

Part 1 General

1.1 SECTION INCLUDES

- .1 The Contractor shall manage his activities so that the health and safety of the public and personnel on site, and the protection of the environment always have precedence over issues related to the cost and schedule of work.

1.2 REFERENCES

- .1 Canadian Standards Association (CSA).
- .2 Workplace Hazardous Materials Information System (WHMIS)/Health Canada.
 - .1 Materials safety data sheets (MSDS).
- .3 An Act Respecting Occupational Health and Safety, L.R.Q. Chap. S-2.1.
- .4 Safety Code for the construction industry, S-2.1, r.4.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 At least three (3) weeks prior to the mobilization of the workforce, forward to the Departmental Representative, the CSST and ASP Construction (Association paritaire en santé et sécurité du secteur de la construction) the site-specific prevention program described in section 1.8. The Departmental Representative will review the health and safety plan prepared by the Contractor for the construction site and will provide observations within seven (7) working days of the receipt of this document. If necessary, the Contractor will revise the health and safety plan and resubmit to the Departmental Representative within three (3) business days after receipt of the observations.
- .3 Departmental Representative's review of Contractor's final Health and Safety plan should not be construed as an approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .4 Submit to Departmental Representative the worksite/workplace inspection sheet, duly completed at intervals indicated in article 1.12.1.
- .5 Submit to Departmental Representative within 24 hours one copy of any inspection report, correction notice or recommendation issued by federal or provincial inspectors.
- .6 Submit to Departmental Representative within 24 hours an investigation report for any accident involving injury and any incident exposing a potential hazard.
- .7 Submit to Departmental Representative all material safety data sheets for controlled products to be used at the worksite/workplace at least three (3) days before they are to be used on the worksite/workplace.
- .8 Submit to Departmental Representative copies of the training certificates required toward the application of the safety program, namely:

- .1 General construction site safety and health courses;
 - .2 First aid in the workplace and cardiopulmonary resuscitation;
 - .3 Training certification in professional diving;
 - .4 Work in confined spaces;
 - .5 Lockout procedures;
 - .6 Any other training called for by regulation or the safety program.
- .9 Medical examinations: where legislation, regulations, directions, specifications or a safety program require medical examinations, the Contractor shall:
- .1 Prior to mobilization, submit to Departmental Representative the certificates of medical examination for all concerned supervisory staff and employees who will be on duty when the worksite/workplace opens.
 - .2 Thereafter, submit without delay certificates of medical examination for any newcomers to the worksite/workplace who are designated in the first paragraph of this article.
- .10 The emergency plan, as defined in article 1.8.3 - Safety and Health Management, shall be submitted to Departmental Representative at the same time as the site-specific safety program.
- .11 Notice of site opening: Notice of site opening shall be submitted to the Commission de la santé et de la sécurité du travail (CSST - Québec) before work begins. A copy of such notice shall be submitted to Departmental Representative at the same time and another posted in full view on the worksite. At demobilization, a notice of site closing shall be forwarded to CSST, with copy to Departmental Representative.
- .12 Engineering plans and certificates of compliance: the Contractor shall provide the CSST and the Departmental Representative with a copy of all plans and certificates of compliance signed and sealed by an engineer as required in the Construction Safety Code (S-2.1, r. 6) or by any other legislation or regulation or by any other clause in the specifications or in this contract. A copy of these documents must be on hand at the site at all times.
- .13 Certificate of compliance delivered by CSST: The certificate of compliance is a document delivered by CSST certifying that the Contractor is in good standing with CSST, i.e., that he has paid out all the benefits concerning any given contract. This document must be provided to Departmental Representative at work completion.

1.4 SAFETY ASSESSMENT

- .1 The Contractor must identify all hazards inherent to each task to be carried out at the site.
- .2 The contractor must plan and organize work so as to eliminate hazards at the source or promote mutual protection so that reliance on individual protective gear can be kept to a minimum. Where individual protection against falls is required, workers shall use a safety harness that meets CAN/CSA-Z-259.10-M90 requirements. Safety belts shall not be used as protection against falls.

