occupational Health and Safety Act for the Province of Newfoundland and Labrador, and the 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: [www.http://laws-lois.justice.gc.ca/eng/acts/L-2_fulltext.html](http://laws-lois.justice.gc.ca/eng/acts/L-2_fulltext.html).

- .2 Canadian Occupational Health and Safety Regulations 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 NBC 2010, Division B, Part 8.
 - .2 Municipal by-laws and ordinances.

- .4 In case of conflict or discrepancy between any specified requirements, the more stringent shall apply.

- .6 Maintain Workers Compensation Coverage in good standing for duration of Contract. Provide proof of clearance through submission of Letter of Good Standing.

- .7 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 of persons on site, safety of property and for protection of persons and environment adjacent to the site to extent that they may be affected by conduct of 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 by-laws, 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 Departmental Representative will provide names of those persons authorized by 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 their 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 international 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 persons 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 Work, immediately take measures to rectify situation and prevent damage or harm. Advise Departmental Representative verbally and in writing.

1.8 FILING OF NOTICE

- .1 File Notice of Project with pertinent provincial health and safety authorities prior to beginning of Work.
 - .1 Departmental Representative will assist in locating address if needed.

1.9 PERMITS

- .1 Post permits, licenses and compliance certificates, specified in section 01 10 10, at Work Site.
- .2 Where a particular permit or compliance certificate cannot be obtained, notify Departmental Representative in writing and obtain approval to proceed before carrying out applicable portion of work.

1.10 HAZARD

- .1 Perform site specific health and safety

ASSESSMENTS

hazard assessment of the Work and its site.

- .2 Carryout 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.

1.11 PROJECT/SITE
CONDITIONS

- .1 The following are known or potential project related safety hazards at site:
 - .1 Working in close proximity of water.
 - .2 Use of water crafts and floating platforms.
 - .3 Wet and slippery conditions.
 - .4 Inclement weather conditions.
 - .5 Potential structural weakness of existing grounds.
 - .6 Heavy equipment activity in the area.
 - .7 Heavy lifting.
 - .8 Working at heights.
 - .9 Cutting tools and other construction power tools.
 - .10 Overhead power/utility lines.
 - .11 Risk of electric shock.
 - .12 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 into hazard assessment process.

- .4 MSDS Data sheets of pertinent hazardous and controlled products stored on site can be obtained from Departmental Representative.

1.12 MEETINGS

- .1 Attend pre-construction health and safety meeting, convened and chaired by Departmental Representative, prior to commencement of Work, at time, date and location determined by Departmental Representative. Ensure attendance of:
 - .1 Superintendent of Work.
 - .2 Designated Health & 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.

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 & 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, marshaling areas. Details on alarm notification methods, fire drills, location of fire fighting 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.
 - .2 Pertinent Federal and Provincial Departments and Authorities having jurisdiction.
 - .3 Local emergency resource organizations.
 - .5 Harmonize Plan with Facility's Emergency Response and Evacuation Plan. Departmental Representative will provide pertinent data including name of 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.

- .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 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 & Safety Site Representative responsible for daily supervision of health and safety of the Work.
- .2 Health & 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 & 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 bi-weekly basis. Record deficiencies and remedial action taken.
 - .2 Conduct Formal Inspections on a minimum monthly basis. Use standardized safety inspection forms. Distribute to subcontractors.
 - .3 Follow-up and ensure corrective measures are taken.
 - .6 Cooperate with Facility's Occupational Health and Safety representative should one be designated by Departmental Representative.
 - .7 Keep inspection reports and supervision related documentation on site.

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 Departmental Representative upon request.
- .3 When unforeseen or peculiar safety-related hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of

Province having jurisdiction and advise 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; minimum being hard hat, safety footwear, safety glasses and hearing protection.
 - .2 Immediately report 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 persons of disciplinary protocols to be taken for non compliance. 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 Departmental Representative.
- .2 Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Departmental Representative will stop Work if non-compliance of health and safety regulations is not corrected in a timely manner.

1.18 INCIDENT
REPORTING

- .1 Investigate and report the following incidents to Departmental Representative:
 - .1 Incidents requiring notification to Provincial Department of Occupational

Safety and Health, Workers Compensation Board or to other regulatory Agency.

.2 Medical aid injuries.

.3 Property damage in excess of \$10,000.00.

.4 Interruptions to Facility operations resulting in an operational lost to a Federal department in excess of \$5000.00.

.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 Departmental Representative.

1.20 BLASTING

.1 Blasting or other use of explosives is not permitted on site without prior receipt of written permission and instructions from Departmental Representative.

.2 Do blasting operations in accordance with local and provincial codes.

1.21 POWDER ACTUATED DEVICES

.1 Use powder actuated fastening devices only after receipt of written permission from Departmental Representative.

1.22 CONFINED SPACES

.1 Abide by occupational health and safety regulations regarding work in confined spaces.

.2 Obtain an 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 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.

1.23 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 Departmental Representative or authorized Safety Officer for inspection.

1.24 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on Work Site in accordance with Acts and Regulations of Province having jurisdiction.
- .2 Post other documents as specified herein, including:
 - .1 Site specific Health and Safety Plan.
 - .2 WHMIS data sheets.

1.25 DIVING OPERATIONS

- .1 All diving work to comply fully with the requirements of CSA Z275.2-04, "Occupational Safety Code for Diving Operations", CSA Z275.4-02, "Competency Standards for Diving Operations" and CSA Z180.1-00, "Compressed Breathing Air and Systems."
- .2 Dive personnel must meet the minimum

- competency requirements of the CSA Z275.4-02 (R2008) and all divers must possess a valid Category 1 Diving Certificate or an Unrestricted Surface-supplied Certificate.
- .3 Diving in free-swim mode is not permitted at the work site.
- .4 Divers must have a current (less than one year) validated medical examination certificate(s) from a licensed Diving Physician in Newfoundland and Labrador who is knowledgeable and competent in diving and hyperbaric medicine, for all dives.

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- 1.1 RELATED WORK .1 Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- 1.2 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.
- 1.3 FIRES .1 Fires and burning of rubbish on site not permitted.
- 1.4 DISPOSAL OF WASTES AND HAZARDOUS MATERIALS .1 Do not bury rubbish and waste materials on site. Dispose at approved landfill sites as specified in Section 01 74 21.
- .2 Do not dispose of hazardous waste or volatile materials, such as mineral spirits, paints, thinners, oil or fuel into waterways, storm or sanitary sewers or waste landfill sites.
- .3 Store, handle and dispose of hazardous materials and hazardous waste in accordance with applicable federal and provincial laws, regulations, codes and guidelines.
- .4 Dispose of construction waste materials and demolition debris, resulting from work, at approved landfill sites only. Carryout such disposal in strict accordance with provincial and municipal rules and regulations. Separate out and prevent improper disposal of items banned from landfills.

- .5 Establish methods and undertake construction practices which will minimize waste and optimize use of construction materials. Separate at source all construction waste materials, demolition debris and product packaging and delivery containers into various waste categories in order to maximize recycling abilities of various materials and avoid disposal of debris at landfill site(s) in a "mixed state". Where recycling firms, specializing in recycling of specific materials exist, transport such materials to the recycling facility and avoid disposal at landfill sites.
- .6 Communicate with landfill operator prior to commencement of work, to determine what specific construction, demolition and renovation waste materials have been banned from disposal at the landfill and at transfer stations.

1.5 DRAINAGE

- .1 Provide temporary drainage and pumping as necessary to keep excavations and site free from water.
- .2 Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- .3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with governing regulations and requirements.
- .4 Pumped water must meet applicable federal, provincial, and municipal standards before it can be discharged to a surface water body. If regulatory guidelines exceedences are noted, the Departmental Representative has the right to issue stop pumping instructions

to the Contractor. Contractor will not be compensated for any delays associated with retrofitting equipment to meet guidelines.

- .5 Provide control devices such as filter fabrics, sediment traps and settling ponds to control drainage and prevent erosion of adjacent lands. Maintain in good order for duration of work.

1.6 PERMITS

- .1 All guidelines and instructions stated on permits must be strictly adhered to.

1.7 WORK ADJACENT TO WATERWAYS

- .1 Do not operate construction equipment in waterways.
- .2 Do not use waterway beds for borrow material.
- .3 Do not dump excavated fill, waste material or debris in waterways.
- .4 At borrow sites, design and construct temporary crossings to minimize erosion to waterways in strict conformance with provincial and federal environmental regulations.
- .5 Do not skid logs or construction materials across waterways.
- .6 Avoid indicated spawning beds when constructing temporary crossings of waterways.
- .7 Do not blast within 100 m of spawning beds.
- .8 Do not refuel any type of equipment within 100 m of a water body. Maintain equipment in good working condition with no fluid leaks,

loose hoses or fittings.

1.8 POLLUTION
CONTROL

- .1 Maintain temporary erosion and pollution control features installed under this contract.
- .2 Control emissions from equipment and plant to local authorities emission requirements.
- .3 Prevent sandblasting and other extraneous materials from contaminating air beyond application area, by providing temporary enclosures.
- .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads and around entire construction site.
- .5 Maintain inventory of hazardous materials and hazardous waste stored on site. List items by product name, quantity and date when storage began.
- .6 Have emergency spill response equipment and rapid clean-up kit, appropriate to work, at site. Locate adjacent to work and where hazardous materials are stored. Provide personal protective equipment as required for clean-up.
- .7 Report, to Federal and Provincial Department of the Environment, spills of petroleum and other hazardous materials as well as accidents having potential of polluting the environment. Also notify Departmental Representative and submit a written spill report to Departmental Representative within 24 hours of occurrence.
- .8 Provide a floating debris containment boom whenever any of the Contractors methods of

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work allow for the potential of floating debris.

1.9 WILDLIFE
PROTECTION

- .1 Should nests of migratory birds in wetlands be encountered during work, immediately 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.

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1.1 References

- .1 Canada Shipping Act, Transport Canada, 2001, amended 2013-12-01
- .2 Canadian Coast Guard Regulations, Fisheries and Oceans Canada
- .3 Canadian Environmental Assessment Act, 2012, amended 2013-11-25
- .4 Canadian Environmental Protection Act, 1999, amended on 2014-03-28
- .5 Fisheries Act, 1985, Fisheries and Oceans Canada, amended 2013-11-25
- .6 Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters, 1998
- .7 Migratory Birds Convention Act, 1994, Environment Canada, amended 2010-12-10
- .8 Navigation Protection Act, 1985. Transport Canada, amended 2014-04-01
- .9 NL Provincial Environment Acts and Regulations
- .10 Species at Risk Act, 2002, amended 2013-03-08
- .11 The Federal Policy on Wetland Conservation, 1991, Environment Canada
- .12 Transportation of Dangerous Goods Act, 1992, Transport Canada, amended 2009-06-16
- .13 Workplace Hazardous Materials Information System, Health Canada.

1.2 Definitions

- .1 Archaeological resources: all tangible evidence of human activity that is of historical, cultural or scientific interest. Examples include features, structures, archaeological objects or remains at or from an archaeological site, or an object recorded

as an isolated archaeological find.

- .2 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.
- .3 Deleterious substance: (a) any substance that, if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water, or (b) any water that contains a substance in such quantity or concentration, or that has been so treated, processed or changed, by heat or other means, from a natural state that it would, if added to any other water, degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water.
- .4 Fish habitat: spawning grounds and any other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes.
- .5 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.

- .6 Invasive or 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.
- .7 Navigable water: a canal and any other body of water created or altered as a result of the construction of any work.
- .8 Surface 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.
- .9 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.

1.3 Transportation

- .1 Transport hazardous materials and hazardous waste in compliance with the Transportation of Dangerous Goods Act.
- .2 Eliminate free board spillage when excavating, loading and hauling excavated material.
- .3 Trucks transporting excavated material will have watertight boxes.
- .4 Do not overload trucks when hauling excavated material.
- .5 Maintain trucks clean and free of mud, dirt and other foreign matter.

