



**RETURN BIDS TO :
RETOURNER LES SOUMISSIONS À :**

Bid Receiving/Réception des soumissions

Procurement Hub | Centre d'approvisionnement
Fisheries and Oceans Canada | Pêches et Océans
Canada
301 Bishop Drive | 301 promenade Bishop
Fredericton, NB E3C 2M6

Email – courriel : DFOtenders-soumissionsMPO@dfo-mpo.gc.ca

REQUEST FOR STANDING OFFER

**DEMANDE D'OFFRES À COMMANDES
(DOC)**

Proposal to: Fisheries and Oceans Canada

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods and services listed herein and on any attached sheets at the price(s) set out therefor.

Proposition aux : Pêches et Océans Canada

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

Comments : - Commentaries :

Title – Sujet Diving Services - Canso Canal, Nova Scotia (NS)		Date July 9, 2020
Solicitation No. – N° de l'invitation F5211-200101		
Client Reference No. – No. De référence du client F4709-201500		
Solicitation Closes – L'invitation prend fin At / à : 14:00 ADT (Atlantic Daylight Time) On / le : August 11, 2020		
F.O.B. – F.A.B Destination	GST – TPS See herein — Voir ci-inclus	Duty – Droits See herein — Voir ci-inclus
Destination of Goods and Services – Destinations des biens et services See herein — Voir ci-inclus		
Instructions See herein — Voir ci-inclus		
Address Inquiries to – Adresser toute demande de renseignements à Hannah State Senior Contracting Officer Fisheries and Oceans Canada Email – courriel : DFOtenders-soumissionsMPO@dfo-mpo.gc.ca		
Delivery Required – Livraison exigée See herein — Voir ci-inclus	Delivery Offered – Livraison propose	
Vendor Name, Address and Representative – Nom du vendeur, adresse et représentant du fournisseur/de l'entrepreneur :		
Telephone No. – No. de telephone	Facsimile No. – No. de télécopieur	
Name and title of person authorized to sign on behalf of Vendor (type or print) – Nom et titre de la personne autorisée à signer au nom du fournisseur (taper ou écrire en caractères d'imprimerie)		
Signature	Date	

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PART 1 – GENERAL INFORMATION

1.1 Introduction

The Request for Standing Offers (RFSO) is divided into seven parts plus attachments and annexes, as follows:

- Part 1 General Information: provides a general description of the requirement;
- Part 2 Offeror Instructions: provides the instructions applicable to the clauses and conditions of the RFSO;
- Part 3 Offer Preparation Instructions: provides Offerors with instructions on how to prepare their offer to address the evaluation criteria specified;
- Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria which must be addressed in the offer, and the basis of selection;
- Part 5 Certifications and Additional Information: includes the certifications and additional information to be provided;
- Part 6 Security, Financial and Insurance Requirements: includes specific requirements that must be addressed by Offerors; and
- Part 7 7A, Standing Offer, and 7B, Resulting Contract Clauses:
- 7A, includes the Standing Offer containing the offer from the Offeror and the applicable clauses and conditions;
- 7B, includes the clauses and conditions which will apply to any contract resulting from a call-up made pursuant to the Standing Offer.

The Attachments include Attachment 1 to Section 3, Pricing Schedule

The Annexes include the Statement of Work, the Basis of Payment, Insurance Requirements, Vessel Charter Contract Conditions, Standing Offer Reporting, and Pre-Dive Check List example and any other Annexes.

1.2 Summary

The Contractor will provide diving services and dive supervision for investigations, operations and construction requirements at the Canso Canal for the Department of Fisheries and Oceans (DFO) of Canada.

Work in the Canso Canal will involve pressure and non-pressure infrastructure dives including but not limited to inspections, debris recovery, maintenance and repairs, welding and cutting, remotely operated underwater Vehicle (ROV), hydraulic tools and thickness measuring (with equipment).

The Contractor will carry out service in accordance with CAN/CSA Z275.4-M97 Competency Standard of Diving Operation; CAN/CSA Standard Z275.2.92 Occupational Safety Code for Diving Operations and any other applicable Federal or Provincial regulations.

One (1) Standing Offer will be issued for this requirement.

The period for making call ups against the Standing Offer is from date of issuance until March 31, 2022 with three (3) additional one (1) year optional periods that may be exercised by DFO.

This requirement is limited to Canadian goods and/or services.

1.3 Debriefings

Offerors may request a debriefing on the results of the request for standing offers process. Offerors should make the request to the Standing Offer Authority within 15 working days of receipt of the results of the request for standing offers process. The debriefing may be in writing, by telephone or in person.

PART 2 – OFFEROR INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the Request for Standing Offers (RFSO) by number, date and title are set out in the *Standard Acquisition Clauses and Conditions Manual* (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Revision to Departmental Name: As this solicitation is issued by Fisheries and Oceans Canada (DFO), any reference to Public Works and Government Services Canada or PWGSC or its Minister contained in any term, condition or clause of this solicitation, including any individual SACC clauses incorporated by reference, will be interpreted as reference to DFO or its Minister.

Offerors who submit an offer agree to be bound by the instructions, clauses and conditions of the RFSO and accept the clauses and conditions of the Standing Offer and resulting contract(s).

The 2006 (2020-05-28) Standard Instructions – Request for Standing Offers – Goods or Services – Competitive Requirements, are incorporated by reference into and form part of the RFSO.

Subsection 5.4 of 2006, Standard Instructions – Request for Standing Offers – Goods or Services – Competitive Requirements, is amended as follows:

Delete: 60 days
Insert: 120 days

2.2 Submission of Offers

Offers must be submitted only to Fisheries and Oceans Canada (DFO) Bid Receiving Unit by the date, time and place indicated on page 1 of the RFSO.

Due to the nature of the Request for Standing Offers, transmission of offers by facsimile to DFO will not be accepted.

2.3 Enquiries – Request for Standing Offers

All enquiries must be submitted in writing to the Standing Offer Authority no later than **ten (10)** calendar days before the Request for Standing Offers (RFSO) closing date. Enquiries received after that time may not be answered.

Offerors should reference as accurately as possible the numbered item of the RFSO to which the enquiry relates. Care should be taken by Offerors to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked “proprietary” at each relevant item. Items identified as “proprietary” will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that Offerors do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Offerors. Enquiries not submitted in a form that can be distributed to all Offerors may not be answered by Canada.

2.4 Applicable Laws

The Standing Offer and any contract resulting from the Standing Offer must be interpreted and governed, and the relations between the parties determined, by the laws in force in Nova Scotia.

Offerors may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their offer, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Offerors.

PART 3 – OFFER PREPARATION INSTRUCTIONS

3.1 Offer Preparation Instructions

Canada requests that Offerors provide their offer in separately bound sections as follows:

- Section I: Technical Offer (1 soft copy in PDF format);
- Section II: Financial Offer (1 soft copy in PDF format);
- Section III: Certifications (1 soft copy in PDF format);

The maximum size per email (including attachments) is limited to 10MB. If the limit is exceeded, your email might not be received by DFO. It is suggested that you compress the email size or send multiple emails to ensure delivery. Bidders are responsible to send their proposal and to allow enough time for DFO to receive the proposal by the closing period indicated in the RFP.

For bids transmitted by email, DFO will not be responsible for any failure attributable to the transmission or receipt of the email bid. DFO will send a confirmation email to the Bidders when the submission is received.

Due to the nature of the RFSO, offers transmitted by facsimile will not be accepted.

Prices must appear in the financial offer only. No prices must be indicated in any other section of the offer.

Section I: Technical Offer

In their technical offer, Offerors should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

Section II: Financial Offer

Offerors must submit their financial offer in accordance with Attachment 1 to Part 3 – Pricing Schedule. The total amount of Applicable Taxes must be shown separately.

3.1.1 Electronic Payment of Invoices – Offer

If you are willing to accept payment of invoices by Electronic Payment Instruments, complete Section 5.2.3.3 Electronic Payment Instruments, to identify which ones are accepted.

If Section 5.2.3.3 Electronic Payment Instruments is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.

Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

3.1.2 Exchange Rate Fluctuation

C3011T (2013-11-06), Exchange Rate Fluctuation

Section III: Certifications Offerors must submit the certifications and additional information required under Part 5.

ATTACHMENT 1 TO PART 3 – PRICING SCHEDULE

The Bidder must complete the following pricing schedule and include it in its financial bid.

As a minimum, the Bidder must respond to this pricing schedule by inserting in its financial bid for each of the periods specified below its quoted all-inclusive fixed hourly rate for each of the resource categories identified.

The rates specified below, when quoted by the Bidder, include the total estimated cost of all travel and living expenses that may need to be incurred for:

1. Work described in Section 7, Standing Offer Agreement and Resulting Contract Clauses, of this bid solicitation required to be performed at Canso Canal, Nova Scotia;
2. Travel between the successful bidder's place of business and the site of Canso Canal; and
3. The relocation of resources

To satisfy the terms of any resulting contract. These expenses cannot be charged directly and separately from the professional fees to any contract that may result from the bid solicitation.

The inclusion of volumetric data in this document does not represent a commitment by DFO that DFO's future usage of the services described in the bid solicitation will be consistent with this data.

Initial Offer Period – Standing Offer Award to March 31, 2022

TABLE A						
No.	Description: Class of Labour, material or plant			Firm Hourly Rate (A)	Estimated Quantity (hrs) (B)	Extended Total (C) = A X B
1	During Regular Hours* 07:30 – 16:30 Monday to Friday *Contractor must be on-site within a maximum of seventy-two (72) hours from call.	1.1	Provide four (4) person surfaced supplied dive crew	\$ _____	130	\$ _____
		1.2	Extra diver surface supplied	\$ _____	34	\$ _____
		1.3	SCUBA diver	\$ _____	11	\$ _____
		1.4	Provision of boat (minimum 35 ft.)	\$ _____	26	\$ _____
		1.5	Provision of barge (minimum 100 ft.)	\$ _____	11	\$ _____
		1.6	Two (2) person crew with ROV (Remote Operated Vehicle)	\$ _____	28	\$ _____
		1.7	Boom truck with personnel basket (minimum 15 ton towing capacity)	\$ _____	105	\$ _____
		1.8	Mobilization/Demobilization	\$ _____	26	\$ _____
2	Outside Regular Hours and Emergency* Calls Monday	2.1	Provide four (4) person surfaced supplied dive crew	\$ _____	11	\$ _____
		2.2	Extra diver surface supplied	\$ _____	4	\$ _____
		2.3	SCUBA diver	\$ _____	4	\$ _____
		2.4	Provision of boat	\$ _____	4	\$ _____

	through Sunday, included all day Saturday, Sunday and holidays. *Anytime as requested, Contractor must be on-site within a maximum of twelve (12) hours from call.		(minimum 35 ft.)			
		2.5	Provision of barge (minimum 100 ft.)	\$ _____	4	\$ _____
		2.6	Two (2) person crew with ROV (Remote Operated Vehicle)	\$ _____	6	\$ _____
		2.7	Boom truck with personnel basket (minimum 15 ton towing capacity)	\$ _____	9	\$ _____
		2.8	Mobilization/Demobilization	\$ _____	3	\$ _____
3	Materials and Miscellaneous					
	Offeror allowance for unspecified material, replacement parts, for equipment rentals for other than basic shop, tradesperson tools, and required permits and certificates. <i>Estimated \$1,818.18 + 10% markup before taxes</i>					\$2,000.00
Subtotal for Initial Offer Period (for evaluation purposes only):						\$ _____
TAXES (Please insert, as applicable) ____%:						\$ _____

Option Period 1 – April 1, 2022 to March 31, 2023

TABLE B						
No.	Description: Class of Labour, material or plant		Firm Hourly Rate (A)	Estimated Quantity (hrs) (B)	Extended Total (C) = A X B	
1	During Regular Hours* 07:30 – 16:30 Monday to Friday *Contractor must be on-site within a maximum of seventy-two (72) hours from call.	1.1	Provide four (4) person surfaced supplied dive crew	\$ _____	92	\$ _____
		1.2	Extra diver surface supplied	\$ _____	24	\$ _____
		1.3	SCUBA diver	\$ _____	8	\$ _____
		1.4	Provision of boat (minimum 35 ft.)	\$ _____	18	\$ _____
		1.5	Provision of barge (minimum 100 ft.)	\$ _____	8	\$ _____
		1.6	Two (2) person crew with ROV (Remote Operated Vehicle)	\$ _____	20	\$ _____
		1.7	Boom truck with personnel basket (minimum 15 ton towing capacity)	\$ _____	74	\$ _____
		1.8	Mobilization/Demobilization	\$ _____	18	\$ _____

2	Outside Regular Hours and Emergency* Calls Monday through Sunday, included all day Saturday, Sunday and holidays. *Anytime as requested, Contractor must be on-site within a maximum of twelve (12) hours from call.	2.1	Provide four (4) person surfaced supplied dive crew	\$ _____	8	\$ _____
		2.2	Extra diver surface supplied	\$ _____	3	\$ _____
		2.3	SCUBA diver	\$ _____	3	\$ _____
		2.4	Provision of boat (minimum 35 ft.)	\$ _____	3	\$ _____
		2.5	Provision of barge (minimum 100 ft.)	\$ _____	3	\$ _____
		2.6	Two (2) person crew with ROV (Remote Operated Vehicle)	\$ _____	4	\$ _____
		2.7	Boom truck with personnel basket (minimum 15 ton towing capacity)	\$ _____	6	\$ _____
		2.8	Mobilization/Demobilization	\$ _____	2	\$ _____
3	Materials and Miscellaneous					
	Offeror allowance for unspecified material, replacement parts, for equipment rentals for other than basic shop, tradesperson tools, and required permits and certificates. <i>Estimated \$1,818.18 + 10% markup before taxes</i>					\$2,000.00
Subtotal for Option Period 1 (for evaluation purposes only):						\$ _____
TAXES (Please insert, as applicable) ____%:						\$ _____

Option Period 2 – April 1, 2023 to March 31, 2024

TABLE C						
No.	Description: Class of Labour, material or plant		Firm Hourly Rate (A)	Estimated Quantity (hrs) (B)	Extended Total (C) = A X B	
1	During Regular Hours* 07:30 – 16:30 Monday to Friday *Contractor must be on-site within a maximum of	1.1	Provide four(4) person surfaced supplied dive crew	\$ _____	92	\$ _____
		1.2	Extra diver surface supplied	\$ _____	24	\$ _____
		1.3	SCUBA diver	\$ _____	8	\$ _____
		1.4	Provision of boat (minimum 35 ft.)	\$ _____	18	\$ _____
		1.5	Provision of barge (minimum 100 ft.)	\$ _____	8	\$ _____
		1.6	Two (2) person crew with ROV (Remote Operated	\$ _____	20	\$ _____

	seventy-two (72) hours from call.		Vehicle)			
		1.7	Boom truck with personnel basket (minimum 15 ton towing capacity)	\$ _____	74	\$ _____
		1.8	Mobilization/Demobilization	\$ _____	18	\$ _____
2	Outside Regular Hours and Emergency* Calls Monday through Sunday, included all day Saturday, Sunday and holidays. *Anytime as requested, Contractor must be on-site within a maximum of twelve (12) hours from call.	2.1	Provide four (4) person surfaced supplied dive crew	\$ _____	8	\$ _____
		2.2	Extra diver surface supplied	\$ _____	3	\$ _____
		2.3	SCUBA diver	\$ _____	3	\$ _____
		2.4	Provision of boat (minimum 35 ft.)	\$ _____	3	\$ _____
		2.5	Provision of barge (minimum 100 ft.)	\$ _____	3	\$ _____
		2.6	Two (2) person crew with ROV (Remote Operated Vehicle)	\$ _____	4	\$ _____
		2.7	Boom truck with personnel basket (minimum 15 ton towing capacity)	\$ _____	6	\$ _____
		2.8	Mobilization/Demobilization	\$ _____	2	\$ _____
3	Materials and Miscellaneous					
	Offeror allowance for unspecified material, replacement parts, for equipment rentals for other than basic shop, tradesperson tools, and required permits and certificates. <i>Estimated \$1,818.18 + 10% markup before taxes</i>					\$2,000.00
Subtotal for Option Period 2 (for evaluation purposes only):						\$ _____
TAXES (Please insert, as applicable) _____%:						\$ _____

Option Period 3 – April 1, 2024 to March 31, 2025

TABLE D						
No.	Description: Class of Labour, material or plant			Firm Hourly Rate (A)	Estimated Quantity (hrs) (B)	Extended Total (C) = A X B
1	During Regular Hours* 07:30 – 16:30 Monday to Friday *Contractor must	1.1	Provide four (4) person surfaced supplied dive crew	\$ _____	92	\$ _____
		1.2	Extra diver surface supplied	\$ _____	24	\$ _____
		1.3	SCUBA diver	\$ _____	8	\$ _____

	be on-site within a maximum of seventy-two (72) hours from call.	1.4	Provision of boat (minimum 35 ft.)	\$ _____	18	\$ _____
		1.5	Provision of barge (minimum 100 ft.)	\$ _____	8	\$ _____
		1.6	Two (2) person crew with ROV (Remote Operated Vehicle)	\$ _____	20	\$ _____
		1.7	Boom truck with personnel basket (minimum 15 ton towing capacity)	\$ _____	74	\$ _____
		1.8	Mobilization/Demobilization	\$ _____	18	\$ _____
2	Outside Regular Hours and Emergency* Calls Monday through Sunday, included all day Saturday, Sunday and holidays. *Anytime as requested, Contractor must be on-site within a maximum of twelve (12) hours from call.	2.1	Provide four (4) person surfaced supplied dive crew	\$ _____	8	\$ _____
		2.2	Extra diver surface supplied	\$ _____	3	\$ _____
		2.3	SCUBA diver	\$ _____	3	\$ _____
		2.4	Provision of boat (minimum 35 ft.)	\$ _____	3	\$ _____
		2.5	Provision of barge (minimum 100 ft.)	\$ _____	3	\$ _____
		2.6	Two (2) person crew with ROV (Remote Operated Vehicle)	\$ _____	4	\$ _____
		2.7	Boom truck with personnel basket (minimum 15 ton towing capacity)	\$ _____	6	\$ _____
		2.8	Mobilization/Demobilization	\$ _____	2	\$ _____
3	Materials and Miscellaneous Offeror allowance for unspecified material, replacement parts, for equipment rentals for other than basic shop, tradesperson tools, and required permits and certificates. <i>Estimated = \$1,818.18 + 10% markup before taxes</i>					\$2,000.00
Subtotal for Option Period 3 (for evaluation purposes only):						\$ _____
TAXES (Please insert, as applicable) ____%:						\$ _____

EVALUATED PRICE	
Subtotal for Initial Offer Period:	\$ _____
Subtotal for Optional Offer Period 1:	\$ _____
Subtotal for Optional Offer Period 2:	\$ _____
Subtotal for Optional Offer Period 3:	\$ _____
Total Evaluated Price (Exclusive of Taxes):	\$ _____

Notes on items:

The item numbers listed below refer to the items listed in the Hourly Rate Tables above.

Items # 1.1, 2.1

The Contractor must include all equipment necessary to perform the duties of the work bid in the Standard Offer of Agreement including but not limited to all equipment required for a four (4) person surface supplied dive; all recording devices - video, audio, pressure and non-pressure infrastructure dives; including but not limited to inspections, debris recovery, maintenance and repairs, welding and cutting, hydraulic tools, thickness measuring equipment ; any pneumatic and hand tools necessary to complete the tasks.

Items # 1.2, 2.2

Any extra diver to complement the four (4) person surfaced supplied dive team must be approved by DFO's Department Representative prior to use.

Items # 1.3, 2.3

Any diver using self contained underwater breathing apparatus.

Items # 1.4, 2.4

In the event that the contractor be required to provide a vessel (minimum 35 ft.) for the execution of work authorized by DFO's Departmental Representative. The compensation for this item includes all equipment and labour necessary to operate the vessel and perform the given task.

Items # 1.5, 2.5

In the event that the Contractor be required to provide a barge (minimum 100 ft.) for the execution of work authorized by DFO's Departmental Representative. The compensation for this item includes all equipment and labour necessary to operate the barge and perform the task.

Items #1.6, 2.6

The Contractor must include all equipment necessary to perform the duties of the work bid in the Standard Offer of Agreement including but not limited to all equipment required for a two (2) person with Remotely Operated underwater Vehicle (ROV).

Items # 1.7, 2.7

The Contractor must include all equipment necessary to perform the duties of the work bid in the Standard Offer of Agreement including but not limited to all equipment and personnel required for a boom truck (minimum 15 ton towing capacity) with personnel basket.

Items # 1.8, 2.8

Mobilization and demobilization hourly rate will be invoiced at the hourly rate for actual time in transit.

PART 4 – EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

- (a) Offers will be assessed in accordance with the entire requirement of the Request for Standing Offers including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the offers.

4.1.1 Technical Evaluation

4.1.1.1 Mandatory Technical Criteria

Please refer to Annex J.

4.1.1.2 Point Rated Technical Criteria

Please refer to Annex J.

4.1.2 Financial Evaluation

4.1.2.1 Evaluation of Price - Offer

SACC Manual Clause [M0220T \(2016-01-28\)](#), Evaluation of Price

4.2 Basis of Selection

4.2.1 Basis of Selection – Highest Combined Rating of Technical Merit (50%) and Price (50%)

1. To be declared responsive, a bid must:
 - a. comply with all the requirements of the bid solicitation; and
 - b. meet all mandatory criteria; and
 - c. obtain the required minimum of **70 points** overall for the technical evaluation criteria which are subject to point rating.
The rating is performed on a scale of **100 points**.
2. Bids not meeting (a) or (b) or (c) will be declared non-responsive.
3. The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 50% for the technical merit and 50% for the price.
4. To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of points available multiplied by the ratio of 50%.
5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 50%.
6. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.

7. Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 50/50 ratio of technical merit and price, respectively. The total available points equals 135 and the lowest evaluated price is \$45,000 (45).

		Bidder 1	Bidder 2	Bidder 3
Overall Technical Score		115/135	89/135	92/135
Bid Evaluated Price		\$55,000.00	\$50,000.00	\$45,000.00
Calculations	Technical Merit Score	$115/135 \times 50 = 42.59$	$89/135 \times 50 = 32.96$	$92/135 \times 50 = 34.07$
	Pricing Score	$45/55 \times 50 = 40.91$	$45/50 \times 50 = 45.00$	$45/45 \times 50 = 50.00$
Combined Rating		83.50	77.96	84.07
Overall Rating		2 nd	3 rd	1 st

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

Offerors must provide the required certifications and additional information to be issued a standing offer.

The certifications provided by Offerors to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare an offer non-responsive, will have the right to set-aside a standing offer, or will declare a contractor in default if any certification made by the Offeror is found to be untrue whether made knowingly or unknowingly during the offer evaluation period, during the Standing Offer period, or during the contract period.

The Standing Offer Authority will have the right to ask for additional information to verify the Offeror's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Standing Offer Authority will render the offer non-responsive, result in the setting aside of the Standing Offer or constitute a default under the Contract.

5.1 Certifications Required with the Offer

Offerors must submit the following duly completed certifications as part of their offer.

5.1.1 Integrity Provisions – Declaration of Convicted Offences

In accordance with the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Offeror must provide with its offer the required documentation, as applicable), to be given further consideration in the procurement process.

5.2 Certifications Precedent to the Issuance of a Standing Offer and Additional Information

The certifications and additional information listed below should be submitted with the offer, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Standing Offer Authority will inform the Offeror of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the offer non-responsive.

5.2.1 Integrity Provisions – Required Documentation

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real procurement agreement of the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Offeror must provide the required documentation, as applicable, to be given further consideration in the procurement process.

5.2.2 Federal Contractors Program for Employment Equity – Standing Offer Certification

By submitting an offer, the Offeror certifies that the Offeror, and any of the Offeror's members if the Offeror is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list) available at the bottom of the page of the [Employment and Social Development Canada-Labour's](https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#s4) website (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#s4>).

Canada will have the right to declare an offer non-responsive, or to set-aside a Standing Offer, if the Offeror, or any member of the Offeror if the Offeror is a Joint Venture,

appears on the "FCP Limited Eligibility to Bid" list at the time of issuing of a Standing Offer or during the period of the Standing Offer.

5.2.3 Additional Certifications Precedent to Issuance of a Standing Offer

5.2.3.1 Canadian Content Certification

This procurement is limited to Canadian services.

The Offeror certifies that (*please check one of the following*):

the service offered is a Canadian service as defined in paragraph 2 of clause A3050T (2018-12-06); **OR**

the service offered is NOT a Canadian service as defined in paragraph 2 of clause A3050T (2018-12-06).

5.2.3.2 Status and Availability of Resources

The Offeror certifies that, should it be issued a standing offer as a result of the Request for Standing Offer, every individual proposed in its offer will be available to perform the Work resulting from a call-up against the Standing Offer as required by Canada's representatives and at the time specified in a call-up or agreed to with Canada's representatives. If for reasons beyond its control, the Offeror is unable to provide the services of an individual named in its offer, the Offeror may propose a substitute with similar qualifications and experience. The Offeror must advise the Standing Offer Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the Offeror: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.

If the Offeror has proposed any individual who is not an employee of the Offeror, the Offeror certifies that it has the permission from that individual to propose his/her services in relation to the Work to be performed and to submit his/her résumé to Canada. The Offeror must, upon request from the Standing Offer Authority, provide a written confirmation, signed by the individual, of the permission given to the Offeror and of his/her availability.

Signature

Date

5.2.3.3 Electronic Payment Instruments

The Offeror accepts to be paid by any of the following Electronic Payment Instrument(s):

VISA Acquisition Card;

Direct Deposit (Domestic and International)

5.2.3.4 Former Public Servant

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPS, offerors must provide the information required below before the issuance of a standing offer. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of offers is completed, Canada will inform the Offeror of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the offer non-responsive.

Definitions

For the purposes of this clause,

"former public servant" is any former member of a department as defined in the [Financial Administration Act](#) R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- a. an individual;
- b. an individual who has incorporated;
- c. a partnership made of former public servants; or
- d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the [Public Service Superannuation Act](#) (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the [Supplementary Retirement Benefits Act](#), R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions payable pursuant to the [Canadian Forces Superannuation Act](#), R.S., 1985, c. C-17, the [Defence Services Pension Continuation Act](#), 1970, c. D-3, the [Royal Canadian Mounted Police Pension Continuation Act](#), 1970, c. R-10, and the [Royal Canadian Mounted Police Superannuation Act](#), R.S., 1985, c. R-11, the [Members of Parliament Retiring Allowances Act](#), R.S. 1985, c. M-5, and that portion of pension payable to the [Canada Pension Plan Act](#), R.S., 1985, c. C-8.

Former Public Servant in Receipt of a Pension

As per the above definitions, is the Offeror a FPS in receipt of a pension?

YES () NO ()

If so, the Offeror must provide the following information, for all FPS in receipt of a pension, as applicable:

- a. name of former public servant;
- b. date of termination of employment or retirement from the Public Service.

By providing this information, Offerors agree that the successful Offeror's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in

accordance with [Contracting Policy Notice: 2012-2](#) and the [Guidelines on the Proactive Disclosure of Contracts](#).

Work Force Adjustment Directive

Is the Offeror a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive?

YES () NO ()

If so, the Offeror must provide the following information:

- a. name of former public servant;
- b. conditions of the lump sum payment incentive;
- c. date of termination of employment;
- d. amount of lump sum payment;
- e. rate of pay on which lump sum payment is based;
- f. period of lump sum payment including start date, end date and number of weeks;
- g. number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

The following certification signed by the Contractor or an authorized officer:

"I certify that I have examined the information provided above and that it is correct and complete"

Signature

Date

Print Name of Signatory

PART 6 – SECURITY, FINANCIAL AND INSURANCE REQUIREMENTS

6.1 Security Requirements

Security Clauses #1 – No Security Requirement, escort required at DFO site(s)

- The supplier and all individuals assigned to work on the contract or arrangement **MUST NOT** have access to PROTECTED or CLASSIFIED information/assets.
- The supplier and all individuals assigned to work on the contract or arrangement **MUST NOT** have unescorted access to restricted access areas of Fisheries and Oceans Canada facilities, as Canadian Coast Guard vessels.
- The supplier and all individuals assigned to work on the contract or arrangement **MUST NOT** remove any PROTECTED or CLASSIFIED information/assets from DFO site(s).
- Subcontracts or arrangements with a third party are not to be awarded without the prior written permission of the Contracting Authority (i.e. a new SRCL must be submitted and processed following the same procedure as for the initial contract).

6.2 Financial Capability

SACC Manual clause [M9033T](#) (2011-05-16), Financial Capability

6.3 Insurance Requirements

The Offeror must provide a letter from an insurance broker or an insurance company licensed to operate in Canada stating that the Offeror, if issued a standing offer as a result of the request for the standing offer, can be insured in accordance with the Insurance Requirements specified in **Annexes C and D**.

If the information is not provided in the offer, the Standing Offer Authority will so inform the Offeror and provide the Offeror with a time frame within which to meet the requirement. Failure to comply with the request of the Standing Offer Authority and meet the requirement within that time period will render the offer non-responsive.

PART 7 – STANDING OFFER AND RESULTING CONTRACT CLAUSES

A. STANDING OFFER

7.1 Offer

7.1.1 The Offeror offers to perform the Work in accordance with the Statement of Work at Annex "A".

7.2 Security Requirements

7.2.1 The following security requirements apply and form part of the Standing Offer:

Security Clauses #1 – No Security Requirement, escort required at DFO site(s)

- The supplier and all individuals assigned to work on the contract or arrangement MUST NOT have access to PROTECTED or CLASSIFIED information/assets.
- The supplier and all individuals assigned to work on the contract or arrangement MUST NOT have unescorted access to restricted access areas of Fisheries and Oceans Canada facilities, as Canadian Coast Guard vessels.
- The supplier and all individuals assigned to work on the contract or arrangement MUST NOT remove any PROTECTED or CLASSIFIED information/assets from DFO site(s).
- Subcontracts or arrangements with a third party are not to be awarded without the prior written permission of the Contracting Authority (i.e. a new SRCL must be submitted and processed following the same procedure as for the initial contract).

7.3 Standard Clauses and Conditions

All clauses and conditions identified in the Standing Offer and resulting contract(s) by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Revision to Departmental Name:

As this solicitation is issued by DFO, any reference to Public Works and Government Services Canada or PWGSC or its Minister contained in any term, condition or clause of this solicitation, including any individual SACC clauses incorporated by reference, will be interpreted as a reference to DFO or its Minister.

Offerors who submit an offer agree to be bound by the instructions, clauses and conditions of the RFSO and accept the clauses and conditions of the Standing Offer and resulting contract(s).

7.3.1 General Conditions

2005 (2017-06-21) General Conditions - Standing Offers - Goods or Services, apply to and form part of the Standing Offer.

7.3.2 Standing Offers Reporting

The Offeror must compile and maintain records on its provision of goods and services to Canada under contracts resulting from the Standing Offer. This data must include all purchases done by Canada, including those acquired and paid for by Canada acquisition cards.