- .3 Equipment, tools and protective gear which cannot be installed, fitted or used without compromising the health or safety of workers or the public shall be deemed inadequate for the work at hand.
- .4 All mechanical equipment shall be inspected before delivery to the work site. Before using any mechanical equipment, submit to Departmental Representative a certificate of compliance signed by a qualified mechanic. Whenever he suspects a defect or the risk of an accident, the Departmental Representative may order the immediate shut-down of equipment and require a new inspection by a specialist of his own choosing.
- .5 For any use of hoisting equipment to lift persons or materials, ensure that the inspections required by applicable regulations made and be able to submit a copy of the inspection certificate upon request by the Departmental Representative.

1.5 MEETINGS

- .1 A Contractor's representative who has decisional ability must attend all meetings at which site safety and health issues are to be discussed.
- .2 The Contractor shall set up a site safety committee, and convene meetings in accordance with the Construction Safety Code.

1.6 REGULATORY REQUIREMENTS

- .1 Comply with all legislation, regulations and standards applicable to the Work at hand.
- .2 Comply with specified standards and regulations to ensure safe operations on sites contaminated with hazardous or toxic materials.
- .3 Regardless of the publication date shown in the construction safety code, always use the most recent version applicable.

1.7 PROJECT/SITE CONDITIONS

- .1 The personnel in charge of construction activities on the work site will be exposed to the following elements which must be factored in the Contractor's safety plan:
 - .1 Work in the vicinity of a water body;
 - .2 Work on piles in a cluttered environment;
 - .3 Work on piles in confined spaces;
 - .4 Diving work in a cluttered environment;
 - .5 Continued operations of the N/M Bella Desgagnés maritime services.
 - .6 Line of oil and gas present in the fill of the dock.
 - .7 Wharf with structural deficiencies (specify security measures to prevent the risks related to this situation).

1.8 GENERAL REQUIREMENTS

- .1 Acknowledge and assume all the tasks and obligations which customarily devolve upon a Head Contractor under the terms of the Act Respecting Occupational Health and Safety (R.S.Q., chapter S-2.1) and the Construction Safety Code (S-2.1, r.4).

- .2 The Contractor shall prepare a specific worksite/workplace safety program based on hazard identification and apply it from the start of project until close-out is completed. The safety plan must take into account the information provided in article 1.7. It must be distributed to all persons concerned as required in article 1.3. At minimum, the safety program shall include:
 - .1 Company safety and health policy;
 - .2 A description of the work, total costs, schedule and projected workforce curve;
 - .3 Flow chart of safety and health responsibility;
 - .4 The physical and material layout of the site;
 - .5 First-aid and first-line treatment standards;
 - .6 Identification of site-specific hazards;
 - .7 Risk assessment for the tasks to be carried out, including preventive measures and the procedures for applying them;
 - .8 Training requirements;
 - .9 Procedures in case of accident/injury;
 - .10 Written commitment from all parties to comply with the prevention program;
 - .11 A site inspection schedule based on the preventive measures.
- .3 The contractor must draw up an effective emergency plan based on the characteristics and constraints of the site and its surroundings. Submit the emergency plan to all parties concerned, pursuant to the provisions of article 1.3. The emergency plan must include:
 - .1 Evacuation procedure;
 - .2 Identification of respondents (police, firefighters, ambulance services, etc.);
 - .3 Identification of persons in charge at the site;
 - .4 Identification of first-aid attendants;
 - .5 Training required for those responsible for applying the plan;
 - .6 Any other information needed, in the light of the site characteristics.

1.9 RESPONSIBILITY

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

1.10 COMMUNICATIONS AND POSTING

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

1.11 UNFORESEEN HAZARDS

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

1.12 WORKPLACE INSPECTION AND CORRECTION OF HAZARDOUS SITUATIONS

- .1 Proceed to inspection of worksite and fill the worksite inspection schedule at least once a week.
- .2 Immediately take all necessary measures to correct any lapses from legislative or regulatory requirements and any hazards identified by a government inspector, by the Departmental Representative, by the site safety and health coordinator or during routine inspections.
- .3 Submit to Departmental Representative written confirmation of all measures taken to correct lapses and hazardous situations.
- .4 Work interruption: Give the safety officer or, where there is no safety officer, the person assigned to safety and health responsibilities, full authority to order interruption and

resuming of work as and when deemed necessary or desirable in the interests of safety and health. This person should always act so that the safety and health of the public and site workers and environmental protection take precedence over cost and scheduling considerations.