- .6 Secure contents against spillage. Avoid potential release of contents and of any foreign matter onto highways, roads and access routes used for the work. Immediately clean any ground spills and soils to extent as directed by authority having jurisdiction.
- .7 Prior to commencement of work, advise and seek approval from the Departmental Representative of the existing roads and temporary routes/roads proposed to be used to access work areas and to haul material to and from the site, including roads to the excavated material disposal site.
- .8 Construction material and debris is not to become waterborne.
- .9 Any tools, equipment, vehicles, temporary structures or parts thereof used or maintained for the purpose of building or placing a work in navigable water are not to remain in place after the completion of the project.
- .10 Vessels are to be permitted safe access through the worksite at all times, and assisted as necessary.
- .11 All materials and equipment used in construction must be marked in accordance with the Collision Regulations of the Canada Shipping Act, 2001 when located on the waterway.
- .12 Advise the Canadian Coast Guard, Marine Communication and traffic Services (MCTS) sufficiently in advance of commencement of work or when deploying or removing site markings in order to allow for appropriate Notices to Shipping/Mariners action.
- .13 Work activities must comply with all / any conditions of the Navigation Protection Act

(NPA) permit issued by Transport Canada.

- 1.4 Temporary Causeways and Access Roads
- .1 It will be the Contractor's responsibility to gain access to the work area. The construction and removal of temporary causeways and access roads will be at the Contractor's expense and will be removed immediately after clearance of the excavated area.
 - .2 It will be the Contractor's responsibility to identify a location for the disposal of material imported by the Contractor for the construction of temporary causeways and access roads.
 - .3 All material used for construction of temporary causeways and access roads must be clean and free from excessive fines, organics, debris and non-toxic (i.e., free of fuel, oil, grease and/or any other contaminants), non-ore bearing and from a provincially approved non-water source.
 - .4 Heavy machinery and equipment must be operated from a dry platform only. Temporary causeways and access roads shall be constructed at an elevation such that machinery and equipment is operating completely out of the water at all stages of the tide. If tidal work is being carried out, machinery and equipment shall be relocated back to a suitable elevation to prevent operating in submerged waters.
 - .6 Maintain temporary buoys to mark the position of the access road including the outer toe as construction proceeds. All buoys are to meet requirements of the applicable Canadian Coast Guard standard and be equipped with radar reflectors.

1.5 Operation of Machinery

- .1 Ensure that machinery arrives on site in a clean condition and is maintained free of fluid leaks, invasive species and noxious weeds.
- .2 Whenever possible, operate machinery on land above the high water mark, on ice, or from a floating barge in a manner that minimizes disturbance to the banks and bed of the water body.
- .3 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.

1.6 Containment and Spill Management

- .1 Comply with Federal (CEPA Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations) and Provincial regulations, codes, standards and guidelines for the storage of fuel and allied petroleum products on or near the site.
- .2 Do not dump petroleum products or any other deleterious substances on ground or in the water.
- .3 Be diligent and take all necessary precautions to avoid spills and activities that may potentially contaminate the soil and water (both surface and subsurface) when handling petroleum products on site and during fueling and servicing of vehicles and equipment.
- .4 Maintain on site appropriate emergency spill response equipment consisting of at least one 250-litre (55 gallon) over pack spill kit for containment and cleanup of spills.
- .5 Maintain vehicles and equipment in good working order to prevent leaks on site.

- .6 In the event of a petroleum spill, immediately notify the 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.
 - .7 Materials such as paint, primers, blasting abrasives, rust solvents, degreasers, grout, or other chemicals are not to enter the watercourse.
 - .8 Develop a response plan that is to be implemented immediately in the event of a sediment release or spill of a deleterious substance.
- 1.7 Hazardous Material Handling
- .1 Store and handle hazardous materials in accordance with applicable federal and provincial regulations, codes, standards and guidelines. Store in location that will prevent spillage into the environment.
 - .2 Label containers to WHMIS requirements and keep MSDS data sheets on site for all hazardous materials.
 - .3 Maintain inventory of hazardous materials and hazardous waste stored on site. List items by product name, quantity and date when stored.
 - .4 Store and handle flammable and combustible materials in accordance with National Fire Code.
- 1.8 Disposal of Wastes
- .1 Do not bury rubbish, construction & demolition debris and waste materials on site.
 - .2 Dispose and recycle construction and demolition debris and waste materials in accordance with Provincial Waste Management

Regulations.

- .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, regulations, codes, standards and guidelines.

1.9 Water Quality

- .1 Conduct all work activities 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 excavation equipment. Make adjustments as required and as approved by Departmental Representative.
 - .2 Strategically position excavator equipment and haul vehicles to avoid over the water swings of excavated material whenever possible.
 - .3 Avoid bottom stockpiling, dragging or side casting material during excavation. If these activities are being proposed, the Contractor must:
 - .1 Employ suitable operational and engineering controls e.g., silt curtain), as approved by the Departmental Representative, around the excavation work area.
 - .4 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 Departmental Representative to minimize interference and impact

to harbour users.

- .5 Do not wash down equipment within a 30 metre buffer zone of a wetland, watercourse or other identified environmentally sensitive area.
- .6 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.

1.12 Blasting

- .1 Avoid using explosives in or near water. Use of explosives in or near water produces shock waves that can damage a fish swim bladder and rupture internal organs. Blasting vibrations may also kill or damage fish eggs or larvae.
- .2 If explosives are required as part of a project, the potential for impacts to fish and fish habitat should be minimized by implementing the following measures:
 - .1 Time in-water work requiring the use of explosives to prevent disruption of vulnerable fish life stages, including eggs and larvae, by adhering to appropriate Fisheries & Oceans Canada timing windows.
 - .2 Isolate the work site to exclude fish from within the blast area by using bubble / air curtains (i.e., a column of bubbled water extending from the substrate to the water surface as generated by forcing large volumes of air through a perforated pipe/hose), cofferdams or aqua dams.
 - .3 Remove any fish trapped within the isolated area and release unharmed beyond

the blast area prior to initiating blasting.

.4 Minimize blast charge weights used and subdivide each charge into a series of smaller charges in blast holes (i.e., decking) with a minimum 25 millisecond (1/1000 seconds) delay between charge detonations.

.5 Back-fill blast holes (stemmed) with sand or gravel to grade or to streambed / water interface to confine the blast.

.6 Place blasting mats over top of holes to minimize scattering of blast debris around the area.

.7 Do not use ammonium nitrate based explosives in or near water due to the production of toxic by-products.

.8 Remove all blasting debris and other associated equipment / products from the blast area.

1.13 Socioeconomic
Restrictions

- .1 Abide by municipal and provincial regulations for any restrictions 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 Work equipment and machinery must be equipped with purposely designed mufflers to reduce noise on site to lowest possible level. Maintain mufflers in good operating condition at all times.

1.14 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, shield and position flood lights downwards and the 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 of migratory birds in wetlands be encountered during work, immediately 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.

1.15 Fish Protection

- .1 Avoid wet, windy and rainy periods that may increase erosion and sedimentation.
- .2 Ensure that all in-water activities, or associated in-water structures, do not interfere with fish passage, constrict the channel width, or reduce flows.

1.16 Air Quality

- .1 Keep airborne dust and dirt resulting from the work on site to an absolute minimum.
- .2 Dust suppression by the application of water must be employed, when required. Apply dust control measures to roads, parking lots and work areas. The Departmental Representative

shall determine locations where water is to be applied, the amount of water to be applied, and the times at which it shall be applied. Waste oil must not to be used for dust control under any circumstances.

- 1.17 Fires .1 Fires and burning of rubbish on site not permitted.
- 1.18 Archaeological .1 All construction personnel are responsible for reporting any unusual materials unearthed during construction to the construction supervisor. If the find is believed to be an archaeological resource, the construction supervisor will immediately stop work in the vicinity of the find and notify his / her immediate supervisor.
- .2 If an archaeological and / or historically significant item is discovered during excavation, work in the area will be stopped immediately and the Departmental Representative will be contacted.
- .3 Work can only resume in the vicinity of the find when authorized by the DFO Project Manager.
- .4 In the event of the discovery of human remains or evidence of burials, the excavation work will immediately cease and nearest law enforcement agency will be contacted immediately by the DFO Project Manager.

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- 1.1 SECTION INCLUDES .1 Inspection and testing, administrative and enforcement requirements.
- 1.2 RELATED SECTIONS .1 Section 01 33 00 - Submittal Procedures.
.2 Section 01 78 00 - Closeout Submittals.
- 1.3 INSPECTION .1 Facilitate Departmental Representative's access to Work. If part of Work is being fabricated at locations other than construction site, make preparations to allow access to such Work whenever it is in progress.
.2 Give timely notice requesting inspection of Work designated for special tests, inspections or approvals by Departmental Representative or by inspection authorities having jurisdiction.
.3 If Contractor covers or permits to be covered Work designated for special tests, inspections or approvals before such is made, uncover Work until particular inspections or tests have been fully and satisfactorily completed and until such time as Departmental Representative gives permission to proceed. Pay costs to uncover and make good such Work.
.4 In accordance with the General Conditions, Departmental Representative may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents.
- 1.4 INDEPENDENT INSPECTION AGENCIES .1 Departmental Representative may engage and pay for service of Independent Inspection and Testing Agencies for purpose of inspecting and testing portions of Work except for the following which remain part of Contractor's

responsibilities:

.1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.

.2 Inspection and testing performed exclusively for Contractor's convenience.

.3 Testing, adjustment and balancing of conveying systems, mechanical and electrical equipment and systems.

.4 Mill tests and certificates of compliance.

.5 Tests as specified within various sections designated to be carried out by Contractor under the supervision of Departmental Representative.

.6 Additional tests specified in Clause 1.4.2.

.2 Where tests or inspections by designated Testing Agency reveal work not in accordance with contract requirements, Contractor shall pay costs for additional tests or inspections as Departmental Representative may require to verify acceptability of corrected work.

.3 Employment of inspection and testing agencies by Departmental Representative does not relax responsibility to perform Work in accordance with Contract Documents.

1.5 ACCESS TO WORK

.1 Furnish labour and facility to provide access to the work being inspected and tested.

.2 Co-operate to facilitate such inspections and tests.

.3 Make good work disturbed by inspections and tests.

1.6 PROCEDURES

.1 Notify Departmental Representative sufficiently in advance of when work is ready for tests, in order for Departmental

Representative to make attendance arrangements with Testing Agency. When directed by Departmental Representative, notify such Agency directly.

- .2 Submit representative samples of materials specified to be tested. Deliver in required quantities to Testing Agency. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in Work.
- .3 Provide labour and facilities to obtain and handle samples on site. Provide sufficient space on site for Testing Agency's exclusive use to store equipment.

1.7 REJECTED WORK

- .1 Remove and replace defective Work, whether result of poor workmanship, use of defective or damaged products and whether incorporated in Work or not, which has been identified by Departmental Representative as failing to conform to Contract Documents.
- .2 Make good damages to existing or new work, including work of other Contracts, resulting from removal or replacement of defective work.

1.8 TESTING BY
CONTRACTOR

- .1 Provide all necessary instruments, equipment and qualified personnel to perform tests designated as Contractor's responsibilities herein or elsewhere in the Contract Documents.
- .2 At completion of tests, turn over 2 copies of fully documented test reports to Departmental Representative.
- .3 Submit mill test certificates and other certificates as specified in various sections.

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- 1.1 ACCESS
- .1 Provide and maintain adequate access to project site.
 - .2 Maintain access roads for duration of contract and make good damage resulting from Contractors' use of roads.
- 1.2 CONTRACTOR'S SITE OFFICE
- .1 Be responsible for and provide own site office, if required, including electricity, heat, lights and telephone. Locate site office as directed by Departmental Representative.
- 1.3 DEPARTMENTAL REPRESENTATIVE'S SITE OFFICE
- .1 Provide or construct a separate site office for the use of the Departmental Representative and the Site Representative. The building must be in place prior to commencement of work.
 - .2 Provide heating system to maintain 22°C inside temperature at -20°C outside temperature.
 - .3 The building will be approximately 2400 mm x 3600 mm. It will have a suitable frame covered with a weatherproof siding and lined with plywood or other approved material. The floor will be of 19 mm thick material. It will be provided with suitable window with at least 1 m² of glass and arranged to provide at least 0.5 m² of screened opening. The door will be fitted with a lockset and 2 keys.
 - .4 The office will be equipped with a drafting chair and a 900 mm x 1500 mm table having a hinged, smooth wooden top suitable for drafting.
 - .5 Install electrical lighting system to provide minimum 750 lux using surface mounted, shielded commercial fixtures with 10% upward

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light component.