The Offeror must provide this data in accordance with the reporting requirements detailed in Annex "F". If some data is not available, the reason must be indicated in the report. If no goods or services is provided during a given period, the Offeror must provide a "nil" report.

The data must be submitted on a quarterly basis to the Standing Offer Authority.

The quarterly reporting periods are defined as follows:

- Report 1: April 1 to June 30;
- Report 2: July 1 to September 30
- Report 2: October 1 to December 31
- Report 4: January 1 to March 31

The data must be submitted to the Standing Offer Authority no later than thirty (30) calendar days after the end of the reporting period.

7.4 Term of Standing Offer

7.4.1 Period of the Standing Offer

The period for making call-ups against the Standing Offer is from date of Standing Offer Award to March 31, 2022.

7.4.2 Extension of Standing Offer

If the Standing Offer is authorized for use beyond the initial period, the Offeror offers to extend its offer for **three (3) additional one (1) year periods**, under the same conditions and at the rates or prices specified in the Standing Offer, or at the rates or prices calculated in accordance with the formula specified in the Standing Offer.

The Offeror will be advised of the decision to authorize the use of the Standing Offer for an extended period by the Standing Offer Authority **fifteen (15) days** before the expiry date of the Standing Offer. A revision to the Standing Offer will be issued by the Standing Offer Authority.

7.5 Authorities

7.5.1 Standing Offer Authority

The Standing Offer Authority is:

Name: Hannah State
Title: Senior Contracting Officer
Department: Fisheries and Oceans Canada
Directorate: Materiel and Procurement Services
Address: 301 Bishop Drive
Fredericton, New Brunswick, E3C 2M6
Telephone: 506-429-2622
E-mail address: DFOtenders-soumissionsMPO@DFO-MPO.GC.CA

The Standing Offer Authority is responsible for the establishment of the Standing Offer, its administration and its revision, if applicable. Upon the making of a call-up, as Contracting Authority, he is responsible for any contractual issues relating to individual call-ups made against the Standing Offer by any Identified User.

7.5.2 Project Authority

The Project Authority for the Standing Offer is: *(to be identified at Standing Offer award)*

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone: _____
Facsimile: _____
E-mail: _____

The Project Authority is the representative of the department or agency for whom the Work will be carried out pursuant to a call-up under the Standing Offer and is responsible for all the technical content of the Work under the resulting Contract.

7.5.3 Offeror's Representative *(to be identified at Standing Offer award)*

Name: _____
Title: _____
Address: _____
Telephone: _____
Facsimile: _____
E-mail: _____

7.6 Proactive Disclosure of Contracts with Former Public Servants

By providing information on its status, with respect to being a former public servant in receipt of a [Public Service Superannuation Act](#) (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with [Contracting Policy Notice: 2012-2](#) of the Treasury Board Secretariat of Canada.

7.7 Identified Users

The Identified User authorized to make call-ups against the Standing Offer is: Fisheries and Oceans Canada.

7.8 Call-up Procedures

7.8.1 Any call-up for Work against this Standing Offer will be processed as follows:

7.8.1.1 The Project Authority will provide the Offeror with the following information:

- i. the description of the services required and the location coordinates;
- ii. the schedule deemed acceptable by the identified User, if applicable.

7.8.1.2 The cost per service call will be established in accordance with the Basis of Payment, attached hereto as Annex "B".

7.8.1.3 The Offeror will be authorized by the identified User to proceed with the Work by the issuance of a duly completed and signed Call-up from a Purchase Order form. The Offeror shall not commence any work until it has received a Call-up which is signed by the Identified User. The Offeror acknowledges that any and all work performed in the absence of a signed call-up will be done at its own risk, and Canada shall not be liable for payment therefore.

7.8.2 A call-up made against this Standing Offer shall form a contract only for those goods or services, or both, which have been called-up, provided always that such call-up is made in accordance with the provisions of this Standing Offer.

7.9 Call-up Instrument

The Work will be authorized or confirmed by the Identified User(s) using the call-up form PWGSC-TPSGC 942 – Call-up Against a Standing Offer.

7.10 Limitation of Call-ups

Individual call-ups against the Standing Offer must not exceed \$60,000.00 (Applicable Taxes included).

If goods are included in the call-up, the value of the goods portion must not exceed \$25,000.00 (Applicable Taxes included).

7.11 Financial Limitation

The total cost to Canada resulting from call ups against the Standing Offer must not exceed the sum of \$_____ *(to be filled in at standing offer issuance)* (Applicable Taxes excluded) unless otherwise authorized in writing by the Standing Offer Authority. The Offeror must not perform any work or services or supply any articles in response to call ups which would cause the total cost to Canada to exceed the said sum, unless an increase is so authorized.

The Offeror must notify the Standing Offer Authority as to the adequacy of this sum when 75 percent of this amount has been committed, or four (4) months before the expiry date of the Standing Offer, whichever comes first. However, if at any time, the Offeror considers that the said sum may be exceeded, the Offeror must promptly notify the Standing Offer Authority.

7.12 Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- a) the call up against the Standing Offer, including any annexes;
- b) the articles of the Standing Offer;
- c) the general conditions [2005 \(2017-06-21\)](#), General Conditions - Standing Offers - Goods or Services
- d) [2035 \(2020-05-28\)](#), General Conditions – Higher Complexity – Services;
- e) Annex A, Statement of Work;
- f) Annex B, Basis of Payment;
- g) Annex C, Insurance Requirements;
- h) Annex D, Marine Liability Insurance Conditions;
- i) Annex E, Additional Vessel Charter Contract Conditions;
- j) Annex F, Standing Offer Reporting;
- k) Annex G, Pre-Dive Check List;
- l) Annex H, Departmental Diving Safety Procedures;
- m) Annex I, Guide for Diving Safety; and
- n) the Offeror's offer dated _____ (*to be inserted at Standing Offer Award*).

7.13 Certifications and Additional Information

7.13.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Offeror with its offer or precedent to issuance of the Standing Offer (SO), and the ongoing cooperation in providing additional information are conditions of issuance of the SO and failure to comply will constitute the Offeror in default. Certifications are subject to verification by Canada during the entire period of the SO and of any resulting contract that would continue beyond the period of the SO.

7.13.2 SACC Manual Clauses

[A3060C](#) (2008-05-12), Canadian Content Certification

[A9141C](#) (2008-05-12), Vessel Condition

7.14 Applicable Laws

The Standing Offer and any contract resulting from the Standing Offer must be interpreted and governed, and the relations between the parties determined, by the laws in force in Nova Scotia.

B. RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from a call-up against the Standing Offer.

7.1 Statement of Work

The Contractor must perform the Work described in the call-up against the Standing Offer.

7.2 Standard Clauses and Conditions

7.2.1 General Conditions

[2035](#) (2018-06-21), General Conditions – Higher Complexity – Services, apply to and form part of the contract.

7.3 Term of Contract

7.3.1 Period of the Contract

The Work must be completed in accordance with the call-up against the Standing Offer.

7.3.2 Delivery Date

Delivery must be completed in accordance with the call-up against the Standing Offer.

7.4 Proactive Disclosure of Contracts with Former Public Servants

By providing information on its status, with respect to being a former public servant in receipt of a Public Service Superannuation Act (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with Contracting Policy Notice: 2012-2 of the Treasury Board Secretariat of Canada.

7.5 Payment

7.5.1 Basis of Payment

The Contractor will be paid firm hourly rates stipulated in the call-up, calculated in accordance with the Basis of Payment detailed in Annex "B".

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

7.5.2 Limitation of Expenditure

1. Canada's total liability to the Contractor under the Contract must not exceed \$ _____ *(to be inserted at Standing Offer issuance)*. Customs duties are included and Applicable Taxes are extra.
2. No increase in the total liability of Canada or in the price of the Work resulting from any design changes, modifications or interpretations of the Work, will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been approved, in writing, by the Contracting Authority before their incorporation into the Work. The Contractor must not perform any work or provide any service that would result in Canada's total liability being exceeded before obtaining the written approval of the Contracting Authority. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:
 - a. when it is 75% committed, or
 - b. four months before the contract expiry date, or
 - c. as soon as the Contractor considers that the contract funds provided are inadequate for the completion of the Work,

whichever comes first.

3. If the notification is for inadequate contract funds, the Contractor must provide to the Contracting Authority a written estimate for the additional funds required. Provision of such information by the Contractor does not increase Canada's liability.

7.5.3 Method of Payment

The following methods of payment will apply:

1. SACC *Manual* clause [H1000C](#) (2008-05-12), Single Payment
2. SACC *Manual* clause [H1008C](#) (2008-05-12), Monthly Payment

7.5.4 Electronic Payment of Invoices – Call-up

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- a. Visa Acquisition Card;
- b. Direct Deposit (Domestic and International);

7.6 Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed. Each invoice must be supported by:
 - a) A copy of time sheets to support the time claimed;
 - b) A copy of the release document and any other documents as specified in the contract;
 - c) A copy of the invoices, receipts, vouchers for all direct expenses, consumables. Detailed cost +10% markup is allowed; and
 - d) A copy of the Statutory Declaration.
2. Invoices must be distributed as follows:
 - a. One (1) copy must be forwarded to the following email addresses:
DFO.invoicing-facturation.MPO@canada.ca
[CC AP Coder: _____](#) *(to be identified at Standing Offer award)*
 - b. One (1) copy must be forwarded to the Project Authority identified in the call-up.

7.7 Insurance

The Contractor must comply with the insurance requirements specified in Annex C and Annex D. The Contractor must maintain the required insurance coverage for the duration of the contract. Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the contract.

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

The Contractor must forward to the Contracting Authority within **ten (10)** days after the date of the award of the contract, a Certificate of Insurance evidencing the insurance coverage and

confirming that the insurance policy complying with the requirements is in force. Coverage must be placed with an insurer licensed to carry out business in Canada. The Contractor must, if requested by the Contracting Authority, forward to DFO a certified true copy of all applicable insurance policies.

ANNEX "A" STATEMENT OF WORK

1.0 Title

Diving Services – Canso Canal, Nova Scotia (NS)

2.0 Background

The Contractor will provide diving services and dive supervision for investigation, operation and construction requirements of the Canso Canal for Real Property, Department of Fisheries and Oceans Canada (DFO), Gulf Region.

3.0 Scope

Work in the Canso Canal will involve pressure and non-pressure infrastructure dives including but not limited to inspections, debris recovery, maintenance and repairs, welding and cutting, Remotely Operated underwater Vehicle (ROV), hydraulic tools, thickness measuring equipment may be needed.

4.0 Objectives

The Contractor must carry out service in accordance with CAN/CSA Z275.4-M97 Competency Standard of Diving Operation; CAN/CSA Standard Z275.2.92 Occupational Safety Code for Diving Operations and any other applicable Federal or Provincial regulations.

5.0 Requirements

The Contractor must:

- 5.1 Provide dive teams for the normally scheduled Monday to Friday time frame during Canal normal hours of operations (7:30 am to 4:30 pm AT).
- 5.2 Provide dive teams, if required, on any day of the year should it be necessary;
- 5.3 Provide a maximum seventy-two (72) hours response time for routine requirements e.g. non-emergency; and twelve (12) hours response time for emergencies.
- 5.4 Provide divers that:
 - a) are certified by the Diver Certification Board of Canada
 - b) have a valid Divers Medical Certificate from the Canadian Association of Diving Contractors log book; and
 - c) have a minimum of fifty (50) hours diving time.
- 5.5 Ensure that DFO has copies of all certifications identified above, before providing services;
- 5.6 Provide qualified and experienced divers, trained to a level that will allow the diver to safely undertake diving operations;
- 5.7 Prior to commencing work each dive, provide a written report to DFO's departmental representative, detailing the site-specific Health and Safety Plan, including as a minimum:

- a) Ensuring that a current Workplace Safety and Insurance Board (WSIB) Clearance Certificate, for all personnel involved in the dive has been filed with DFO, CCG-Canso Canal.
 - b) Results of site-specific safety hazard assessment;
 - c) Results of safety and health risk or hazard analysis for site tasks and operations;
 - d) Contractor and subcontractor Safety Communication Plan;
 - e) The provision of a Comprehensive Dive Plan and Emergency Response Plan for each assignment;
 - f) The completion of a DFO OHS Attestation form and provide it to the initiating DFO's Departmental Representative.
 - g) Pre-Dive Checklist (see example in Annex G)
 - h) Daily toolbox meeting log.
- 5.8 Have a valid Liability Insurance Certificate e.g. as per Annexes C and D;
- 5.9 Contractor to provide telephone notification and Notice for Diving Operation to Ministry of Labour (MOL) area diving office, and provide a copy to DFO's RPSS Regional Engineer of the gulf region and the Director of Canal Operations prior to each dive. To determine qualifications, the diver must be able to provide MOL with past diving logs including any certificates of competency and diving medical validation at the time of any inspection;
- 5.10 Ensure all divers maintain an updated dive log, and make available upon request;
- 5.11 Have prior signed authorization, from a DFO's department representative, before subcontracting services;
- 5.12 Provide proof of a comprehensive, company-wide Health and Safety Policy;
- 5.13 Follow and adhere at all times to Canada Labour Code Part II Section 18, OS&HA N.S. Regulation 174/2005 and the regulations made under them and any other applicable legislation;
- 5.14 Ensure supplied personnel are familiar with regulatory prohibitions placed on the use of SCUBA and the interactions of Occupational Health and Safety Act concerning crane and barge operations, where personal protective equipment and prescribed procedures are required;
- 5.15 Provide supplied personnel with all appropriate equipment, devices, tools, and machinery, including personal protection devices (PPE, PFD), ensuring all equipment is maintained in proper working conditions and is used in the prescribed manner as required under the Canadian Labour Code (CLC);
- 5.16 At all times have available a qualified diving supervisor who is authorized to act on the Contractors behalf, to ensure work is properly and safely carried out. The diving supervisor shall be qualified to a level required to supervise the diving operation being carried out;

- 5.17 Carry out safety and coordination meetings for the purpose of informing their personnel of the health and safety hazards at the work site. Minutes of these meetings are to be forwarded to the DFO's departmental representative;
- 5.18 Immediately stop work and advise DFO's departmental representative, verbally and in writing, in the event of any unforeseen or peculiar safety-related factors, hazard or condition, becoming evident, during the performance of the work;
- 5.19 Resolve any stop work orders that DFO's departmental representative, or any other Federal or Provincial official, may impose for non-compliance of health and safety regulations;
- 5.20 Prepare Operation Control Instructions covering any environmental aspects that their on-site activities, products and services create;
- 5.21 Prior to the removal of any substance, that the Contractor determines could be hazardous to the environment or diver health, provide to DFO's departmental representative, for review and approval, the estimated cost associated with providing protection from exposure to the substance;
- 5.22 Provide the following diving services, as required, but not necessarily limited to the following:
 - a) Meet with the DFO's departmental representative on site, upon request;
 - b) Provide photographic, video and a written report of investigative findings;
 - c) Inspection and repair of underwater infrastructure and equipment, including but not limited to: concrete, hydraulic lines, electrical cables, intake/exhaust valves, lock gates function, replacement of drop cables, hinges, bushings, seals, etc. within lock chambers, and canals;
 - d) Installation/removal and proper sealing of coffer logs for lock dewatering;
 - e) Measure quantities for contract progress payments;
 - f) Tremie concrete placement;
 - g) Sealing of locks, as required;
 - h) Welding;
 - i) Drilling, breaking and removal of concrete;
 - j) Grinding, repairing, removal, installing fasteners and seals;
 - k) Report observations of specific asset conditions; and
- 5.23 Provide diving services for the assets at Canso Canal Causeway.

6.0 Departmental Support

The Project Authority will be available to assist in coordinating activities as well as providing leadership and access to data collected from the field throughout the duration of this SOA.

7.0 Location of Work

Work will be at the Canso Canal site, Nova Scotia.

8.0 Travel and Living

The Crown will not reimburse the Contractor for any travel and/or living expenses as part of this Standing Offer Agreement.

9.0 Language requirements

The Contractor's resources must have an intermediate proficiency level in English, in the written, verbal and comprehension areas as described in the table below.

Language Proficiency Grid			
	Oral	Comprehension	Written
Basic	<p>A person speaking at this level can:</p> <ul style="list-style-type: none"> • ask and answer simple questions; • give simple instructions; and, • give uncomplicated directions relating to routine work situations. 	<p>A person reading at this level can:</p> <ul style="list-style-type: none"> • fully understand very simple texts; grasp the main idea of texts about familiar topics; and, • read and understand elementary points of information such as dates, numbers, or names from relatively more complex texts to perform routine job-related tasks. 	<p>A person writing at this level can:</p> <ul style="list-style-type: none"> • write isolated words, phrases, simple statements or questions on very familiar topics using words of time, place or person.
Intermediate	<p>A person speaking at this level can:</p> <ul style="list-style-type: none"> • sustain a conversation on concrete topics; report on action taken; • give straightforward instructions to employees; and, • provide factual descriptions and explanations. 	<p>A person reading at this level can:</p> <ul style="list-style-type: none"> • grasp the main idea of most work-related texts; • identify specific details; and, • distinguish main from subsidiary ideas. 	<p>A person writing at this level can:</p> <ul style="list-style-type: none"> • deal with explicit information on work-related topics since they have sufficient mastery of grammar and vocabulary.

Advanced	<p>A person speaking at this level can:</p> <ul style="list-style-type: none">• support opinions, and understand and express hypothetical and conditioned ideas.	<p>A person reading at this level can:</p> <ul style="list-style-type: none">• understand most complicated details, inferences and fine points of meaning; and,• have a good comprehension of specialized or less familiar material.	<p>A person writing at this level can:</p> <ul style="list-style-type: none">• write texts where ideas are developed and presented in a coherent manner.
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The following are associated with the Annex A – Statement of Work

- PART 1 : DESCRIPTIONS AND DEFINITIONS**
- PART 2 : ENVIRONMENTAL PROCEDURES**
- PART 3: HEALTH AND SAFETY REQUIREMENTS**

PART 1: DESCRIPTIONS AND DEFINITIONS

942	Call Up Against a Standing Offer Agreement
Add	Make an addition to.
Breakdown Maintenance	To perform repairs to damaged equipment due to failures.
Client	DFO RPSS Gulf Region
Contract Authority	Contract Officer with the Procurement Hub.
Director of Operations	DFO Director of RPSS Gulf Region.
DFO	Department of Fisheries and Oceans Canada
HASP	Health and Safety Plan.
Predictive Maintenance	To perform required repairs that have been declared in advance, on the basis of observation, experience and/or scientific reasons.
Preventative Maintenance	To inspect, test and recondition a system, in order to prevent failures, at regularly scheduled intervals in accordance with specific instructions.
Project Authority	The Project Authority includes the DFO RPSS Gulf Region Project Authority or their representative that is the representative of the department or agency for whom the work is being carried out under this SOA and is responsible for all matters concerning the technical content of the work under this SOA.
Remove	Take off or away from.
Repair	Restore to a sound state.
RP	Real Property
RPSS	Real Property, Safety and Security
SOA	Standing Offer Agreement for services on a call up basis; a call up for services based on an as and when services are required.
WHMIS	Workplace Hazardous Materials Information System.
Workers Compensation	Workers Compensation Board of Nova Scotia

PART 2 - ENVIRONMENTAL PROCEDURES

2.1 REFERENCES

- 2.1.1 Canada Shipping Act, Transport Canada, 2001, amended 2019-07-30.
- 2.1.2 Canadian Coast Guard Regulations, Fisheries and Oceans Canada.
- 2.1.3 Canadian Environmental Protection Act (CEPA 1999) and associated Regulations
- 2.1.4 Impact Assessment Act, 2020-06-02. (Mitigation measures outlined in the SEED and or exclusion list, document in process)
- 2.1.5 Fisheries Act, 1985, Fisheries and Oceans Canada, amended 2019-08-28.
- 2.1.6 Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters, 1998.
- 2.1.7 Migratory Birds Convention Act, 1994, Environment Canada, amended 2017-12-12.
- 2.1.8 Navigation Protection Act, 1985. Transport Canada, amended 2019-10-04.
- 2.1.9 Nova Scotia – Environment Act.
- 2.1.10 Species at Risk Act, 2002, amended 2019-08-28.
- 2.1.11 The Federal Policy on Wetland Conservation, 1991, Environment Canada.
- 2.1.12 Transportation of Dangerous Goods Act, 1992, Transport Canada, amended 2019-08-28.
- 2.1.13 Workplace Hazardous Materials Information System, Health Canada, 2015.

2.2 DEFINITIONS

2.2.1 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.

2.2.2 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 driest upland areas.

2.2.3 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.

2.2.4 Fish habitat:

Water frequented by fish and any other areas on which fish depend directly or indirectly to carry out their life processes, including spawning grounds and nurseries, rearing, food supply and migration areas.

2.2.5 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.

2.2.6 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.

2.2.7 Navigable water:

A canal and any other body of water created or altered as a result of the construction of any work.

2.2.8 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.

2.2.9 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.

2.3 TRANSPORTATION

2.3.1 Transport hazardous materials and hazardous waste in compliance with the Transportation of Dangerous Goods Act.

2.3.2 Eliminate free board spillage when excavating, loading and hauling material.

2.3.3 Maintain trucks clean and free of mud, dirt and other foreign matter.

2.3.4 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.

2.3.5 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 dredge material disposal site.

2.3.6 Construction material and debris are not to become waterborne.

2.4 OPERATIONS OF MACHINERY

2.4.1 Ensure that machinery arrives on site in a clean condition and is maintained free of fluid leaks, invasive species and noxious weeds.

- 2.4.2 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.
- 2.4.3 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.

2.5 CONTAINMENT AND SPILL MANAGEMENT

- 2.5.1 Comply with Federal (DFO & 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 site.
- 2.5.2 Do not dump petroleum products or any other deleterious substances on ground or in the water.
- 2.5.3 Be diligent and take all necessary precautions to avoid spills and contaminate the soil and water (both surface and subsurface) when handling petroleum products on site and during fuelling and servicing of vehicles and equipment.
- 2.5.4 Maintain on site appropriate emergency spill response equipment consisting of at least one (1) 250 litres (55 gallons) over pack spill kit for containment and cleanup of spills.
- 2.5.5 Maintain vehicles and equipment in good working order to prevent leaks on site.
- 2.5.6 In the event of a spill of hazardous material, immediately notify DFO's Departmental Representative and the Canadian Coast Guard (CCG) at 1-800-565-1633 (24-hour report line). Perform cleanup in accordance with all regulations and procedures stipulated by authority having jurisdiction.
- 2.5.7 Materials such as paint, primers, blasting abrasives, rust solvents, degreasers, grout, or other chemicals are not to enter the watercourse.
- 2.5.8 Develop a response plan that is to be implemented immediately in the event of a sediment release or spill of a deleterious substance.

2.6 HAZARDOUS MATERIAL HANDLING

- 2.6.1 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.
- 2.6.2 Label containers to WHMIS requirements and keep SDS data sheets on site for all hazardous materials.
- 2.6.3 Maintain inventory of hazardous materials and hazardous waste stored on site. List items by product names, quantity and date when stored.
- 2.6.4 Store and handle flammable and combustible materials in accordance with National Fire Code.

2.7 DISPOSAL OF WASTES

- 2.7.1 Do not bury rubbish, construction and demolition debris (i.e., concrete, creosote timbers, steel, impacted soil materials, etc.) and waste materials on site.

- 2.7.2 Dispose and recycle construction and demolition debris and waste materials in accordance with Provincial Waste Management Regulations.
- 2.7.3 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.
- 2.7.4 Dispose of hazardous waste in accordance with applicable federal and provincial, regulations, codes, standards and guidelines.

2.8 WATER QUALITY

- 2.8.1 Do not wash down equipment within a thirty (30) meter buffer zone of a wetland, watercourse, near a drain that enters a water course or other identified environmentally sensitive areas.
- 2.8.2 Water contamination by preservative treated wood:
 - a) Preservative treated lumber and timber, whether plant or sites treated, shall be cured for a minimum of thirty (30) days from the date of the treatment application before their installation in areas which will be in contact with the water.
 - b) Do not cut treated wood lumber over the surface of a watercourse or wetland.
 - c) Do not use liquid applied preservative products over the surface of a watercourse or wetland.
 - d) Wood treated with Chromate Copper Arsenate (CCA) or Ammoniac Copper Zinc Arsenate (ACZA) must be CSA or American Wood Preserver Association (AWPA) approved.
 - e) Do not use timber and lumber treated with creosote, petroleum and pentachlorophenol for any part of the work.
- 2.8.3 Ensure that all vessels will have procedures in place to ensure safeguards against marine pollution: awareness training of all employees, means of retention of waste oil on board and discharge to shore based reception facilities, capacity of responding to a clean-up of accidental spill caused by vessels involved in any particular project.

2.9 BIRD AND BIRD HABITAT

- 2.9.1 Advise immediately the Authority Representative if the Contractor or his employees notice a nest habitat near where the work is to be happening.
- 2.9.2 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.
- 2.9.3 Minimize disturbance to all birds on site and adjacent areas during the entire course of the work.
- 2.9.4 Do not approach concentrations of seabirds, waterfowl and shorebirds when anchoring equipment.

- 2.9.5 During night time work, position flood lights in opposite direction of nearby bird nesting habitat.
- 2.9.6 Should nests of migratory birds be encountered during work, immediately notify DFO's Departmental Representative for directives to be followed.
 - a) Do not disturb nest sites and neighbouring vegetation until nesting is completed.
 - b) Minimize work immediately adjacent to such areas until nesting is completed.
 - c) Protect these areas by following recommendations of Canadian Wildlife Service.

2.10 FISH PROTECTION

- 2.10.1 If any work should happen where there's a risk of erosion and sedimentation going into the water body, the contractor shall develop and submit for review/approval a Site Specific Erosion and Sedimentation Control Plan.
- 2.10.2 Minimize duration of in-water work.
- 2.10.3 Avoid wet, windy and rainy periods that may increase erosion and sedimentation.
 - a) Installation of effective erosion and sediment control measures before starting work to prevent sediment from entering the water body. A weekly check of sediment control measures and repairs as needed. Additional inspection and repair to be carried out before and after rainfall exceeding ten (10) mm. A log of each inspection and repair is to be kept along with a weekly report of exposed areas.
 - b) Contractor to have additional control measures on site including silt fence, hay, and loose hay/mulch to maintain or install control measures as required.
 - c) Measures for managing water flowing onto the site, as well as water being pumped / diverted from the site such that sediment is filtered out prior to the water entering a water body. For example, pumping / diversion of water to a vegetated area, construction of a settling basin or other filtration system.
 - d) Measures for containing and stabilizing waste material (e.g., construction waste and materials, commercial logging waste, uprooted or cut aquatic plants, accumulated debris) above the high-water mark of nearby water bodies to prevent re-entry.
 - e) Regular inspection and maintenance of erosion and sediment control measures and structures during the course of the work.
 - f) Repairs to erosion and sediment control measures and structures if damage occurs, all fees assumed by the contractor.
 - g) Removal of non-biodegradable erosion and sediment control materials once site is stabilized.
- 2.10.4 Be aware of the risk of contamination of the fish habitat at the site as a result of alien species being introduced in the water.

- 2.10.5 To minimize the possibility of fish habitat contamination and the spread of aquatic invasive (alien species), all construction equipment which will be immersed into the water of a watercourse, or has the possibility of coming into contact with such water during the course of the work, must be cleaned and washed to ensure that they are free of marine growth and alien species.
- a) Equipment shall include boats, barges, cranes, excavators, haul trucks, pumps, pipe lines and other all miscellaneous tools and equipment previously used in a marine environment.
- 2.10.6 Cleaning and washing of equipment shall be performed immediately upon their arrival at the site and before use in or over the body of water.
- 2.10.7 Conduct cleaning and washing operations as follows:
- a) Scrape and remove heavy accumulation of mud and dispose appropriately.
- b) Wash all surfaces of equipment by use of a pressurized fresh water supply.
- c) Immediately follow with the application of a heavy sprayed coating of undiluted vinegar or other environmentally approved cleaning agent to thoroughly remove all plant matter, animals and sediments.
- d) Check and remove all plant, animal and sediment matter from all the bilges and filters.
- e) Drain standing water from equipment and let fully dry before use.
- f) Upon removal from the water, drain standing water from equipment and let fully dry before removal off the site.
- 2.10.8 Do not wash down equipment within a thirty (30) meter buffer zone of a wetland, watercourse, near a drain that enters a water course or other identified environmentally sensitive areas.
- 2.10.9 Record of Assurance Logbook:
- a) Maintain an ongoing log of past and present usage and wash downs of all equipment to illustrate mitigation measures undertaken against fish habitat contamination by alien species.
- b) Write data in a hard cover bound logbook to include the following:
- 1) Dates and location where equipment was previously used in a watercourse or wetland;
 - 2) The type of work performed.
 - 3) Dates of wash down for each piece of equipment;
 - 4) Cleaning method and cleaning agent(s) used.
- 2.10.10 Keep Record of Assurance Logbook updated from project to project. Upon request, submit logbook to DFO's Departmental Representative for review.

2.10.11 Abide by requirements and recommendations from Fisheries and Oceans Canada – Fisheries Protection Program in cleaning and wash down of equipment.

2.10.12 A safety zone for marine mammals will be established at the work site. The safety zone shall consist of a circle with a radius of at least five hundred (500) meters as measured from the centre of the work site.

- a) If marine mammals are observed within the safety zone while in-water activities are underway, all activities will cease until the marine mammals leave the safety zone and are not observed within the safety zone for a minimum period of thirty (30) minutes.
- b) Work may start or restart if marine mammals are not observed within the safety zone within the thirty (30) minute period.
- c) Regular watch of the safety zone shall occur at all other times.

2.11 AIR QUALITY

2.11.1 Keep airborne dust and dirt resulting from the work on site to an absolute minimum.

2.11.2 Dust suppression by the application of water must be employed when required. Apply dust control measures to roads, parking lots and work areas. DFO's 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 be used for dust control under any circumstances.

2.11.3 Spray surfaces with water or other environmentally approved product. Use purposely suited equipment or machinery and apply in sufficient quantity and frequency to provide effective result and continued dust control during the entire course of the work.

2.11.4 Do not use oil or any other petroleum products for dust control.

2.12 FIRES

2.12.1 Fires and burning of rubbish on site is not permitted.

PART 3 - HEALTH AND SAFETY REQUIREMENTS

3.1 Compliance Requirement

- 3.1.1 Comply with the Canada Labour Code Part II and the Canada Occupational Health and Safety Regulations.
- 3.1.2 Comply with the Provincial Occupational Health and Safety Act and supporting Occupational General Safety Regulations as amended from time to time.
- 3.1.3 Observe and enforce construction safety measures required by the following statutes and authorities.
- 3.1.4 The Contractor and his/her personnel must adhere to the Federal Government "NO SMOKING" Policy while in Federal facilities and Scent Free Policy if applicable.