- .5 Without limiting the scope of sections 1.8 and 1.9, the Departmental Representative may order cessation of work if, in his/her view, there is any hazard or threat to the safety or health of site personnel or the public or to the environment.

1.13 BLASTING

- .1 Blasting or other use of explosives is not permitted.

1.14 POWDER ACTUATED DEVICES

- .1 Use powder actuated devices only after receipt of written permission from Departmental Representative.
- .2 Any person using a power fastener must hold a training certificate and comply with all the requirements of section 7 of the Safety Code for the construction industry (S-2.1, r.4).
- .3 Any other such device must be used according to manufacturer's instructions and applicable standards and regulations.

1.15 HOT WORK

- .1 Hot work: means work and activities where a flame is used or sparks are produced such as in welding, cutting, riveting, drilling, grinding, burning and heating.
- .2 Before beginning work, receive from the wharfinger, who is responsible for the place of work, the "hot-work permit" where work involves hot work. A permit must be issued for each work shift. Refer to the attached form in Appendix B.
- .3 Similarly, make sure before starting work on the absence of any trace of oil in water.
- .4 Keep one (1) hand extinguisher in working order and adequate for the risk at hand in the work area within 5 m of any flame, sparks or intense heat.
- .5 Designate a person to make the round (fire) for a minimum period of 60 minutes after the end of the work shift. This person shall countersign the permit and give it back to the person for the place of work (or his representative) after the 60-minute period.
- .6 The storage of propane cylinders must comply with CAN/CSA-B149.2, Propane Storage & Handling Code, in addition to meeting the specific conditions set out in this document. Cylinders must be stored outdoors in a safe place, free from tampering, in a storage cabinet designed for this purpose, held securely upright and locked at all times, where there is no movement of vehicles unless protected by barriers or equivalent measures.
- .7 All propane cylinders used or stored on construction sites shall be provided with a collar designed to protect the valve.
- .8 The filling of propane cylinders on site is prohibited unless the procedure is compliant with CAN / CSA B149.2 and approved and authorized by Departmental Representative.

1.16 WELDING AND CUTTING

- .1 Welding and cutting must be executed in accordance with article « 3.13. Supply of compressed gas » and « 3.14. Welding and Cutting » of the Safety Code for the Construction Industry, S-2.1, r.6.
- .2 Welding and cutting devices are extreme fire hazards on construction sites. The following precautions should be taken in this type of work:
 - .1 Store compressed gas cylinders on a fireproof surface and make sure the area is well ventilated.
 - .2 Store all oxygen cylinders at minimum distance of 6 meters from flammable gas cylinders (i.e., acetylene) or combustible materials such as oil or grease, unless separated by a non-combustible partition as specified in Article 3.13.4. Safety Code for the Construction Industry, S-2.1, r.6.
 - .3 Install fireproof canvas where welding works are superimposed and where there is a risk of falling sparks.
 - .4 Store all cylinders away from any heat sources.
 - .5 Do not put acetylene in contact with metals such as silver, mercury, copper, and brass alloys containing more than 65% copper, to avoid the risk of an explosive reaction.
 - .6 Ascertain that arc welding equipment is supplied with the required voltage and is grounded.
 - .7 Ascertain that arc welding wire conductors are not damaged.
 - .8 Place welding equipment on level ground and sheltered from weather conditions.
 - .9 Move away or cover combustible materials that may be near the welding set-up.
 - .10 Do not weld or cut any closed container.
 - .11 Provide protection measures when welding or cutting is performed near piping, tanks or other containers of flammable materials.
 - .12 Do not make any cutting, welding or any open flame work on a container, tank, pipe or other container that may contain flammable or explosive substance unless:
 - .1 Air samples were collected indicating that the job can be carried out safely, or
 - .2 Measures have been taken to ensure the safety of workers.