- .6 Maintain office in clean condition.
- .7 Arrange and pay for telephone and facsimile machine in the Departmental Representative's Office for Site Representative's exclusive use. Long distance calls or faxes placed on this phone by the Departmental Representative or the Site Representative will be paid by the Departmental Representative.
- .8 Contractor may, on approval of Departmental Representative, provide cellular or mobile phone. If approval to use cellular or mobile phone is granted, be responsible for all services, airtime, license and network access fees, and all other fees or charges required to utilize the phone as intended by the manufacturer.

1.4 SANITARY
FACILITIES

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

1.5 POWER

- .1 Arrange, pay for and maintain temporary electrical power supply in accordance with governing regulations and ordinances.
- .2 Supply and install all temporary facilities for power such as pole lines and underground cables to approval of local power supply authority.

1.6 WATER SUPPLY

- .1 Arrange, pay for and maintain temporary water supply in accordance with governing regulations and ordinances.

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- 1.7 SCAFFOLDING
- .1 Design, construct and maintain scaffolding in rigid, secure and safe manner in accordance with CSA797-09.
 - .2 Erect scaffolding independent of walls. Remove when no longer required.
- 1.8 CONSTRUCTION SIGN AND NOTICES
- .1 Contractor or subcontractor advertisement signboards are not permitted on site.
 - .2 Only notices of safety or instructions are permitted on site.
 - .3 Safety and Instruction Signs and Notices:
 - .1 Signs and notices for safety and instruction shall be in both official languages.
 - .4 Maintenance and Disposal of Site Signs:
 - .1 Maintain approved signs and notices in good condition for duration of project and dispose of off site on completion of project or earlier if directed by Departmental Representative.
- 1.9 REMOVAL OF TEMPORARY FACILITIES
- .1 Remove temporary facilities from site when directed by Departmental Representative.

PART 1 - GENERAL

- 1.1 SECTION INCLUDES .1 Barriers.
.2 Traffic Controls.
- 1.2 INSTALLATION AND REMOVAL .1 Provide temporary controls in order to execute work expeditiously.
.2 Remove from site all such work after use.
- 1.3 HOARDING .1 Erect temporary site enclosure using new 1.2 m high snow fence wired to rolled steel "T" bar fence posts spaced at 2.4 m centres. Provide one lockable truck gate. Maintain fence in good repair.
- 1.4 GUARD RAILS AND BARRICADES .1 Provide as required by governing authorities and to approval of Departmental Representative.
- 1.5 ACCESS TO SITE .1 Provide and maintain access to adjacent harbour facilities.
- 1.6 PUBLIC TRAFFIC FLOW .1 Provide and maintain competent signal flag operators, traffic signals, barricades and flares, lights, or lanterns as required to perform work and protect the public.
- 1.7 FIRE ROUTES .1 Maintain access to property including overhead clearances for use by emergency response vehicles.
- 1.8 PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY .1 Protect surrounding private and public property from damage during performance of work.
.2 Be responsible for damage incurred.

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1.1 DESCRIPTION

- .1 This section specifies requirements for board, lodgings and related services to be provided by the Contractor for the Site Monitor.
- .2 It is a requirement of this contract that the Contractor provide and pay for all board and lodgings for the Site Monitor's sole use for the duration of the project. Provide for and maintain acceptable living accommodations on site for the Site Monitor's sole use. The minimum requirement would be a hotel within 5km of the project site, or other arrangement approved by the Departmental Representative. The minimum daily allowance for the site monitor's meals (to be paid for by the contractor), is in accordance with the latest published Treasury Board guidelines for breakfast/lunch/dinner allowances (these can be found on-line at <http://www.njc-cnm.gc.ca/directive/travel-voyage/s-td-dv-a3-eng.php>).

1.2 BOARD AND LODGINGS

- .1 For the purpose of this contract board and lodgings shall include but not necessarily be limited to: sleeping accommodation, meals and dining facilities, washroom facilities, laundry facilities, electrical and heating service, linens and bedding, etc. and any reasonable service as directed by the Departmental Representative.
- .2 Board and lodgings must be approved by the Departmental Representative and Contractor will cooperate in providing all services required to maintain an acceptable standard of living during construction period.
- .3 The Contractor shall include all calendar

days, including weekends and statutory holidays in determining the cost.

1.3 REQUIREMENTS
OF REGULATORY
AGENCIES

- .1 Comply with any or all applicable Agencies regulation of the Province of Newfoundland and Labrador, relating to the set up, servicing and maintenance of accommodations for the Site Monitor.
- .2 Obtain and pay for any permits which may be required and comply to regulations of same.

- 1.1 GENERAL
- .1 Use new material and equipment unless otherwise specified.
 - .2 Within 7 days of written request by Departmental Representative, submit following information for any materials and products proposed for supply:
 - .1 name and address of manufacturer;
 - .2 trade name, model and catalogue number;
 - .3 performance, descriptive and test data;
 - .4 manufacturer's installation or application instructions;
 - .5 evidence of arrangements to procure.
 - .6 evidence of manufacturer delivery problems or unforeseen delays.
 - .3 Provide material and equipment of specified design and quality, performing to published ratings and for which replacement parts are readily available.
 - .4 Use products of one manufacturer for equipment or material of same type or classification unless otherwise specified.
 - .5 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.
- 1.2 PRODUCT QUALITY AND REFERENCED STANDARDS
- .1 Contractor shall be solely responsible for submitting relevant technical data and independent test reports to confirm whether a product or system proposed for use meets contract requirements and specified standards.
 - .2 Final decision as to whether a product or system meets contract requirements rest solely with the Departmental Representative in accordance with the General Conditions.

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1.3 ACCEPTABLE
MATERIALS AND
ALTERNATIVES

- .1 Acceptable Materials: When materials specified include trade names or trade marks or manufacturer's or supplier's name as part of the material description, select and only use one of the names listed for incorporation into the Work.
- .2 Alternative Materials: Submission of alternative materials to trade names or manufacturer's names specified must be done during the bidding period following procedures indicated in the Instructions to Bidders.
- .3 Substitutions: After acceptance of bid, substitution of a specified material will be dealt with as a change to the Work in accordance with the General Conditions of the Contract.

1.4 MANUFACTURERS
INSTRUCTIONS

- .1 Unless otherwise specified, comply with manufacturer's latest printed instructions for materials and installation methods to be used. Do not rely on labels or enclosure provided with products. Obtain written instructions directly from manufacturers.
- .2 Notify Departmental representative in writing of any conflict between these specifications and manufacturers instructions, so that Departmental Representative will designate which document is to be followed.

1.5 AVAILABILITY

- .1 Immediately notify Departmental Representative in writing of unforeseen or unanticipated material delivery problems by manufacturer. Provide support documentation as per Clause 1.1.2 above.

1.6 WORKMANSHIP

- .1 Ensure quality of work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed.

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- .2 Remove unsuitable or incompetent workers from site as stipulated in General Conditions.
- .3 Ensure cooperation of workers in laying out work. Maintain efficient and continuous supervision on site at all times.
- .4 Coordinate work between trades and subcontractors.
- .5 Coordinate placement of openings, sleeves and accessories.

1.7 FASTENINGS -
GENERAL

- .1 Provide metal fastenings and accessories in same texture, colour and finish as base metal in which they occur. Prevent electrolytic action between dissimilar metals. Use non-corrosive fasteners, anchors and spacers for securing exterior work and in humid areas.
- .2 Space anchors within limits of load bearing or shear capacity and ensure that they provide positive permanent anchorage. Wood or organic material plugs not acceptable.
- .3 Keep exposed fastenings to minimum, space evenly and lay out neatly.
- .4 Fastenings which cause spalling or cracking of material to which anchorage is made, are not acceptable.
- .5 Do not use explosive actuated fastening devices unless approved by Departmental Representative. See Section 01 35 29 on Health and Safety in this regard.

1.8 FASTENINGS -
EQUIPMENT

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Use heavy hexagon heads, semi-finished unless otherwise specified.

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- .3 Bolts may not project more than one diameter beyond nuts.
 - .4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur and, use resilient washers with stainless steel.
- 1.9 STORAGE, HANDLING AND PROTECTION
- .1 Deliver, handle and store materials in manner to prevent deterioration and soiling and in accordance with manufacturer's instructions when applicable.
 - .2 Store packaged or bundled materials in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work. Provide additional cover where manufacturer's packaging is insufficient to provide adequate protection.
 - .3 Store products subject to damage from weather in weatherproof enclosures.
 - .4 Store cementitious products clear of earth or concrete floors, and away from walls.
 - .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
 - .6 Store sheet materials and lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.
 - .7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
 - .8 Immediately remove damaged or rejected materials from site.

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- .9 Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

1.10 CONSTRUCTION
EQUIPMENT AND PLANT

- .1 On request, prove to the satisfaction of Departmental Representative that the construction equipment and plant are adequate to manufacture, transport, place and finish work to quality and production rates specified. If inadequate, replace or provide additional equipment or plant as directed.
- .2 Maintain construction equipment and plant in good operating order. Prevent oil and other contaminant leaks. Should any contaminant leak onto ground or into the water, take immediate and appropriate measures to contain, cleanup and dispose in an environmentally responsible manner.

PART 1 - GENERAL1.1 GENERAL

- .1 Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
- .2 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .3 Prevent accumulation of wastes which create hazardous conditions.
- .4 Provide adequate ventilation during use of volatile or noxious substances.

1.2 MATERIALS

- .1 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

1.3 CLEANING DURING CONSTRUCTION

- .1 Maintain project grounds and public properties in a tidy condition, free from accumulations of waste material and debris. Clean areas on a daily basis.
- .2 Provide on-site garbage containers for collection of waste materials and debris.
- .3 Remove waste materials and debris from site on a daily basis.

1.4 FINAL CLEANING

- .1 In preparation for acceptance of the Work perform final cleaning.
- .2 Inspect finishes, fitments and equipment. Ensure specified workmanship and operation.

- .3 Broom clean exterior paved and concrete surfaces; rake clean other surfaces of grounds.

1.1 RELATED
SECTIONS

- .1 Section 01 35 43 - Environment Procedures.
- .2 Section 02 41 16 - Sitework, Demolition and Removal.

1.2 WASTE
MANAGEMENT PLAN

- .1 Prior to commencement of work, prepare waste Management Workplan.
- .2 Workplan to include:
 - .1 Waste audit.
 - .2 Waste reduction practices.
 - .3 Material source separation process.
 - .4 Procedures for sending recyclables to recycling facilities.
 - .5 Procedures for sending non-salvageable items and waste to approved waste processing facility or landfill site.
 - .6 Training and supervising workforce on waste management at site.
- .3 Workplan to incorporate waste management requirements specified herein and in other sections of the Specifications.
- .4 Develop Workplan in collaboration with all subcontractors to ensure all waste management issues and opportunities are addressed.
- .5 Submit copy of Workplan to Departmental Representative for review and approval.
 - .1 Make revisions to Plan as directed by Departmental Representative.
- .6 Implement and manage all aspects of Waste Management Workplan for duration of work.
- .7 Revise Plan as work progresses addressing new opportunities for diversion of waste from landfill.

1.3 WASTE AUDIT

- .1 At project start-up, conduct waste audit of:
 - .1 Site conditions identifying salvageable

and non-salvageable items and waste resulting from demolition and removal work.

.2 Projected waste resulting from product packaging and from material leftover after installation work.

- .2 Develop written list. Record type, composition and quantity of various salvageable items and waste anticipated, reasons for waste generation and operational factors which contribute to waste.