3.2 Submittals

- 3.2.1 Before Work Begins:
 - a) The Contractor must provide the Project Authority with a copy of the company's site-safety plan.

3.3 Training

- 3.3.1 Before Work Begins: The Contractor must provide:
 - a) Certification of training for safety for all personnel that will be involved with the Works /Services. Updated list complete with licences shall be kept on site including personnel changes.
 - b) Safe operation of tools and equipment.
 - c) Proper wearing and use of Personal Protective Equipment (PPE) & Personal Flotation Device (PFD).
 - d) Safe work practices and procedures
 - e) Site conditions and minimum site safety rules

3.4 Disciplinary Procedures for Safety Violations

- 3.4.1. Contractors shall have their own written disciplinary procedures for violation or noncompliance of work site safety rules and regulation. However, the Project Authority will take the following actions in the event it is notified of a safety violation.
 - a) First Violation:

Verbal warning issued to the Contractor for the first violation of a safety regulation, rules, policy and procedures. (Violation will be documented on contract file, and a copy sent to the Contractor, Project Authority and Contracting Authority).
 - b) Second Violation:

Written warning issued to the Contractor for the second violation of a safety regulation, rules, policy and procedures. (Violation will be documented on contract file, and a copy sent to the Contractor, Project Authority and Contracting Authority).

c) Third Violation:

A third violation of a safety regulation, rules, policy and procedures may result in the termination of the contract with a recommendation to the Contracting Authority that the Contractor be denied access to future SOA/SC(s). (Documented to contract file, and copies sent to the Contractor, Project Authority, and Contracting Authority).

d) Serious Violation:

For a serious violation of a safety regulation, rules, policy and procedures as deemed by a Regulator, Project Manager or Safety Officer a recommendation will be made to the Contracting Authority to immediately terminate the SOA/SC(s). (Violation documented on contract file, and copies sent to the Contractor, Project Authority and Contracting Authority).

e) Charges Laid or Guilty Determination by Courts:

Infractions of safety regulations, rules, policy and procedures that result in charges being laid by a Regulator against the Contractor or the Contractor being found guilty by the courts may result in that Contractor being denied access to future contracts.

ANNEX “B” BASIS OF PAYMENT

The Contractor will be paid firm hourly rates as follows for work performed in accordance with the Standing Offer. All deliverables are F.O.B. Destination. Customs duties are included and Applicable Taxes are extra.

TABLE A - Standing Offer Period (From Standing Offer Award to March 31st, 2022)

TABLE A			
A	B	C	D
Item	Requirements	Firm All Inclusive Hourly Rate (excluding GST/HST) Regular Hours 7:30 am to 16:30 PM AT Monday to Friday CAD (\$)	Firm All Inclusive Hourly Rate (excluding GST/HST) Outside Regular Hours and Emergency Calls CAD (\$)
1	Provide four (4) person surfaced supplied dive crew	\$ _____	\$ _____
2	Extra Diver Surface Supplied	\$ _____	\$ _____
3	SCUBA Diver	\$ _____	\$ _____
4	Provision of Boat (minimum 35 ft.)	\$ _____	\$ _____
5	Provision of Barge (minimum 100 ft.)	\$ _____	\$ _____
6	Two (2) person crew with ROV (<i>Remote Operated Vehicle</i>)	\$ _____	\$ _____
7	Boom Truck with personnel basket (minimum 15 ton towing capacity)	\$ _____	\$ _____
8	Mobilization/ Demobilization	\$ _____	\$ _____

+ Initial Standing Offer Period – Allowance for materials and miscellaneous items cost + 10%(markup): \$2,000.00 (excluding taxes)

TABLE B – Option Period 1 (April 1, 2022 to March 31st, 2023)

TABLE B			
A	B	C	D
Item	Requirements	Firm All Inclusive Hourly Rate (excluding GST/HST) Regular Hours 7:30 am to 16:30 PM AT Monday to Friday CAD (\$)	Firm All Inclusive Hourly Rate (excluding GST/HST) Emergency Hours CAD (\$)
1	Provide four (4) person surfaced supplied dive crew	\$ _____	\$ _____
2	Extra Diver Surface Supplied	\$ _____	\$ _____
3	SCUBA Diver	\$ _____	\$ _____
4	Provision of Boat (minimum 35 ft.)	\$ _____	\$ _____
5	Provision of Barge (minimum 100 ft.)	\$ _____	\$ _____
6	Two (2) person crew with ROV (<i>Remote Operated Vehicle</i>)	\$ _____	\$ _____
7	Boom Truck with personnel basket (minimum 15 ton towing capacity)	\$ _____	\$ _____
8	Mobilization/ Demobilization	\$ _____	\$ _____

**+ Option Period 1 – Allowance for materials and miscellaneous items cost + 10% (markup):
\$2,000.00 (excluding taxes)**

TABLE C – Option Period 2 (April 1, 2023 to March 31st, 2024)

TABLE C			
A	B	C	D
Item	Requirements	Firm All Inclusive Hourly Rate (excluding GST/HST) Regular Hours 7:30 am to 16:30 PM AT Monday to Friday CAD (\$)	Firm All Inclusive Hourly Rate (excluding GST/HST) Emergency Hours CAD (\$)
1	Provide four (4) person surfaced supplied dive crew	\$ _____	\$ _____
2	Extra Diver Surface Supplied	\$ _____	\$ _____
3	SCUBA Diver	\$ _____	\$ _____
4	Provision of Boat (minimum 35 ft.)	\$ _____	\$ _____
5	Provision of Barge (minimum 100 ft.)	\$ _____	\$ _____
6	Two (2) person crew with ROV (<i>Remote Operated Vehicle</i>)	\$ _____	\$ _____
7	Boom Truck with personnel basket (minimum 15 ton towing capacity)	\$ _____	\$ _____
8	Mobilization/ Demobilization	\$ _____	\$ _____

**+ Option Period 2 – Allowance for materials and miscellaneous items cost + 10% (markup):
\$2,000.00 (excluding taxes)**

TABLE D – Option Period 3 (April 1, 2024 to March 31st, 2025)

TABLE D			
A	B	C	D
Item	Requirements	Firm All Inclusive Hourly Rate (excluding GST/HST) Regular Hours 7:30 am to 16:30 PM AT Monday to Friday CAD (\$)	Firm All Inclusive Hourly Rate (excluding GST/HST) Emergency Hours CAD (\$)
1	Provide four (4) person surfaced supplied dive crew	\$ _____	\$ _____
2	Extra Diver Surface Supplied	\$ _____	\$ _____
3	SCUBA Diver	\$ _____	\$ _____
4	Provision of Boat (minimum 35 ft.)	\$ _____	\$ _____
5	Provision of Barge (minimum 100 ft.)	\$ _____	\$ _____
6	Two (2) person crew with ROV (<i>Remote Operated Vehicle</i>)	\$ _____	\$ _____
7	Boom Truck with personnel basket (minimum 15 ton towing capacity)	\$ _____	\$ _____
8	Mobilization/ Demobilization	\$ _____	\$ _____

**+ Option Period 3 – Allowance for materials and miscellaneous items cost + 10% (markup):
\$2,000.00 (excluding taxes)**

Notes on items:

The item numbers listed below refer to the items listed in the tables above.

Item # 1

The Contractor must include all equipment necessary to perform the duties of the work bid in the Standard Offer of Agreement including but not limited to all equipment required for a four(4) person surface supplied dive; all recording devices - video, audio, pressure and non-pressure infrastructure dives; including but not limited to inspections, debris recovery, maintenance and repairs, welding and cutting, hydraulic tools, thickness measuring equipment ; any pneumatic and hand tools necessary to complete the tasks.

Item # 2

Any extra diver to complement the four (4) person surfaced supplied dive team must be approved by the Department Representative prior to use.

Item # 3

Any diver using self contained underwater breathing apparatus.

Item # 4

In the event that the contractor be required to provide a vessel (minimum 35 ft.) for the execution of work authorized by DFO's Departmental Representative. The compensation for this item includes all equipment and labour necessary to operate the vessel and perform the given task.

Item # 5

In the event that the Contractor be required to provide a barge (minimum 100 ft.) for the execution of work authorized by DFO's Departmental Representative. The compensation for this item includes all equipment and labour necessary to operate the barge and perform the task.

Item # 6

The Contractor must include all equipment necessary to perform the duties of the work bid in the Standard Offer of Agreement including but not limited to all equipment required for a two (2) person with Remotely Operated underwater Vehicle (ROV).

Item # 7

The Contractor must include all equipment necessary to perform the duties of the work bid in the Standard Offer of Agreement including but not limited to all equipment and personnel required for a boom truck (minimum 15 ton towing capacity) with a personnel basket.

Item # 8

Mobilization and demobilization hourly rate will be invoiced at the hourly rate for actual time in transit.

ANNEX "C" INSURANCE REQUIREMENTS

The Contractor shall, at the Contractor's own expense, provide and maintain insurance as indicated hereunder:

1. Definitions

1.1. "Contract" means "Purchase Order".

1.2. "Buyer" means those departmental organizations or persons who have been given the responsibility for the contracting process within the Department.

2. Indemnification

The issuance coverage required by the provisions of these Insurance Conditions shall in no way limit the Contractor's responsibility under the indemnification section of the General Conditions of the contract. Any additional coverage the Contractor may deem necessary to fulfill obligations under the indemnity section shall be at the Contractor's own discretion and expense.

3. Period of Insurance

The insurance coverage shall be in effect from the date of contract award and shall be maintained until the contract work is completed.

4. Proof of Insurance

Within fourteen (14) days after acceptance of the Contractor's tender, the Contractor shall deposit with the Buyer, a Certificate of Insurance or certified true copies of all contracts of insurance maintained by the Contractor pursuant to the requirements of these Insurance Conditions.

5. Notification

Each insurance policy shall contain a provision that thirty (30) days prior written notice shall be given to Her Majesty in the event of any material change in, cancellation of, or expiration of coverage.

6. Insured

Each insurance policy shall insure the Contractor, and shall include as an Additional Named Insured, Her Majesty the Queen in right of Canada as represented by the Minister of Fisheries and Oceans.

7. Payment of deductible

The amount of the deductible, if any, shall be borne by the Contractor.

8. Public Liability and Property Damage Insurance

8.1. The Contractor shall, concurrently with the execution of this contract, place and maintain at all times during the execution of the work covered by this contract, sufficient public liability and property damage insurance against personal injury and loss or damage to the property so as to fully cover the Contractor's liability to any firm, person, association, or corporation, resulting from or attributable to the execution of the work.

The Minimum Acceptable Amount is \$2,000,000.00.

8.2. The policy shall be issued with a deductible amount of not more than \$500.00 per occurrence applying to property damage claims only.

9. Third party liability for vehicles and equipment owned, leased, used or operated by the Contractor

The Contractor shall provide an endorsement to the public liability and property damage insurance policy to include third party liability insurance for vehicles and equipment owned, leased, used or operated by the Contractor.

Minimum acceptable amount is \$2,000,000.00.

10. Tenants Legal Liability Insurance (where applicable)

The Contractor shall provide an endorsement to the public liability and property damage insurance policy to provide coverage for premises under the Contractor's care, custody and control in a **minimum amount of \$500,000.00.**

ANNEX "D" MARINE LIABILITY INSURANCE CONDITIONS

1. The Contractor must obtain Protection & Indemnity (P&I) insurance that must include excess collision liability and pollution liability. The insurance must be placed with a member of the International Group of Protection and Indemnity Associations or with a fixed market in an amount of not less than the limits determined by the *Marine Liability Act*, S.C. 2001, c. 6. Coverage must include crew liability, if it is not covered by Worker's Compensation as detailed in paragraph (2.) below.
2. The Contractor must obtain Worker's Compensation insurance covering all employees engaged in the Work in accordance with the statutory requirements of the Territory or Province or state of nationality, domicile, employment, having jurisdiction over such employees. If the Contractor is assessed any additional levy, extra assessment or super-assessment by a Worker's Compensation Board, as a result of an accident causing injury or death to an employee of the Contractor or subcontractor, or due to unsafe working conditions, then such levy or assessment must be paid by the Contractor at its sole cost.
3. The Protection and Indemnity insurance policy must include the following:
 - a. Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada as additional insured should read as follows: Canada, represented by Public Works and Government Services Canada.
 - b. Waiver of Subrogation Rights: Contractor's Insurer to waive all rights of subrogation against Canada as represented by the Department of Fisheries and Oceans and Public Works and Government Services Canada for any and all loss of or damage to the watercraft however caused.
 - c. Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of cancellation.
 - d. Cross Liability/Separation of Insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.
 - e. Litigation Rights: Pursuant to subsection 5(d) of the Department of Justice Act, S.C. 1993, c. J-2, s.1, if a suit is instituted for or against Canada which the Insurer would, but for this clause, have the right to pursue or defend on behalf of Canada as an Additional Named Insured under the insurance policy, the Insurer must promptly contact the Attorney General of Canada to agree on the legal strategies by sending a letter, by registered mail or by courier, with an acknowledgement of receipt.

For the province of Quebec, send to:

*Director Business Law Directorate,
Quebec Regional Office (Ottawa),
Department of Justice,
284 Wellington Street, Room SAT-6042,
Ottawa, Ontario, K1A 0H8*

For other provinces and territories, send to:

*Senior General Counsel,
Civil Litigation Section,*

*Department of Justice
234 Wellington Street, East Tower
Ottawa, Ontario K1A 0H8*

A copy of the letter must be sent to the Contracting Authority. Canada reserves the right to co-defend any action brought against Canada. All expenses incurred by Canada to co-defend such actions will be at Canada's expense. If Canada decides to co-defend any action brought against it, and Canada does not agree to a proposed settlement agreed to by the Contractor's insurer and the plaintiff(s) that would result in the settlement or dismissal of the action against Canada, then Canada will be responsible to the Contractor's insurer for any difference between the proposed settlement amount and the amount finally awarded or paid to the plaintiffs (inclusive of costs and interest) on behalf of Canada.

ANNEX "E" ADDITIONAL VESSEL CHARTER CONTRACT CONDITIONS

1. The Contractor must keep and maintain the vessel, engines, gear and equipment in good and sufficient repair for the duration of the Contract and must pay for all necessary repairs, renewals and maintenance.
2. The Contractor must:
 - 2.1 indemnify and save harmless Canada from and against any claim for loss or damage to the vessel or any other property, engines, gear, or equipment, arising from the charter, and for injury or property of persons aboard the vessel, excepting any injury or damage to property of Canada's employees or agents;
 - 2.2 ensure that the operations are only carried out by Canada's authorized representatives as specified by the Project Authority;
 - 2.3 ensure that approved personal floatation devices for all persons on board are in readily accessible positions at all times;
 - 2.4 ensure that the use or possession of illegal drugs or alcohol is prohibited. If any member of the crew is found under the influence of such drugs and/or intoxicants while on duty, it will be cause for termination of the Contract for default.
3. If the vessel is disabled or is not in running order or is laid up without the consent of Canada, then Canada will not be liable for payment for the hire of the vessel during this period. If this period exceeds one week, Canada may terminate the Contract immediately for default.
4. If any gear or equipment necessary for the efficient operation of the vessel for the purpose of the Contract is not in good working order for any period of time, then the payment of hire will cease for the lost time, and if during the voyage the speed is reduced by a defect in or breakdown of any part of the hull, machinery or equipment, the time lost will be deducted from the hire. Canada will be the sole judge of the capability of the vessel.
5. If the vessel is unable to operate safely in the work area because of sea or weather conditions, as agreed to by the representative of the Contractor and the representative of Canada, then the charter for the day will be terminated and a pro-rated payment made to the Contractor for that period engaged in the Work in accordance with the terms of the Contract.
6. If the particulars furnished by the Contractor and set out in the Contract are incorrect or misleading, Canada may, at Canada's discretion, terminate the Contract for default.
7. If the vessel is lost or damaged to such an extent as to justify abandonment as for a constructive total loss, Her Majesty may terminate the Contract.
8. The Contractor, by these presents, does hereby remise, release and forever discharge Her Majesty and all employees of Her Majesty from all manners of action, claims or demands, of whatever kind or nature that the Contractor ever had, now has or can, shall or may hereafter have by reason of damage to or personal injury, or both as a result of or in any way arising out of the acts or omission of Her Majesty or employees of Her Majesty pursuant to the terms and conditions of the Agreement or any Contract.
9. The Contractor acknowledges and agrees that this Agreement or any Contract shall in no way replace, substitute or derogate from any of the rights powers if Her Majesty pursuant to the Fisheries Act of Canada or any other statute, law or regulation of Canada.

10. If a provision or term or condition of this Agreement or any Contract is wholly or partially invalid, this Agreement or Contract shall be interpreted as if the invalid provision, term or condition had not been a part of this Agreement or Contract.
11. The Contractor shall permit Her Majesty all access and egress that is request by Her Majesty to accomplish all inspections deemed necessary by Her Majesty to administer the terms and conditions of this Agreement or Contract.
12. The vessel shall not participate in a commercial fishery while under the terms and conditions of this Agreement or Contract.
13. Her Majesty will assume all costs for all fuel and lubricating oils required for propulsion lighting or heating. Fuel tanks must be proven full (e.g. dipped), upon commencement of Agreement or Contract.
14. The Contractor certifies that any price/rate shown herein has been computed in accordance with generally accepted accounting principles applicable to all like products or services sold by the Contractor, that such price / rate is not in excess of the lowest price / rate charged anyone else including their most favoured customer for like quality and quantity of the service, and does not include the provision for discount or commission to selling agents.

ANNEX “F” STANDING OFFER REPORTING

The Contractor must report on a quarterly basis the call-up/contract activities. The minimum reporting requirements are as follows:

- a. The standing offer number;
- b. The supplier name;
- c. The reporting period;
- d. The date of the call-up/contract;
- e. The call-up/contract number for each call-up/contract, including amendments;
- f. Description of service /Purchase;
- g. The Project Authority;
- h. Date of completion of work;
- i. The value of the call-up/contract, Goods or Services Tax/Harmonized Sales Tax included, as applicable.

Example:

SO #: _____
Company: _____
Reporting period: _____

Call-up Date	Call up #	Description of service/Purchase	Project Authority	Date of Completion of Work	Price (\$)	Qty	Extended Total = Price x Qty

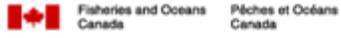
ANNEX "G" PRE-DIVE CHECK LIST EXAMPLE

This list identifies dive plan requirements that must be reviewed by the dive team before each dive:

- Diver-in-Charge designated;**
- If needed, dive tender(s) assigned;**
- If needed, standby diver(s) assigned;**
- Divers feel physically and mentally fit to dive;**
- Duties of each dive team member understood;**
- Surface & underwater conditions and hazards reviewed;**
control contingencies established;
- Emergency procedures reviewed;**
- Dive termination protocols reviewed;**
- Communication methods reviewed;**
- Repetitive dive factors determined;**
- No decompression limit determined;**
- Diving equipment requirements established;**
- Breathing supply requirements established;**
- Reserve breathing supply requirements established;**
- Thermal protection requirements established;**
- If needed, lifeline requirements established;**
- Emergency equipment requirements established;**
- All diving equipment checked;**
- Checklist completion verified in log book.**

**After entering the water but before beginning descent,
every diver shall check that all equipment is present,
properly fastened, and functioning.**

ANNEX "H" DEPARTMENTAL DIVING SAFETY PROCEDURES



CONTROLLED COPY

Departmental Diving Safety Procedures



Canada

Record of Amendments

#	Date	Subject	Initials
1	2007-10-27	3.3.1.3.c modified to read: "developing, issuing, compliance checklists to assist regional diving safety officers to meet regulatory and departmental policy requirements;"	
2	2007-10-27	3.3.1.4b modified to read: "meet annually or more often, as determined by the chairperson, to receive and review any recommendations on diving safety made by Regional Diving Safety Committees and recommend corrective action to the NSDC and National Policy Health & Safety Committee;"	
3	2007-10-27	3.3.1.4d modified to read: "when necessary, make amendments to this document, and forward by way of the DDSO recommended changes to the NSDC.	
4	2007-10-27	Inserted new 3.3.2.5 c to read: "coordinate Diver-in-Charge training and competency checks and assist managers/supervisors to ensure that a Diver-in-Charge is appointed for each diving operation;"	
5	2007-10-27	4.7 modified to read: "Any diver who has less than 10 open water dives or less than 7.5 hours logged and who has yet to complete the necessary competency checks is a Diver-in-Training and must remain under the direct supervision of the Area Diving Safety Officer or qualified designee."	
6	2007-10-27	9.9.1 modified to read: "A dive team consisting of at least two divers must be present at every dive site but free swimming solo diving is not permitted."	
7	2007-10-27	10.8.6 a-c modified to read: "There shall be at least three (3) persons present at a surface supply dive site, specifically: a) diver; b) stand-by diver / tender; c) Diver-in Charge / manifold operator"	
8	2007-10-27	11.4.1 a-c modified to read: "There shall be at least three (3) persons present at a surface supply dive site, specifically: a) diver; b) stand-by diver / tender; c) Diver-in Charge / manifold operator."	
9	2007-10-27	10.9 Removed sentence: "Towed Diving shall not be conducted at depths in excess of 15 metres"	
10	2007-10-27	10.9.5 Removed sentence: "Sledding shall not be	

		conducted at depths in excess of 15 metres.”	
11	2007-10-27	10.9.4b Removed reference to length of line	
12	2007-10-27	9.18a Modified to read: “12 hours following a no-decompression dive or time required by tables or whichever is greater;”	
13	2007-10-27	7.8 paragraph 2 Modified to read “All Scuba cylinders shall be visually inspected annually both internally and externally. For aluminum cylinders the annual VIP must also include an eddy current test to check for hairline cracks in the neck threads if recommended by the manufacturer.”	
13	2007-10-27	7.8 Added statement: “Transportation of the Department’s cylinders must be conducted in accordance with the Transport Dangerous Goods (TDG) Regulations, including proper labelling.”	
14	2007-10-27	2.1 Deleted Section	
15	2007-10-27	7.2 Section heading modified to read: Design Requirements for Diving Equipment	
16	2007-10-27	7.2 ammended to read: “All diving equipment used by employees must be designed for its intended use and maintained in a condition that ensures its safe operation for the purpose and at the depth for which it was designed.”	
17	2007-10-27	7.3 Deleted list item a) and modified paragraph 1 to read: “All diving equipment used by employees must be inspected, tested, maintained and calibrated by a qualified person at intervals recommended by the manufacturer and whenever the equipment is thought to be defective. “	
18	2007-10-27	4.2 Revised heading to read “Diving Safety Officer”	
19	2007-10-27	4.2 paragraph 1 modified to read: “The Diving Safety Officer must be an experienced DFO diver and:”	
20	2008-09-22	6.2.2 paragraph 2 revised to read: “Divers must be trained in the use of oxygen equipment for therapeutic purposes.”	
21	2008-09-22	6.3.4 Diver-in-Charge Evaluation. Deleted Section.	
22	2008-09-22	6.3.5 Area Diving Safety Officer Evaluation. Deleted Section.	
23	2008-09-22	2.13 Diving Safety Officer – Regional. Revised to read “An individual who, because of knowledge, training and experience is appointed by the Regional Director General...”	
24	2008-09-22	2.14 Revised to read “An individual who, because of knowledge, training and experience is appointed by regional director(s)...”	
25	2008-09-22	10.7 Enriched Air Nitrox (EANx) Diving : Added statement “This procedure was written in accordance with the DAN Nitrox Workshop Consensus	

		Recommendations, November 3-4, 2000.”	
26	2008-09-22	10.7.5 paragraph 1 modified to read: “The partial pressure O2 exposure limit for any diver shall not exceed 1.6 ATA.”	
27	2008-09-22	Section 6.3.6 Snorkel Diving has been renumbered to 6.3.4	
28	2008-09-22	Section 6.3.7 Non-DFO Divers has been renumbered to 6.3.5	
29	2010-02-22	Section 6.3.2 Tender Evaluation: removed c) “be trained in CPR, first aid and in the administration of oxygen.”	
30	2010-02-22	Chapter 1 and Section 9.20. Renamed “the Occupational Safety and Health Loss Control Manual” to “DFO Health and Safety Manual”	
31	2010-10-22	Section 3.3.1.1 Update sector name to “Oceans and Science”	
32	2010-10-22	Section 6.2.2 Added requirement for training in AED	
33	2010-10-22	Section 7.5.2 Updated breathing air specification to CAN/CSA Z 275.2-04	
34	2010-10-22	Section 9.10.3 Added AED to equipment list	
35	2010-10-22	Section 11.2.3. Fixed typographic error: Changed “approved” to “approval” (English version only).	
36	2010-10-22	Entire document: Renamed “Departmental Diving Safety Officer” to “National Diving Safety Coordinator	
37	2010-10-22	Entire document: Renamed “Regional Diving Safety Officer” to “Regional Diving Safety Coordinator”	
37	2010-10-22	Entire document: Renamed “Area Diving Safety Officer” to “Area Diving Safety Coordinator”	
38	2010-10-22	Entire document: Renamed “Diving Safety Officer(s)” to “Diving Safety Coordinator(s)”	
39	2010-10-22	Entire document: Renamed “Departmental Diving Safety Committee” to “National Diving Safety Committee”	
40	2010-10-22	Section 3.3.1.3 c) Revised to read: “conducting compliance audits to facilitate the implementation of regulatory and departmental requirements in the regions”	
41	2010-10-22	Footer: Added last amended date field	
42	2010-10-22	Section 6.2.2 Replaced “trained” to “certified” for first aid and CPR	
43	2010-10-22	Section 6.3.1.1 Theory – Deleted section	
44	2010-10-22	Sections 6.3.1.2 Pool renumbered to 6.3.1.1; Section 6.3.1.3 Open Water renumbered to 6.3..1.2; Section 6.3.1.4 Additional Requirements – Special Operations renumbered to 6.3.1.3	
45	2010-10-22	Section 6.3.2 Tender Evaluation. Deleted section	

46	2010-10-22	Section 6.3.3 Standby Diver Evaluation. Deleted Section	
47	2010-10-22	Section 6.3.4 Snorkel Diving. Renumbered to 6.3.2	
48	2010-10-22	Section 6.3.5 Non-DFO Divers. Renumbered to 6.3.3	
49	2010-10-22	Section 6.4.. Changed "Area Diving Safety Officer" to "Area or Regional Diving Safety Coordinator"	
50	2010-10-22	Section 6.4 b). Replaced: "have passed at least one nationally recognized diving certification" with: "meet the training and competency requirements prescribed in the DFO Diver Training and Competency Procedure"	
51	2010-10-22	Section 6.4 e). Deleted, subsection e) "have completed an annual competency check." And following paragraph: "All divers must be trained in first aid and CPR, and be familiar with rescue diving procedures, including recognition and management of diving related illness."	
52	2010-10-22	Section 7.5.3. Added "within the preceding 12 months"	
53	2010-10-22	Section 8.2a). Added "diver" to list of training	
54	2010-10-22	Section 8.2b). Changed "certified technician's signature" to "qualified technician's signature"	
55	2010-10-22	Section 9.5a). Changed "Diver Log Book" to lowercase (English version only)	
56	2010-10-22	Section 9.5b). Changed "Diver-in-Charge Instruction Manual" to "Diver-in-Charge Slates"	
57	2010-10-22	Section 9.5.1 Diver Log Book. Deleted section.	
58	2010-10-22	Section 9.5.2 Diver-in-Charge Instruction Manual. Renumbered to 9.5.1 and renamed Diver-in-Charge Slates. Updated text references to "Instruction Manual" to "Slates"	
59	2010-10-22	Section 9.9.2. Removed second paragraph "The Diver-in-Charge shall ensure that the pre-dive checklist is reviewed and recorded as an entry in the dive log prior to every dive."	
60	2010-10-22	Section 9.9.4. Added new list item a) one diver	
61	2010-10-22	Section 9.10.1. Changed heading from "Knives" to "Knives and Cutting Tools". Added "or cutting tool" to text.	
62	2010-10-22	Section 9.10.1. Removed second paragraph "It is strongly recommended that knives be worn on or above the waist."	
63	2010-10-22	Section 9.20. Revised to read: "Unusual incidents, emergencies or accidents must be logged and immediately reported by the diver to the Area or Regional Diving Safety Coordinator, who thereafter reports to the National Diving Safety Coordinators."	
64	2011-01-31	Section 10.6.5 Removed last paragraph "In situations where free-swimming operations are occurring in areas where there is ice movement, a constant surface vigil	

		shall be maintained and a diver recall system deployed.”	
65	2011-01-31	Section 10.6.4 e) Changed “redundant” to “independent”	
66	2011-01-31	Section 10.10.4 b) Added “vulcanized rubber”	
67	2011-06-28	Forward: Removed sentence “Diving also complements the rescue activities available to the crew members of the Canadian Coast Guard Hovercraft unit which operates in the Straight of Georgia.”	
68	2011-06-28	2.9 Revised to read “A qualified person who, because of knowledge, training and experience has been designated by the project manager to be in charge at the dive site.”	
69	2011-06-28	2.20 Revised to read “...which is used to secure a diver to a safe anchorage point at the surface...”	
70	2011-06-28	3.2: Removed sentence “Responsibilities associated with diving operations are to be contained in the statement of duties of Divers, Divers-in-Charge and Diving Safety Coordinators.”	
71	2011-06-28	Entire document: Renamed “Part XVIII of the Canada Labour Code” and “Part XVIII of the Code” to “Part XVIII of the COHS”	
72	2011-06-28	4.8 b) Revised to read “be trained as per Transport Canada requirements and DFO policy”	
73	2011-06-28	5.2 Added statement “If age 40 or over, a confidential medical questionnaire must be completed and submitted in alternate years.”	
74	2011-06-28	6.2.2 Revised to read “When an AED is available at the dive site, the divers present must be trained in its use.”	
75	2011-06-28	7.5.1 Revised to read “Only air compressors specially designed for filling scuba cylinders shall be used for this purpose.”	
76	2011-06-29	Added “7.9 Buoyancy Control Devices – Every diver must be equipped with a buoyancy control device.”	
77	2011-06-28	9.2.2 and 10.3 Revised to read “Planned decompression...”	
78	2011-06-28	10.10.4 Fixed typographic error: Removed “...required for...” which appeared twice	
79	2011-06-28	11.2.7 Updated hyperbaric chamber standard to CAN/CSA Z275.1-05	
80	2011-06-28	11.5.5.1 c) Revised to read “the visibility at the location”	
81	2011-06-28	Annex A regulation reference heading revised to read: Canada Occupational Health and Safety Regulations Part XVIII Diving Operations, pursuant to the Canada Labour Code Part II	
82	2017-04-11	7.5.2 Revised to read “...as amended from time to time.”	
83	2017-04-11	9.3.1 Added statement “Diving in currents greater than one knot is prohibited unless additional safety procedures are developed and followed.”	
84	2017-04-11	9.15 Changed “7.D.16” to “7.B.1”	

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FOREWORD

The Department maintains an underwater diving program in support of its mandate to conserve and sustain the utilization of fishery resources and to deliver safe effective and environmentally sound marine services.