1.17 HOISTING OF MATERIALS

- .1 Locate lifting equipment in such way that loads do not travel over the heads of workers, of occupants and the public, and that loads comply with the load restrictions on the wharf.
- .2 Forward to the Departmental Representative a working procedure, including among others the position of the crane, the mast length and maximum weight of loads to be handled.

- .3 All mobile cranes manufactured after 1 January 1980 must be fitted with an overload protection device.
- .4 All mobile cranes with cables, except where used for other ends than lifting loads, must be provided with a safety device against twoblocking.
- .5 The Contractor shall provide the Departmental Representative with a mechanical service inspection certificate for each lifting device. Inspections must be carried out just prior to the delivery of the equipment to the work site.
- .6 In addition to the mechanical service inspection certificate, the annual inspection certificate and the crane logbook must be aboard all crane and crane-truck cabs.
- .7 The entire lifting area shall be closed off to prevent non-authorized people from entering.
- .8 Make a thorough inspection of all slings and lifting accessories to ensure that material in poor condition is destroyed and disposed of.
- .9 Lift compressed gas cylinders with a basket specially designed for this purpose.

1.18 SCAFFOLDING

- .1 Foundation
 - .1 Scaffolding shall be installed on a solid foundation so that it does not slip or rock.
- .2 Assembly, bracing and mooring:
 - .1 All scaffolding shall be assembled, braced and moored in accordance with the Manufacturer's instructions and the provisions of the Safety Code for the construction industry.
 - .2 Where a situation requires the removal of part of the scaffolding (e.g., crosspieces), the Contractor shall submit an assembly procedure signed and sealed by an engineer certifying that the scaffolding assembled in that manner will allow the work to be done safely given the loads to which it will be subject.
 - .3 For scaffolding where the span between two supports is greater than 3 m, the Contractor shall provide an assembly plan signed and sealed by an engineer.
- .3 Platforms:
 - .1 Scaffolding platforms shall be designed and installed in accordance with the provisions of the Safety Code for the construction industry.
 - .2 If planks are used, they shall be approved and stamped in accordance with section 3.9.8 of the Safety Code for the construction industry (current edition).
 - .3 The platforms shall cover the entire surface protected by the guardrails.
 - .4 Notwithstanding the above, scaffolding 4 sections (or 6 m) high or higher shall have a full platform covering the entire surface of the putlogs every 3 m or fraction thereof, and the components of that platform shall not be moved at any time to create an intermediate landing.
- .4 Guardrails:
 - .1 A guardrail shall be installed on every landing.

- .2 Cross braces are not considered guardrails.
- .3 Where scaffolding 4 sections (or 6 m) high or higher requiring full platforms is used, guardrails shall be installed on each landing at the start of work and shall remain in place until the work is completed.
- .5 Access:
 - .1 The Contractor shall ensure that access to the scaffolding does not compromise worker safety.
 - .2 Where the platforms of the scaffolding are comprised of planks, ladders shall be installed in such a way that planks extending beyond the platform do not block the way up or down.
 - .3 Notwithstanding the provisions of the Safety Code for the construction industry, stairs shall be installed on all scaffolding that has 6 or more rows of uprights or is 6 sections (or 9 m) high or higher.
- .6 Protection of the public and occupants:
 - .1 The Contractor shall identify the boundaries of and barricade the work area so as to limit access to authorized workers only.

1.19 WORK IN THE VICINITY OF A WATER BODY

- .1 The following requirements shall be met for work involving drowning risks:
 - .1 In all work carried out water the Contractor shall comply with the following requirements in addition to article 2.10.13 of the Safety Code for the construction industry.
 - .2 Wherever possible, the Contractor shall plan his work so as to implement safety measures to prevent any worker from falling into the water. The use of such security measures should be preferred to wearing a life jacket.
 - .3 Wear a life jacket or buoyancy device to maintain the user's head above water and to float effortlessly.
 - .4 Submit to CSST and to the Departmental Representative the following documents before work begins:
 - .1 Work related information (work dates, location, water body, description of work, etc.);
 - .2 The list of vessels and working platforms used during the work, specifying their respective use;
 - .3 Evidence that an evaluation and inspection were conducted by Transport Canada for each boat, motorized platform, or non self-propelled platform;
 - .4 A transportation plan on water for workers (where applicable);
 - .5 A rescue plan specific to this work with the following information and ensuring that all workers affected have received the training and information needed to apply the plan:

- .1 A complete description of the procedures, including the responsibilities of persons who are allowed access to the workplace;
- .2 The location of the emergency equipment.
- .5 The Contractor shall be able to demonstrate that the operators of each craft has the knowledge and skills required to perform their duties safely.
- .6 Ensure that a rescue vessel is moored to the wharf and available at all times within thirty (30) metres of the workers.