1.4 WASTE REDUCTION

- .1 Based on waste audit, develop waste reduction program.
- .2 Structure program to prioritize actions, with waste reduction as first priority, followed by salvage and recycling effort, then disposal as solid waste.
- .3 Identify materials and equipment to be:
- .1 Protected and turned over to Departmental Representative when indicated.
 - .2 Salvaged for resale by Contractor.
 - .3 Sent to recycling facility.
 - .4 Sent to waste processing/landfill site for their recycling effort.
 - .5 Disposed of in approved landfill site.
- .4 Reduce construction waste during installation work. Undertake practices which will minimize waste and optimize full use of new materials on site, such as:
- .1 Use of a central cutting area to allow for easy access to off-cuts;
 - .2 Use of off-cuts for blocking and bridging elsewhere.
 - .3 Use of effective and strategically placed facilities on site for storage and staging of left-over or partially cut materials to allow for easy incorporation into work whenever possible avoiding

unnecessary waste.

- .5 Develop other strategies and innovative procedures to reduce waste such as minimizing the extent of packaging used for delivery of materials to site, etc.

1.5 MATERIAL SOURCE
SEPARATION PROCESS

- .1 Develop and implement material source separation process at commencement of work as part of mobilization and waste management at site.
- .2 Provide on-site facilities to collect, handle and store anticipated quantities of reusable, salvageable and recyclable materials.
 - .1 Use suitable containers for individual collection of items based on intended purpose.
 - .2 Locate to facilitate deposit but without hindering daily operations of existing building tenants.
 - .3 Clearly mark containers and stockpiles as to purpose and use.
- .3 Perform demolition and removal of existing structure components and equipment following a systematic deconstruction process.
 - .1 Separate materials and equipment at source, carefully dismantling, labelling and stockpiling alike items for the following purposes:
 - .1 Reinstallation into the work where indicated.
 - .2 Salvaging reusable items not needed in project which Contractor may sell to other parties. Sale of such items not permitted on site.
 - .3 Sending as many items as possible to locally available recycling facility.
 - .4 Segregating remaining waste and debris into various individual waste

categories for disposal in a "non-mixed state" as recommended by waste processing/landfill sites.

- .4 Isolate product packaging and delivery containers from general waste stream. Send to recycling facility or return to supplier/manufacturer.
- .5 Send leftover material resulting from installation work for recycling whenever possible.
- .6 Establish methods whereby hazardous and toxic waste materials, and their containers, encountered or used in the course work are properly isolated, stored on site and disposed in accordance with applicable laws and regulations from authorities having jurisdiction.
- .7 Isolate and store existing materials and equipment identified for re-incorporation into the Work. Protect against damage.

1.6 WORKER TRAINING
AND SUPERVISION

- .1 Provide adequate training to workforce, through meetings and demonstrations, to emphasize purpose and worker responsibilities in carrying out the Waste Management Plan.
- .2 Waste Management Coordinator: designate full-time person on site, experienced in waste management and having knowledge of the purpose and content of Waste Management Plan to:
 - .1 Oversee and supervise waste management during work.
 - .2 Provide instructions and directions to all workers and subcontractors on waste reduction, source separation and disposal practices.

- .3 Post a copy of Plan in a prominent location on site for review by workers.

1.7 CERTIFICATION
OF MATERIAL
DIVERSION

- .1 Submit to Departmental Representative, copies of certified weigh bills from authorized waste processing sites and sale receipts from recycling/reuse facilities confirming receipt of building materials and quantity of waste diverted from landfill.
- .2 Submit data at pre-determined project milestones as determined by Departmental Representative.
- .3 Compare actual quantities diverted from landfill with projections made during waste audit.

1.8 DISPOSAL
REQUIREMENTS

- .1 Burying or burning of rubbish and waste materials is prohibited.
- .2 Disposal of waste, volatile materials, mineral spirits, oil, paint, paint thinner or unused preservative material into waterways, storm, or sanitary sewers is prohibited.
- .3 Do not dispose of preservative treated wood through incineration.
- .4 Do not dispose of preservative treated wood with other materials destined for recycling or reuse.
- .5 Dispose of treated wood, end pieces, wood scraps and sawdust at a sanitary landfill.
- .6 Dispose of waste only at approved waste processing facility or landfill sites approved by authority having jurisdiction.

- .7 Contact the authority having jurisdiction prior to commencement of work, to determine what, if any, demolition and construction waste materials have been banned from disposal in landfills and at transfer stations. Take appropriate action to isolate such banned materials at site of work and dispose in strict accordance with provincial and municipal regulations.
- .8 Transport waste intended for landfill in separated condition, following rules and recommendations of Landfill Operator in support of their effort to divert, recycle and reduce amount of solid waste placed in landfill.
- .9 Collect, bundle and transport salvaged materials to be recycled in separated categories and condition as directed by recycling facility. Ship materials only to approved recycling facilities.
- .10 Sale of salvaged items by Contractor to other parties not permitted on site.

Basin Maintenance Dredging
Sandy Cove, NL

2017-05-05

1.1 SECTION
INCLUDES

- .1 Project Record Documents as follows:
 - .1 As-built drawings;
 - .2 As-built specifications;
 - .3 Reviewed shop drawings.

1.2 PROJECT RECORD
DOCUMENTS

- .1 Departmental Representative will provide two white print sets of contract drawings and two copies of Specifications Manual specifically for "as-built" purposes.
- .2 Maintain at site one set of the contract drawings and specifications to record actual as-built site conditions.
- .3 Maintain up-to-date, real time as-built drawings and specifications in good condition and make available for inspection by the Departmental Representative at any time during construction.
- .4 As-Built Drawings:
 - .1 Record changes in red ink on the prints. Mark only on one set of prints and at completion of project and prior to final inspection, neatly transfer notations to second set (also by use of red ink). Submit both sets to Departmental Representative. All drawings of both sets shall be stamped "As-Built Drawings" and be signed and dated by Contractor.
 - .2 Show all modifications, substitutions and deviations from what is shown on the contract drawings or in specifications.
 - .3 Record following information:
 - .1 Horizontal and vertical location of various elements in relation to Geodetic Datum.
 - .2 Field changes of dimension and detail.
 - .3 All design elevations, sections, and details dimensioned and marked-up to consistently report finished

installation conditions.

.4 Any details produced in the course of the contract by the Departmental Representative to supplement or to change existing design drawings must also be marked-up and dimensioned to reflect final as-built conditions and appended to the as-built drawing document.

.5 All change orders issued over the course of the contract must be documented on the finished as-built documents, accurately and consistently depicting the changed condition as it applies to all affected drawing details.

.5 As-built Specifications: legibly mark in red each item to record actual construction, including:

.1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly items substituted from that specified.

.2 Changes made by Addenda and Change Orders.

.3 Mark up both copies of specifications; stamp "as-built", sign and date similarly to drawings as per above clause.

.6 Maintain As-built documents current as the contract progresses. Departmental Representative will conduct reviews and inspections of the documents on a regular basis. Frequency of reviews will be subject to Departmental Representative's discretion. Failure to maintain as-builts current and complete to satisfaction of the Departmental Representative shall be subject to financial penalties in the form of progress payment reductions and holdback assessments.

Basin Maintenance Dredging
Sandy Cove, NL

2017-05-05

1.3 REVIEWED
SHOP DRAWINGS

.1 Compile 2 full sets of all reviewed shop drawings.

PART 1 - GENERAL

1.1 GENERAL
REQUIREMENTS

- .1 A Notice to Shipping is to be issued prior to commencement and upon completion of work.
- .2 During construction, any vessels or barges utilized must be marked in accordance with the provisions of the Canada Shipping Act Collision Regulations.
- .3 Upon completion of the project, a written Notice to Mariners must be issued.

1.2 PROTECTION

- .1 Protect existing objects designated to remain. In event of damage, immediately replace or make repairs to approval of and at no additional cost to Canada.
- .2 Place a floating boom around entire demolition site to prevent loss of any materials.
- .3 Remove all floating debris from water on a routine and timely basis.

PART 2 - PRODUCTS

NOT APPLICABLE

PART 3 - EXECUTION

3.1 EXECUTION

- .1 Inspect site and verify with Departmental Representative objects designated for removal.
- .2 Locate and protect utility lines. Preserve in operating condition active utilities traversing site.

- 3.2 REMOVAL .1 Do not disturb adjacent work designated to remain in place.
- 3.3 DISPOSAL OF MATERIAL .1 All demolished materials, except materials designated to be reused, will become property of contractor and will be removed from site and disposed of to satisfaction of Departmental Representative and in accordance with environmental guidelines. It is the sole responsibility of the contractor to dispose of all demolished materials at an approved disposal site. Ensure that disposal site is approved and willing to accommodate any materials disposed of from work site.
- .2 Contractor shall obtain and pay for all necessary permits and disposal fees for use of an approved waste disposal site.
- 3.4 RESTORATION .1 Upon completion of work, remove debris, trim surfaces and leave work site in clean condition.
- .2 Reinstate areas and existing works outside areas of demolition to conditions that existed prior to commencement of work.

PART 1 - GENERAL

- 1.1 DESCRIPTION .1 This specification section includes the requirements for dredging, and disposal of dredged materials.
- 1.2 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 Estimated quantity:
.1 Volume of material calculated to be above grade and within specified side slopes unless otherwise specified.
- .8 Chart Datum: permanently established plane from which soundings or tide heights are referenced, usually Lowest Normal Tide (LNT).
- .9 Lowest Normal Tide (LNT): plane so low that tide will seldom fall below it.
- .10 Cleared Area: area of dredging accepted as achieving the required grade and verified by a PWGSC survey.

-
- 1.3 REGULATORY REQUIREMENTS
- .1 There are strict environmental procedures that must be followed during the Work.
 - .2 Comply with municipal, provincial and national codes and regulations relating to project.
 - .3 Mark floating equipment with lights in accordance with the provisions of the Canada Shipping Act Collision Regulations and Notices to Mariners.
- 1.4 SCHEDULING
- .1 Submit to Departmental Representative, within 2 weeks after acceptance of bid, schedule of work including time periods during which each operation involved in Work will be undertaken. At time of submission of schedule, meet with Departmental Representative to review schedule.
 - .2 Adhere to schedule and take immediate action to correct any slippage by effectively altering operations or mobilizing other equipment. Notify Departmental Representative of corrective action to be taken.
- 1.5 LOCATION
- .1 Work comprises dredging of areas as indicated on the drawing. Contractor to become familiar with the distance to the dredging limits, and plan his dredging methodology accordingly. All measures required to achieve the dredge depths and limits shown on the drawing are the responsibility of the Contractor.
- 1.6 INTERFERENCE TO NAVIGATION
- .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, marine operations and construction activities at wharf site.

- .2 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.
- .3 Keep the Marine Communications and Traffic Services' Centre, Fisheries and Oceans Canada, informed of dredging operations in order that necessary Notices to Mariners will be issued.

1.7 DATUM, WATER GAUGES AND TARGETS

- .1 Elevations used in this specification and contract drawings are in metres referred to Canadian Hydrographic Services Survey datum.
- .2 Areas to be dredged are to be referenced to vertical bench marks for each location of dredging as indicated.

1.8 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, Aerospace, Defence and Marine Branch and this certificate to accompany bid submission.

1.9 SITE INFORMATION

- .1 There is no distinction between Class "B" and Class "A" dredging in this contract.
- .2 Results of most recent soundings and uplands elevations are included on the drawings. This data will be used for all calculations for quantity purposes. If the contractor wishes to perform own survey, a written notice must be submitted to the Departmental Representative (at least 7 days notice) so PWGSC can verify the sounding survey before the commencement of any work.

- .3 Take necessary steps to become fully familiar with potential inclement weather and sea conditions in this area.

1.10 SURVEY
REQUIREMENTS

- .1 Provide, at own expense, survey 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. Areas are to be sounded to provide sounding printout display of at least 2 x 2 m UTM grid to approval of Departmental Representative.

1.11 SURVEYS AND
ACCEPTANCE OF WORK

- .1 No area will be dredged prior to Departmental Representative and Contractor's mutual acceptance of the existing sounding and topographical survey data included on the drawings.
- .3 A survey will be undertaken by Departmental Representative upon completion of dredging. Survey will confirm if dredging is completed as specified and whether area can be considered cleared area. Survey will be by electronic sweep equipment. Survey plan at 1:250 plotting least of minimum depths obtained in this survey will identify areas requiring reworking to obtain following elevations using least of minimum mode.
- .4 Contractor to re-dredge as necessary to remove all material which is found to be above grade using the least of minimum mode elevations as specified herein.
- .5 One additional survey will be undertaken at Departmental Representative's cost, for those areas not meeting acceptance criteria for dredging. All additional surveys required to clear areas will be undertaken by the Departmental Representative at Contractor's cost.