The Departmental Diving Safety Procedures identify the administrative and operational requirements that are necessary to ensure that DFO employees who dive comply with the Canada Labour Code Part II and the Canadian Occupational Safety and Health Regulations, Part XVIII Diving Operations.

Diving allows direct observation and in water experimentation and produces essential data that cannot be obtained by other means.

All managers must ensure that any diving program that involves DFO employees who dive is conducted according to the procedures contained within this document. Managers can be assisted in this task by utilizing the expertise offered by their Regional Diving Safety Coordinator.

DFO divers who deploy from and/or in support of CCG vessels must also follow the Diving Operations Section of the CCG Fleet Safety Manual and operational compliance will be verified by way of a pre-dive checklist.

Chapter 1. INTRODUCTION

All persons involved in diving operations have an individual responsibility to support a safe diving program and to follow the procedures contained within this document. These procedures list the specific requirements and restrictions that apply to all DFO employees who dive in support of scientific research, construction, inspection, and rescue diving operations.

These procedures are designed to prevent accidents and injuries, and they are also provided to ensure that DFO divers comply with the Canada Labour Code and Regulation XVIII on Diving Operations. The document therefore provides information to enhance dive site safety and operational effectiveness but it also lists the responsibilities of managers and divers and reviews their legal obligations. Training, competency, medical, and equipment requirements are listed to identify and control the wide variety of occupational risks and hazards common to diving operations.

However, this Departmental Diving Safety Procedures document does not stand alone and the following DFO OSH manuals should also be consulted:

- a) DFO Health and Safety Manual;
- b) Occupational Health & Safety Awareness Supervisor's Guide
- c) Occupational Health & Safety Awareness Handbook for Employees

Divers must be trained and properly equipped for the task being performed and on an annual basis must demonstrate that they are competent to perform the types of dives in which they are likely to participate. Managers must acknowledge that training, instruction, competency and in water experience are essential components of the diving safety program. They must be knowledgeable about these procedures and must ensure that their divers follow them.

Accurate records must be kept in order to show that all reasonable steps have been taken to safely control the diving activities conducted on behalf of the department. The Diver Administration Program (DAP) and Maintenance and Inventory Control (MIC), computer software applications, have been made available to each region, to facilitate and standardize these record keeping requirements.

Although it is expected that all persons involved in the diving safety program will voluntarily comply with the procedures contained within this document, disciplinary protocols have been included to control those who do not. These procedures are a necessary part of the due diligence process and represent an essential component for defence in the event of any subsequent legal proceedings.

Owing to the complex and highly variable nature of diving operations, specialized diving safety procedures, reflecting specific activities and hazards may be developed as required. At no time however are standards to fall below the basic requirements set out in this document.

Chapter 2. DEFINITIONS

2.1 Bottom Time

The total elapsed time in minutes between leaving the surface in descent to the time that final ascent begins.

2.2 Buddy System

A system where two free-swimming Scuba divers are deployed as a buddy pair and where the divers are responsible for maintaining effective communication with each other and rendering assistance when necessary.

2.3 Contaminated Environment

Contaminated environment means:

- a) a point of discharge of effluent from a sewer, a water or sewage treatment plant or an industrial plant;
- b) a site where chemical or biological effluent has accumulated; or
- c) the site of an oil or radioactive spill.

2.4 Dive – Type 1

Is a dive, the primary purpose of which is to:

- a) conduct scientific, archaeological or other research operations; or
- b) gather evidence or information relating to a crime.

2.5 Dive – Type 2

Is any dive that extends outside the restriction of a Type 1 dive.

2.6 Dive Program

The assemblage of operational and administrative procedures used to organize and control an establishment's diving activities. This includes training, equipment maintenance, diving project approval, record keeping, and competency checks for divers.

2.7 Dive Tender

A competent person at the dive site who tends the diver(s), controls surface requirements and monitors the progress of the dive.

2.8 Diver

A person who has completed the administrative, medical and training requirements and who has been declared competent to perform work underwater.

Specialty dives may require additional training and competency checks.

2.9 Diver-in-Charge

A qualified person who, because of knowledge, training and experience has been designated by the project manager to be in charge at the dive site.

2.10 Diver-in-Training

A diver gaining experience and training under the supervision of the Area Diving Safety Coordinator or designee.

2.11 Diving Buoy

Is a special purpose buoy which is coloured white and carries a rectangular red flag, each side of which is not less than 50 cm in length, that has a white diagonal stripe extending from the tip of the hoist to the bottom of the flag (see Schedule 1 of the Federal Diving Regulations).

2.12 Diving Safety Coordinator – National

An individual appointed by the Department to develop departmental diving policy, to ensure regulatory compliance, and to chair the National Diving Safety Committee.

2.13 Diving Safety Coordinator – Regional

An individual who, because of knowledge, training and experience is appointed by the Regional Director General to coordinate the regional diving program, to ensure regulatory compliance, and to chair the Regional Diving Safety Committee.

2.14 Diving Safety Coordinator – Area

An individual who, because of knowledge, training and experience is appointed by regional director(s) in consultation with the Regional Diving Safety Coordinator to be responsible for a branch/establishment diving program.

2.15 Diving Safety Committee – National

A committee composed of the National Diving Safety Coordinator as chairperson and the Regional Diving Safety Coordinators.

2.16 Diving Safety Committee – Regional

A committee of competent persons appointed by the Regional Director General to recommend procedures, policy and standards for regional diving operations and to act as a board of review and appeal.

2.17 Free-Swimming

Is a Scuba diving deployment where the diver is not tethered to the surface by a lifeline.

2.18 Hyperbaric Chamber

A pressure vessel and associated equipment designed to subject humans to greater-than-atmospheric pressures.

2.19 International Code Flag Alpha

The white and blue flag referenced in Schedule 1 of the Federal Diving Regulation and in Rule 27 of the Collision Regulations of the Canada Shipping Act.

2.20 Lifeline

Is a line, free of knots or splices, which is used to secure a diver to a safe anchorage point at the surface and which has a breaking strength of not less than 1400 kg.

2.21 Liveboating

The support of a diving operation from a vessel that is not at anchor, made fast to the shore or a fixed structure, or aground.

2.22 Medical Officer

A physician recommended by the Department of Health and Welfare to conduct medical examinations of individuals engaged in diving on behalf of DFO.

2.23 No-Decompression Limit

The maximum bottom time which allows a direct ascent to the surface without requiring decompression stops.

2.24 Repetitive Dive

Is any dive where residual nitrogen influences the calculation of the bottom time recorded for the dive.

2.25 Residual Nitrogen

Nitrogen in excess of normal concentrations that is still dissolved in a diver's tissues after the surface has been reached.

2.26 Surface Interval (SI)

The time which a diver has spent on the surface following a dive. Time begins as soon as the diver surfaces and ends as the diver starts the descent for the next dive.

2.27 Surface Supply Dive

A diving operation where a diver is supplied with breathing mixtures by a life support umbilical from the surface.

2.28 Therapeutic Recompression

The treatment of a diver in a hyperbaric chamber in accordance with generally accepted tables and practices.

Chapter 3. ROLES & RESPONSIBILITIES

3.1 Introduction

This chapter describes the roles and responsibilities of individuals involved in any diving operation or activity which the Department controls through the involvement of DFO personnel, or the ownership of equipment utilized in such operations.

3.2 General

It is the duty of all those responsible for or associated with diving operations to ensure that the procedures contained within this document are complied with and that the safety of divers and surface support personnel is not jeopardized.

3.3 Roles and Responsibilities

3.3.1 Corporate Level

3.3.1.1 Assistant Deputy Minister Oceans and Science

The Assistant Deputy Minister Oceans and Science is responsible for developing and implementing the departmental diving safety program and ensuring that DFO managers and divers are aware of and comply with the legal requirements of the Canada Labour Code Part II, the Federal Diving Regulation (Part XVIII of the COHS) and the Departmental Diving Safety Procedures.

3.3.1.2 Assistant Deputy Ministers

Assistant Deputy Ministers are responsible for ensuring that DFO managers and divers are aware of and comply with the legal requirements of the Canada Labour Code, Part II, the Federal Diving Regulation (Part XVIII of the COHS) and the Departmental Diving Safety Procedures.

3.3.1.3 National Diving Safety Coordinator

The National Diving Safety Coordinator is responsible for:

- a) developing, issuing and maintaining diving safety, training and competency procedures, and facilitating their implementation throughout the Department;
- b) advising senior management on issues pertaining to diving safety and health and obtaining authorization for departmental diving safety procedures;
- c) conducting compliance audits to facilitate the implementation of regulatory and departmental requirements in the regions;
- d) representing the Department in negotiations with Human Resources Development Canada, Treasury Board, Health Canada, Provincial regulatory authorities, the Canadian Association for Underwater Sciences and the Canadian Standards Association on issues pertaining to diving safety;
- e) chairing the National Diving Safety Committee; and
- f) preparing an annual diving safety report to the National Science Directors Committee. This report will be presented to the National Policy Health and Safety Committee by way of the Chief, Occupational Health & Safety.

3.3.1.4 National Diving Safety Committee

The National Diving Safety Committee will:

- a) act as a departmental advisory committee in matters pertaining to diving safety, training and competency.
- b) meet annually or more often, as determined by the chairperson, to receive and review any recommendations on diving safety made by Regional Diving Safety Committees and recommend corrective action to the NSDC and National Policy Health & Safety Committee;
- c) act as board of review for diving incidents and accidents;
- d) when necessary, make amendments to this document, and forward by way of the DDSO recommended changes to the NSDC.

3.3.2 Regional / Site Level

3.3.2.1 Regional Director General

Each Regional Director General is responsible for:

- a) implementing the requirements of Part XVIII of the COHS Regulation on Diving Operations and the Departmental Diving Safety Procedures within the region;
- b) in consultation with the Regional Diving Safety Committee, appointing an employee to act as the Regional Diving Safety Coordinator;
- c) providing the funding necessary to run the regional diving office; and
- d) appointing a Regional Diving Safety Committee to recommend procedures, policy and standards for diving operations and to act as a board of review and appeal.

3.3.2.2 Regional Diving Safety Coordinator

The Regional Diving Safety Coordinator is responsible for:

- a) advising the Regional Management Committee on issues pertaining to diving safety and health;
- b) ensuring that regional dive programs comply with the Federal Diving Regulation and the procedures outlined in this document;
- c) chairing the annual Regional Diving Safety Committee meeting and submitting an annual diving safety report to the Regional Occupational Safety and Health Committee. This will include records as outlined in this document and incident/accident reports;
- d) attending the annual National Diving Safety Committee meeting and submitting a diving safety report as outlined in c).

3.3.2.3 Regional Diving Safety Committee

The Regional Diving Safety Committee shall:

- a) meet at least once per year to discuss, plan and review the safety of diving operations;
- b) if necessary, make recommendations for amending these procedures and table them at the annual National Diving Safety Committee meeting; and
- c) act as board of review with the authority to approve, restrict, prohibit, suspend or reinstate any diver, diving operation, program, practice or equipment.

3.3.2.4 Regional Directors

Regional Directors employing DFO personnel in diving operations, shall:

- a) appoint, in consultation with the Regional Diving Safety Coordinator, an employee to act as the Area Diving Safety Coordinator to provide assistance and advice on diving matters;
- b) where necessary, develop a specialized diving supplement to reference diving activities and procedures not covered in this document. A copy of this supplement must be forwarded to the Regional Diving Safety Coordinator for initial approval.

3.3.2.5 Area Diving Safety Coordinator

The Area Diving Safety Coordinator is responsible for:

- a) the coordination and safety of all diving operations conducted on behalf of a directorate or establishment as outlined in this document;
- b) the coordination of annual diver competency checks;
- c) coordinate Diver-in-Charge training and competency checks and assist managers/supervisors to ensure that a Diver-in-Charge is appointed for each diving operation;
- d) ensuring, in accordance with Chapter 7, that periodic inspection tests are scheduled on all diving equipment and that maintenance records are completed and retained;
- e) ensuring that all air used for diving meets the minimum specifications outlined in Chapter 7;
- f) developing and maintaining dive site emergency contingency and evacuation plans;
- g) maintaining records as outlined in Chapter 8
- h) reporting any incidents or accidents to the Regional Diving Safety Coordinator.

The Area Diving Safety Coordinator shall have the authority to suspend divers who fail to comply with Departmental Procedures, and to restrict or prohibit any diving activity that is considered unsafe or imprudent. The Regional Diving Safety Committee shall be immediately informed of any such restrictive actions for review and further action as necessary.

3.3.2.6 Managers / Supervisors

All managers who supervise divers are responsible for maintaining a safe workplace. The Department expects you to diligently promote, manage, and monitor the Diving Safety Program.

Managers are responsible for ensuring:

- a) in consultation with the Area Diving Safety Coordinator that diver training and project equipment corresponds to the operational requirements of the dive; and
- b) in consultation with the Area Diving Safety Coordinator, that a Diver-in-Charge is appointed for each diving operation.

3.3.2.7 Diver-in-Charge

The Diver-in-Charge controls on-site diving operations and must ensure that:

- a) all divers on-site have completed the annual administrative, medical, and competency checks required for the dive;
- b) all equipment is in good working order, has had an annual maintenance check and is properly used;
- c) the pre-dive checklist shown in Annex B and contained within the Diver Log Book is completed prior to each dive and that proof of completion is entered in the dive log.

- d) a written emergency evacuation plan has been tested, and is readily available at the dive site; and
- e) any incidents or accidents are immediately reported as per the procedures outlined in section 9.20, and that steps are taken to control such irregularities.

The Diver-in-Charge has the authority to restrict, prohibit or suspend any diving operation. The Diving Safety Officer shall be immediately informed of any such restrictive action.

3.3.2.8 Divers

Ultimate responsibility for diving safety resides with the individual diver. A diver should not dive, nor be allowed to dive if, in the diver's own judgment or in the judgment of the Diver-in-Charge:

- a) the diver feels unfit, or is exhausted, or is impaired by spirits, drugs or other causes;
- b) the conditions are considered unsafe or unfavourable; and
- c) conditions may violate the precepts of safe diving operations and/or the requirements of this document.

A diver shall neither be forced to dive nor be penalized for not diving when the diver, for valid reasons, desires not to do so.

Divers shall:

- a) endeavour to maintain a high degree of mental and physical ability;
- b) be responsible for the safe custody and maintenance of all diving equipment issued to them for their personal use or for the use of the dive team;
- c) record all dives in their DFO log book, and submit an annual log summary to their Area Diving Safety Coordinator. Log books shall be available for inspection; and
- d) immediately report any incidents or accidents to their supervisor and their Area Diving Safety Coordinator.

3.3.2.9 Dive Tender

Must, for the duration of a surface supply dive, devote his or her entire time and attention to the work of tending the diver.

3.3.2.10 Boat Operator

Must, for the duration of a type 2 dive, devote his or her entire time and attention to the command of the vessel.

Chapter 4. QUALIFICATIONS OF DIVE TEAM MEMBERS

4.1 Purpose

This chapter outlines the qualifications of managers, divers, and support personnel who are directly involved in the administrative and operational components of the diving program.

4.2 Diving Safety Coordinator

The Diving Safety Coordinator must be an experienced DFO diver and:

- a) be thoroughly familiar with the administrative, medical, training and operational requirements for DFO dive operations as outlined in this document;
- b) be capable of planning and implementing comprehensive diver training and competency checks that meet specific program objectives and regulatory compliance;
- c) be knowledgeable in the use of and maintenance requirements for all diving equipment used by branch divers; and
- d) have a comprehensive knowledge of:
 - i. Federal and Provincial regulatory requirements;
 - ii. diver training techniques, including preparation of resource material and examinations;
 - iii. criteria for annual competency checks;
 - iv. diving safety and emergency procedures including the recognition of and the procedures for first aid treatment of diving related illnesses and injuries;
 - v. the physiology and medical requirements of diving;
 - vi. diving tables and their use;
 - vii. local diving conditions and requirements.

4.3 Diver-in-Charge

The Diver-in-Charge should be a DFO approved diver with local operational experience and:

- a) be knowledgeable in the diving safety procedures contained within this document;
- b) be familiar with the administrative, medical, training and operational prerequisites for DFO approval to dive;
- c) be familiar with Federal and Provincial regulatory requirements;
- d) be capable of implementing all aspects of the diving program for each project supervised;
- e) be knowledgeable in the use and maintenance of all diving equipment used by divers employed on each diving project supervised;
- f) be knowledgeable of diving safety and emergency procedures applicable to the requirements of each diving operation supervised.

4.4 Diver

The diver should be experienced with field operational requirements and must:

- a) be knowledgeable of and agree to conform to the diving safety procedures contained within this document;

- b) have completed the administrative, medical, training, and competency prerequisites for approval to dive for DFO;
- c) be knowledgeable in the use, care, and pre-dive check requirements of all diving equipment used; and
- d) be knowledgeable of diving safety and emergency procedures applicable to the requirements of each diving operation.

4.5 Stand-by Diver

In addition to the requirements noted in section 4.4, the stand-by diver shall:

- a) be selected from the more experienced divers present;
- b) be fully versed on emergency search procedures; and,
- c) be fully versed on recovery procedures for an unconscious diver.

4.6 Dive Tender

The dive tender must:

- a) be knowledgeable about safe diving procedures and techniques;
- b) be knowledgeable of the diving safety procedures contained within this document;
- c) be knowledgeable in the use, care, and operational pre-dive check of all diving equipment used by the diver; and
- d) be knowledgeable of diving safety and emergency procedures applicable to the requirements of each diving operation.

4.7 Diver-in-Training

Individuals may qualify as a diver-in-training while working toward completion of the DFO diver training benchmarks and 25 logged open water dives when they meet the administrative, medical and competency prerequisites needed for approval to dive for DFO.

4.8 Boat Operator

The boat operator must:

- a) be knowledgeable in boat operation procedures and techniques;
- b) be trained as per Transport Canada requirements and DFO policy;
- c) be knowledgeable about the Departmental Diving Safety Procedures, specifically as it relates to the responsibilities and duties of a boat operator.

Chapter 5. MEDICAL STANDARDS

5.1 Purpose

This chapter provides departmental diving medical examination guidelines.

5.2 Medical Requirements

Every diver must receive a medical examination every two years and be declared fit to dive using the protocols contained in Section VII of Health Canada's Occupational Health Assessment Guideline. If age 40 or over, a confidential medical history questionnaire must be completed and submitted in alternate years.

Assessments are best conducted by physicians with diving medical experience.

Additional medical examinations must be given and written clearance for further diving must be provided by the examining physician:

- a) after any major injury or illness;
- b) after a diver has been treated for a pressure-related injury or illness;
- c) at the request of the Area Diving Safety Coordinator, the Diver-in-Charge or the diver's supervisor; and
- d) at the discretion of the examining physician.

5.3 Restrictions

Where a diver has been declared fit to dive with specified restrictions, the Diver-in-Charge must ensure that the diver dives in accordance with the specified restrictions.

Chapter 6. TRAINING, COMPETENCY, & APPROVAL REQUIREMENTS

6.1 Purpose

This chapter sets out the training, competency and approval requirements needed to dive on behalf of the Department.

6.2 Training Requirements

6.2.1 Diving

Diving courses offered by external agencies qualify as entry level training for DFO divers.

Additional training procedures are specified in the document titled DFO Training and Competency Procedures that is updated periodically to reflect current best practices.

However, such training may not ensure adequate skill levels and on an annual basis, DFO divers must demonstrate that they are competent to perform the types of dives in which they will participate.

Additional training may be required for dives outside the excursions, equipment, or breathing mixture restrictions outlined in Chapter 9.

Log book review, pool and openwater checkouts are suggested procedures for assessing competency levels and for establishing remedial training requirements.

6.2.2 First Aid and CPR

DFO divers must be certified in first aid and Cardio-Pulmonary Resuscitation and in the recognition of the symptoms and the management of diving related illness and injuries.

Divers must be trained in the use of oxygen equipment for therapeutic purposes.

When an AED is available at the dive site, the divers present must be trained in its use.

6.3 Competency Requirements

The following criteria must be used when conducting annual competency checks. Additional competency procedures are specified in the document titled DFO Training and Competency Procedures that is updated periodically to reflect current best practices.

6.3.1 Diver Evaluation

6.3.1.1 Pool

All divers must:

- a) demonstrate acceptable watermanship ability;
- b) demonstrate ability to assemble, disassemble and maintain diving equipment;
- c) enter the water with full equipment;
- d) alternate between snorkel and Scuba while swimming;
- e) clear face mask;
- f) demonstrate share air procedures as both a donor and recipient;
- g) demonstrate ability to remove and replace equipment while submerged;
- h) demonstrate understanding of underwater signs and signals; and

- i) rescue and transport a passive simulated accident victim.

6.3.1.2 Open Water

Divers must:

- a) demonstrate judgment adequate for safe diving;
- b) enter and leave open water wearing Scuba gear;
- c) kick on the surface while wearing Scuba gear, but not breathing from the Scuba unit;
- d) surface dive to a depth of 3 m (10 feet) in open water without Scuba;
- e) achieve and maintain neutral buoyancy;
- f) demonstrate clearing of mask and regulator while submerged;
- g) demonstrate proficiency in share air breathing as both donor and receiver in stationary and swimming modes;
- h) demonstrate techniques of self-rescue and buddy rescue.

6.3.1.3 Additional Requirements – Special Operations

Dive operations outside the excursion or equipment restrictions outlined in Chapter 9 may require additional training, experience and competency checks. Specialty requirements and operational procedures are summarized in Chapter 10 and Chapter 11.

6.3.2 Snorkel Diving

Although snorkel diving falls outside the scope of this document, both managers and employees must ensure that safe working practices occur for this activity.

Managers must ensure that:

- a) snorkel divers have received medical approval as per the protocol established by Health Canada;
- b) snorkel divers have above average swimming ability;
- c) the buddy system is strongly enforced;
- d) thermal protection is provided and if needed, weight belts are fitted with a quick-release closure; and
- e) each snorkel diver is equipped with a whistle, knife, and inflatable buoyancy device.

6.3.3 Non-DFO Divers

Persons who are not DFO employees and who dive with employees must also demonstrate that they are competent to perform the types of dives in which they will participate.

6.4 DFO Approval to Dive

As a basic minimum, employees who wish to dive must satisfy their respective Area or Regional Diving Safety Coordinator that they:

- a) are required to dive in support of DFO objectives;
- b) meet the training and competency requirements prescribed in the DFO Diver Training and Competency Procedure;
- c) have been declared medically fit to work as a diver as outlined in Chapter 5;
- d) are thoroughly familiar with the operational requirements for DFO dive operations as outlined in this document; and

6.4.1 Rescinding of Diving Privileges

Divers who fail to comply with conditions specified in this document shall have their diving privileges rescinded.

A diver's permission to dive may also be rescinded or restricted by the Regional Diving Safety Committee for:

- a) non-compliance with any of the diving regulations; and
- b) deliberate violation of safe diving procedures.

Rescinded divers may apply to the Regional Diving Safety Committee for re-approval to dive. They must however satisfy all the required conditions, and depending on circumstances, may require additional training.

Chapter 7. DIVING EQUIPMENT MAINTENANCE AND INVENTORY CONTROL

7.1 Purpose

This chapter outlines the requirements for diving equipment maintenance and provides standards for breathing air purity.

7.2 Design Requirements for Diving Equipment

All diving equipment used by employees must be designed for its intended use and maintained in a condition that ensures its safe operation for the purpose and at the depth for which it was designed.

7.3 Maintenance Requirements

All diving equipment used by employees must be inspected, tested, maintained and calibrated by a qualified person at intervals recommended by the manufacturer and whenever the equipment is thought to be defective.

Diving equipment used by persons who are not employees but who are granted access to the workplace and who dive with employees must be in a condition that ensures its operation for the purpose and at the depth for which it was designed.

7.4 Defective Equipment

Where a diver finds a defect in any diving equipment, including pressure gauges and depth gauges, that may render it unsafe for use, the diver shall immediately report the defect to the Diver-in-Charge.

The Diver-in-Charge shall mark or tag as unsafe and remove from service any diving equipment, including pressure gauges and depth gauges, that may be used by divers where a defect may render it unsafe for use.

7.5 Breathing Supply

7.5.1 Air Compressors

Only air compressors specially designed for filling scuba cylinders shall be used for this purpose.

Air intakes shall be well screened and equipped with a filter and shall be located to ensure a supply of clean air, free from contamination by fumes, smoke, etc. Extensions to the intake manifold should have the hose upwind from any exhaust pipe.

The discharged compressed air shall be passed to a scuba cylinder (or an air reservoir) through frequently cleaned and recharged filters that are designed to remove dust, oil, CO, water, and other contaminants with the resultant breathing air meeting the specification of paragraph 7.5.2.

The compressor shall have an operation time-elapsed clock and/or log book listing dates, running times, filter and maintenance schedules.

Annually, an air sample from each DFO compressor shall be sent to a testing laboratory for analysis.

7.5.2 Breathing Air Standards

Breathing air shall meet the specifications outlined in the CAN/CSA Z275.2-04 Occupational Safety Code for Diving Operations as amended from time to time.

7.5.3 Air from Commercial Sources

Breathing air from commercial sources shall be certified by the supplier, within the preceeding 12 months, as being suitable for breathing in accordance with section 7.5.2.

7.6 Regulators

Regulators shall be serviced at least annually by a qualified technician according to manufacturers' specifications.

Regulators used by DFO divers shall be fitted with a submersible pressure gauge for monitoring Scuba cylinder pressure unless otherwise dictated by circumstances.

All Scuba regulators used by DFO divers shall be checked before use by individual divers.

The Area Diving Safety Coordinator will ensure that an inspection record is maintained for each regulator as outlined in Chapter 8.

7.7 Gauges

Gauges shall be inspected and calibrated by a qualified person before first use and at least annually thereafter, or whenever it is thought to be defective.

The Area Diving Safety Coordinator will ensure that an inspection record is maintained for each gauge as outlined in Chapter 8.

7.8 Scuba Cylinders

All compressed air cylinders must bear a valid test date and shall be tested in accordance with the Canadian Transport Commission or equivalent agency. They shall be hydrostatically tested every five years and stamped to that effect by the testing facility.

All Scuba cylinders shall be visually inspected annually both internally and externally. For aluminum cylinders the annual VIP must also include an eddy current test to check for hairline cracks in the neck threads if recommended by the manufacturer.

DFO divers shall not use a cylinder which is not stamped with proper marking and a valid test date nor charge a cylinder to a pressure greater than that marked on it.

The Area Diving Safety Coordinator will ensure that an inspection record is maintained for each cylinder as outlined in Chapter 8.

Transportation of the Department's cylinders must be conducted in accordance with the Transport Dangerous Goods (TDG) Regulations, including proper labeling.

7.9 Buoyancy Control Devices

Every diver must be equipped with a buoyancy control device.

Chapter 8. RECORD KEEPING REQUIREMENTS

8.1 Purpose

This chapter outlines the record keeping requirements for the Department's diving program. Record keeping is an essential component for regulatory compliance. It also forms a critical element of a due diligence defence.

8.2 Records

The Area Diving Safety Coordinator shall ensure that a file is kept for each diver verifying that:

- a) diving is identified as a job requirement, medical clearance has been received, competency checks have been completed, diver, first aid and CPR training have been given, a log book has been issued and dive records are being maintained;
- b) regular maintenance and calibration records are kept for cylinders, regulators, gauges, compressors, and air analysis as per the manufacturer's recommendations. Records must include serial numbers and the qualified technician's signature.

8.3 Diving-Related Incident / Injury

- a) Every diver shall report to the Area Diving Safety Coordinator any unusual incident that occurred or diving-related injury.
- b) The Area Diving Safety Coordinator shall investigate the occurrence reported pursuant to a), keep a written record of the findings, and forward them to the Regional Diving Safety Coordinator.
- c) The Regional Diving Safety Coordinator shall immediately report all diving related injuries to the National Diving Safety Coordinator.

8.4 Dive Records

Dive records must be kept and maintained for every diver. Divers must log all dives and submit these records to their Area Diving Safety Coordinator annually or on demand.

This dive record shall contain, for each dive:

- a) the date of the dive;
- b) the location of the dive;
- c) the name of the diver;
- d) the name of the standby diver, if any;
- e) the name of the diver's tender, if any;
- f) the signature of the diver and Diver-in-Charge; and
- g) the breathing mixture used, if other than air.

8.4.1 Type I Dives

The record referred to in 8.4 shall also contain, for each type 1 dive:

- a) total elapsed time, measured in minutes, from the time the diver leaves the surface to the time the diver begins final ascent, rounded to the next whole minute;
- b) maximum depth reached; and

- c) any unusual incident or condition, including emergency decompression time.

8.4.2 Type 2 Dives

The record referred to in section 8.4 shall also contain, for each type 2 dive:

- a) type of diving equipment used;
- b) the time the diver leaves the surface;
- c) the maximum depth reached;
- d) the time the diver begins final ascent;
- e) the time the diver reaches the surface;
- f) the decompression schedule used, if any; and
- g) any unusual incident or condition including emergency decompression time.

8.4.3 Long Term Record Keeping

The Area Diving Safety Coordinator shall keep a dated dive record for each diver that shall include:

- a) the year in which the dive occurs;
- b) the maximum depth reached;
- c) the total elapsed time, measured in minutes, from the time the diver leaves the surface to the time the diver begins final ascent, rounded to the next whole minute.
- d) breathing mixture used, if other than air;
- e) any unusual incident or condition;
- f) any occurrence reported pursuant to subsection 8.3 a); and
- g) a copy of any record referred to in subsection 8.3 b).

8.4.4 Provision of Dive Records

- a) The Diver-in-Charge is responsible for submitting a copy of the dated dive records to the Area Diving Safety Coordinator at the end of the dive operation.
- b) The Area Diving Safety Coordinator shall forward on an annual basis the dated dive records to the Regional Diving Safety Coordinator.
- c) The Regional Diving Safety Coordinator shall annually supply the record referred to in 8.4.3 to the diver.

8.4.5 Instruction, Training & Competency Records

The Area Diving Safety Coordinator shall keep a record of all instruction and training received by the diver and all competency demonstrations given pursuant to Chapter 6 for as long as the diver is employed by DFO as a diver.

8.4.6 Record Keeping Duration

The Area Diving Safety Coordinator shall:

- a) keep the record referred to in sections 8.4, 8.4.1, and 8.4.2 for a period of 12 months after the date of the dive;

- b) keep a copy of the record referred to in section 8.4.3 for a period of five years after the date on which the diver ceases to be employed.
- c) keep a copy of the record referred to in section 8.4.5 for as long as the diver is employed as a diver.

8.5 Diver Administration Program

The Department has developed a personal computer software application called Diver Administration Program (DAP) to facilitate and standardized the record keeping requirements for DFO divers as established in the Federal Diving Regulations.

DAP supports the processes and record-keeping requirements for:

- a) registering and renewing divers administrative clearances to dive;
- b) tracking medical clearances and expiry;
- c) tracking training received;
- d) competency demonstrations, and
- e) long term record keeping of dive log records.