1.20 DIVING WORK

- .1 Comply with all requirements of the regulations on salubrity and safety (S-2.1, r.19.1), and specifically to section XXVII, work performed underwater. Comply also with the requirements of CSA Z275.2 - Occupational safety code for diving operations, CSA Z275.1 - Hyperbaric Facilities, and CSA Z275.4 - Competency standard for diving, hyperbaric chamber, and remotely operated vehicle operations (current editions). In case of discrepancies among requirements, comply with the most stringent provision.
- .2 In addition to the previous paragraph, where of construction work is performed, comply with the Safety Code for the construction industry (S-2.1, r.4).
- .3 Before work is undertaken, submit the following documents to the Departmental Representative in keeping with the content required in the occupational health and safety regulations:
 - .1 The training certificate in professional diving of every member of the dive team, or the document certifying recognition of the skills of these people to CAN/CSA Z 275.4 (Competency standard for diving, hyperbaric chamber, and remotely operated vehicle operations) in accordance with article 312.8 of this regulation;
 - .2 The workplace first aid training certificate of every member of the dive team;
 - .3 The medical certificate of each member of the dive team;
 - .4 For each dive under this project, a dive plan as required by the occupational health and safety regulations;
 - .5 A notice confirming that a communication system with the medical emergency service for diving emergencies is available at all times at the diving station.
- .4 Before work begins, carry out a simulation of the rescue procedure at the site as required in section 312.31 of the occupational health and safety regulation.
- .5 Submit to Departmental Representative the filled daily checklist confirming the presence and condition of the equipment required at the dive site in the dive plan.
- .6 Ensure that all other documents required in section XXVI of the occupational health and safety regulation are available at all times on the site (dive record, diver logbook, etc.).
- .7 Comply with the requirements of sections 355 to 357 of the occupational health and safety regulation for all people assigned to this project and who remain at the surface.
- .8 The Contractor shall consider the following features on the work site and adjust the contents of his dive plan accordingly:

- .1 Presence of an impressed current cathodic protection system on the site. It is therefore necessary to provide a lockout procedure for these special conditions.
- .2 With respect to the work carried out inside the wharf (service void), the Contractor shall be consider that they will be undertaken in enclosed and cluttered space conditions.
- .9 If the diving station is more than two (2) metres above the water, forward the following to the Departmental Representative:
 - .1 The plan of the equipment used to get the worker in the water if a platform is not used as a launching means;
 - .2 The plan of the equipment used to lift the platform or the other device unless the equipment is a crane or a boom truck.
- .10 If diving is done from a boat, provide the Departmental Representative with the following documents:
 - .1 Evidence of the qualification of the boat operator;
 - .2 The boat's certificate of conformity issued by Transport Canada.

1.21 WORK IN THE WHARF SERVICE SPACE

- .1 In addition to meeting provincial requirements that apply to enclosed spaces, the Contractor shall further comply with the requirements set out in the following paragraphs. The Contractor must first develop a second access as shown on the drawings in addition to the existing access to create an emergency exit should the existing access become impracticable during construction.
- .2 The Departmental Representative reserves the right, based on the Contractor's level of competency with confined spaces, to require the latter to hire the services of a firm specialized in health and safety, or in enclosed spaces, to analyse the risks inherent to confined spaces, to fill the entry permit, to perform work supervision, or for any other activity related to work in confined spaces.
- .3 The Contractor shall designate a person responsible for health and safety working in confined spaces. This person must be a qualified as defined in section 297 of the Regulation respecting occupational health and safety (S-2.1, r.13). The person must be present at all times during work in confined spaces and ensure that all regulatory requirements and the requirements of this section are met. The designated person must include fill and issue the enclosed space entry permit.
- .4 Mandatory training:
 - .1 All persons having access to an enclosed space, as well as the responsible person and the confined space supervisor, the must be trained on the entry into enclosed areas.
 - .2 All persons who have to use a self-contained breathing apparatus for confined space entry should be trained on the use of such devices.
 - .3 All persons identified as respondents for confined spaces emergencies must be trained on rescue in confined spaces.