Basin Maintenance Dredging
Sandy Cove, NL

2017-05-05

1.12 MEASUREMENT
FOR PAYMENT

- .1 Dredging: Dredging will be measured in cubic metres, determined from existing seabed elevation established from the current sounding survey down to grade depth elevation within pay limits shown on drawings. Quantities will be determined by a sounding survey performed by the PWGSC Survey Crew after dredging survey is completed by using electronic sounding and DPGS positioning equipment. The Departmental Representative will verify that the Contractor has performed dredging to the specified grade depth. No payment will be made for over-dredging. PWGSC will conduct an interim and final survey. The Contractor will formally request at least seven (7) days in advance that the final after-dredging survey be performed upon completion of dredging. The survey will be dependent on the weather. If the survey and inspection shows that all material has not been removed, the Contractor is to re-dredge to obtain grade depth. The Contractor will perform a sounding survey, using a method approved by the Departmental Representative to verify that the specified dredge depth has been obtained. The Departmental Representative will then perform a third survey for final verification of dredge depth. This third sounding survey and any subsequent surveys will be at the cost of the Contractor. Payment will include disposal of dredged material, using water tight boxes, at an approved waste site.
- .2 Contractor responsible for determining the approved waste site and paying all associated tipping fees. Contractor responsible for any required temporary works (backfilling, culvert installation, etc.) at the waste disposal site, where load restrictions may impede the use of heavy truck traffic along existing waste disposal access roads.
- .4 No separate payment will be made for

Contractor's survey vessel, equipment and crew or diving services.

- .5 There will be no additional payment for delays and/or downtime for vessel traffic, fishery operations, marine operations, during periods when no dredging is permitted. Contractor should contact the Harbour Authority to determine schedules of operations.
- .6 There will be no additional payment for downtime and for delays caused by vessel traffic or other activities associated with the site operations.
- .7 Removal of infilling material will not be measured for payment.
- .8 No separate payment will be made for sweeping.

Appendix A:
Diving Probe Report

Sandy Cove Bottom Samples & Probes

DETAILS

CALL UP #

PROJECT #

STANDING OFFER #: **EA003-161184**

PWGSC Representative – Mark McNeil

Report Writer: Brandon Sparkes



Date: May 16, 2017



Brandon Sparkes
11 Snooks Lane
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SANDY COVE BOTTOM SAMPLES & PROBES

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Dive Crew
Supervisor – Steve Drover
Diver – Brandon Sparkes
Diver – Mike Taylor
Tender – Stuart Lamb

Scope of work

- Sediment samples will be collected by divers.
- Samples will be collected from the top 0.10 m of the harbour bottom and positioned into laboratory supplied sample jars while underwater.
- 3) 250 ml glass jars of sediment be collected at each sediment sample location.
- Collect two methanol soil vials with each sediment location
- Underwater probes at each site as per the attached drawing. Establish a 5m x 5m grid pattern, taken using a piece of 10M rebar and a 5lb hammer. Depth of penetration to be noted at each location with general commentary on overburden (i.e. silty sand with 200mm penetration before hitting inferred bedrock.....beach rock overlying apparent bedrock – probe advanced 500mm....., etc.).
- Underwater pictures of the general area to be taken (general pictures to show type of harbour bottom materials and any surrounding bedrock outcrops that may be present).
- Report of finding, complete with pictures

Work Description

This project was carried out from Sunday May 14th 2017 until Monday May 14th 2017. Soil sediment samples as well as soil methanol samples were collected at the below locations. Samples were shipped to AGAT Laboratories in St. John's Tuesday May 16.

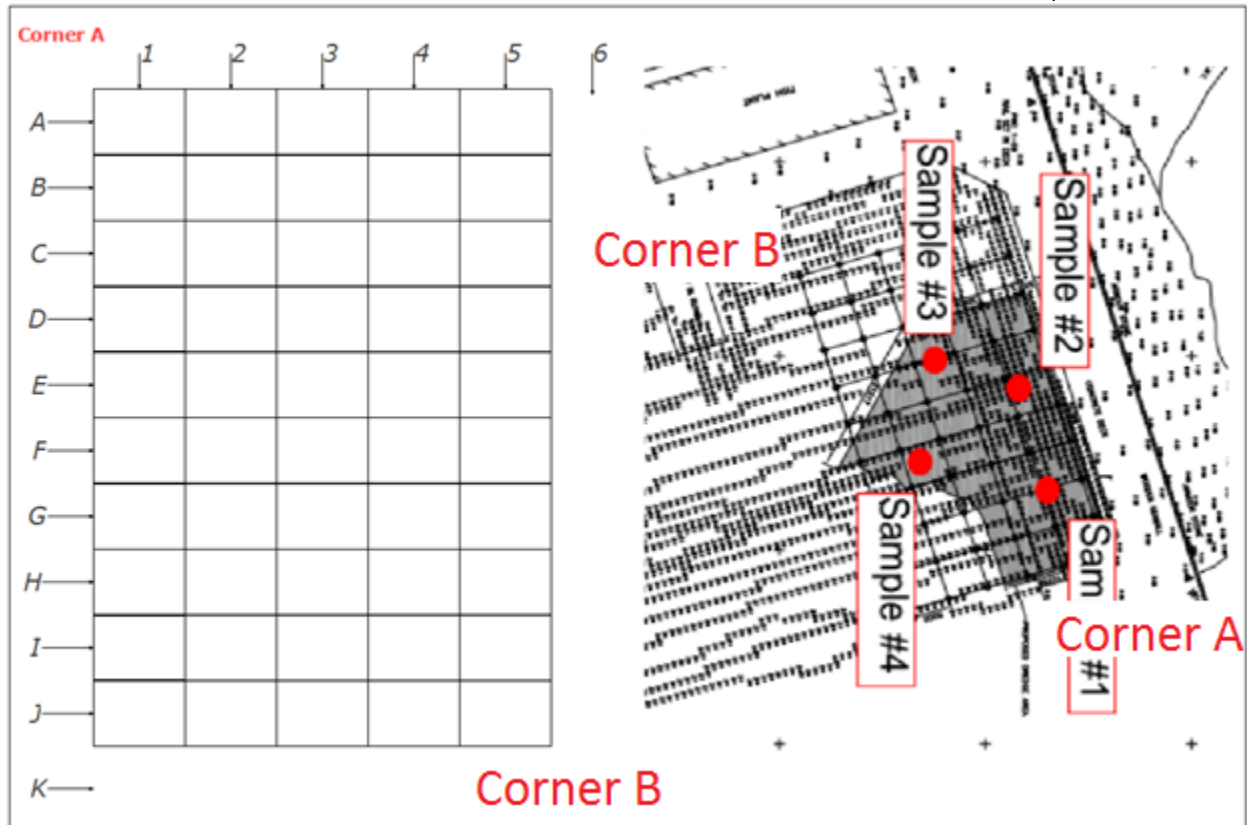
Probes were taken using a 5LB hammer and 10M 1 Meter rebar. Anything that did not hit solid bottom after our 1 Meter rod was fully submerged was recorded as 1M+. This area had a large mixture of rock so it was not possible to identify if what we were hitting was rock or bedrock.

Bottom Sample Location Findings

Location	Sample ID	Sample Descriptions	Bottom Substrate
Sandy Cove	Sandy Cove-1	Grey, Sand	Heavy Kelp covering Sand
	Sandy Cove-2	Grey, Sand	Heavy Kelp covering Sand
	Sandy Cove-3	Grey, Sand	Heavy Kelp covering Sand
	Sandy Cove-4	Grey, Sand	Heavy Kelp covering Sand

Sandy Cove





Location #	Depth Of Penetration	Overburden Type
A1	1M+	Sand, kelp & small beach rock
A2	300mm	Sand, kelp & small beach rock
A3	500mm	Sand, kelp & small beach rock
A4	500mm	Sand, kelp & small beach rock
A5	500mm	Sand, kelp & small beach rock
A6	1M+	Sand, kelp & small beach rock
B1	1M+	Sand, kelp & small beach rock
B2	600mm	Sand, kelp & small beach rock
B3	900mm	Sand, kelp & small beach rock

B₄	300mm	Sand, kelp & small beach rock
B₅	500mm	Sand, kelp & small beach rock
B₆	1M+	Sand, kelp & small beach rock
C₁	1M+	Sand, kelp & small beach rock
C₂	600mm	Sand, kelp & small beach rock
C₃	100mm	Sand, kelp & small beach rock
C₄	400mm	Sand, kelp & small beach rock
C₅	700mm	Sand, kelp & small beach rock
C₆	1M+	Sand, kelp & small beach rock
D₁	1M+	Sand, kelp & small beach rock
D₂	200mm	Sand, kelp & small beach rock
D₃	400mm	Sand, kelp & small beach rock
D₄	550mm	Sand, kelp & small beach rock
D₅	700mm	Sand, kelp & small beach rock
D₆	1M+	Sand, kelp & small beach rock
E₁	700mm	Sand, kelp & small beach rock
E₂	300mm	Sand, kelp & small beach rock
E₃	200mm	Sand, kelp & small beach rock
E₄	100mm	Sand, Kelp & densely spread rocks
E₅	100mm	Sand, Kelp & 400-800mm rock
E₆	600mm	Sand, Kelp & 400-800mm rock

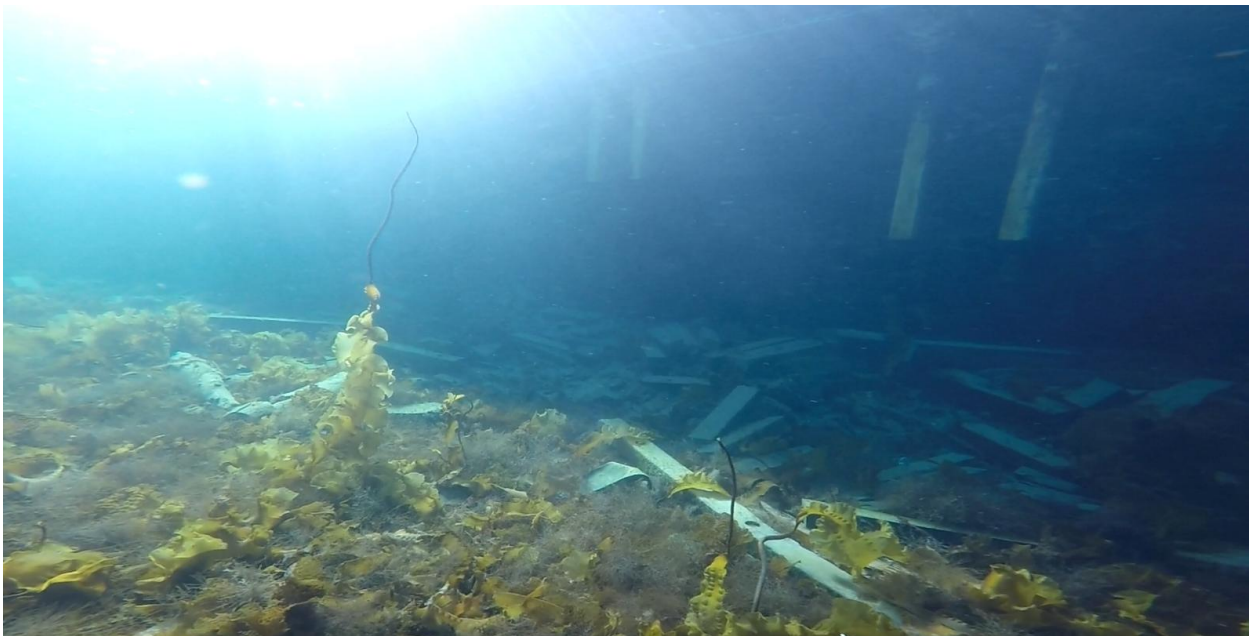
F1	200mm	Sand, kelp & small beach rock
F2	300mm	Sand, kelp & small beach rock
F3	0mm	Sand, Kelp & densely spread rocks
F4	0mm	Sand, Kelp & densely spread rocks
F5	100mm	Sand, Kelp & densely spread rocks
F6	800mm	Sand & Kelp
G1	100mm	Sand, small amounts of seaweed & 400-600mm rock
G2	200mm	Sand, small amounts of seaweed & 400-600mm rock
G3	100mm	Sand, small amounts of seaweed & 400-600mm rock
G4	100mm	Sand, small amounts of seaweed & 400-600mm rock
G5	300mm	Sand, small amounts of seaweed & 400-600mm rock
G6	500mm	Sand, small amounts of seaweed
H1	0mm	Sand, small amounts of seaweed & 300-600mm rock
H2	0mm	Sand, small amounts of seaweed & 300-600mm rock
H3	100mm	Sand, small amounts of seaweed & 300-600mm rock
H4	300mm	Sand, small amounts of seaweed & 300-600mm rock
H5	500mm	Sand, small amounts of seaweed & 300-600mm rock
H6	600mm	Sand, small amounts of seaweed & 300-600mm rock
I1	0mm	Sand, small amounts of seaweed & 300-600mm rock