8.6 Records of Air Quality Tests

The Area Diving Safety Coordinator shall maintain a record of each air quality test performed pursuant to section 7.5.1 for a period of five years after the date on which the test was made.

8.7 Records of Equipment Inspection, Test, Maintenance, & Calibration

The Area Diving Safety Coordinator shall maintain a record of each equipment inspection, test, maintenance and calibration performed pursuant to Chapter 7 for a period of five years after the date on which the inspection, test, maintenance or calibration was performed.

8.8 Maintenance and Inventory Control Program

The Department has developed a personal computer software application called Maintenance and Inventory Control Program (MIC) to facilitate and standardize the record keeping requirements for diving equipment as established in the Federal Diving Regulation.

MIC supports the record keeping requirements by:

- a) providing a method to inventory DFO diving equipment;
- b) printing a work sheet for each piece of diving equipment that allows inspections to be properly documented.

Chapter 9. GENERAL OPERATIONAL PROCEDURES AND REQUIREMENTS – TYPE 1 AND TYPE 2 DIVES

9.1 Purpose

This chapter outlines the general procedures and requirements that must be followed for Type 1 and Type 2 dives performed by departmental divers.

Chapter 10 lists additional procedures for Type 1 dives that occur outside the excursion and equipment restrictions described in this chapter.

Chapter 11 lists additional requirements needed for Type 2 dives.

9.2 Restrictions

9.2.1 Depth

Maximum depth for any DFO dive operation is 40 m.

For dives at depths greater than 20 m, the special requirements outlined in section 10.4 must be included in the dive plan.

9.2.2 Decompression

Planned decompression dives are not permitted unless approved by the National Diving Safety Committee.

9.2.3 Type 1 Dives

Type 1 dives:

- a) cannot require decompression;
- b) cannot occur in the vicinity of underwater pressure differentials;
- c) cannot involve the search, construction, repair or inspection of ships, bridge piers, wharves, dry docks, underwater tunnels, or water control and water intake facilities;
- d) cannot involve using underwater welding or cutting equipment or explosives;
- e) cannot exceed 40 m in depth.

9.2.4 Type 2 Dives

In addition to all of the general requirements listed in this chapter, Type 2 dives must also follow the special requirements listed in Chapter 11.

9.3 Hazards

Immediately before each dive, the Dive Team must discuss the nature of all conditions and hazards likely to be encountered and the Diver-in-Charge must ensure that they are understood and controlled.

9.3.1 Currents / Tides

Water flow conditions of greater than one knot should be considered beyond the diver's ability to comfortably resist by swimming. Water movement at sea can be complex for divers because surface water may move in a different direction and at different velocities than deeper bottom waters. Each diver should be as streamlined as possible and equipment should be low profile and snag resistant. Diving in currents greater than one knot is prohibited unless additional safety procedures are developed and followed.

The main risk of diving in flowing water is being swept away, either offshore or along-shore into hazardous conditions (e.g., surf or rapids). Risks can be compounded by low visibility due to increased likelihood of entanglement.

The progress of the dive can be monitored by watching bubbles but whenever possible dive teams should pull a surface float to facilitate tracking.

9.3.2 Low Visibility

The basic premise of the buddy system is that free-swimming divers can observe each other and immediately render assistance if required. However, in low visibility situations this advantage is lost and the risk of buddy separation and entrapment increases dramatically. Therefore in low visibility situations, a three-person dive team should be deployed as follows:

- a) a single diver with a lifeline supported by a tender; and
- b) a standby diver on the surface.

Whenever possible, voice communication systems should also be used.

9.3.3 Altitude Diving

Diving at altitude requires careful planning and preparation and should not be undertaken lightly. Special dive tables and acclimation will be required and generally, the higher the dive site, the more remote it is. For an added level of safety, nitrox should be considered.

9.4 Specialized Equipment

Additional training may be required for:

- a) dry suits;
- b) full face masks.

9.5 Dive Site Records

Log Books facilitate in-field record keeping, promote regulatory compliance and represent an essential element of a due diligence defence. The following books must be used at each dive site:

- a) diver log book;
- b) Diver's-in-Charge Slates.

9.5.1 Diver-in-Charge Slates

The Diver-in-Charge Slates promotes and documents effective on-site supervision and control of the diving operations.

The Slates contains a pre-dive checklist (see Annex B) that must be reviewed prior to each dive as part of the compliance check.

Verification of this review must be recorded as a dive log entry.

The Slates also contains:

- a) emergency procedures and control information;
- b) instructions and procedures to be followed in case of accident or injury; and

c) dive tables.

It is the duty of the Diver-in-Charge to maintain complete and accurate records for all diving operations.

9.6 Equipment Check

Immediately before each dive, every diver shall check that all the equipment required is present, properly fastened in place and functioning.

Once in the water and before beginning a descent, every diver shall repeat the pre-dive check.

9.7 Reserve Breathing Supply

A reserve breathing supply sufficient to allow the safe termination of a dive must be immediately available to the diver.

9.7.1 Free-Swimming Scuba Deployment

For free-swimming buddy pair Scuba deployments, the reserve breathing supply can be immediately made available to the out of air diver through a redundant second stage regulator (commonly called an octopus or safe-second) carried by the buddy diver.

Each diver must therefore be equipped with a redundant second stage “octopus” regulator or the team must carry at least one independent pony bottle / regulator system.

9.7.2 Independent Air System

Anytime a single diver of the dive team is deployed using Scuba, an independent pony bottle / regulator system must be carried by the diver.

Manifolded twin tanks with two regulators and an isolation valve is also acceptable and whenever possible voice communication systems should be used.

9.8 Emergency Procedures

When a diver shows any indication of a pressure-related injury or requires therapeutic recompression, the necessary first aid treatment must be initiated and medical support notified immediately.

Therefore, an emergency procedure which contains addresses, telephone numbers and radio frequencies for recompression chambers, medical facilities and ambulance services shall be at site and readily available to the dive team.

The procedure must identify the location of the nearest emergency medical facility and operational hyperbaric chamber and contact information for emergency transportation in the event of an accident.

A template for this information is provided in Annex C and is also included in the Diver Log Book and the Diver-in-Charge Instruction Manual.

The procedures must provide medical support on a 24 hour-a-day basis and a suitable means of communication between the dive site and medical support.

Although the flying after diving restriction does not apply to an emergency air evacuation, pressurized aircraft should be used whenever possible. In the event of an emergency air evacuation, provision shall be made to furnish the diver with oxygen, and the flight altitude and in-flight conditions shall be those recommended by the attending physician or Diver-in-Charge. However, a 1000 ft (307.7 metres) maximum should be maintained whenever possible.

These procedures must be tested periodically.

9.9 Dive Team Requirements

9.9.1 Basic Requirement

A dive team consisting of at least two divers must be present at every dive site but free swimming solo diving is not permitted.

9.9.2 Diver-in-Charge

One diver at every dive site must be designated as the Diver-in-Charge and this individual is responsible for supervising the entire diving operation.

9.9.3 Communications

All members of the dive team shall have a comprehensive knowledge of hand, rope, and electronic signals designated for use on the dive site.

9.9.4 Tethered Dives

In a diving operation where the diver is tethered to the surface by a lifeline, there shall be at least three persons present at the dive site, of whom:

- a) one diver
- b) one diver's tender; and
- c) one standby diver.

9.9.5 Diver's Tender

Where a diver's tender is needed, he/she shall devote all of his or her time and attention to the work of a diver's tender.

9.9.6 Standby Diver

Where a standby diver is needed, the standby diver shall:

- a) be trained and equipped to operate at the depth at which and in the circumstances in which a submerged diver is operating;
- b) be readily available to assist the submerged diver in the event of an emergency; and
- c) not dive or be required to dive except in an emergency.

9.9.7 Boat Operator

In addition to the two person dive team, a qualified boat operator must be present at any dive carried out from a boat or vessel.

9.10 Additional Safety Equipment

9.10.1 Knives and Cutting Tools

All DFO divers must wear a sheathed and sharpened knife or cutting tool when diving.

9.10.2 Lifeline

If a lifeline is required by the dive plan, it must:

- a) be free of knots and splices, other than knots and splices necessary to attach the lifeline to the diver and the dive site;

- b) have a breaking strength of not less than 1400 kg;
- c) be secured to the diver so as to prevent loss of contact with the diver; and
- d) be secured at the surface to a safe point of anchorage.

A lifeline shall always be used in dives taking place under ice.

A lifeline must be tended at all times by a diver's tender.

9.10.3 Surface Equipment

Where identified by the dive plan, the following equipment must be present on the dive site:

- a) dive tables;
- b) first aid kit;
- c) demand-type oxygen dispensing system;
- d) adequate quantity of oxygen;
- e) additional full air cylinders;
- f) surface communications equipment sufficient to contact medical assistance while still in the field;
- g) rope; and
- h) AED

9.11 Signals Displayed while Diving

Whenever diving operations are being conducted in areas in which marine traffic is probable, the Diver-in-Charge shall ensure that the following signals are prominently displayed from a vessel, boat, pier or another conspicuous object:

- a) the International Code Flag A, hoisted from any vessel, boat or platform used in support of a dive in such a manner as to ensure all-round visibility of the dive site; and
- b) a diver's buoy for each free-swimming dive team.
- c) for night dive operations the diver's buoy should be equipped with:
 - i. a light, in which case the light shall be yellow and flashing, and
 - ii. reflecting material, in which case the reflecting material shall be yellow.

9.12 Unfit to Dive

If a diver considers himself or herself unfit to dive owing to illness, fatigue or any other cause, the diver shall inform the Diver-in-Charge of this fact.

A Diver-in-Charge shall not permit the diver to dive.

9.13 Adherence to Planned Depth-Time Procedures

Diving operations, repetitive dives, and treatment of divers shall be carried out in strict accordance with approved tables and procedures. Except in the case of accidents or unavoidable circumstances, a diver shall not be permitted to remain at any depth longer than the maximum time planned for that depth nor to reach a greater depth than the maximum depth planned for that dive.

9.14 Termination of Dive

The diver should not proceed with a dive if:

- a) the Diver-in-Charge requests termination;

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- b) a diver requests termination;
- c) a diver loses contact with or fails to respond correctly to communications from a buddy team member;
- d) a diver fails to respond correctly to communications from the tender;
- e) a diver's primary breathing supply fails;
- f) a diver is aware of any sign of malfunction of gear or sign or symptom of distress; or
- g) any dive team member is aware of any unusual or unplanned situation which threatens the health or safety of any dive team member.

9.15 Diving from CCG Vessels

The Master of every vessel from which divers are deployed, shall have overall responsibility for all diving operations conducted from the vessel.

The diving protocol contained within section 7.B.1 of the CCG Fleet Safety Manual will be used to screen divers prior to their deployment.

The master shall have the authority to terminate any diving operation which may endanger the vessel, its crew, or those involved in the diving operation.

The vessel shall not be moved or relocated while a diver is in the water unless the Diver-in-Charge agrees to the move or relocation.

Vessel inspection is outside the parameters of a Type 1 dive, and the procedures contained in Chapter 11 must be used for this type of operation.

9.16 Floating Platforms

When a floating platform, vessel or boat is used in support of the dive, it must remain on site at all times while a diver is in the water.

9.17 Elevated Entries

Whenever diving operations are carried out from a diving station located more than 2 m above the water, the divers must be transported through the air-water interface by a cage, basket or platform.

This equipment and any associated hoisting devices and tackle must be:

- a) used for the purpose for which they were designed; and
- b) do not in themselves create a hazard.

Any cage, basket or platform and any associated equipment shall be dedicated to the diving operations until the dive is completed.

9.18 Flying After Diving

A diver cannot fly at altitudes greater than 300 m above the altitude of the dive site unless the following period of time has elapsed:

- a) 12 hours following a no-decompression dive or time required by tables or whichever is greater;
- b) such time as is specified by a physician who treated the diver for a pressure-related injury.

If low level flying is required for transporting divers between dive sites, altitude procedures can be used to ensure an extra margin of safety.

9.19 Observation After Diving

The Diver-in-Charge shall ensure that, on completion of a dive, a diver remains under observation for at least one hour to ensure the safety and health of the diver.

9.20 Incident/Accident Reporting

Unusual incidents, emergencies or accidents must be logged and immediately reported by the diver to the Area or Regional Diving Safety Coordinator, who thereafter reports to the National Diving Safety Coordinator.

Accidents must also be reported as outlined in the DFO Health and Safety Manual.

9.21 Diving after Treatment for a Pressure-related Illness

Any diver who has suffered pressure-related illness shall not dive unless approval for further diving is given by a medical officer.

Chapter 10. SPECIAL OPERATIONAL PROCEDURES AND REQUIREMENTS – TYPE 1 DIVES

10.1 Purpose

This chapter establishes the procedures and requirements that apply to underwater activities that fall outside the excursion or equipment restrictions outlined in Chapter 9.

10.2 Special Procedures

Special procedures are needed when it is recognized that an underwater project falls outside the restrictions outlined in Chapter 9. As required, the project shall be analysed and written procedures shall be established to identify the additional risks, instruction, training, competency, equipment, operational requirements and minimum crew needed for the dive.

Prior to commencing specialty operations, these written procedures shall be submitted to the Regional Diving Safety Coordinator who will distribute them to the Regional Diving Safety Committee for review and approval.

Thereafter, they can then be submitted to the National Diving Safety Committee for final approval and inclusion in this chapter.

10.3 Specialty Operations

Potentially hazardous conditions which warrant special equipment, techniques, and/or skills and which require additional training, include but are not limited to:

- a) deep diving (10.4);
- b) night diving (10.5);
- c) ice diving (10.6);
- d) enriched air nitrox (EANx) diving (10.7);
- e) surface supplied diving (10.8);
- f) towed diving (10.9);
- g) contaminated environment diving (10.10).

Planned decompression dives are prohibited during all type 1 specialty operations.

10.3.1 Specialty Approval

To receive DFO approval for specialty operations, the employee shall:

- a) be a DFO approved diver;
- b) have received the instruction and training required to perform the specialty dive;
- c) be declared competent to perform the specialty dive by the Area Diving Safety Coordinator or his/her designee.

10.3.2 Re-Qualification

In order to re-qualify for a DFO specialty approval, employees shall on an annual basis, demonstrate competency for the types of dives in which they will participate.

10.4 Deep Diving

Deep Diving is defined as a dive conducted at a depth between 20 and 40 metres. The maximum depth for a Type 1 Deep Dive is 40 metres.

10.4.1 Additional Risks

There are additional risks associated with Deep Diving. These risks include:

- a) air depletion due to an increased rate of air consumption;
- b) decompression illness due to increased gas loading;
- c) nitrogen narcosis due to increased gas loading;
- d) over exertion due to increased gas density;
- e) a loss of thermal protection capability due to suit compression; and
- f) a decrease in visibility due to depth.

10.4.2 Instruction and Training

Deep Diver instruction and training shall include at least four dives and the following topics:

- a) the proper use of the DCIEM tables;
- b) gas consumption calculations for increased depth;
- c) proper Deep Diving techniques, which shall include: top-side coordination, dive team deployment, descents, buddy contact, air management, safety stops, emergency decompression procedures, ascents;
- d) the signs, symptoms and treatment of pressure-related injuries; and
- e) a review of the therapeutic use of oxygen and the equipment used to dispense it.

10.4.3 Competency Requirements

In order to be declared competent to perform Deep Dives, the diver shall be able to:

- a) plan a Deep Dive using the DCIEM tables;
- b) execute a descent, when possible, using a tactile or visual guide (either a line or sloping bottom);
- c) ascend at a rate not to exceed the ascent rate specified by the table used (e.g., 60 fpm or 18 mpm) using a depth gauge and timing device (or a dive computer with ascent rate indicator);
- d) perform at least a three-minute safety stop at 5 metres before surfacing;
- e) execute an alternate air source ascent, with buddy's alternate air source from 5 metres, when possible, using a tactile or visual guide (either a line or sloping bottom); and
- f) simulate a pressure-related incident and rescue.

10.4.4 Equipment Requirements

In addition to the equipment required for general operations (see Chapter 9), the following shall be used whenever a diver is working deeper than 20 metres:

- a) plastic version of DCIEM tables;
- b) reserve air supply;
- c) redundant regulator; and
- d) first aid kit and O₂.

10.4.5 Operational Requirements

- a) For dives greater than 20 metres, the risk of decompression illness increases and for this reason, oxygen equipment and an adequate quantity of oxygen must be immediately available at the dive site.
- b) Should the dive exceed 30 metres, a reserve air supply must be carried by each diver.
- c) Free dives through the water column should be avoided on deep dives. Where structure is not available to guide in the descent a shot line should be utilized.
- d) Appropriate exposure protection shall be considered and if necessary a dive light should be carried.

10.4.6 Minimum Crew

At least three persons shall be present during all Deep Diving operations and shall be deployed as follows:

- a) two shall be divers, one of whom shall be designated as the Diver-in-Charge; and
- b) one shall control the site and this person shall not enter the water.

10.5 Night Diving

Night Diving is defined as any dive, taking place between sunset and sunrise. The maximum depth for Night Diving is 30 metres.

Should the night dive exceed 20 m, the diver shall also be deep diver approved.

10.5.1 Additional Risks

There are additional risks associated with Night Diving. These risks include:

- a) disorientation and buddy separation underwater; and
- b) an increased level of stress due to darkness.

10.5.2 Instruction and Training

Night Diver instruction and training shall include at least three dives and the following topics:

- a) avoiding and coping with stress;
- b) proper buddy separation procedures;
- c) underwater navigation at night;
- d) proper Night Diving techniques (i.e. top-side coordination, dive team deployment, descents, buddy contact, communication, light failure protocols, disorientation, use of diver recall signals, ascents); and
- e) the proper use and maintenance of dive lights.

10.5.3 Competency Requirements

In order to be declared competent to perform Night Dives, the diver shall be able to:

- a) demonstrate how to avoid and cope with stress, and proper buddy separation procedures;
- b) execute a descent, when possible using a tactile or visual guide (either a line or sloping bottom);

- c) demonstrate how to communicate with hand signals and dive lights;
- d) demonstrate the proper use of a personal dive light, submersible pressure gauge, compass, timing device and depth gauge at night;
- e) navigate to a predetermined location using a compass/natural features and return to the starting point;
- f) demonstrate proper buddy procedures by maintaining buddy contact throughout the Night Dive; and
- g) perform an ascent, when possible using a tactile or visual guide (either a line or sloping bottom).

10.5.4 Equipment Requirements

In addition to the equipment required for general operations (see Chapter 9), the following shall be used whenever the diver is working at night:

- a) a primary dive light;
- b) a back up dive light;
- c) a whistle;
- d) navigation/orientation surface lights, and
- e) a diver recall signal device.

10.5.5 Operational Requirements

Navigation/orientation surface lights may include existing, permanent shore lights for orientation, strobe lights, or required lighting when diving from a vessel.

When diving from any vessel, boat or platform at night three vertical lights shall be hoisted to ensure all-around visibility. The highest and lowest of these lights shall be red and the middle light shall be white.

10.5.6 Minimum Crew

At least three persons shall be present during all Night Diving operations and shall be deployed as follows:

- a) two shall be divers one of whom shall be designated as the Diver-in-Charge; and
- b) one shall control the site and this person shall not enter the water.

10.6 Ice Diving

Ice Diving is defined as any dive in, through, under, or in the vicinity of ice. Should the ice dive exceed 20 m, the diver shall also be deep diver approved.

10.6.1 Additional Risks

There are additional risk associated with Ice Diving and these risks include:

- a) increased risk of entrapment while working in an overhead environment;
- b) impact with underside of the ice; and,
- c) regulator free flow due to super cooling.

Additional risk factors are associated with site preparation and involve the use of chain saws, wrecking bars and ice tongs in a slippery environment.

10.6.2 Instruction and Training

Ice Diver instruction and training shall include at least three dives and the following topics:

- a) site preparation and safe use of associated tools;
- b) line signals and basic rigging;
- c) configuring a bail-out air supply and regulator;
- d) cold water regulator and free flow procedures;
- e) tender duties; and,
- f) dry suit diving.

10.6.3 Competency Requirements

In order to be declared competent to perform ice dives, the diver shall be able to:

- a) demonstrate (prior to participation in an ice dive) competency in the use of a dry suit;
- b) demonstrate a thorough knowledge of, and carry out the safe use of associated tools in site preparation;
- c) demonstrate a thorough knowledge of, and the ability to use line signals in ice diving;
- d) demonstrate a thorough knowledge of, and carry out equipment configuration for ice diving to include, harnesses, bail-out air supply and line attachment; and
- e) demonstrate a thorough knowledge of, and carry out tender duties for ice diving.

10.6.4 Equipment Requirements

In addition to the equipment required for general operations (see Chapter 9), the following shall be used whenever the diver is working under ice:

- a) ice harnesses;
- b) carabineers;
- c) 50 metre 3/8" diver's lifeline;
- d) 75 metre 3/8" polypropylene stand-by line;
- e) independent air supply; and
- f) environmentally sealed regulators.

Depending on the circumstance of the diving operation and the environmental conditions expected, surface support equipment may be required. Specifically,

- a) chain saw with ice chain;
- b) wrecking bars;
- c) ice tongs;
- d) ice screws;
- e) modular tentage;

- f) diesel/kerosene heaters; and
- g) shovels.

10.6.5 Operational Requirements

All personnel operating at or around the hole shall wear a floater suit or jacket and ice harness.

The lifeline shall be attached to the diver's harness by locking carabineer A bight will be tied in the line at the divers end with a figure-eight knot. The knot will be reinforced with use of tie-wraps or duct tape.

The standby diver shall have a buoyant emergency rescue line 30% longer than the lifeline being used by the primary diver.

The stand-by diver will be fully dressed (exception of mask) and immediately ready for the water in all ice diving operations.

10.6.6 Minimum Crew

At least three persons shall be present during all Ice Diving operations and shall be deployed as follows:

- a) two shall be divers, one of whom shall be a standby diver; and
- b) one shall control the site and this person shall not enter the water.

10.7 Enriched Air Nitrox (EANx) Diving

This procedure was written in accordance with the DAN Nitrox Workshop Consensus Recommendations, November 3-4, 2000.

Enriched Air Nitrox (EANx) Diving includes any dive where the breathing gas used is 22% to 40

% oxygen (O₂), with the remaining percentage of the gas being nitrogen (N₂). Breathing gas with an oxygen content higher than 40% shall not be used.

Should the Nitrox Dive exceed 20 m, the diver shall also be deep diver approved.

10.7.1 Additional Risks

There are additional risks associated with the use of EANx. The most common of which is oxygen toxicity. This is the result of exposure to a high partial pressure of O₂, generally caused by inaccurate gas analysis or by exceeding the maximum operating depth of a specific nitrox mix.

Due to the presence of 100% O₂ at a filling station there is the additional risk of fire and explosion when blending EANx.

10.7.2 Instruction and Training

Instruction and training in the use of EANx shall include at least two dives and the following topics:

- a) application, advantages and disadvantages;
- b) signs and symptoms of oxygen toxicity;

- c) DCIEM or NOAA partial pressure & exposure time limits;
- d) oxygen exposure calculations;
- e) maximum operating depth (MOD) calculations;
- f) optimal gas mix equation;
- g) equivalent air depth (EAD) concept and calculations;
- h) use of EANx tables;
- i) equipment concerns and marking; and,
- j) gas analysis.

10.7.3 Competency Requirements

In order to be declared competent to perform nitrox dives, the diver shall be able to:

- a) calculate oxygen CNS% for a specific time and depth;
- b) perform required calculations to determine O₂ exposure, MOD, and optimal gas mix;
- c) calculate EAD for two EANx mixes;
- d) demonstrate use of EANx tables in a repetitive dive using two different EANx mixes; and
- e) demonstrate use of an O₂ analyzer on two different EANx mixes.

10.7.4 Equipment Requirements

In addition to the equipment required for general operations (see Chapter 9), the following equipment is required for a nitrox dive:

- a) O₂ analyzer;
- b) EANx dedicated and labeled cylinders; and
- c) approved EANx tables for the gas mix being used.

10.7.5 Operational Requirements

The partial pressure O₂ exposure limit for any diver shall not exceed 1.6 ATA.

Divers shall conduct their own analysis of the nitrox in each cylinder they intend to dive. The O₂ content and MOD of the mix shall be duly noted on both the cylinder and in the nitrox log at the filling station.

Gas blending shall only be undertaken by trained and qualified personnel. The National Diving Safety Coordinator shall approve the EANx tables used.

10.7.6 Minimum Crew

The minimum crew for an EANx dive not in excess of 20 metres is two (2).

Minimum crew for a deep EANx dive (20 to 40 metres) is three (3). Personnel shall be deep dive qualified and will be deployed in accordance with section 10.4.5.

10.8 Surface Supply Diving

Surface Supply Diving is any operation where the diver is supplied with breathing gas by an umbilical from the surface.

Should the Surface Supply Dive exceed 20 m, the diver shall also be deep diver approved.

10.8.1 Additional Risks

Surface supplied diving can provide a greater margin of safety than open-circuit free swimming Scuba for certain applications such as those described in section 10.10. Numerous redundant safety systems, hard-wire communication and protection from contaminants can enhance diver safety. However additional instruction, training, equipment, and competency are required to assure safe surface supply diving.

10.8.2 Instruction and Training

Instruction and training for surface supplied diving shall include at least ten dives and the following topics:

- a) operational use of the DSI Superlite series of demand diving helmets;
- b) operational use of the Divator IIG (AGA) full-face mask with harness block bail-out assembly;
- c) operational use of both 2-wire and 4-wire divers communication system;
- d) operational use of a divers air delivery manifold, including umbilical line pressure calculations for depth;
- e) tender duties and responsibilities;
- f) line pull signals;
- g) emergency procedures; and
- h) first line maintenance of surface supplied diving equipment.

10.8.3 Competency Requirements

In order to be declared competent to conduct surface supplied operations the diver shall be able to:

- a) demonstrate a thorough knowledge of and the ability to carry out pre-dive site set-up and equipment pre-dive checks on a manifold, umbilical, helmets, masks, harness blocks and communications equipment.
- b) as tender, demonstrate a thorough knowledge of and carry out dress-in procedure for a surface supplied diver.
- c) as tender, demonstrate umbilical handling from a figure-eight coil, line signals and emergency procedures.
- d) demonstrate a thorough knowledge of and carry out manifold operations for surface supplied diving, including line pressure calculations and emergency procedures.
- e) as a diver, demonstrate a thorough knowledge of and the ability to perform surface supplied diving with a demand diving helmet and full-face mask with harness block, including emergency procedures and line signals.
- f) as a stand-by diver demonstrate a thorough knowledge of and the ability to carry out emergency procedures in cases of trapped and unconscious diver.
- g) demonstrate a thorough knowledge of and the ability to carry out post-dive procedures and first-line maintenance on surface supplied diving equipment.

10.8.4 Equipment Requirements

The Regional Diving Safety Coordinator shall approve all surface supplied diving equipment for use.

All diving helmets and surface supply diving masks shall be fitted with non-return valves and shall be checked daily before the commencement of diving operations in accordance with manufacturer's recommendations.

Surface supply equipment shall include a voice communication system between the diver and the surface that shall allow the diver's breathing to be heard at the surface.

The life support umbilical shall incorporate a lifeline rigged to prevent stress on the air line. Each diver shall carry a reserve breathing supply appropriate for the dive.

10.8.5 Operational Requirements

An emergency signal system shall be in effect during a diving operation to supplement the primary communication system.

Surfaced supplied live boating is prohibited unless written approval is obtained from the National Diving Safety Coordinator.

10.8.6 Minimum Crew

There shall be at least three (3) persons present at a surface supply dive site, specifically:

- a) diver;
- b) stand-by diver / tender;
- c) Diver-in Charge / manifold operator

For the duration of the surface supply dive, the diver's tender shall devote his or her full attention to the work of a diver's tender.

For the duration of the dive the manifold operator shall devote his or her full attention to the duties of operating the manifold, communications box and supervising the dive.

Except in an emergency, each surface supply diver in the water shall have a separate diver's tender.

10.9 Towed Diving

Towed Diving permits a rapid and systematic bottom survey to be conducted in clear shallow water.

10.9.1 Additional Risks

There are additional risks associated with the use of towed diver sleds. These risks include:

- a) pulmonary over-inflation injury due to rapid uncontrolled ascent;
- b) decompression sickness due to rapid uncontrolled ascent;
- c) eardrum rupture due to uncontrolled decent or inability to valsalva; and
- d) physical injury resulting from impact with u/w objects or the bottom.

10.9.2 Instruction and Training

Instruction and training in the use of towed diver sleds shall include:

- a) safe boating operation for towed diver sledding;
- b) application and restrictions for towed diver sledding;
- c) planning an underwater search with sleds;
- d) types of sleds;
- e) ascending and descending procedures while sledding; and
- f) emergency and lost diver procedures.

10.9.3 Competency Requirements

In order to be declared competent to conduct underwater sledding operations the diver shall:

- a) demonstrate a thorough knowledge of and carry out a site survey for towed diver operations including, maps, charts and depth soundings;
- b) as a diver, demonstrate and carry out safe sledding operations; and
- c) as boat operator, demonstrate a thorough knowledge of safe boat handling respective to towed diver operations.

10.9.4 Equipment Requirements

In addition to the equipment required for general operations (see Chapter 9), the following equipment is also required for towed diver sledding:

- a) approved underwater sled;
- b) 3/8" polypropylene line;
- c) hand held depth sounder or hand lead-line;
- d) area charts or maps; and
- e) lost diver line.

10.9.5 Operational Requirements

Sledding shall not be conducted where underwater visibility is less than 6 metres. The Stand-by diver shall be fully dressed and ready for the water.

10.9.6 Minimum Crew

Minimum crew to conduct under-water sledding operations is four (4), and shall be deployed as follows:

- a) diver;
- b) stand-by diver;
- c) spotter; and
- d) boat operator.

The Diver-in-Charge shall act as spotter or boat operator.

10.10 Contaminated Environments

Water pollution has become a not-uncommon obstacle for DFO divers and it is therefore important to recognize and analyse the risks.

Contaminants can manifest themselves in a variety of pollutants and sewage effluent that can contain pathogenic microorganisms and toxic chemicals and these risks have increased drastically over recent years.

Where contamination is suspected, expert advice shall be obtained prior to diver deployment and this should involve consultation with a Health Canada Physician.

In all cases, DFO personnel who have a dive project at a contaminated site shall have written permission from the Regional Diving Safety Coordinator prior to proceeding with the work.

Should the Contaminated Environment Dive exceed 20 m, the diver shall also be deep diver approved.

10.10.1 Additional Risks

There are additional risks associated with Contaminated Environment Diving. These risks include:

- a) biological hazards;
- b) chemical hazards; and
- c) thermal hazards.