- .4 Each training required in the above paragraphs must be given by a firm specialized in health and safety or in enclosed spaces.
- .5 The training certificates of those listed above must be forwarded to the Departmental Representative before the start of work in confined areas.
- .5 Risk assessment within the wharf (crawl space).
 - .1 The Contractor shall conduct an assessment of the risks inherent and related to confined spaces, including:
 - .1 The prevailing internal atmosphere, namely the concentration of oxygen, flammable gases and vapors;
 - .2 Availability of natural ventilation;
 - .3 Cubic measurement or footprint and the possible presence of debris and construction materials on the seabed;
 - .4 The variation in water depths;
 - .5 Any other special conditions.
 - .2 The risk assessment must be performed and signed by the person responsible for health and safety work in confined spaces. The report must be forwarded to the Departmental Representative for review at least ten (10) days before the date set for work in confined areas.
- .6 The Contractor shall forward to the Departmental Representative for review at least five (5) days before the date set for work inside the wharf, a copy of the entry permit. The entry permit must be completed by the person responsible for health and safety working in confined spaces, and include the following information:
 - .1 Description of the work to be executed and the method of work, including the equipment and tools required to perform the work;
 - .2 Description of the risks and corresponding control measures, based on the results of the risk assessment inherent to the confined space and based on the risks involved in the work to be performed;
 - .3 Safety equipment used to control the risks in enclosed spaces (i.e., fans, gas detecting device, local ventilation, personal protective equipment, etc.);
 - .4 Rescue procedure containing at least the following elements:
 - .1 Means of communication between the supervisor of the confined area and the workers inside the confined space;
 - .2 Rescue equipment specific to each confined space;
 - .3 Confirmation that the municipal emergency department has been notified of the work in confined spaces specifically on this site and can respond to a rescue in a confined space; otherwise the Contractor shall identify workers on site who will act as rescuers should there be a need to access the inside of the enclosed area (mandatory rescue training);
 - .4 Location of the telephone, and telephone number of the municipal emergency service (where applicable);
 - .5 Date of entry permit;

- .6 Name of person issuing the permit and name of this person's employer;
 - .7 Name of supervisor and name of this person's employer;
 - .8 Names of workers who must enter the confined space and name of each of their employers.
- .7 The Contractor shall forward to the Departmental Representative a medical certificate dated within two years for all persons using a supplied-air respirator. The certificates should confirm the fitness of each person to use this kind of device.
- .8 Requirements for work in confined spaces.
- .1 Before each entry in an enclosed area, the responsible person must take measurements of oxygen concentration, of flammable gases, and all toxic gases likely to be found, and record the results of these measurements on the entry permit. These measures must be taken at various places under the dock (in corners and other places where the air can be stagnant).
 - .2 No worker may enter a confined area if the following requirements are not complied with:
 - .1 Oxygen concentration must be greater than or equal to 19.5%, and less than or equal to 23%;
 - .2 The concentration of flammable gases or vapors must be less than or equal to 10% of the lower explosive limit (LEL);
 - .3 The concentration of other gases must not exceed the standards referenced in Schedule I of the Regulation respecting occupational health and safety (S-2.1, r.13).
 - .3 Where the measured concentrations of oxygen and gas remain within the regulatory values, the person responsible must ensure that all preventive measures indicated on the permit are in place and must finish completing the entry permit (date, time, signatures, etc.) before issuing the permit and allowing access to the confined area.

An entry permit should only cover one (1) work shift; the Contractor shall issue a new permit for each additional work shift.
 - .4 During work within the confined area, gas concentrations must be measured continuously and the detecting device installed at the workers' breathing zone level. If the prevailing conditions inside the confined space are such that workers could not hear or see the alarm, the Contractor must find a way for the supervisor of the enclosed space to monitor concentration measurements while maintaining measurements in the workers' breathing zone.