I2	0mm	Sand, small amounts of seaweed & 300-600mm rock
I3	0mm	Sand, small amounts of seaweed & 300-600mm rock
I4	100mm	Sand, small amounts of seaweed & 300-600mm rock
I5	150mm	Sand, small amounts of seaweed & 300-600mm rock
I6	500mm	Sand, small amounts of seaweed & 300-600mm rock
J1	0mm	Sand, small amounts of seaweed & 300-600mm rock
J2	100mm	Sand, small amounts of seaweed & 300-600mm rock
J3	100mm	Sand, small amounts of seaweed & 300-600mm rock
J4	100mm	Sand, small amounts of seaweed & 300-600mm rock
J5	200mm	Sand, small amounts of seaweed & 300-600mm rock
J6	200mm	Sand, small amounts of seaweed & 300-600mm rock
K1	0mm	Sand, small amounts of seaweed & 300-600mm rock
K2	0mm	Sand, small amounts of seaweed & 300-600mm rock
K3	100mm	Sand, small amounts of seaweed & 300-600mm rock
K4	0mm	Sand, small amounts of seaweed & 300-600mm rock
K5	100mm	Sand, small amounts of seaweed & 300-600mm rock
K6	300mm	Sand, small amounts of seaweed & 300-600mm rock

Photo 1) This photo is taken from roughly location A3 looking towards B3. The bottom is covered in 400-600mm of heavy seaweed. Under the seaweed is sand and a mix of small beach rock.



Photo 2) Taken from roughly E3 looking towards F1,F2. The bottom still has a heavy cover of kelp. There is a lot of building materials on bottom in this area, old timbers. The bottom is still a mix of sand and rock.





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Photo 3) Taken from G3 there is less kelp in this area and the bottom is a mixture of larger rocks and sand.



Emergency Contacts

- Diving will be done in accordance with D.C.E.I.M dive tables, 30 feet for 150 minutes.
- Diver will have surface supplied air, video, bail out and communication.
- Standby will have surface- supplied air, bailout and communication.
- A site specific hazard assessment will be conducted by dive supervisor and the written dive plan will be discussed with all persons associated with the dive activities.
- All dive gear will undergo pre-dive checks and Medicor will be notified of diving operations. The number for the Queen Elizabeth 2 hospitals hyperbaric support facility will be included in the list of emergency numbers.

PROPER P.P.E. WILL BE WORN BY ALL MEMBERS OF THE DIVE CREW AT ALL TIMES.

Emergency Numbers

CENTRE FOR OFFSHORE AND REMOTE MEDICINE (MEDICOR)	ST. JOHN'S, NL	1-709-777-6300
FLEET DIVING UNIT (ATLANTIC)	HALIFAX, NS	902-460-1339
Q.E.2	HALIFAX, NS	902-473-7998
O .H. & S.	ST. JOHN'S NL	709-722-7121
ENVIRONMENTAL EMERGENCY	ST. JOHN'S NL	709-772-2083
INDUSTRIAL ACCIDENTS	ST. JOHN'S NL	709-729-4444
FIRE DEPARTMENT	PORT AUX CROIX	709-861-9111
HOSPITAL	PORT SAUNDERS	709-861-3139
HARBOUR AUTHORITY	PORT AUX CHOIX	709-861-3087

Sandy Cove Hazard Assessment

Hazard Identified	Hazard Ranking	Controls	Completed By	Date
Weather Conditions -wind -fog -rain -Sea State	High	<ul style="list-style-type: none"> - Abort dive operations if winds increase in intensity - Abort dive operations in high seas - Abort dive operations when visibility goes below .3km - Abort dives when sea state is above 2Meters 		
Marine Traffic	High	<ul style="list-style-type: none"> - Notice to mariners announcement concerning dive operations - Flagging - Visual surveillance 		
Tide	Med	<ul style="list-style-type: none"> - Check flow before a diver enters the water - Abort dive operations if tidal flow increases 		
Entering and Exiting Water	High	<ul style="list-style-type: none"> - Diver to use ladder attached to dive boat entering and exiting water - Secondary recovery to be available on boat 		
Medical Emergency	High	<ul style="list-style-type: none"> - Carry first aid kit - Sufficient oxygen supply - Have emergency numbers on site - File dive plan with Medicor - Have a secondary port identified 		

Entanglement	Med	<ul style="list-style-type: none"> - Carry a knife - Avoid areas of obvious danger - Move slow 		
Slips and Falls	High	<ul style="list-style-type: none"> - Aided entry into and out of water - Keep worksite neat - Support diver will being dressed in. - Support diver well entering and exiting the dive boat 		
Equipment Failure	Med	<ul style="list-style-type: none"> - Use properly serviced equipment - Conduct pre-dive check - Double redundancy with air supply and communication box - Carry spare parts 		
Qualified Personnel	High	<ul style="list-style-type: none"> - Current medicals - DCBC Unrestricted Surface Supplied Diver - CPR - O2 provider courses or diver medic 		
Pedestrians	Low	<ul style="list-style-type: none"> - Mark work area with caution tape - Keep unauthorized personnel out of work area - Raise dive flag 		
Tools	low	<ul style="list-style-type: none"> - Use tools only for the work that they were designed - Do not remove any safety components - Divers will be instructed in the proper operation of tool - Tools will be used only if they are in good working condition 		
Placing Loads I.e.; pipe and pumping cement	low	<ul style="list-style-type: none"> - Keep loads under control. - Be sure of all instruction. - Do not place yourself or equipment under load. - Umbilical shall be attended at all times - All lifting of loads will be directed by dive supervisor 		
		-		
		-		



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Appendix B:
Regulatory Review



Suite 204, 1 Regent Square
Corner Brook, NL
A2H 7K6

August 3, 2017

William French
DFO Small Craft Harbours
1 Regent Square
Corner Brook, NL, A2H 7K6

RE: Maintenance dredging, Sandy Cove, NL

Based on the most up-to-date interpretation of the Canadian Environmental Assessment Act (CEAA2012), dredging activities for navigational/access purposes is not defined as a “*project*” and thus does not require a determination of environmental significance under the Act. However, an environmental review is still required to ensure SCH are compliant with other applicable federal and provincial environmental legislation and regulations.

Applicable regulatory requirements for abovenoted project

1) Canadian Environmental Assessment Act

As dredging is no longer considered a project - as defined within the Canadian Environmental Assessment Act – a formal environmental assessment is not required. However, pursuant to internal DFO SCH policy, all proposed dredging activities are to be subjected to an environmental review. **This letter is to be considered proof of that review. No further documentation regarding the applicability of the CEAA is required.**

2) Fisheries Act

As per section 35(1) of the Fisheries Act, it is illegal to “...*carry on any work, undertaking or activity that results in serious harm to fish that are part of a commercial, recreational or Aboriginal fishery...*”. Therefore, this project was sent to the Fisheries and Oceans Canada, Fisheries Protection Program for review on June 21, 2017. A response was issued in July 26, 2017 which includes mitigation measures that should be followed as part of the project. Provided the mitigation measures are adhered to, Serious Harm is not anticipated.

3) Navigation Protection Act

The proposed dredging in Sandy Cove is covered by a Minor Works and Waters Navigation Protection Act Order (MWWO) and does not require formal approval from the Navigation Protection Program of Transport Canada. It is the proponents’ responsibility to ensure that the conditions of the MWWO are adhered to.



4) Water Resources Act (Provincial)

The abovenoted project is covered under the Newfoundland and Labrador Department of Environment and Conservation, Water Resources Division Minor Dredging Permit ALT8600-2017. **The NLDOEC must be notified following completion of the proposed dredging.**

5) Environmental Protection Act (Provincial)

Service NL has issued an approval for the disposal of dredge spoils from this project at an approved provincial landfill only. Disposal and/or reuse in any other location is not permitted.

In addition to the conditions prescribed above, the following additional conditions must be adhered to:

- i) dredge material must be transported to a provincially approved landfill for disposal;
- ii) the total volume of material removed must not exceed 2000 cubic metres;

All projects listed above may commence at your convenience. DFO is responsible to ensure all mitigations and notification requirements are adhered to. All regulatory approvals, responses/forms related to the proposed dredging are appended to this letter.

Should the scope of any of the proposed projects change, further re-evaluation is recommended. **This letter is applicable to the 2017/2018 Sandy Cove dredging project only.** Should you wish to discuss any of the abovenoted projects please don't hesitate to contact me.

Regards,

Mark McNeil
Environmental Services
Public Services and Procurement Canada

mark.mcneil@pwgsc-tpsgc.gc.ca

Office: (709) 637-4481

c/c. Paul Curran, DFO SCH

Atch.



P.O. Box 5667
St. John's, NL A1C 5X1

Your file Votre référence

Our file Notre référence
17-HNFL-00316

DFO – Small Craft Harbour
P.O. Box 5667
St. John's NL A1C 5X1

Attention: Mr. Paul Curran

Dear Mr. Curran:

Subject: Implementation of mitigation measures to avoid and mitigate serious harm to fish – Basin Maintenance Dredging - Sandy Cove, NL

The Fisheries Protection Program (the Program) of Fisheries and Oceans Canada received your proposal on June 21, 2017.

Your proposal has been reviewed to determine whether it is likely to result in serious harm to fish which is prohibited under subsection 35(1) of the *Fisheries Act*.

The proposal has also been reviewed to determine whether it will adversely impact listed aquatic species at risk and contravene sections 32, 33 and 58 of the *Species at Risk Act*.

Our review consisted of:

- An Application for Review and associated documentation

We understand that you propose to:

- Dredge approximately 500m² of the SCH boat basin in Sandy Cove.

To avoid the potential of serious harm to fish and their habitat, we are recommending that the attached mitigation measures be included into your plans. Provided that these mitigation measures are incorporated into your plans, the Program is of the view that your proposal will not result in serious harm to fish. The Program is also of the view that your proposal will not contravene Sections 32, 33, or 58 of the *Species at Risk Act*. No formal approval is required from the Program under the *Fisheries Act* or the *Species at Risk Act* in order to proceed with your proposal.

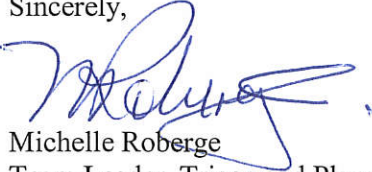
If your plans have changed or if the description of your proposal is incomplete, or changes in the future, you should consult our website (<http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>) or consult with a qualified environmental consultant to determine if further review is required by the Program.

A copy of this letter should be kept on site while the work is in progress.

It remains your responsibility to meet the other requirements of federal, provincial and municipal agencies.

If you have any questions, please contact Triage & Planning at our St. John's office at (709) 772-4140, by fax at (709) 772-5562, or by email at FPP.XNFL@dfo-mpo.gc.ca. Please refer to the file number referenced above when corresponding with the Program.