10.10.1.1 Biological Hazards

Microbial pathogens such as bacteria, viruses, worms, protozoa, fungi, and algae may occur naturally within the specific environment or they may have been introduced into the area via an external source such as sewage or chemical wastes from industrial sources, commercial ships, or agricultural run-off. The risks these hazards may carry for the diver include:

- a) ear/eye infections;
- b) respiratory tract infections;
- c) inflammation of the intestinal tract;
- d) warts or skin infections;
- e) parasitic infections;
- f) central nervous system effects; and
- g) systemic or pulmonary fungus infections

10.10.1.2 Chemical Hazards

Chemical and petroleum product spills occur as a result of incidents involving the collision of commercial vessels or in other marine accidents, such as oil well blowouts and spills from storage facilities. Industrial chemicals commonly found in polluted water include:

- a) phosphates;
- b) chlorates;
- c) peroxides;
- d) acids; and

- e) solvents (benzene, xylene, toluene).

A diver is likely to have one or more of the following physical reactions to a toxic chemical exposure:

- a) upper respiratory tract infection;
- b) difficulty in breathing;
- c) skin reactions;
- d) nausea;
- e) burns;
- f) severe allergic reactions;
- g) tingling of the limbs; and
- h) headache, dizziness, confusion.

10.10.1.3 Thermal Hazards

The majority of divers who encounter hyperthermia problems will be those persons who are working in tropical waters or in the heated environment normally found in cooling water outfalls. Warm to hot water can also contain higher than normal levels of pathogenic organisms, necessitating additional layers of protective clothing and equipment. Heat prostration may also occur because divers are generally unaware of the extent of their own overheating and may not exhibit the signs or symptoms of hyperthermia until after their core temperature has risen to a level that is considered medically unsafe. The dangers of hyperthermia can present as:

- a) rapid pulse;
- b) vomiting;
- c) convulsions;
- d) unconsciousness; and
- e) death.

10.10.2 Instruction and Training

Instruction and training of a diver in preparation for exposure to contaminated water conditions should include the following topics:

- a) recognition of contamination hazards (biological, chemical and thermal);
- b) pre-exposure medical precautions;
- c) appropriate equipment selection criteria;
- d) polluted-water diving procedures and precautions; and
- e) decontamination procedures.

10.10.3 Competency Requirements

In order to be declared competent to conduct diving operations involving contaminated water sites, the diver shall be able to:

- a) demonstrate the ability to identify a dive site which would raise a contamination concern;

- b) demonstrate a thorough knowledge of, and an ability to carry out safe polluted-water diving procedures and precautions; and
- c) demonstrate a thorough knowledge of, and an ability to carry out all required decontamination procedures.

10.10.4 Equipment Requirements

Once an area is known to be contaminated it is then necessary to determine the type, concentration and degree of hazard that the pollutant presents to the diver. Expert advice shall be obtained and this information shall be recorded. Knowing the level of risk and the type of contaminant will facilitate the decision regarding what type of equipment will be most appropriate for the dive exposure. Standard SCUBA equipment affords little protection for the diver working in a contaminated environment because it allows the diver's mouth, eyes, and ears to be directly exposed to the water. This situation allows water droplets to be drawn into the diver's mouth and on into the respiratory tract. Therefore, the diver is vulnerable via inhalation and ingestion, as well as skin, eye, and ear contact.

The ideal dress for a diver who will be exposed to a contaminated dive site will be a drysuit complete with attached hood, boots, gloves and full face mask.

In extreme cases, the diver shall use a surface supply dive system incorporating a full-face mask or helmet. Airborn contaminants at the site should be considered and a high-pressure air bank may be needed, rather than a local air compressor.

If the diver cannot be adequately protected from the pollutant hazard at the intended site with the equipment available to the dive team, then the dive shall not take place. Therefore in addition to the equipment required for general operations (see Chapter 9), the following shall be used whenever a diver is working within a contaminated environment:

- a) a full face mask or helmet;
- b) a vulcanized rubber drysuit with attached boots and hood as a minimum;
- c) any other equipment required to keep the diver protected;
- d) suitable apparel and equipment shall be worn to prevent exposure of surface support personnel to any contaminate;
- e) appropriate equipment at the surface of the dive site, to allow for effective decontamination of personnel; and
- f) a contingency plan for emergencies shall be made and be available at the dive site and will include:
 - i. measures to decontaminate the diver rapidly, at least partially, and
 - ii. to institute resuscitation and treatment;
 - iii. measures to prevent contamination of surface staff;
 - iv. measures to minimize contamination of surface equipment;
 - v. notification to the physician of an emergency involving contamination;
 - vi. notification to the emergency hospital facility that a diver who is injured, and has been contaminated with specific and/or nonspecific contaminates is being sent to the facility; and
 - vii. notification to the ambulance or emergency transport service that the diver/victim is contaminated.

10.10.5 Operational Requirements

10.10.5.1 Dive Plan

Before diving commences in a contaminated environment, an operational plan shall be produced and it shall identify:

- a) the contaminants present;
- b) any special clothing or equipment to be used;
- c) the potential adverse health effects to persons and special medical precautionary measures;
- d) the exclusion zone, contamination reduction zone, support zone including the protective clothing and equipment to be used in them;
- e) the procedures to be followed by personnel when moving from one zone to another;
- f) the special first aid measures associated with exposure to the specific contaminants; and
- g) the emergency telephone numbers to secure qualified assistance within adequate response times.

This plan shall be available at the dive site.

10.10.5.2 Diver-in-Charge

The Diver-In-Charge shall ensure that:

- a) emergency breathing apparatus is provided for surface support personnel if there is risk of inhaling dangerous contaminants during the diving operations;
- b) suitable apparel and equipment is worn by surface support personnel to prevent exposure to contaminants;
- c) an appropriate means of safely decontaminating personnel is available at the dive site;
- d) the dive site has the means and facilities to safely dispose of contaminated clothing and equipment;
- e) all diving systems and equipment exposed to the contaminant are inspected for deterioration before each dive;
- f) diaphragms of the first and second stage regulators and associated exhaust valves are inspected for deterioration before each dive; and
- g) contaminated diving systems and equipment are not removed from the dive site unless authorized by the Diver-In-Charge, and are not used in any subsequent diving operation unless found free of all contaminants.

10.10.5.3 Surface Supply Equipment Requirements

Where appropriate for the degree of contamination; for dives in contaminated environments, the Diver-In-Charge shall ensure that divers use surface supply equipment including:

- a) a surface supply diving helmet designed and suitable for such work;
- b) a totally enclosed diving suit, made of nonabsorbent material which mates to the helmet with a positive seal and locking device;
- c) a two-way voice communication system; and
- d) protective devices, where practicable, to minimize contaminant exposure to diving equipment.

10.10.5.4 Contaminant Zones

For dives in contaminated environments, the following zones shall be established on site:

- a) a dedicated contamination reduction zone with suitable means to decontaminate personnel;
- b) a dedicated support zone with suitable means to decontaminate or dispose of apparel and equipment; and
- c) a dedicated exclusion zone to handle the contaminant, accessible only to authorized and protected personnel.

Workers entering the exclusion zone shall wear appropriate personal protective equipment. Workers shall enter and leave the exclusion zone only through the contamination reduction zone. No food, drink, or tobacco may be taken into the exclusion zone or the contamination zone.

10.10.6 Minimum Crew

A minimum crew of 4 workers shall be present at a diving operation in a contaminated environment, one of whom shall be a diver, one a diver-in-charge, one a diver's tender, and one a standby diver.

Chapter 11. SPECIAL OPERATIONAL PROCEDURES AND REQUIREMENTS – TYPE 2 DIVES

11.1 Purpose

This chapter outlines the procedures and requirements (in addition to those listed in Chapter 9) that must be followed for all Type 2 Dives performed by DFO divers.

Type 2 dives include but are not limited to:

- a) decompression dives (see restriction section 11.2.6);
- b) dives in the vicinity of underwater pressure differentials including water control and water intake facilities;
- c) dives related to the search, construction, repair or inspection of ships (includes cleaning transducers), bridge piers, wharves, dry docks, and underwater tunnels;
- d) dives that involve using underwater welding or cutting equipment or explosives; and
- e) dive rescue programs.

11.2 General Requirements

11.2.1 Approach to Water Control and Intake Facilities

Diving where underwater pressure differentials may be encountered is strictly prohibited unless the flow of water is stopped and not re-established until the diver leaves the water.

11.2.2 Boat Dive

For the duration of a Type 2 dive carried out from a boat or vessel, the dive boat operator must devote his or her entire time and attention to the work as a dive boat operator.

11.2.3 Use of Explosives

Use of underwater explosives by DFO divers is strictly prohibited unless written approval is obtained from the National Diving Safety Coordinator.

In the event that approval is ever obtained, a two-way voice communication system must be used unless this equipment is in itself a hazard to the diver.

11.2.4 Machinery and Equipment

All machinery and equipment that could be a hazard to the diver must be secured against inadvertent movement and made inoperable for the duration of the dive.

11.2.5 Entrapment

Where there is a likelihood that a diver may be trapped, the Diver-in-Charge shall ensure that:

- a) a two-way voice communication system between the diver and the diver's tender is provided; and
- b) a second dive team, equipped to rescue a diver in the event of an emergency, is present at the dive site.

11.2.6 Decompression Dives

Decompression dives are strictly prohibited unless written approval is obtained from the National Diving Safety Committee.

11.2.7 Hyperbaric Chamber

If decompression dives are approved, a hyperbaric chamber meeting the requirements of CSA Standard CAN/CSA Z275.1-05 must be available and in operable condition.

The hyperbaric chamber must be operated by a qualified person.

11.2.8 Alternative Energy Sources

If any life support equipment used at the dive site has a power source requirement then a second source must also be available and be capable of being rapidly brought on line.

11.3 Scuba Dives

11.3.1 Tethered

In a diving operation where the diver is tethered to the surface by a lifeline or float, there shall be at least three persons present at the dive site, of whom:

- a) one is a standby diver; and
- b) one is a diver's tender.

The Diver-in-Charge of a Type 2 Scuba diving operation must remain on the surface.

11.3.2 Untethered

In a Type 2 Scuba diving operation where the diver is not tethered to the surface by a lifeline or float, there shall be:

- a) a through-water, two-way voice communication system between the divers and the surface; and
- b) at least four persons present at the dive site, of whom:
 - i. three are divers, one of whom is a standby diver; and
 - ii. one is a diver's tender.

The Diver-in-Charge of a Type 2 Scuba diving operation must remain on the surface.

11.4 Surface Supply Diving

All requirements contained in section 10.8 with respect to a Type 1 surface supplied dive shall be followed for Type 2 surface supplied dives.

11.4.1 Minimum Crew

There shall be at least three (3) persons present at a surface supply dive site, specifically:

- a) diver;
- b) stand-by diver / tender;
- c) Diver-in Charge / manifold operator.

For the duration of the surface supply dive, the diver's tender shall devote his or her full attention to the work of a diver's tender.

For the duration of the dive the manifold operator shall devote his or her full attention to the duties of operating the manifold, communications box and supervising the dive.

Except in an emergency, each surface supply diver in the water must have a separate diver's tender.

11.5 Hull Inspection

Hull inspection diving may be necessary due to a known problem or it may be requested in order that a vessel's Captain or Chief Engineer can generate an up-to-date pre-sailing report on the state of the vessel's hull. The work may take several paths and require a variety of pre-dive plans. The tasks requested may be anything from a simple report based on a Close Visual Inspection (CVI) to the repair, removal or cleaning of a specific component. In all cases, when a dive crew is assembled to carry out work on a ship's hull, the work must be planned, and then conducted according to the plan.

11.5.1 Additional Risks

There are additional risks associated with Hull Inspection Diving. These risks include:

- a) increased risk of entrapment while working in an overhead environment;
- b) increased risk of being crushed while working between the bottom of the vessel and the seabed;
- c) hand lacerations due to marine growth on the hull;
- d) working in the vicinity of the ship's intake, discharge and propulsion systems;
- e) over exertion due to increased workload caused by long swims; and
- f) loss of buoyancy control, i.e. falling from the bottom of the vessel to the seabed.

11.5.2 Instruction and Training

Hull Inspection diver instruction and training should include the following topics:

- a) ship's nomenclature;
- b) reporting terminology;
- c) switching to back-up air supply;
- d) emergency recovery to surface support vessel or area; and
- e) buoyancy control.

11.5.3 Competency Requirements

In order to perform Hull Inspection Dives, the diver must be able to:

- a) demonstrate a knowledge of a ship's nomenclature;
- b) demonstrate the rigging arrangements commonly used during hull surveys;
- c) communicate via line signals;
- d) demonstrate the emergency contingencies contained in the pre-dive plan; and
- e) maintain a specified depth by controlling buoyancy.

11.5.4 Equipment Requirements

In addition to the equipment required for general operations (see Chapter 9), the following must be used whenever a diver is working under the hull of a ship:

- a) a bail out bottle; and
- b) any tools identified in the dive plan.

11.5.5 Operational Requirements

11.5.5.1 Dive Plan

Prior to any diving, a survey of the location shall be conducted and the following considered:

- a) the clearance between the bottom of the ship and the seabed;
- b) the current and tidal influences at the location;
- c) the visibility at the location;
- d) the weather, prevailing and expected, must be acceptable for the dive exposure.

Prior to the commencement of diving operations, the dive crew shall meet with the Vessel Master and the Chief Engineer to discuss and finalize the dive plan and implement safety plans. At this meeting, the ship plans/drawings will be consulted in order to familiarize the dive crew with construction of the ship's hull.

In conjunction with Chief Engineer, the Diver-in-Charge shall ensure intakes and propulsion systems are locked out.

Flags and shapes shall be hoisted and the ships compliment shall be advised that diving is about to commence.

All over-the-side working shall cease until the dive operation is complete.

As a pre dive requirement, the Diver-in-Charge must ensure that every member of the dive team is familiar with the dive plan, that all members of the dive team agree on signals and emergency procedures, and that all the necessary equipment is available and in good operating condition.

11.5.5.2 Tethered Dives

Where the diver is tethered to the surface by a lifeline or float, there shall be at least three persons present at the dive site and shall be deployed as follows:

- a) two shall be divers, one of whom shall be the standby diver; and
- b) one shall be the diver's tender.

A voice communication system sufficient to monitor the diver's breathing must be used.

11.5.5.3 Untethered Dives

Where the diver is not tethered to the surface by a lifeline or float, there shall be a through-water, two-way voice communication system between the divers and the surface, and at least four persons present at the dive site and shall be deployed as follows:

- a) three shall be divers, one of whom shall be the standby diver; and
- b) one shall be the diver's tender.

11.5.5.4 Diver-in-Charge

The person not diving shall be designated as the Diver-in-Charge. This person will control the site and shall not enter the water.

Annex A Regulatory Concordance

Canada Occupational Health and Safety Regulations Part XVIII Diving Operations, pursuant to the Canada Labour Code Part II.	Fisheries and Oceans Canada Departmental Diving Safety Procedures.
Regulation Reference	Section Number Reference
18.1	2.1 Bottom Time 2.3 Contaminated Environment 2.4 Dive – Type 1 2.5 Dive – Type 2 2.7 Dive Tender 2.8 Diver 2.9 Diver-in-Charge 2.11 Diving Buoy 2.18 Hyperbaric Chamber 2.19 International Code Flag A 2.21 Liveboating 2.23 No-Decompression Limit 2.27 Surface Supply Dive 2.28 Therapeutic Recompression
18.2	— Not Applicable —
18.3 (1)	— Not Applicable —
18.3 (2)	— Not Applicable —
18.4 (1) (a)	Chapter 9 GENERAL OPERATIONAL PROCEDURES AND REQUIREMENTS – TYPE 1 AND TYPE 2 DIVES Chapter 10 SPECIAL OPERATIONAL PROCEDURES AND REQUIREMENTS – TYPE 1 DIVES Chapter 11 SPECIAL OPERATIONAL PROCEDURES AND REQUIREMENTS – TYPE 2 DIVES
18.4 (1) (b)	9.3 Hazards Chapter 10 SPECIAL OPERATIONAL PROCEDURES AND REQUIREMENTS – TYPE 1 DIVES Chapter 11 SPECIAL OPERATIONAL PROCEDURES AND REQUIREMENTS – TYPE 2 DIVES
18.4 (1) (c)	9.8 Emergency Procedures
18.4 (2)	9.8 Emergency Procedures
18.4 (3)	— Entire Document —
18.5 (1) (a) (b)	6.2.1 Diving 9.4 Specialized Equipment 10.3 Specialty Operations 10.4.2 Instruction and Training 10.5.2 Instruction and Training 10.6.2 Instruction and Training 10.7.2 Instruction and Training 10.8.2 Instruction and Training 10.9.2 Instruction and Training 10.10.2 Instruction and Training

Canada Occupational Health and Safety Regulations Part XVIII Diving Operations, pursuant to the Canada Labour Code Part II.	Fisheries and Oceans Canada Departmental Diving Safety Procedures.
Regulation Reference	Section Number Reference
18.5 (2)	6.3 Competency Requirements
18.5 (3)	6.3.3 Non-DFO Divers
18.6 (1)	6.2.2 First Aid and CPR
18.6 (2)	6.2.2 First Aid and CPR
18.7 (1) (a) (b)	5.2 Medical Requirements 5.3 Restrictions 9.12 Unfit to Dive
18.7 (2)	— Covered by OHAG—
18.7 (3)	5.3 Restrictions
18.7 (4)	5.2 Medical Requirements
18.8 (1)	9.12 Unfit to Dive
18.8 (2)	9.12 Unfit to Dive
18.9 (1) (a-l)	Annex B Pre-Dive Checklist
18.9 (2)	Annex B Pre-Dive Checklist
18.9 (3)	Annex B Pre-Dive Checklist 9.2.2 Decompression 11.2.6 Decompression Dives
18.10 (1)	9.9.1 Dive Team - Basic Requirement
18.10 (2)	9.9.2 Dive Team - Diver-in-Charge
18.10 (3)	10.8.6 Minimum Crew
18.10 (4)	9.9.7 Boat Operator
18.11	10.8.6 Minimum Crew
18.12	11.2.2 Boat Dive
18.13	11.3.1 Tethered 11.3.2 Untethered 11.4.1 Minimum Crew 11.5.5.2 Tethered Dives 11.5.5.3 Untethered Dives
18.14 (a) (b) (c)	9.9.6 Standby Diver
18.15 (a) (b) (c)	9.8 Emergency Procedures
18.16 (a) (b)	9.8 Emergency Procedures
18.17	9.13 Adherence to Planned Depth-Time Procedures 9.2.2 Decompression
18.18 (a) (b) (i) (ii)	9.11 Signals Displayed while Diving 10.5.5 Operational Requirements
18.19	9.9.2 Diver-in-Charge
18.20 (a) (b) (c) (d)	9.9.2 Diver-in-Charge
18.21	9.3 Hazards
18.22 (a) (b)	9.9.2 Diver-in-Charge 9.9.3 Communication
18.23 (1) (2)	9.7 Reserve Breathing Supply 9.7.1 Free-Swimming Scuba Deployment 9.7.2 Independent Air System 11.5.4 Equipment Requirements
18.24	7.5.1 Air Compressors 7.5.2 Breathing Air Standards 7.5.3 Air from Commercial Sources

Canada Occupational Health and Safety Regulations Part XVIII Diving Operations, pursuant to the Canada Labour Code Part II.	Fisheries and Oceans Canada Departmental Diving Safety Procedures.
Regulation Reference	Section Number Reference
18.25 (a) (b)	Annex B Pre-Dive Checklist 9.10.3 Surface Equipment 10.4.4 Equipment Requirements
18.26 (1) (a) (b)	Error! Reference source not found. Error! Reference source not found. 7.3 Maintenance Requirements 7.4 Defective Equipment
18.26 (2)	7.3 Maintenance Requirements
18.27 (1)	9.6 Equipment Check Annex B Pre-Dive Checklist
18.27 (2)	9.6 Equipment Check
18.28 (1)	9.17 Elevated Entries
18.28 (2) (a) (b)	9.17 Elevated Entries
18.28 (3)	9.17 Elevated Entries
18.29	9.15 Diving from CCG Vessels
18.30	9.16 Floating Platforms
18.31 (1) (a) (b) (c)	9.10.2 Lifeline
18.31 (2)	9.10.2 Lifeline 10.6.4 Equipment Requirements
18.31 (3)	9.10.2 Lifeline
18.32 (a) (b) (c)	7.7 Gauges
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18.45	11.2.1 Approach to Water Control and Intake Facilities

Canada Occupational Health and Safety Regulations Part XVIII Diving Operations, pursuant to the Canada Labour Code Part II.	Fisheries and Oceans Canada Departmental Diving Safety Procedures.
Regulation Reference	Section Number Reference
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Annex B Pre-Dive Checklist

PRE-DIVE CHECKLIST

This list identifies dive plan requirements that must be reviewed by the dive team before each dive:

- Diver-in-Charge designated.
- If needed, dive tender(s) assigned.
- If needed, standby diver(s) assigned.
- Divers feel physically and mentally fit to dive.
- Duties of each dive team member understood.

- Surface & underwater conditions and hazards reviewed, control contingencies established.
- Emergency procedures reviewed.
- Dive termination protocols reviewed.
- Communication methods reviewed.
- Repetitive dive factor determined.
- No decompression limit determined.

- Diving equipment requirements established.
- Breathing supply requirements established.
- Reserve breathing supply requirements established.
- Thermal protection requirements established.
- If needed, lifeline requirements established.
- Emergency equipment requirements established.
- All diving equipment checked.

- Checklist completion verified in log book.**

After entering the water but before beginning descent, every diver shall check that all equipment is present, properly fastened, and functioning.

Annex C Emergency Information Template

EMERGENCY RESPONSE & EVACUATION BY SITE

Emergency planning is an essential component of pre-dive planning and one of your responsibilities as a DFO diver. This page must be completed for each site and must be reviewed at least once a year.

Site Info

Site / Location: _____

Area Diving Safety Coordinator: _____

Ambulance

Phone: _____

Comment: _____

Hospital

Phone: _____

Contact Person: _____

Comment: _____

Hyperbaric Facility

Location: _____

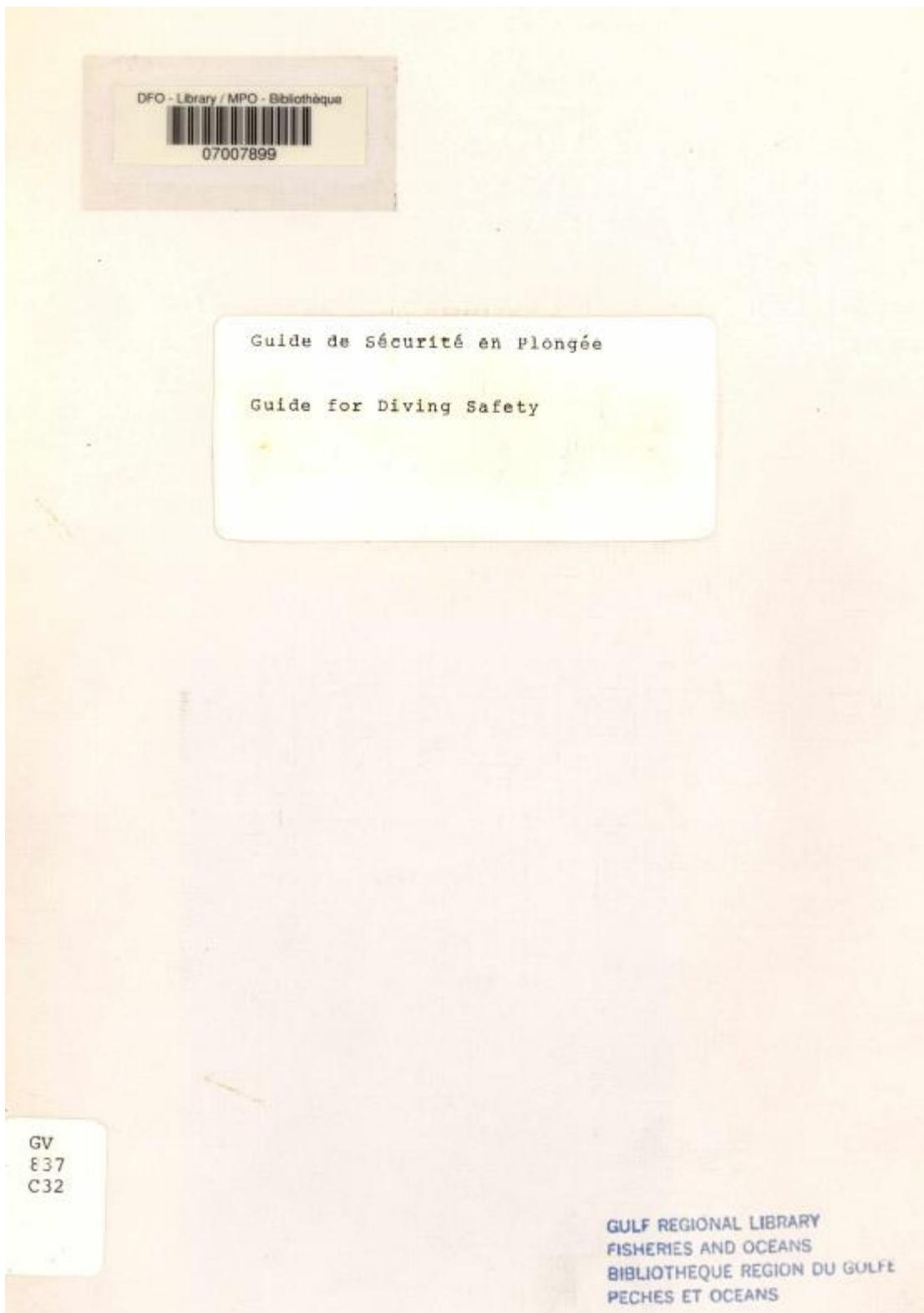
Phone: _____

Contact Person: _____

Comment: _____

<p>Divers Alert Network (DAN) (919) 684-9111</p>
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ANNEX "I" GUIDE FOR DIVING SAFETY

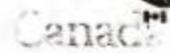




GUIDE DE **SÉCURITÉ**
EN PLONGÉE

GUIDE FOR **SAFETY**
DIVING

 Produit et distribué par le Service canadien de la sécurité





Guide for Diving Safety

Guide de Sécurité en Plongée

Fisheries and Oceans	Pêches et Océans
Guide for Diving Safety	Guide de Sécurité en plongée

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Foreword

To obtain a true understanding of our aquatic environment, and to gain essential knowledge of our marine resources, we must continually seek better and safer ways to explore, perform research, and undertake analysis of the underwater world. In many situations this work must be done by divers who can provide the degree of direct observation and control of experimentation necessary to acquire essential data that cannot be obtained by other means.

The Department of Fisheries and Oceans' Guide for Diving Safety has been developed to provide an appropriate safety framework to cover Departmental diving activities, including the fundamentals for safe and efficient diving, and for carrying out useful work underwater.

The dynamic nature of underwater work dictates that this Guide be subject to periodic revision. DFO divers will be asked to contribute to such revision to ensure that operational requirements are met to the fullest extent possible.

Pat Napoli
Director General, Personnel

Avant-Propos

Pour que nous puissions bien comprendre notre environnement aquatique et acquérir une connaissance fondamentale de nos ressources marine, nous devons continuellement chercher des méthodes plus sûres et plus efficaces d'exploration, de recherche et d'étude du monde sous-marin. Dans de nombreux cas, des données essentielles ne peuvent être obtenues autrement que par l'intermédiaire d'observations et de vérifications effectuées par des plongeurs.

Le Guide de Sécurité en Plongée du ministère des Pêches et des Océans a pour objet de doter les plongeurs du Ministère d'un cadre sécuritaire adapté à leurs besoins qui, tout en incluant les règles de base pour une plongée sécuritaire, permet de réaliser efficacement des travaux sous-marins.

Comme les méthodes de travail sous l'eau évoluent constamment, ce guide sera révisé à l'intervalles réguliers. Les plongeurs du MPO seront appelés à contribuer à ces révisions afin de satisfaire le plus possible aux exigences du travail.

Pat Napoli
Directeur général, du Personnel

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Fisheries and Oceans
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Chapter 1: INTRODUCTION

Individuals participating in diving operations are exposed to a variety of occupational risks and hazards. Owing to the complex and highly variable nature of these operations, this Guide provides only an outline of the minimum acceptable administrative, training, and operational procedures applicable to safe diving activities.

Specialized diving safety procedures reflecting the specific activities and hazards of a particular branch or establishment may be added to this Guide; however, at no time are standards to fall below the basic requirements set out in the Guide.

All those employed in diving operations have an individual responsibility to follow safe diving procedures and to support a safe diving program. The authority and responsibility for implementing the requirements outlined in this Guide rests with the Regional Director General who will delegate operational and administrative control of the diving program to the Regional Diving Officer and the Regional Diving Safety Committee.

At the national level, Regional Diving Officers form a Departmental Diving Safety Committee which meets annually to review this Guide and to make amendments based on the recommendations of the Regional Diving Safety Committees.

On an even larger scale, DFO supports the Canadian Association for Underwater Science (CAUS) and through membership, promotes diving safety and reciprocity between government, universities, and the private sector, nationally and inter-nationally.

Chapitre 1: INTRODUCTION

Les gens qui participent à des opérations de plongée dans le cadre de leurs fonctions s'exposent à une multitude de risques et de dangers. En raison de la nature complexe et grandement variable de la plongée, ce guide ne donne qu'une description sommaire des procédures administratives et opérationnelles de base et des exigences de formation relative à la plongée.

Les directions et les établissements qui se sont dotés de mesures de sécurité spéciales relatives aux méthodes et aux dangers propres à leurs opérations de plongée pourront les inclure dans ce guide. Toutefois, ces mesures ne devront en aucun cas être moins sévères que les exigences fondamentales qui y sont exposées.

Tous les employés qui prennent part à des opérations de plongée ont le devoir d'observer les règles de sécurité et de soutenir la réalisation d'un programme de plongée sécuritaire. Le directeur général régional doit voir au respect des exigences énoncées dans ce guide et déléguer le contrôle opérationnel et administratif du programme de plongée à l'agent de plongée régional et au Comité régional de sécurité en plongée.

À l'échelle nationale, les agents de plongée régionaux constituent un comité ministériel de sécurité en plongée lequel se réunit annuellement afin de revoir le présent guide et le modifier selon les recommandations des comités régionaux de sécurité en plongée.

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Chapter 2: DEFINITIONS

2.01 Approved Equipment

Diving equipment approved by the Regional Diving Safety Committee. This includes cylinders, regulators, gauges, buoyancy compensators, dry suits, compressors and other associated equipment.

2.02 Basic Dive

A daytime, non repetitive, no decompression, free swimming dive, using the buddy system and open circuit scuba with air. A basic dive must not exceed 20 m (66 feet) and it must permit direct access to the surface.

2.03 Bottom Time

The total elapsed time in minutes between leaving the surface in descent to the time that final ascent is begun.

2.04 Buddy System

A system of assigning diving partners who are responsible for maintaining effective communication with each other and rendering assistance when necessary.

2.05 Departmental Diving Safety Committee

A committee composed of the Departmental Diving Officer as chairperson and the Regional Diving Officers.