Where the work is organized in such way that the workers are distant from each other in an enclosed area of large dimensions, the Contractor shall provide for additional gas detectors.
 - .5 The Contractor shall provide gas detectors and maintain them in good working condition. He must be able to demonstrate that the gas detectors used have been calibrated and adjusted by the responsible person or by a qualified person according to the manufacturer's recommendations. The Departmental Representative may at all times verify the accuracy of the Contractor's

equipment. In case of failure of a detection device, the work must immediately be suspended and all workers must leave the enclosed area.

The manufacturer's Instruction Manual for the gas detector must be available on site.

- .6 At the entrance to an enclosed space and during the performance of work in conditions free from diving, the Contractor shall proceed continuously without interruption to mechanical ventilation for forty-eight (48) hours before allowing the access under the dock. The ventilation system must be of sufficient capacity to maintain concentrations of contaminants below regulatory concentration limits.
- .7 If the alarm of a gas detector is triggered, all workers must leave the enclosed area. The concentration readings must then be recorded on the entry permit. The Contractor must identify and neutralize the source of contamination, ventilate the confined area to remove any contaminant residues and allow access to the confined space when the oxygen and gas concentrations have returned to normal.
- .8 No compressed gas cylinder or welding machine must be brought within confined spaces: this equipment must stay outside and must not block the access to or exit from the confined areas; all cylinders must be properly secured.
- .9 Electrical tools and equipment used for work in confined spaces should be grounded and, where necessary, explosion-proof. All equipment must be connected to a ground fault circuit interrupter (GFCI) or a step down transformer. The Contractor shall, at own expense, have a qualified electrician change the electrical outlets and/or circuit breakers he intends to use which do not meet these criteria.
- .10 Where hot work is required, the Contractor shall obtain a hot work permit and comply with the requirements specified in article 1.15 of this section.
- .11 The Contractor shall assign a competent person to assume the supervision. The supervisor should be assigned exclusively to these functions and must remain outside the confined space as long as workers remains inside the confined area. In addition, the supervisor shall:
 - .1 Check that the entry permit is completed, signed and posted next to the confined area;
 - .2 Be knowledgeable of the specific working procedures in enclosed spaces and ensure that they are complied with;
 - .3 Ensure ongoing communication with all workers in the confined area;
 - .4 Ascertain that the necessary emergency equipment is in place;
 - .5 Be knowledgeable of booster fan systems and ensure proper operation for the duration of the work, as applicable;
 - .6 Prevent access to unauthorized persons;
 - .7 Ensure that conditions surrounding the area the confined spaces do not affect the health and safety of workers within.
 - .8 Trigger the emergency procedure as needed.

- .12 The same person may assume the monitoring functions and that of the person responsible for health and safety working in confined spaces, subject to complying with all the requirements of both functions.

1.22 LOCKOUT PROCEDURES

- .1 When work is carried out on electrically supplied equipment or equipment likely to be turned on accidentally, the Contractor shall provide and enforce a written lockout procedure, and submit this procedure to the Departmental Representative.
- .2 The supervising personnel and all workers concerned must have taken the course on lockout techniques offered by ASP Construction or equivalent training from another organization.

1.23 FLOATING MATERIAL

- .1 Mark floating equipment with lights/markers in accordance with the most stringent regulation between:
 - .1 CSST: Commission de la santé et de la sécurité du travail;
 - .2 Canadian Coast Guard regulations;
 - .3 International "Rules of the Road".
- .2 Maintain radio watch on board.
- .3 Place in position and maintain all required buoys/markers throughout contract duration.
- .4 Contractor shall, on an ongoing basis, report accurately all movements of his floating equipment to the Canadian Coast Guard Marine Communications and Traffic Services (SCTM Québec). As well, report to SCTM the start and end hours of all construction periods.
- .5 Provide updates to the Transport Canada local representative for issuance of Notices to Shipping.

Part 2 Products

2.1 NOT USED

- .1 Not used.

Part 3 Execution

3.1 NOT USED

- .1 Not used.

END OF SECTION