Sincerely,



Michelle Roberge
Team Leader, Triage and Planning
Regulatory Review – Fisheries Protection Program

Attach – Dredging



Dredging

Fisheries and Oceans Canada

Measures to Avoid Causing Harm to Fish and Fish Habitat

On November 25, 2013 the Fisheries Protection Provisions of the **Fisheries Act** came into force. The **Fisheries Act** requires that projects avoid causing serious harm to fish unless authorized by the Minister of Fisheries and Oceans. This applies to work being conducted in or near waterbodies that support fish that are part of or that support a commercial, recreational or Aboriginal fishery.

If you are conducting a project near water, it is your responsibility to ensure you avoid causing serious harm to fish in compliance with the **Fisheries Act**. The following advice will help you avoid causing harm and comply with the **Act**.

- a. *Time work in water to protect fish, including their eggs, juveniles, spawning adults, migration and/or the organisms upon which they feed.*
- b. *Sensitive or important fish habitat should be avoided.*
- c. *Conduct in-water work during periods of low flow to further reduce the risk to fish and their habitat or to allow work in water to be isolated from flows.*
- d. *Minimize duration of in-water work.*
- e. *Schedule work to avoid wet, windy and rainy periods that may increase erosion and sedimentation.*
- f. *Minimize the amount of dredged material removed by only dredging the area and depth required.*
- g. *Equipment should be mechanically sound to avoid leaks of oil, gas, and/or hydraulic fluids.*
- h. *Operate machinery on land above the high water mark, on ice, or from a floating barge in a manner that minimizes disturbances to the bank and bed of the water body.*
- i. *Use site isolation measures (e.g., silt boom or silt curtain) for containing suspended sediment where in-water work is required.*

Additional measures that may be required to protect fish and fish habitat can be found on the DFO national website (<http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>) and in the *Guidelines for the Protection of Freshwater Fish Habitat in Newfoundland & Labrador* (<http://www.dfo-mpo.gc.ca/Library/240270.pdf>)

Should your plans change please contact the Fisheries Protection Program-Regulatory Review:

Fisheries Protection Program
Fisheries and Ocean Canada
80 East White Hills Road
St. John's NL A1C 5X1
Telephone: (709) 772-4140
Fax: (709) 772-5562
Email: FPP-NL@dfo-mpo.gc.ca

Note: This advice is only applicable to the project specified on the accompanying DFO letter.

such as a portage, exist to allow vessels to resume navigation on the other side of the work site; and

- (b) that no floating pipes are left unattended or unsupervised.

Removal of temporary works

(5) The owner of works of the class established by subsection (3) must ensure that they are completely removed on completion of the construction or placement of the works for which they were required.

Restoration of contours

(6) The owner of works of the class established by subsection (2) must, if the contours of the bed of the navigable water were disturbed by either of the following, ensure that the contours are restored to their natural state on completion of the construction or placement of the works:

- (a) the placement or construction of the works or of works of the class established by subsection (3); or
- (b) the removal of works of the class established by subsection (3).

Re-laying piping

(7) Subject to subsection (8), if the piping of works of the class established by subsection (2) no longer lies on the bed of the navigable water, the owner of the works must, as soon as feasible,

- (a) re-lay the piping so that it lies on the bed; or
- (b) remove the works.

Dangers to navigation

(8) The owner must immediately take the action referred to in subsection (7) if the piping becomes a danger to navigation because it no longer lies on the bed of the navigable water.

DREDGING

Class established

12. (1) Dredging is established as a class of works for the purposes of subsection 5.1(1) of the Act if

- (a) the works are done in order to maintain the width or depth of the navigable water;
- (b) all dredged materials are disposed of
 - (i) above the ordinary high-water mark, or
 - (ii) in water where the disposal is authorized by or under an Act of Parliament;
- (c) the works do not use any suction dredging that involves the use of floating or submerged pipes;
- (d) the works have no cables that cross on, over or through any portion of the navigable water; and
- (e) the works do not include blasting.

Temporary works — class established

(2) Temporary works that are required for the construction or placement of works of the class established by subsection (1) are established as a class of works for the purposes of subsection 5.1(1) of the Act unless the temporary works are in, on, over, under, through or across a navigation channel marked by the federal government, a provincial government or an agency of one of those governments.

Prior notification of Canadian Coast Guard

(3) If works of the class established by subsection (2) are in a charted navigable water, the owner of the works must, at least 48 hours before the construction or placement of the works starts, in writing notify a Canadian Coast Guard Marine Communications and Traffic Services Centre of the day on which construction or placement of the works is expected to start.

During construction or placement

(4) During the construction or placement of works of the class established by subsection (1) or (2), the owner of the works must ensure that vessels can navigate safely through or around the work site or, if navigation is interrupted by any activity related to the construction or placement, that suitable means, such as a portage, exist to allow vessels to resume navigation on the other side of the work site.

During construction or placement of temporary works

(5) During the construction or placement of works of the class established by subsection (2), the owner of the works must ensure that

- (a) if the works are on, over or across a navigable water, the works are marked, from dusk to dawn and during periods of restricted visibility, with yellow flashing lights that are
 - (i) located on the end of the works that is farthest from the nearest bank or shore, if the works are not more than 3 m in length,
 - (ii) located on each end of the works, if the works are more than 3 m in length but not more than 20 m in length,
 - (iii) located on each end of the works and at any other location on the works so that the lights are spaced not more than 20 m apart, if the works are more than 20 m in length but not more than 30 m in length, or
 - (iv) located on each end of the works and at any other location on the works so that the lights are spaced not more than 30 m apart, if the works are more than 30 m in length; and
- (b) if the works are in or through a navigable water, the works are marked with cautionary buoys that are lighted from dusk to dawn and during periods of restricted visibility and are
 - (i) located at the end of the works that is farthest from the nearest bank or shore, if the works are not more than 3 m in length,
 - (ii) located at each end of the works, if the works are more than 3 m in length but not more than 20 m in length,
 - (iii) located at each end of the works and at any other location alongside the works so that the buoys are spaced not more than 20 m apart, if the works are more than 20 m in length but not more than 30 m in length, or
 - (iv) located at each end of the works and at any other location alongside the works so that the buoys are spaced not more than 30 m apart, if the works are more than 30 m in length.

Removal of temporary works

(6) The owner of works of the class established by subsection (2) must ensure that they are completely removed on completion of the construction or placement of the works for which they were required.

Contouring

(7) The owner of works of the class established by subsection (1) must ensure that the bed of the navigable water is, on completion of the construction or placement of the works, contoured to prevent hazards to navigation.

Notification of Canadian Coast Guard on completion

(8) If works of the class established by subsection (1) or (2) are in a charted navigable water, on completion of the construction or placement of the works the owner of the works must, in writing, notify a Canadian Coast Guard Marine Communications and Traffic Services Centre that the works have been completed.

MOORING SYSTEMS

Definitions

13. (1) The following definitions apply in this section.

“length”
« *longueur* »

“length” means, in respect of a vessel, the distance between the fore and aft extremities of the vessel.

“mooring system”
« *système d’amarrage* »

“mooring system” means a system that is used to secure a vessel and that consists of an anchor that is set in or on the bed of a navigable water, a single anchor line, a single buoy and a mooring line to attach to a vessel.

“swing area”
« *aire d’évitage* »

“swing area” means the diameter of a circle created by the swinging of a vessel moored to a mooring system.

Class established

(2) Mooring systems are established as a class of works for the purposes of subsection 5.1(1) of the Act if

- (a) the swing area of the works is not
 - (i) within 20 m of a work, other than a pipeline or an aerial or submarine cable, that is not owned by the owner of the works,
 - (ii) within 20 m of the swing area of another work of the class established by this subsection, or
 - (iii) within 50 m of a marina, public launch-ramp or navigation channel;

PERMIT TO ALTER A BODY OF WATER

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 48

Date: **MARCH 03, 2017**

File No: **532-02**
Permit No: **ALT8600-2017**

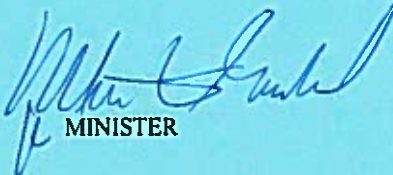
Permit Holder: **Department of Fisheries and Oceans Canada
Small Craft Harbour Branch
John Cabot Building, 10 Barter's Hill
St. John's NL A1C 5X1**

Attention: **Mr. Paul Curran**

Re: **Minor DFO Dredging and Works Projects**

Permission is hereby given for : routine dredging or beach grading of 2000 cubic metres or less of primarily sand, gravel, cobble, and boulder material and other associated works in or near bodies of water in order to provide safe navigation at for the Department of Fisheries and Oceans' small craft harbours at various locations and facilities across the Province, in reference to the application received on April 19, 2016 and further information provided on or before March 1, 2017.

- This Permit does not release the Permit Holder from the obligation to obtain appropriate approvals from other concerned municipal, provincial and federal agencies.
- The Permit Holder must obtain the approval of the Crown Lands Administration Division if the project is being carried out on Crown Land.
- This Permit is subject to the terms and conditions indicated in Appendices A and B (attached).
- It should be noted that prior to any significant changes in the design or installation of the proposed works, or in event of changes in ownership or management of the project, an amendment to this Permit must be obtained from the Department of Municipal Affairs and Environment under Section 49 of the *Water Resources Act*.
- Failure to comply with the terms and conditions will render this Permit null and void, place the Permit Holder and their agent (s) in violation of the *Water Resources Act* and make the Permit Holder responsible for taking any remedial measures as may be prescribed by this Department.



MINISTER

APPENDIX A
Terms and Conditions for Permit

Dredging

1. Dredging activity must only be carried out during periods when wind, wave and tide conditions minimize the dispersion of silt and sediment from the work site.
2. Dredged material must be disposed of in accordance with the regional Service NL Centre of the Department of Service NL. The Department of Service NL may require samples to be submitted for testing and analysis.
3. Dredged material must be disposed of in accordance with the regional Service NL Centre of the Department of Service NL. The Department of Service NL may require samples to be submitted for testing and analysis. Only suitable, rocky material dredged may be used for breakwater construction as it will not be susceptible to erosion.

General Alterations

4. Any work that must be performed below the high water mark must be carried out during a period of low water levels.
5. Any flowing or standing water must be diverted around work sites so that work is carried out in the dry.
6. Water pumped from excavations or work areas, or any runoff or effluent directed out of work sites, must have silt and turbidity removed by settling ponds, filtration, or other suitable treatment before discharging to a body of water. Effluent discharged into receiving waters must comply with the *Environmental Control Water and Sewage Regulations, 2003*.
7. All operations must be carried out in a manner that prevents damage to land, vegetation, and watercourses, and which prevents pollution of bodies of water.
8. The use of heavy equipment in streams or bodies of water is not permitted. The operation of heavy equipment must be confined to dry stable areas.
9. All vehicles and equipment must be clean and in good repair, free of mud and oil leaks, or other harmful substances that could impair water quality.
10. During the construction of concrete components, formwork must be properly constructed to prevent any fresh concrete from entering a body of water. Dumping of concrete or washing of tools and equipment in any body of water is prohibited.
11. Wood preservatives such as penta, CCA or other such chemicals must not be applied to timber near a body of water. All treated wood or timber must be thoroughly dry before being brought to any work site and installed.
12. Any areas adversely affected by any minor dredging or associated work carried under this Permit must be restored to a state that resembles local natural conditions. Further remedial measures to mitigate environmental impacts on water resources can and will be specified, if considered necessary in the opinion of this Department.
13. The bed, banks and floodplains of watercourses, or other vulnerable areas affected by any minor dredging or associated work carried under this Permit, must be adequately protected from erosion by seeding, sodding or placing of rip-rap.
14. All waste materials resulting from any minor dredging or associated work carried under this Permit, must be disposed of at a site approved by the Department of Service NL.
15. Periodic maintenance such as painting, resurfacing, clearing of debris, or minor repairs, must be carried out without causing any physical disruption of any body of water. Care must be taken to prevent spillage of pollutants into any body of water.
16. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.
17. Sediment and erosion control measures must be installed before starting work. All control measures must be inspected

regularly and any necessary repairs made if damage is discovered.