Chapitre 2: DÉFINITIONS

2.01 Équipement reconnu

Équipement de plongée reconnu par le Comité régional de sécurité en plongée (bouteilles, régulateurs, jauges, vestes de compensation, habits de plongée, compresseurs et équipement connexe).

2.02 Plongée élémentaire

Plongée de jour, non-successive et n'exigeant pas de décompression, en scaphandre autonome, copain-copain, ne dépassant pas 20m de profondeur (66 pieds) et avec un accès direct à la surface.

2.03 Temps de fond

Temps total écoulé, en minutes, entre le moment où le plongeur quitte la surface en descente et le moment où il commence sa remontée finale.

2.04 Copain - copain

Le fait de charger des partenaires de plongée de demeurer en contact et de s'entraider au besoin.

2.05 Comité ministériel de sécurité en plongée

Comité constitué d'un président, et des agents de plongée régionaux.

<p>2.06 Departmental Diving Safety Officer</p> <p>An individual appointed by the Senior Assistant Deputy Minister to develop departmental diving policy and to liaise with the National Joint Safety and Health Committee on matters pertaining to diving safety and health.</p>	<p>2.06 Agent ministériel de sécurité en plongée</p> <p>Personne chargée par le sous-ministre adjoint principal d'élaborer la politique du Ministère en matière de plongée et de discuter des questions relatives à la santé et à la sécurité en plongée avec le Comité national mixte de santé et de sécurité.</p>
<p>2.07 DFO Certified Diver</p> <p>A diver who has satisfied the administrative, medical, and basic training criteria necessary for DFO diving certifications. Specialty certification requires additional training and endorsement.</p>	<p>2.07 Plongeur reconnu par le MPO</p> <p>Plongeur qui répond aux critères administratifs et médicaux ainsi qu'aux exigences de formation du MPO ; les plongées spécialisées nécessitent un entraînement et une certification supplémentaire.</p>
<p>2.08 Diver-in-charge</p> <p>An individual appointed by the project manager in consultation with the Diving Officer, and who coordinates and controls infield diving operations.</p>	<p>2.08 Plongeur en chef</p> <p>Personne chargée par le responsable du projet, en consultation avec l'agent de plongée, de coordonner et de diriger les opérations de plongée.</p>
<p>2.09 Diver-In-Training</p> <p>A diver gaining DFO certification and/or experience and training in specialty diving activities under the supervision of the Diving Officer or Diver-in-charge.</p>	<p>2.09 Plongeur stagiaire</p> <p>Plongeur en voie d'être reconnu par le MPO ou en train prendre de l'expérience et/ou de recevoir une formation dans le cadre d'opérations de plongée spéciales supervisées par l'agent de plongée ou le plongeur en chef.</p>
<p>2.10 Diver's Tender</p> <p>A competent person at the dive site who tends the diver(s), controls surface requirements and monitors the progress of the dive.</p>	<p>2.10 Aide de surface</p> <p>Personne compétente qui, durant la plongée, s'occupe des plongeurs, effectue les opérations de surface et suit l'évolution de la plongée.</p>
<p>2.11 Diving</p> <p>Entering the water wearing a compressed gas breathing apparatus.</p>	<p>2.11 Plongée</p> <p>Le fait de pénétrer dans l'eau en portant un appareil respiratoire à air comprimé.</p>

<p>2.12 Diving Officer</p> <p>The individual who, because of diving qualifications and experience is appointed by branch director(s) in consultation with the Regional Diving Officer to be responsible for branch/establishment diving programs.</p>	<p>2.12 Agent de plongée</p> <p>Personne qui, en raison de ses compétences et de son expérience en plongée, est chargée par le(s) directeur (s), en consultation avec l'agent de plongée régional, d'encadrer le programme de plongée d'une direction ou d'un établissement.</p>
<p>2.13 Diving Program</p> <p>The assemblage of operational and administrative procedures used to organize and control an establishment's diving activities. This includes diver training and DFO certification, equipment maintenance, diving project approval and record keeping.</p>	<p>2.13 Programme de plongée</p> <p>Ensemble des procédures opérationnelles et administratives servant à organiser et à contrôler les opérations de plongée d'un établissement, notamment la formation des plongeurs et leur reconnaissance par le MPO, l'entretien de l'équipement, l'autorisation des opérations de plongée et la tenue des registres.</p>
<p>2.14 Free Swimming</p> <p>Means diving while using scuba but not tethered to the surface by a lifeline or float.</p>	<p>2.14 Plongée libre</p> <p>Signifie la plongée utilisant l'appareil respiratoire autonome mais qui n'est pas relié à la surface par une ligne de sauvetage ou une flotte.</p>
<p>2.15 Medical Officer</p> <p>A physician recommended by the Department of Health and Welfare to conduct medical examinations of individuals engaged in diving on behalf of DFO.</p>	<p>2.15 Médecin</p> <p>Médecin recommandé par le ministère de la Santé et du Bien-Être Social pour effectuer les examens médicaux des individus qui font de la plongée pour le MPO.</p>
<p>2.16 No-Decompression Limit</p> <p>The maximum bottom time which allows a direct ascent to the surface without requiring decompression stops.</p>	<p>2.16 Limite pour la remontée sans paliers</p> <p>Temps de fond maximal permettant au plongeur de remonter directement à la surface sans nécessiter de décompression.</p>

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2.17 Recognized Agency

A person or agency who, because of expertise, knowledge, training and experience, is recognized by the Regional Diving Safety Committee as qualified to instruct, examine and certify divers and equipment.

2.18 Regional Diving Officer

The individual who, because of diving qualifications and experience, is appointed by the Regional Director General to be responsible for the region's diving program.

2.19 Regional Diving Safety Committee

A committee of competent persons appointed by the Regional Director General to recommend procedures, policy and standards for regional diving operations and to act as a board of review and appeal.

2.20 Repetitive Dive

Is any dive where residual nitrogen influences the calculation of the bottom time recorded for the dive.

2.21 Residual Nitrogen

Nitrogen in excess of normal conditions that is still dissolved in a diver's tissues after the surface has been reached.

2.17 Organisme reconnu

Personne ou organisme qui, de par ses connaissances, ses compétences, sa formation et son expérience, est autorisé par le Comité régional de sécurité en plongée à former des plongeurs, à leur faire subir des examens, à leur délivrer des certificats ainsi qu'à examiner et à approuver l'équipement.

2.18 Agent de plongée régional

Personne qui, de par ses compétences et son expérience en plongée, est chargée par le directeur général régional d'encadrer le programme de plongée de la région.

2.19 Comité régional de sécurité en plongée

Comité formé de personnes compétentes et chargé par le directeur général régional de recommander des procédures, des principes et des normes pour les opérations de plongée régionales et de servir de comité d'examen et d'appel.

2.20 Plongée successive

Toute plongée pour laquelle l'azote résiduel influence le calcul du temps de plongée.

2.21 Azote résiduel

Surplus d'azote dissout qui se trouve encore dans les tissus du plongeur une fois que celui-ci est revenue à la surface.

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2.22 Specialty Dive

Any dive outside the excursion or equipment restrictions of a basic dive. Such a dive may require additional training and operational procedures.

2.23 Surface Interval (SI)

The time which a diver has spent on the surface following a dive. Time begins as soon as the diver surfaces and ends as the diver starts the descent for the next dive.

2.22 Opérations de plongée spéciales

Toute opération de plongée dont les paramètres (trajet, équipement) diffèrent de ceux d'une opération de plongée élémentaire. Ce genre de plongée peut nécessiter une formation et des procédures opérationnelles supplémentaires.

2.23 Intervalle en surface (IS)

Temps que le plongeur passe en surface après une plongée; cet intervalle commence dès que le plongeur fait surface et se termine dès qu'il s'immerge pour effectuer la plongée suivante.

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Chapter 3: RESPONSIBILITIES	Chapitre 3: RESPONSABILITÉS
<p>3.1.0 Purpose</p> <p>This chapter describes the responsibilities of individuals involved in any diving operation or activity which the Department controls through the involvement of personnel or the ownership of equipment utilized in such operations.</p>	<p>3.1.0 Objet</p> <p>Ce chapitre décrit les responsabilités des individus qui prennent part à une opération de plongée régie par le Ministère soit parce que ses employés y participent ou parce qu'il possède l'équipement qui y est utilisé.</p>
<p>3.2.0 Responsibilities</p> <p>It is the duty of all those responsible for or associated with diving operations to ensure the regulations in this Guide are complied with and that the safety of divers and surface support personnel is not jeopardized.</p> <p>Responsibilities associated with diving operations are to be contained in the statement of duties of Divers, Divers in Charge and Diving Officers.</p>	<p>3.2.0 Responsabilités</p> <p>Il appartient aux employés chargés des activités de plongée ou concernés par celles-ci de voir à ce que les règles énoncées dans ce guide soient respectées et que la sécurité des plongeurs et du personnel de surface ne soit pas compromise.</p> <p>Les responsabilités relatives aux activités de plongée doivent figurer dans les énoncés de fonctions des plongeurs, plongeur en chef, et des agents de plongée.</p>
<p>3.2.1 Departmental Diving Safety Officer</p> <p>The Departmental Diving Safety Officer is responsible for:</p> <ul style="list-style-type: none"> a) advising senior management on issues pertaining to diving safety and health and obtaining authorization for departmental diving safety policies; b) developing, issuing and maintaining diving safety policies and procedures, and ensuring their implementation throughout the Department; 	<p>3.2.1 Agent ministériel de sécurité en plongée</p> <p>L'agent ministériel de sécurité en plongée doit:</p> <ul style="list-style-type: none"> a) conseiller les gestionnaires supérieurs en matières de santé et de sécurité en plongée et faire approuver les politiques du Ministère relatives à la sécurité en plongée ; *b) élaborer, publier et mettre à jour les politiques et les procédures de sécurité en plongée et voir à leur application au sein du Ministère ;

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<p>c) representing the Department in negotiations with Labour Canada, Treasury Board, Health and Welfare Canada, the Canadian Association for Underwater Sciences and the Canadian Standards Association on issues pertaining to diving safety;</p> <p>d) chairing the Departmental Diving Safety Committee; and</p> <p>e) submitting an annual diving safety report to the Director General, Personnel</p>	<p>c) représenter le ministère au cours des négociations avec Travail Canada, le Conseil du Trésor, Santé et Bien-Être Social Canada, l'Association Canadienne des Sciences Subaquatiques et l'Association canadienne de normalisation portant sur des questions relatives à la sécurité en plongée ;</p> <p>d) présider le Comité ministériel de sécurité en plongée; et</p> <p>e) présenter un rapport annuel sur la sécurité en plongée au Directeur général du Personnel.</p>
<p>3.2.2 Departmental Diving Safety Committee</p> <p>The Departmental Diving Safety Committee shall:</p> <p>a) act as an advisory committee to the Deputy Head in matters pertaining to diving safety and shall submit recommendations to the Director General, Personnel;</p> <p>b) meet annually or more often, as determined by the chairperson, to review any recommendations on diving safety made by Regional Diving Safety Committees;</p> <p>c) act as board of review for diving incidents and accidents;</p> <p>d) when necessary, make amendments to this guide</p>	<p>3.2.2 Comité ministériel de sécurité en plongée</p> <p>Le Comité ministériel de sécurité en plongée doit:</p> <p>a) servir de conseiller en matière de sécurité en plongée auprès du sous-chef relativement à des questions ayant trait à la sécurité en plongée et présentera ses recommandations au Directeur général du personnel ;</p> <p>b) se réunir une fois l'an afin ou plus souvent, à l'avis du président, et d'examiner les recommandations des comités régionaux de sécurité en plongée ;</p> <p>c) agir à titre de comité d'étude des incidents et des accidents de plongée ;</p> <p>d) apporter, au besoin, des modifications à ce guide.</p>

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3.2.3 Regional Director General

The Regional Director General of each region employing qualified DFO personnel in diving operations shall:

- a) appoint an employee to act as Regional Diving Officer;
- b) appoint a Regional Diving Safety Committee to recommend procedures, policy and standards for diving operations and to act as a board of review and appeal.

3.2.3 Directeur général régional

Le directeur général régional d'une région qui a recours à la compétence d'employés du MPO pour ses opérations de plongée doit:

- a) nommer un employé à titre d'agent de plongée régional ;
- b) constituer un comité régional de sécurité en plongée chargé de recommander des procédures, des principes et des normes régissant les opérations de plongée et d'agir à titre de comité d'examen et d'appel.

3.2.4 Regional Diving Officer

The Regional Diving Officer is responsible for:

- a) the coordination and safety of all DFO diving operations conducted within the region;
- b) chairing the annual Regional Diving Safety Committee meeting and submitting an annual diving safety report to the Departmental Diving Safety Committee. This report will include diver log summaries and incident/accident reports;
- c) attending the annual Departmental Diving Safety Committee meeting.

3.2.4 Agent de plongée régional

L'agent de plongée régional doit:

- a) assurer la coordination et le déroulement sécuritaire des opérations de plongée du MPO dans sa région;
- b) présider la réunion annuelle du Comité régional de sécurité en plongée et présenter un rapport annuel sur la sécurité en plongée au Comité ministériel de sécurité en plongée, ce rapport inclura un bilan des activités de plongée et un rapport des accidents ou incidents de plongée;
- c) assister à la réunion annuelle du Comité ministériel de sécurité en plongée.

3.2.5 Regional Diving Safety Committee

The Regional Diving Safety Committee shall:

- a) recommend policy, procedures and standards for the regional diving program;
- b) meet annually to discuss, plan and review the safety of diving operations;
- c) if necessary, make recommendations for amending diving policies and procedures and tabling these recommendations at the annual Departmental Diving Safety meeting; and
- d) act as board of review with the authority to approve, restrict, prohibit, suspend or reinstate any diver, diving operation, program, practice or equipment.

3.2.6 Director

The Director of an establishment or branch, employing qualified DFO personnel in diving operations, shall:

- a) appoint, in consultation with the Regional Diving Officer, an employee to act as the Diving Officer to provide assistance and advice on diving matters;
- b) where necessary, develop a specialized diving supplement to reference diving activities and procedures not covered in this Guide. A copy of this supplement must be forwarded to the Regional Diving Safety Officer for initial approval.

3.2.5 Comité régional de sécurité en plongée

Le Comité régional de sécurité en plongée doit:

- a) recommander des principes, des procédures et des normes applicables au programme régional de plongée ;
- b) se réunir annuellement pour discuter et étudier la sécurité des opérations de plongée et pour faire de la planification à cet égard ;
- c) faire, au besoin, des recommandations visant à modifier les politiques et les procédures en matière de plongée et les présenter à la réunion annuelle du Comité ministériel de sécurité en plongée ;
- d) servir de comité d'examen investi de pouvoirs d'approbation, de restriction ou d'interdiction applicables aux opérations, aux programmes, aux pratiques ou à l'équipement de plongée. Ce comité a aussi le pouvoir d'annuler ou de renouveler le certificat d'un plongeur.

3.2.6 Directeur

Le directeur d'un établissement ou d'une direction qui a recours à la compétence d'employés du MPO pour ses opérations de plongée doit:

- a) nommer, en consultation avec l'agent de plongée régional, un employé à titre d'agent de plongée chargé de lui donner de l'aide et des conseils en matière de plongée ;
- b) produire, s'il y a lieu, un supplément spécial sur les méthodes et les dangers propres aux opérations de plongée d'un établissement ou d'une direction et ne faisant pas l'objet d'une description dans ce guide. Un exemplaire de ce supplément doit être soumis à l'approbation du Comité régional de sécurité en plongée.

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3.2.7 Diving Officer

The Diving Officer is responsible for:

- a) the coordination and safety of all diving operations conducted on behalf of the establishment;
- b) awarding DFO diving certification of employees who meet the minimum requirements in Chapter 4;
- c) ensuring, after consultation with the project manager, that a Diver-in-Charge is appointed for each diving operation;
- d) ensuring, after consultation with the diver in charge, that diver training and project equipment corresponds to the operational requirements of the dive;
- e) ensuring, in accordance with Chapter 6, that periodic inspection tests are scheduled on all diving equipment and that maintenance records are documented and retained;
- f) ensuring that all air used for diving meets the minimum specifications outlined in Chapter 6;
- g) developing and maintaining dive site emergency contingency and evacuation plans as outlined in appendix C of this Guide;

3.2.7 Agent de plongée

L'agent de plongée doit:

- a) assurer la coordination et le déroulement sécuritaire des activités de plongée effectuées pour le compte de son établissement;
- b) délivrer un certificat de plongeur reconnu par le MPO aux employés qui répondent aux exigences de base énoncées au chapitre 4;
- c) s'assurer, après consultation avec le chargé de projet, qu'un plongeur en chef est nommé pour chaque opération de plongée;
- d) s'assurer, après consultation avec le plongeur en chef, que l'entraînement des plongeurs et l'équipement utilisé correspondent aux besoins opérationnel;
- e) s'assurer, conformément au chapitre 6, que l'équipement de plongée fait l'objet d'inspections régulières et que l'on produit et conserve des registres d'entretien ;
- f) s'assurer que tout l'air utilisé pour la plongée répond aux exigences de base énoncées au chapitre 6 ;
- g) élaborer et tenir à jour des plans d'action et d'évacuation d'urgence des lieux de plongée selon la procédure énoncée à l'annexe C de ce guide ;

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- h) reporting any incidents or accidents to the Regional Diving Officer.

The Diving Officer shall have the authority to rescind diving certification when divers fail to comply with the conditions stated in this Guide, and to restrict or prohibit any diving activity that is unsafe or imprudent. The Regional Diving Safety Committee shall be immediately informed of any such restrictive actions for review and further action as necessary.

- h) mentionner tout incident ou accident à l'agent de plongé régional.

L'agent de plongée devra avoir le pouvoir de retirer les certificats des plongeurs qui ne conforment pas aux conditions énoncées dans ce guide et de limiter ou d'interdire toute opération de plongée qu'il juge dangereuse ou imprudente. S'il prend de telles mesures, il doit en informer aussitôt le Comité régional de sécurité en plongée qui étudiera la question et y donnera suite, au besoin.

3.2.8 Diver-in-Charge

The Diver-in-Charge controls on-site diving operations and is responsible for ensuring that:

- a) all applicable diving requirements in this Guide are complied with and that diving tables are not violated. In addition, hazards which may arise during field operations should be identified and controlled;
- b) all divers have completed the annual administrative, medical and training prerequisites for DFO certifications as outlined in Chapter 4;
- c) all equipment is in good working order, has had an annual maintenance check and is properly used as outlined in Chapter 6;

3.2.8 Plongeur en chef

Le plongeur en chef supervise sur place les opérations de plongée et doit s'assurer:

- a) que toutes les exigences de ce guide, ainsi que les tables de plongée, sont respectées. En outre, il doit pouvoir repérer et maîtriser tous les dangers susceptibles de se présenter pendant une opération de plongée;
- b) que les plongeurs répondent aux critères administratifs, médicaux et aux exigences de formation du MPO pour le renouvellement annuel de leur certificat (voir chapitre 4) ;
- c) que l'équipement est en bon état, a fait l'objet d'une vérification annuelle d'entretien et est utilisé en conformité avec les dispositions du chapitre 6 ;

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d) all diving sites have a written emergency evacuation plan. This plan must be periodically tested, and thereafter forwarded to the Diving Officer;

e) any incidents or accidents are immediately reported as per the procedures outlined in section 3.4.0 of this chapter, and that steps are taken to control such irregularities.

The Diver-in-Charge shall have the authority to restrict, prohibit or suspend any diving operation. The Diving Officer shall be immediately informed of any such restrictive action.

3.2.9 Divers

Ultimate responsibility for diving safety resides with the individual diver. A diver should not dive, nor be allowed to dive if, in the diver's own judgement or that of the Diver-in-Charge:

- a) the diver feels unfit, or is exhausted, or is impaired by spirits, drugs or other causes;
- b) conditions may be unsafe or unfavourable;
- c) conditions may violate the precepts of safe diving operations and/or the requirements of this Guide.

A diver shall neither be forced to dive nor be penalized for not diving when the diver, for valid reasons, desires not to do so.

d) qu'un plan d'évacuation éprouvé périodiquement est affiché à tous les lieux de plongée et fourni à l'agent de plongée ;

e) que l'agent de plongée est immédiatement mis au courant de toute irrégularité ou incident et que des mesures soient prises pour empêcher qu'il ne se reproduise.

Le plongeur en chef a le pouvoir de limiter, d'interdire ou de suspendre des opérations de plongée; s'il prend de telles mesures, il doit en informer aussitôt l'agent de plongée.

3.2.9 Plongeurs

Il appartient au plongeur, de veiller à sa propre sécurité. Un plongeur ne devrait pas plonger ni être autorisé à le faire si, de son propre avis ou de celui du plongeur en chef,

- a) il ne se sent pas en bonne forme physique, est épuisé, ou est affaibli par de l'alcool ou des médicaments ;
- b) les conditions peuvent être dangereuses ou défavorables ;
- c) les conditions peuvent être contraires aux principes de sécurité en plongée ou aux exigences énoncées dans ce guide.

Un plongeur ne doit ni être forcé de plonger ni pénalisé pour un refus s'il a des raisons valables.

Divers shall:

- a) endeavour to maintain a high degree of mental and physical ability;
- b) be responsible for the safe custody and maintenance of all diving equipment issued to them for their personal use or for the use of a dive group;
- c) record all divers in their DFO log book, and submit an annual log summary to their diver-in-charge. Log books shall be available for audit;
- d) immediately report any incidents or accidents to their supervisor and their diver-in-charge.

3.3.0 Records

Diving Officers shall ensure that a file is kept for each diver verifying that:

- a) diving is identified as a job requirement, medical clearance has been given, diving certification and speciality endorsements have been obtained, First Aid and CPR certifications are current, and that log book records are being maintained;
- b) regular maintenance and calibration records are kept for cylinders, regulators, gauges, compressors, and air analysis as per the manufacturer's recommendations. Records must include serial numbers and the certified technician's signature.

The above information shall be retained for 5 years.

Le plongeur doit:

- a) chercher à se maintenir en excellente forme physique et psychologique ;
- b) voir à ce que l'équipement de plongée réservé à son usage ou à celui d'une équipe de plongeurs soit entreposé et entretenu de façon sécuritaire ;
- c) tenir un registre personnel donnant le compte rendu de ses opérations de plongée et fournir un bilan annuel au plongeur en chef. Le registre devra être disponible pour consultation ;
- d) mentionner immédiatement tout incident ou accident à son superviseur et au plongeur en chef.

3.3.0 Dossiers

L'Agent de plongée doit s'assurer que le Ministère dispose d'un dossier sur chaque plongeur. Il doit aussi:

- a) vérifier si la plongée compte parmi les exigences du poste en question, si le plongeur a obtenu une autorisation médicale, s'il détient un certificat de plongeur et des attestations de spécialisation, si ses certificats de secourisme et de RCR sont en règle et si ses registres de plongée sont à jour ;
- b) voir à ce que les données courantes sur l'entretien et l'étalonnage des bouteilles, des régulateurs, des jauges, des compresseurs et sur l'analyse d'air soient consignées dans un registre conformément aux recommandations du fabricant. Les données du registre doivent comporter les numéros de série du matériel et la signature authentique du technicien qualifié pour son entretien.

Les renseignements ci-dessus doivent être conservés pendant 5 ans.

<p>Chapter 4: QUALIFICATIONS AND CERTIFICATION</p> <p>4.1.0 Purpose</p> <p>This chapter outlines the qualifications required for individuals diving on behalf of the Department and describes the certification process.</p> <p>4.2.0 Qualifications</p> <p>4.2.1 Diving Officer</p> <p>The Diving Officer should be experienced in the organization's diving programs and should:</p> <ul style="list-style-type: none"> a) be a DFO-certified diver, knowledgeable in diving procedures and techniques preferably at an instructor level; b) be thoroughly familiar with administrative, medical, training and operational prerequisites for DFO certification; c) be capable of planning and implementing comprehensive diver training and familiarization programs and complete diving operations to achieve specific program objectives; d) be knowledgeable in the use of and maintenance requirements for all diving equipment used by the divers of the organization; 	<p>Chapitre 4: COMPÉTENCES ET CERTIFICATS</p> <p>4.1.0 Objet</p> <p>Ce chapitre traite des compétences requises des plongeurs du Ministère et du processus de certification.</p> <p>4.2.0 Compétences</p> <p>4.2.1 Agent de plongée</p> <p>L'Agent de plongée devrait avoir de l'expérience dans l'organisation d'opérations de plongée et répondre aux exigences suivantes:</p> <ul style="list-style-type: none"> a) détenir un certificat de plongeur du MPO, connaître les méthodes et les techniques de plongée et être, de préférence, classé au niveau d'instructeur ; b) connaître à fond les exigences de certification du MPO (administratives, médicales, de formation et opérationnelles) ; c) pouvoir organiser et implanter des programmes de formation et de familiarisation à l'intention des plongeurs et de réaliser des opérations de plongée afin d'atteindre des objectifs spécifiques d'un programme ; d) connaître le mode d'utilisation et les exigences d'entretien de l'équipement de plongée utilisé par les plongeurs de son organisation ;
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- e) have a comprehensive knowledge of:
- 1) diver training techniques, including preparation of resource material and examinations;
 - 2) diving safety and emergency procedures including the recognition of and the procedures for first aid treatment of diving related illnesses and injuries;
 - 3) the physiology and medical requirements of diving;
 - 4) diving tables and their use;
 - 5) local conditions as applied to diving.

4.2.2 Diver-in-Charge

The Diver-in-Charge should be experienced with field operational requirements and shall:

- a) be a DFO-certified diver, knowledgeable in diving procedures and techniques;
- b) be familiar with the administrative, medical training and operational prerequisites for DFO certification;
- c) be capable of implementing all aspects of the diving program for each project supervised;

- e) bien connaître:
- 1) les techniques de formation des plongeurs, notamment la préparation de la documentation et des examens ;
 - 2) les mesures d'urgence et de sécurité en plongée, y compris les maladies et les blessures propres à la plongée et les premiers soins à prodiguer dans ces situations ;
 - 3) les exigences physiologiques et médicales que requiert la pratique de la plongée ;
 - 4) les tables de plongée et leur utilisation ;
 - 5) les conditions locales, vues sous l'angle de la plongée.

4.2.2 Plongeur en chef

Le plongeur en chef devrait avoir une connaissance pratique des exigences opérationnelles de la terrain et devra :

- a) détenir un certificat de plongeur du MPO et connaître les méthodes et les techniques de plongée;
- b) connaître les exigences de certification du MPO (administratives, médicales, de formation et opérationnelles) ;
- c) être en mesure de réaliser, pour chaque opération qu'il supervise, tous les aspects du programme de plongée;

- d) be knowledgeable in the use and maintenance of all diving equipment used by divers employed on each diving project supervised;
- e) be knowledgeable of diving safety and emergency procedures applicable to the requirements of each diving operation supervised.

- d) connaître le mode d'utilisation et les exigences d'entretien de l'équipement utilisé par les plongeurs prenant part aux opérations qu'il supervise ;
- e) connaître les mesures d'urgence et de sécurité en plongée s'appliquant aux opérations qu'il supervise.

4.3.0 DFO Certification

Divers must be DFO certified and be qualified by experience and/or by training to participate in all aspects of the diving operation to which they have been assigned.

4.3.0 Certificats du MPO

Les plongeurs doivent détenir un certificat du MPO et avoir des compétences, acquises par l'expérience ou par la formation, leur permettant de prendre part à tous les aspects des opérations de plongée auxquelles ils sont affectés.

4.3.1 Snorkel Diving

Although snorkel diving falls outside the scope of this document, both supervisors and employees must ensure that safe working practices occur for this activity. See Chapter 2 of the Departmental Occupational Health and Safety Manual.

In order to facilitate safety, supervisors must ensure that:

- a) snorkel divers have above average swimming ability;
- b) the buddy system is strongly enforced;
- c) wet suits are used to avoid hypothermia and if needed, weight belts are fitted with a quick-release closure, and;
- d) each snorkel diver be equipped with a knife, an inflatable buoyancy device, and a whistle.

A type III medical is not required for snorkel diving activities.

4.3.1 Plongée en apnée

Ce guide définissant la plongée comme étant le fait de pénétrer dans l'eau en portant un appareil à air comprimé, il exclut donc la plongée en apnée.

Cependant, tel que mentionné au chapitre 2 du manuel ministériel de Santé Sécurité, les superviseurs et les employés sont responsables d'assumer leur protection. Il est donc recommandé que:

- a) que les plongeurs en apnée soient de bons nageurs (supérieurs à la moyenne) ;
- b) le copain-copain soit pratiqué de façon intensive ;
- c) que des "wet suits" soient utilisés afin d'éviter de tomber en hypothermie.
- d)

Un examen médical de classe III n'est pas requis pour la plongée en apnée.

4.3.2 Basic Certification

Basic certification endorses daytime, non repetitive, no decompression, free swimming diving using the buddy system and open circuit scuba with air. The dive must not exceed 20 m (66 feet) and it must permit direct access to the surface.

To qualify for a basic DFO diver certification, divers must satisfy their respective Diving Officers that they:

- a) are required to dive in support of DFO objectives;
- b) have passed at least one nationally recognized scuba certification;
- c) have passed the diver medical examination prescribed in chapter 5 within the past year;
- d) have logged 12 dives in the past year; and / or
- e) have completed a dive checkout acceptable to their Regional Diving Safety Committee.

Any diver who has not completed 10 open water scuba dives with 7.5 hours logged is a Diver-in-Training and must remain under the close supervision of the Diving Officer or Diver-in-Charge.

All divers must be certified in First Aid and CPR, and be familiar with rescue diving procedures.

4.3.2 Certificat élémentaire

Le certificat élémentaire permet à son détenteur d'effectuer des plongées de jour, non successives, sans décompression, en scaphandre autonome, à une profondeur maximale de 20 m (66 pieds) avec un accès direct à la surface.

Pour obtenir le certificat élémentaire du MPO, un plongeur doit prouver à son agent de plongée:

- a) qu'il doit plonger pour permettre la réalisation des objectifs du MPO ;
- b) qu'il a réussi au moins un examen national pour obtenir un certificat reconnu de plongeur autonome ;
- c) qu'il a, au cours de la dernière année, réussi l'examen médical stipulé au chapitre 5 ;
- d) qu'il a, au cours de la dernière année, inscrit 12 plongées à son registre ; et (ou)
- e) qu'il a réussi une épreuve de plongée jugée acceptable par le Comité régional de sécurité en plongée.

Tout plongeur qui n'a pas effectué au moins 10 plongées autonomes en eau libre en au moins 7,5 heures est considéré comme un plongeur stagiaire et doit demeurer sous l'étroite surveillance de l'agent de plongée ou du plongeur en chef.

Tous les plongeurs doivent posséder des certificats de secourisme et de RCR et doivent bien connaître les méthodes de sauvetage en plongée.