18. Fill material must be obtained from an approved quarry and must be of good quality, free of fines or other substances including metals, organics, or chemicals that may be harmful to the receiving waters. It must not be taken from beaches or streams, and must not be dredged from any body of water.
19. The Permit Holder must annually submit a written report to the Department including all completed minor dredging and other associated works along with photos showing the sites prior to and after all minor dredging and other associated works.
20. This Permit is effective January 1, 2016 and shall expire on December 31, 2018 or earlier if modified, suspended or cancelled by the Minister. Also, this Permit may be renewed by the Minister for such renewal term as the Minister deems appropriate, on such terms and conditions as the Minister considers appropriate and in the public interest, provided the Permit Holder applies for the renewal at least ninety (90) days before the expiry of this Permit.
21. All work must be carried out within the Permit Holder's legal property boundaries or with the approval of the upland owner. In case of Crown Lands, all work must comply with all other terms and conditions of the Crown Lands grant, lease or license for occupancy.
22. The Permit Holder acknowledges and agrees that this Permit does not grant any interest in land or any exclusive right in or to use or occupy lands.

Special Conditions

23. The Permit Holder must apply for and obtain a separate permit under the Water Resources Act, SNL 2002 cW-4.01, specifically Section 39 <http://assembly.nl.ca/Legislation/sr/statutes/w04-01.htm> for any minor dredging or associated works that may take place within any designated Protected Public Water Supply Area servicing any community as indicated in Water Resources Portal available at <https://maps.gov.nl.ca/water/mapbrowser/Default.aspx>.
24. The Permit Holder may be required to apply for and obtain a separate permit under the Water Resources Act, SNL 2002 cW-4.01, specifically Section 48 <http://assembly.nl.ca/Legislation/sr/statutes/w04-01.htm> for any minor dredging or associated works that may take place within any designated flood risk area as indicated at <http://www.env.gov.nl.ca/env/waterres/flooding/frm.html>.
25. Any alteration in or near a freshwater body (including wetlands) requires a separate permit under the Water Resources Act, SNL 2002 cW-4.01, specifically Section 48 <http://assembly.nl.ca/Legislation/sr/statutes/w04-01.htm>. The Permit Holder must avoid work activities in wetlands wherever possible.
26. A water quality monitoring program is not required at this time. However, the Department reserves the right to require that the Permit Holder sample, analyze, and submit results of water quality tests, for the purpose of ensuring that the water quality is maintained within acceptable guidelines. All analyses must be undertaken by a CALA accredited laboratory.
27. Select heavy rocks must be placed along the shoreline to provide slope stability and erosion protection. Dredged materials unsuitable for erosion protection must not be placed along the shoreline.
28. The slopes along the perimeter of infilled areas must be no steeper than two horizontal to one vertical (2H:1V).
29. Infilling must not disrupt the established surface drainage pattern of the area.
30. Suitable booms must be deployed around work sites to contain any floating debris that might otherwise be carried away. All booms must be properly maintained and remain in place until all work is completed.
31. Creosote treated wood must not be used in the construction of any structures in or within 15 metre of any body of water.
32. Periodic maintenance such as painting, resurfacing, clearing of debris, or minor repairs, must be carried out without causing any physical disruption of any body of water. Care must be taken to prevent spillage of pollutants into any body of water.
33. If a minor dredging or associated work carried out under this Permit does prohibit, restrict or impede public access along the shoreline reservation then the Permit Holder shall restore the shoreline reservation to the satisfaction of the Minister within sixty (60) days of a written notice.
34. For each minor dredging or associated work carried out under this Permit, the Permit Holder must notify this Department via email to waterinvestigations@gov.nl.ca or facsimile at (709)729-0320 in accordance with a reporting protocol as deemed

necessary and appropriate in the opinion of the Minister. Also, each minor dredging or associated work carried out under this Permit shall be subject to the payment of applicable fee by the Permit Holder as stated in the application fee schedules approved by the Minister.

35. The acknowledgment of the receipt of this Permit by the Permit Holder constitutes the acceptance of this Permit and its terms and conditions and requirements stated in Appendices A, B and C.

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
Department of Municipal Affairs and Environment

File No: 532-02
Permit No: ALT8600-2017

APPENDIX B
Special Terms and Conditions for Permit

1. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall keep all systems and works in good condition and repair and in accordance with all laws, by-laws, directions, rules and regulations of any governmental authority. The Permit Holder or its agent(s), subcontractor(s), or consultant(s) shall immediately notify the Minister if any problem arises which may threaten the structural stability of the systems and works, endanger public safety and/or the environment or adversely affect others and/or any body of water either in or outside the said Project areas. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall be responsible for all damages suffered by the Minister and Government resulting from any defect in the systems and works, operational deficiencies/inadequacies, or structural failure.
2. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall operate the said Project and its systems and works in a manner which does not cause any water related and/or environmental problems, including but not limited to problems of erosion, deposition, flooding, and deterioration of water quality and groundwater depletion, in or outside the said Project areas. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall be responsible for any and all damages associated with these problems caused as a result of changes, deficiencies, and inadequacies in the operational procedures by the Permit Holder or its agent(s), subcontractor(s), or consultant(s).
3. If the Permit Holder or its agent(s), subcontractor(s), or consultant(s) fails to perform, fulfil, or observe any of the terms and conditions, or provisions of this Permit and/or Ministerial orders and guidelines, as determined by this Department, the Minister may, after providing ten (10) day notice to the Permit Holder, amend, modify, suspend or cancel this Permit in accordance with the *Water Resources Act*.
4. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) indemnify and hold the Minister and Government harmless against any and all liabilities, losses, claims, demands, damages or expenses including legal expenses of any nature whatsoever whether arising in tort, contract, statute, trust or otherwise resulting directly or indirectly from granting this Permit, systems and works in or outside the said Project areas, or any act or omission of the Permit Holder or its agent(s), subcontractor(s), or consultant(s) in or outside the said Project areas, or arising out of a breach or non-performance of any of the terms and conditions, or provisions of this Permit by the Permit Holder or its agent(s), subcontractor(s), or consultant(s).
5. This Permit is subject to all provisions of the *Water Resources Act* and any regulations in effect either at the date of this Permit or hereafter made pursuant thereto or any other relevant legislation enacted by the Province of Newfoundland and Labrador in the future.
6. This Permit shall be construed and interpreted in accordance with the laws of the Province of Newfoundland and Labrador.

- cc: Dr. Abdel-Zaher Kamal Abdel-Razek, Ph. D., P.Eng.
Manager, Water Rights and Investigations Section
Water Resources Management Division
Department of Municipal Affairs and Environment
P.O. Box 8700
4th Floor, West Block, Confederation Building
St. John's, NL A1B 4J6
aabdelrazek@gov.nl.ca
- cc: Mr. Carl Hann (Western)
GSC - Corner Brook, Service NL
Sir Richard Squires Building
Mount Bernard Avenue, P.O. Box 2006
Corner Brook, NL A2H 6J8
chann@gov.nl.ca
- cc: Mr. Guy Perry
Director
GSC - Clarenville, Service NL
8 Myers Avenue, Suite 201
Clarenville, NL A5A 1T5
gperry@gov.nl.ca
- cc: Mr. Ken Russell (Labrador)
Manager of Operations, GSC - Happy Valley-Goose Bay, Service NL
Government Service Centre
2 Tenth Street, P.O. Box 3014, Stn. B
Happy Valley-Goose Bay, NL A0P 1E0
krussell@gov.nl.ca
- cc: Mr. Robert Groves, Regional Manager
GSC - Clarenville, Service NL
8 Myers Avenue, Suite 201
Clarenville, NL A5A 1T5
rgroves@gov.nl.ca
- cc: Mr. Robert Locke
Manager of Operations and Environmental Protection, GSC - Mount Pearl, Service NL
P.O. Box 8700
St. John's, NL A1B 4J6
rlocke@gov.nl.ca
- cc: Mr. Wayne Lynch
Regional Director (Central)
Service NL
P.O. Box 2222
Gander, NL A1V 2N9
waynelynch@gov.nl.ca
- cc: Ms. Sharon Williams, Regional Manager
Environmental Health, GSC - Mount Pearl, Service NL
P.O. Box 8700
St. John's, NL A1B 4J6
williams@gov.nl.ca
- cc: Fisheries Protection Division
Ecosystem Management Branch
Fisheries and Oceans Canada
P.O. Box 5667
St. John's, NL A1C 5X1
FPP-NL@dfo-mpo.gc.ca

- cc: Marine Safety
Transport Canada, Atlantic Regional Headquarters
Airports, Harbours and Ports, and Environmental Services
95 Foundry St.
P.O. Box 42
Moncton, NB E1C 8K6
NPPATL-PPNATL@tc.gc.ca
- cc: Mr. Mark McNeil
Environmental Services
Department of Public Works and Government Services Canada
Suite 204, 1 Regent Square
Corner Brook, NL A2H 7K6
mark.mcneil@pwgsc-tpsgc.gc.ca
- cc: Mr. Shawn Kean
Environmental Services
Public Works & Government Services Canada
John Cabot Building, 10 Barter's Hill
P.O. Box 4600
St. John's, NL A1C 5T2
shawn.kean@pwgsc.gc.ca
- cc: Ms. Cathy Martin
Public Works and Government Services Canada, ES
10 Barter's Hill
P.O. Box 4600
St. John's, NL A1C 5T2
cathy.martin@pwgsc-tpsgc.gc.ca
-



Government of Newfoundland and Labrador
Department of Municipal Affairs and Environment
Water Resources Management Division

Appendix C - Completion Report

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 48

Date: **MARCH 03, 2017**

File No: **532-02**
Permit No: **ALT8600-2017**

Permit Holder: **Department of Fisheries and Oceans Canada
Small Craft Harbour Branch
John Cabot Building, 10 Barter's Hill
St. John's NL A1C 5X1**

Attention: **Mr. Paul Curran**

Re: **Minor DFO Dredging and Works Projects**

Permission was given for : routine dredging or beach grading of 2000 cubic metres or less of primarily sand, gravel, cobble, and boulder material and other associated works in or near bodies of water in order to provide safe navigation at for the Department of Fisheries and Oceans' small craft harbours at various locations and facilities across the Province, in reference to the application received on April 19, 2016 and further information provided on or before March 1, 2017.

I (the Permit Holder named above or agent authorized to represent the Permit Holder) do hereby certify that the project described above was completed in accordance with the plans and specifications submitted to the Department of Municipal Affairs and Environment and that the work was carried out in strict compliance with the terms and conditions of the Permit issued for this project.

Date: _____

Signature: _____

This completion report must be completed and forwarded to the following address upon completion of the approved work.

Department of Municipal Affairs and Environment
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6

July 31, 2017

Mr. Mark McNeil
Environmental Services
Public Works and Government Services Canada
1 Regent Square, Suite 204
Corner Brook, NL A2H 7K6

RE: Dredge Disposal – Dredging, Sandy Cove, NL

Dear Mr. McNeil:

The Government Service Centre has reviewed your request submitted on June 23, 2017 regarding the disposal of dredged materials from dredging at Sandy Cove, NL.

Based on data results contained in the report, the Government Service Centre has approved your request to dispose of 1800m³ of dredged material at an approved waste disposal site subject to the following stipulations:

1. Dredged materials are to be disposed of at the local waste disposal site only. Approval is to be obtained from the owner/operator of the site prior to disposal.
2. Dredged materials are to be stockpiled on site for a minimum of 24 hours before transportation to allow for the drainage of water. The stockpile area is to be located as close as possible to the high water mark. Care is to be taken in choosing this site to limit the negative effect of odors emitting from the stockpile.
3. Dredged materials are to be transported in water tight trucks or containers to prevent leakage.
4. The re-use of dredged materials for other purposes is not permitted under this approval.
5. It is the responsibility of the proponent to obtain any other necessary permits or approvals from federal, provincial, or municipal authorities.
6. The Department reserves the right to cancel this approval at any time for non-compliance with any of the above conditions or for another reason that the Department deems to warrant such action.

If you have any questions, please call (709) 637-2454.

Sincerely,



Tanya Simms
Environmental Protection Officer