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4.3.3 Specialty Certification

Specialty dives are dives outside the excursion or equipment restrictions of a basic dive. Additional training, preparation and operational procedures are necessary before specialty certification is given. (see Chapter 9)

4.4.0 Annual DFO Requalification

In order to retain basic DFO diver certification, employees must annually comply with the following conditions:

- a) pass the diver's medical examination;
- b) log at least 12 dives in the preceding year or complete an appropriate checkout acceptable to their Diving Officer; and
- c) log all dives and submit an annual dive log summary to their respective Diving Officers.

All divers must maintain CPR and First Aid certification.

Additional medical examinations shall be given:

- i) After any major injury or illness;
- ii) At the request of the Diving Officer, the Diver in Charge or the diver's supervisor; and
- iii) At the discretion of the examining physician.

4.3.3 Attestations de spécialisation

On appelle plongée spécialisée, toute plongée dont les paramètres (équipement, conditions) diffèrent de ceux d'une plongée élémentaire. Un entraînement, une préparation et des procédures additionnelles sont nécessaires pour l'obtention de certificats spécialisés (voir chapitre 9)

4.4.0 Renouvellement annuel des certificats du MPO

Pour faire renouveler leur certificat élémentaire, les plongeurs du MPO doivent, une fois par année :

- a) réussir l'examen médical à l'intention des plongeurs ;
- b) montrer qu'ils ont inscrit au moins 12 plongées à leur registre au cours de l'année précédente ou se soumettre à une vérification pertinente jugée acceptable par leur agent de plongée et ;
- c) prouver qu'ils ont inscrit toutes leurs plongées à leur registre et en présenter un résumé à leur agent de plongée.

Les plongeurs doivent maintenir en règle leurs certificats de RCR et de secourisme.

Des examens médicaux supplémentaires s'imposent dans les cas suivants:

- i) après une blessure ou une maladie grave ;
- ii) à la demande de l'agent de plongée, le plongeur en chef ou de la personne responsable du plongeur ; et
- iii) à la discrétion du médecin qui effectue les examens.

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4.5.0 Rescinding of DFO Certificates

Divers who fail to comply with conditions specified in this Guide shall have their diving certificates rescinded.

A diver's certificate may also be rescinded or restricted by the Regional Diving Safety Committee for:

- a) non-compliance with any of the diving regulations;
- b) deliberate violation of safe diving procedures

After a period of ninety (90) days, rescinded divers may apply to the Regional Diving Safety Committee for recertification. They must however satisfy all the required conditions, and depending on circumstances, may be required to repeat an approved diver training course.

4.5.1 Recertification

Should divers allow their certificates to expire they may apply for recertification. They must, however, satisfy all the required conditions, and depending on circumstances, may be required to repeat an approved diver training course.

4.5.0 Révocation des certificats

Les plongeurs qui ne respectent pas les conditions énoncées dans ce guide verront leur certificat révoqué.

Le Comité régional de sécurité en plongée peut également révoquer le certificat d'un plongeur ou lui imposer des restrictions s'il:

- a) ne respecte pas un règlement de plongée;
- b) enfreint volontairement une mesure de sécurité en plongée.

Après 90 jours, les plongeurs dont les certificats ont été révoqués pourront présenter une demande de renouvellement au Comité régional de sécurité en plongée. Ils devront toutefois satisfaire à toutes les exigences et devront peut-être, selon le cas, reprendre un cours de plongée reconnu.

4.5.1 Redélivrance des certificats

Après l'expiration de son certificat, un plongeur peut en demander la redélivrance. Pour ce faire, il devra satisfaire aux exigences et, selon le cas, pourra être tenu de reprendre un cours de plongée reconnu.

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Chapter 5: MEDICAL STANDARDS

Chapitre 5: NORMES MÉDICALES

5.1.0 Purpose

This chapter provides departmental diving examination guidelines.

5.1.0 Objet

Ce chapitre énonce les lignes directrices du Ministère sur les examens de plongée.

5.2.0 General

It has long been recognized that diving requires a high level of muscular and aerobic capacity. For the most part, therefore, only those candidates who have average agility and a high exercise tolerance and who are without serious physical or psychological handicaps shall be allowed to dive on behalf of the Department.

5.2.0 Généralités

On sait depuis longtemps que la plongée exige une puissance musculaire et une capacité aérobie importantes. Dans la majorité des cas, seuls les candidats faisant preuve d'une agilité normale et d'une résistance élevée à l'effort et ne souffrant d'aucun handicap physique ou psychologique grave pourront être autorisés à plonger pour le Ministère.

5.2.1 Medical Standards

DFO diving examinations conform to the Treasury Board Occupational Health and Safety standard 3-13 which is found in Vol. 12 of the Personnel Management Manual, and which is administered as outlined in Health and Welfare Canada's Occupational Health Assessment Guide, Section 2.10.

5.2.1 Normes Médicales

Les examens de plongée du MPO répondent à la norme de santé et de sécurité au travail 3-13 du Conseil du Trésor (Manuel de gestion du personnel, vol. 12) et sont administrés suivant le guide. (chapitre 2.10.)

Assessments are best conducted by physicians with diving medical experience. Frequent communication between diving and medical officers promotes diving medical requirements and improves screening procedures.

Il est préférable que les examens soient administrés par des médecins habitués de suivre des plongeurs. En entretenant des rapports entre eux, les agents de plongée et les médecins encourageront le respect des normes médicales et amélioreront les méthodes d'examen.

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EXAMINATION GUIDELINES		
Examination	Pre-Placement	Periodic
Examination Category	III	III (Annually)
Chest X-Ray - full inspiration / expiration	Yes	If indicated
Electrocardiogram	Yes	Annual after age 40
Pulmonary Function Test	Yes	Yes
Stress Test	If indicated	If indicated
Pressure Test	If indicated	If indicated
Long Bone X-Ray Survey	If indicated	If indicated
Audiogram	Yes	Yes
Urinalysis	Yes	Yes
Complete Blood Count	Yes	Yes
Dental Examination	Yes	If indicated
Diving Questionnaires	Yes	Yes
Psychological Assessment	If indicated	If indicated

LIGNES DIRECTRICES SUR LES EXAMENS DE PLONGÉE		
Examen	Avant l'embauche	Périodiquement
Catégorie d'examen	III	III (chaque année)
Radiographie du thorax (insp.-exp. complète)	Oui	Au besoin
Electrocardiogramme	Oui	Chaque année, après 40 ans
Vérification des fonctions pulmonaires	Oui	Oui
Résistance au stress	Au besoin	Au besoin
Pression	Au besoin	Au besoin
Radiographie des os longs	Au besoin	Au besoin
Audiogramme	Oui	Oui
Analyse d'urine	Oui	Oui
Numération globulaire	Oui	Oui
Examen dentaire	Oui	Oui
Questionnaire sur la plongée	Oui	Oui
Evaluation psychologique	Au besoin	Au besoin

Chapter 6: EQUIPMENT AND AIR STANDARDS

6.1.0 Purpose

This chapter provides standards for breathing air and guidelines on the inspection and maintenance of diving equipment used for DFO diving operations.

6.2.0 Scuba Equipment Policy

The individual diver must accept ultimate responsibility for the condition of assigned diving equipment. Each diver must personally check all equipment prior to each dive and request replacement as required.

6.3.0 Air Compressors

Only air compressors specially designed for filling scuba cylinders shall be used for this purpose.

Compressors shall comply with the following specifications;

- a) the air intake shall be well screened and equipped with a filter and shall be located to ensure a supply of clean air, free from contamination by fumes, smoke, etc. Extensions to the intake manifold should have the hose upwind from any exhaust pipe;

Chapitre 6: NORMES SUR L'ÉQUIPEMENT ET L'AIR

6.1.0 Objet

Ce chapitre décrit les normes applicables à l'air respirable, ainsi que les directives propres à l'inspection et à l'entretien de l'équipement de plongée servant aux opérations de plongée du MPO.

6.2.0 Politique sur les scaphandres autonomes

Il appartient au plongeur, en fin de compte, de veiller à maintenir l'équipement qui lui est confié en bon état. Chaque plongeur doit, avant chaque plongée, inspecter lui-même toutes les pièces de son équipement et demander le remplacement des pièces défectueuses.

6.3.0 Compresseurs d'air

Seuls des compresseurs conçus pour remplir des cylindres de plongé ne doivent être utilisés.

Les compresseurs utilisés doivent répondre aux exigences suivantes:

- a) la prise d'air doit être bien grillagée, munie d'un filtre et être placée de façon à assurer une alimentation en air pur, non contaminé par des vapeurs, de la fumée, etc. L'embouchure des conduits de rallonge de la tubulure d'entrée d'air doit être placée dans le vent par rapport à tout tuyau d'échappement;

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b) the discharged compressed air shall be passed to a scuba cylinder (or an air reservoir) through frequently cleaned and recharged filters that are designed to remove dust and droplets of oil, CO, and water, and to minimize other contaminants with the resultant breathing air meeting the specification of paragraph 6.3.1. Extensions to the exhaust discharge manifold should have the hose downwind;

b) l'air comprimé transmis à une bouteille de plongée (ou à un réservoir d'air) doit traverser des filtres capables de retenir les impuretés (poussières, gouttelettes d'huile, monoxyde de carbone, eau et de réduire au minimum la présence d'autres contaminants, de sorte que l'air réponde aux normes de l'article 6.3.1. Ces filtres doivent être nettoyés et remplacés fréquemment. D'autre part, l'embouchure des conduits de rallonge de la tubulure de sortie d'air doit être placée sous le vent ;

c) The compressor shall have an operation time-elapsed clock and/or log book listing dates, running times, filter and maintenance schedules. These records shall be available for audit.

c) le compresseur doit être muni d'un chronomètre et d'un registre où sont inscrits les dates, heures de fonctionnement et fréquences d'entretien. Ces données doivent être disponibles pour vérification.

Annually, an air sample from each DFO compressor shall be sent to a testing laboratory for analysis.

Chaque année, il faut soumettre à une analyse en laboratoire un échantillon d'air prélevé de chaque compresseur utilisé par le MPO.

6.3.1 Breathing Air Standards

6.3.1 Normes applicables à l'air respirable

Breathing air for scuba use shall meet the specifications outlined in the CAN/CSA Z 275.2-92 Occupational Safety Code for Diving Operations.

L'air destiné à la plongée doit respecter la norme Z275.2-92 de l'ACNOR figurant dans les règles de sécurité pour les travailleurs en plongée.

6.3.2 Air from Commercial Sources

6.3.2 Air de source commerciale

Breathing air from commercial sources shall be certified by the supplier as being suitable for breathing in accordance with the CAN/CSA-Z 275.2-92 Occupational Code for Diving Operations.

Si l'air obtenu de source commerciale devra être certifié par le fournisseur comme étant conforme à la norme Z 275/2-92 de l'ACNOR figurant dans les Règles de sécurité pour les travailleurs en plongée.

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6.4.0 Regulators

All scuba regulators used by DFO divers shall be checked before use by individual divers. Regulators shall be serviced at least annually by a recognized agency, according to manufacturers' specifications.

Regulators used by DFO divers shall be fitted with a submersible pressure gauge for monitoring scuba cylinder pressure unless otherwise dictated by circumstances.

The Diving Officer will ensure that an inspection record is maintained for each regulator as outlined in chapter 3.3.b of this Guide.

6.5.0 Gauges

Gauges shall be inspected and calibrated before first use and at least annually thereafter.

Records for all inspections will be kept by the Diving Officer as outlined in chapter 3.3.b of this Guide.

6.6.0 Scuba Cylinders

All scuba cylinders shall be visually inspected annually both internally and externally, for rust or pitting and be stored in the manner recommended in CSA standard Z180.1 Compressed Breathing Air.

6.4.0 Régulateurs

Tous les régulateurs utilisés par les plongeurs du MPO devront être vérifiés avant leur utilisation par le plongeur. Les régulateurs doivent subir une mise au point au moins une fois par année par un organisme reconnu et conformément aux spécifications du fabricant.

Sauf indication contraire dictée par les circonstances, les régulateurs utilisés par les plongeurs du MPO doivent être munis d'un manomètre submersible permettant de mesurer la pression des bouteilles.

L'agent de plongée doit voir à ce que les données sur l'inspection des régulateurs soient consignées dans un registre (chapitre 3.3.b.)

6.5.0 Jauges

Les jauges doivent être inspectées et étalonnées avant leur première utilisation et, par la suite, au moins une fois l'an.

L'agent de plongée doit tenir un registre de toutes les inspections. (chapitre 3.3.b.)

6.6.0 Bouteilles de plongée

Une inspection visuelle annuelle, intérieure et extérieure, des bouteilles de plongée doit être faite afin de détecter la présence de rouille ou de piqûres, et leur entreposage conforme à la norme Z180.1 de l'ACNOR sur l'air comprimé respirable.

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All compressed air cylinders must bear a valid test date and shall be tested in accordance with the Canadian Transport Commission or equivalent agency. They shall be hydrostatically tested every five years and stamped to that effect by the testing facility.

DFO divers shall not use a cylinder which is not stamped with proper marking and a valid test date nor charge a cylinder to a pressure greater than that marked on it.

Records of all inspections and maintenance procedures completed for each scuba cylinder shall be maintained by the Diving Officer as outlined in chapter 3.3.b of this Guide.

Les bouteilles d'air comprimé doivent être vérifiées conformément aux exigences de la Commission canadienne des transports et porter une date de vérification en règle. Elles doivent faire l'objet d'un test hydrostatique aux cinq ans et porter la marque de l'organisme qui a effectué le test.

Il est interdit d'utiliser une bouteille ne portant ni les marques requises ni une date de vérification en règle et de remplir une bouteille à une pression supérieure à celle qui est indiquée sur sa surface.

L'agent de plongée doit tenir un registre des inspections et des opérations d'entretien de chaque bouteille. (chapitre 3.3.b.)

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Chapter 7: DIVER EVALUATION**Chapitre 7: ÉVALUATION DES PLONGEURS****7.1.0 Purpose**

This chapter sets out the basic diver training requirements for individuals diving on behalf of the Department.

7.1.0 Objet

Ce chapitre énonce les exigences élémentaires régissant la formation des plongeurs MPO.

7.2.0 General

Diver certification courses offered by recognized agencies listed below meet the entry level training requirements for DFO basic diver certification. Entry level training does not, however, guarantee adequate skill levels for effective departmental diving applications; additional experience, training and supervision is usually required. Log book review, pool and open water checkouts are suggested procedures for assessing diving capabilities and remedial training requirements.

7.2.0 Généralités

Les organismes indiqués ci-dessous donnent des cours de plongée répondant au exigences de recrutement du MPO. (certificat élémentaire). Toutefois, cette formation ne confère pas nécessairement les compétences requises à la bonne marche des opérations de plongée du MPO; habituellement de l'expérience supplémentaire, de l'entraînement et de la supervision sont requises. Pour évaluer les capacités des plongeurs et combler les lacunes de leur formation, on suggère d'examiner leur registre de plongée et d'évaluer leurs aptitude en piscine et en eau libre.

7.2.1 Approved Diver Training Agencies

- a) The Professional Association of Diving Instructors (PADI);
- b) The National Association of Underwater Instructors (NAUI);
- c) National Association of Skin Diving Schools (NASDS);
- d) YMCA and YWCA;
- e) American Canadian Underwater Certification (ACUC)
- f) World Underwater Federation (CMAS);
- g) Other agencies approved by the Departmental Diving Safety Committee.

7.2.1 Organismes de formation en plongée reconnus par le MPO

- a) Professional Association of Diving Instructors (PADI) ;
- b) National Association of Underwater Instructors (NAUI) ;
- c) National Association of Skin Diving Schools (NASDS) ;
- d) YMCA et YWCA ;
- e) "American/Canadian Underwater Certifications International" (ACUC) ;
- f) Confédération mondiale des activités subaquatiques (CMAS) ;
- g) Autres organisations approuvées par le Comité ministériel de sécurité en plongée.

<p>7.2.2 Approved First Aid/CPR Training Agencies</p> <p>a) The Canadian Heart Foundation;</p> <p>b) The Canadian Red Cross Society;</p> <p>c) The Professional Association of Diving Instructors;</p> <p>d) The Royal Life Saving Society of Canada;</p> <p>e) St. John's Ambulance Society;</p> <p>f) Other agencies approved by the Departmental Diving Safety Committee.</p>	<p>7.2.2 Organismes de formation en secourisme et en RCR reconnus par le MPO</p> <p>a) Fondation canadienne des maladies du cœur ;</p> <p>b) Société canadienne de la Croix rouge ;</p> <p>c) Professional Association of Diving Instructors ;</p> <p>d) The Royal Life Saving Society of Canada ;</p> <p>e) Ambulance Saint-Jean ;</p> <p>f) Autres organismes approuvés par le Comité ministériel de sécurité en plongée.</p>
<p>7.3.0 DFO Basic Diver Checkout Procedures</p> <p>At the discretion of the Diving Officer, one or both of the following evaluations can be used to establish basic diver capability prior to DFO certification.</p>	<p>7.3.0 Évaluation des plongeurs (Certificats élémentaires)</p> <p>L'agent de plongée est libre d'utiliser l'une ou l'autre des formules suivantes ou les deux à la fois pour déterminer si les plongeurs répondent aux exigences régissant l'obtention d'un certificat élémentaire du MPO.</p>
<p>7.3.1 Pool Evaluation</p> <p>All new divers must:</p> <p>a) demonstrate acceptable watermanship ability;</p> <p>b) demonstrate ability to assemble, disassemble and maintain diving equipment;</p> <p>c) enter water with full equipment;</p> <p>d) alternate between snorkel and scuba while kicking;</p> <p>e) clear face mask;</p>	<p>7.3.1 Évaluation en piscine</p> <p>Tout nouveau plongeur doit:</p> <p>a) être à l'aise dans l'eau ;</p> <p>b) être capable d'assembler, de démonter et d'entretenir son équipement de plongée ;</p> <p>c) entrer dans l'eau en portant l'équipement complet ;</p> <p>d) passer alternativement du tuba au scaphandre autonome tout en nageant ;</p> <p>e) vider son masque ;</p>

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- f) demonstrate buddy breathing as both donor and recipient;
- g) demonstrate ability to remove and replace equipment while submerged;
- h) demonstrate understanding of underwater signs and signals; and
- i) rescue and transport as a diver, a passive simulated accident victim.

- f) pratiquer la respiration à deux (donneur et receveur) avec son partenaire ;
- g) enlever et remettre son équipement sous l'eau ;
- h) comprendre les signes et signaux sous-marins ;
- i) porter secours à une victime passive (simulation) et la remorquer, en tant que plongeur ;

7.3.2 Open Water Evaluation

All new divers must:

- a) demonstrate judgement adequate for safe diving;
- b) enter and leave open water wearing scuba gear;
- c) kick on the surface while wearing scuba gear, but not breathing from the scuba unit;
- d) surface dive to a depth of 3 m (10 feet) in open water without scuba;
- e) achieve and maintain neutral buoyancy;
- f) demonstrate clearing off mask and regulator while submerged;
- g) demonstrate proficiency in shared air or buddy breathing as both donor and receiver in stationary and swimming modes;
- h) demonstrate techniques of self-rescue and buddy rescue.

7.3.2 Évaluation en eau libre

Tout nouveau plongeur doit:

- a) posséder suffisamment de jugement pour plonger en toute sécurité ;
- b) pénétrer en eau libre et en ressortir en portant un scaphandre autonome;
- c) nager à la surface en portant le scaphandre autonome, mais sans respirer l'air de sa bouteille ;
- d) plonger à une profondeur de 3 m (10 pieds) sans le scaphandre autonome ;
- e) parvenir et demeurer en état de flottabilité neutre ;
- f) vider son masque et son régulateur sous l'eau;
- g) être en mesure de pratiquer efficacement la respiration à deux en tant que donneur et receveur et aussi bien au repos qu'à la nage ;
- h) appliquer les techniques de sauvetage à lui-même et à son partenaire ;

<p>7.3.3 Advanced Diver Certification</p> <p>Advanced Diver Certification is primarily based on individual competency in various aspects of diving. This competency level is defined as proof of certification beyond entry level with a minimum of 20 logged dives documenting experience in at least five of the speciality dives listed in chapter 9.2.0</p>	<p>7.3.3</p>
<p>7.3.4 Surface Support</p> <p>All new dive tenders must:</p> <ul style="list-style-type: none"> a) demonstrate acceptable watermanship ability; b) demonstrate ability to assemble, disassemble, and maintain diving equipment; c) demonstrate judgement adequate for safe diving; d) participate in the pool (7.3.1 i) and open water (7.3.2 h) rescue portion of the diver evaluation; and e) be currently certified in CPR and 1st Aid and trained in the administration of oxygen. 	<p>7.3.4</p>
<p>7.4.0 CPR and First Aid Training</p> <p>CPR and First Aid training shall be made available to all divers. It is also recommended that oxygen dispensing systems be made available on site and that all divers be properly trained to use them.</p>	<p>7.4.0 Formation en RCR et en secourisme</p> <p>Des cours de RCR et de secourisme doivent être offerts aux plongeurs. Il est aussi recommandé que de l'oxygène soit disponible sur le site de plongé et que tous les plongeurs soient familiers avec son utilisation.</p>
<p>7.5.0 Specialty Training</p> <p>Specialty operations outside the excursion or equipment restrictions of a basic dive require special training. Specialty training requirements and operational procedures are summarized in Chapter 9.</p>	<p>7.5.0 Spécialisation</p> <p>Les opérations spéciales dont les paramètres dépassent de ceux d'une opération de plongée élémentaire exigent une formation supplémentaire (voir chapitre 9)</p>

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Chapter 8: REGULATIONS FOR THE SAFE CONDUCT OF DIVING

Chapitre 8: RÉGLES DE SÉCURITÉ EN PLONGÉE

8.1.0 Purpose

This chapter lists the regulations that must be met when conducting a basic dive.

These regulations also apply to speciality diving operations, unless modified according to chapter 9.

8.1.0 Objet

8.2.0 Certification

Individuals diving on behalf of the department must be DFO-certified divers or be a supervised trainee completing a diver training program. Certification, requalification and recertification procedures for basic dive operations are specified in Chapter 4, Medical Standards in chapter 5, Equipment and Training requirements are found in Chapter 6 & 7.

8.2.0 Certificats

Les employés qui plongent pour le MPO doivent détenir un certificat du MPO ou prendre part à un programme de formation à titre de plongeur stagiaire. Le chapitre 4 traite des procédures d'obtention, de renouvellement et de redélivrance des certificats.

8.3.0 Basic Dive Operations

A basic dive is a daytime, non repetitive, no decompression, free swimming excursion, using the buddy system and open circuit SCUBA with air. A basic dive must not exceed 20 m (66 feet) and it must permit direct access to the surface.

Basic dives can not occur in the vicinity of culverts, pressure structures, or moving ice. If divers enter the water from a boat or if strong currents/tides are involved, speciality procedures must be used.

8.3.0 Opérations de plongée élémentaires

On appelle plongée élémentaire une plongée de jour, non successive et n'exigeant pas de décompression, en scaphandre autonome, copain-copain, ne dépassant pas 20 m de profondeur (66 pieds) et avec un accès direct à la surface.

8.3.1 Surface Tended Dive

A basic dive can be modified to allow a single diver to dive if:

- a) the Diving Officer has inspected and approved the dive operation;

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- b) there is no risk of entanglement;
- c) the diver has completed the advanced diver training as described in Chapter 7.3.3; and
- d) the diver is supported by a Diver's Tender who has completed the training described in Chapter 7.3.4.

A standby diver must be present for all dives where the Diver's Tender would be unable to provide immediate, hands on assistance to the diver in the water.

The Diver's Tender will monitor the progress of the dive using a safety rope attached to a harness that is worn by the diver.

Under shallow, clear water conditions, the diver may be tended from the surface without the use of a safety line when:

- a) the diving officer has inspected and approved the dive operation
- b) the diver is within three meters of the surface
- c) the Diver's Tender can directly monitor the exhaust bubbles emitted by the diver;
- d) the Diver's tender can provide immediate, hands on assistance to the diver in the water;
- e) the safety line will disturb the habitat being studied.

8.4.0 Planning of Diving Operations

A general plan of the diving operation shall be prepared in conjunction with the project manager and shall be discussed in detail and accepted by the Diver-in-Charge, divers, and any non-diving support personnel.

The plan of the diving operation shall include safety and health aspects of the following as appropriate to the conditions:

- a) dive team assignments;
- b) surface and underwater conditions and hazards;
- c) diving equipment;
- d) breathing air requirements and supply;
- e) thermal protection;
- f) residual inert gas status of dive team members;
- g) no decompression limits and altitude corrections;
- h) emergency procedures including those to be followed in the event of diver separation, equipment malfunction, and out of air situations.

8.4.1 Pre Dive Check

Immediately before every dive, each diver shall check that all equipment is secured and functional. Before descent, a similar in-water check shall be repeated.

8.4.0 Planification des opérations de plongée

Pour chaque opération de plongée, un plan doit être préparé de concert avec le chargé de projet puis discuter en profondeur et soumis à l'approbation du plongeur en chef, des plongeurs et du personnel de surface.

Ce plan doit, tenir compte des aspects relatifs à la sécurité et à la santé propres aux points suivants tel qu'approprié aux conditions de l'opération:

- a) les tâches de chaque membre de l'équipe de plongée ;
- b) les conditions et les dangers en surface et sous l'eau ;
- c) l'équipement de plongée ;
- d) le besoin et l'approvisionnement en air respirable ;
- e) la protection thermique ;
- f) la teneur en gaz inertes résiduels des membres de l'équipe de plongée;
- g) les tables de décompression corrigées en fonction de l'altitude ;
- h) les mesures d'urgence, y compris celles à prendre en cas de défectuosité de l'équipement ou d'un système.

8.4.1 Vérification préliminaire

Immédiatement avant chaque plongée, les plongeurs doivent s'assurer que chaque pièce de leur équipement est bien fixée et fonctionne correctement. Avant de descendre, il doivent répéter la même opération sous l'eau.

8.4.2 Diving Equipment Requirements

Only equipment approved by the Regional Diving Safety Committee will be used by divers on DFO projects. All DFO divers must wear a sheathed and sharpened diver's knife when diving.

When appropriate, DFO divers shall wear a buoyancy control device, depth gauge, watch and/or decompression meter when diving. The use of decompression meters on any project must be approved by the Diving Officer.

8.4.3 Signals Displayed while Diving

Whenever diving operations are being conducted in areas in which marine traffic is probable, the Diver-in-Charge shall ensure that the appropriate signals are prominently displayed from a vessel, boat, pier or another conspicuous object.

8.4.4 Diver's Signals

All DFO divers and surface support personnel shall have a comprehensive knowledge of hand and rope signals designated for use on the dive site.

8.4.5 Surface Equipment

As appropriate, the following equipment should be present on the dive site:

- emergency contingency plan;
- decompression tables;
- first aid kit;
- oxygen;
- spare air;
- two-way radio;
- rope;
- hand and rope signal charts

8.4.2 Équipement

Les plongeurs du MPO ne doivent utiliser que de l'équipement reconnu par le Comité régional de sécurité en plongée.

Au besoin, les plongeurs du MPO doivent porter une jauge de profondeur, une montre ou un décompressimètre. (ordinateur de plongée) L'usage d'un décompressimètre doit, peu importe le projet, être approuvé par l'agent de plongée.

8.4.3 Signaux de plongée

Si une opération de plongée se déroule dans une zone où il peut y avoir du trafic maritime, le plongeur en chef doit voir à ce que les signaux appropriés soient bien en vue sur un bateau, une embarcation, une bouée ou tout autre objet remarquable.

8.4.4 Signaux du plongeur

Les plongeurs du MPO et le personnel de surface doivent bien connaître les signaux à corde et à bras convenus pour l'opération.

8.4.5 Équipement de surface

Au besoin, on devrait avoir sur place l'équipement suivant:

- plan d'urgence ;
- tables de décompression ;
- trousse de premiers soins ;
- oxygène
- réserve d'air ;
- émetteur-récepteur radio ;
- corde
- tableau des signaux à bras et à corde ;

8.4.6 Adherence to Planned Depth-Time Procedures

Diving operations, repetitive dives, and treatment of divers shall be carried out in strict accordance with approved decompression tables and procedures. Except in the case of accidents or unavoidable circumstances, a diver shall not be permitted to remain at any depth longer than the maximum time planned for that depth nor to reach a greater depth than the maximum depth planned for that dive.

8.4.6 Respect des méthodes et des tables de décompression

Les opérations de plongée, les plongées successives et le traitement des plongeurs doivent s'effectuer en toute conformité avec les tables de décompressions et les méthodes reconnues. Sauf en cas d'accident ou de force majeure, un plongeur ne doit pas être autorisé à demeurer à une profondeur donnée plus longtemps que le temps maximal prévu à cette profondeur ni à descendre plus bas que la profondeur maximale prévue pour cette plongée.

8.4.7 Termination of Dive

A diver should not proceed with a dive plan if:

- a) the Diver-in-Charge requests termination;
- b) a diver requests termination;
- c) a diver loses contact with or fails to respond correctly to communications from a buddy team member;
- d) a diver fails to respond correctly to communications from the tender;
- e) a diver goes on diver-carried reserve breathing gas supply;
- f) a diver is aware of any sign of malfunction of gear or sign or symptom of distress; or
- g) any dive team member is aware of any unusual or unplanned situation which threatens the health or safety of any dive team member.

8.4.7 Interruption de la plongée

Les plongeurs ne sont pas autorisés à mettre le plan de plongée à exécution si:

- a) le plongeur en chef en demande l'interruption ;
- b) un plongeur en demande l'interruption ;
- c) un plongeur perd le contact avec ses équipiers ou ne répond pas correctement aux signaux qui lui sont envoyés ;
- d) un plongeur ne répond pas correctement aux signaux de son aide de surface ;
- e) un plongeur a besoin d'utiliser sa réserve d'air ;
- f) un plongeur détecte des signes de défectuosité de son équipement ou présente un danger ;
- g) un membre de l'équipe de plongée se rend compte d'un fait inhabituel ou imprévu qui met en danger la santé ou la sécurité d'un ou de plusieurs membres.

8.5.0 Diving from Ships

The Master of every vessel, from which diving operations are carried out, shall have overall responsibility for all diving operations conducted from the vessel. The master shall have the authority to terminate any diving operation which may endanger the vessel, its crew, or those involved in the diving operation.

The Master shall ensure that all divers are clear of the water, and accounted for, before raising the anchor, turning propellers or getting underway.

8.6.0 Emergencies

In an emergency, where danger to life is imminent or probable, divers may, at their own discretion, deviate from the intent of this Guide. Reports of such deviations, shall be submitted to the Diving Officer and forwarded to the chairpersons of the Regional and Departmental Diving Safety Committees.

8.7.0 Incident/Accident Reporting

Unusual incidents, emergencies or accidents must be logged by the diver on the form provided in the log book. This information must be given to the Diver in Charge and the diving officer. Accidents must also be reported as outlined in chapter 5 of the Departmental Occupational Health and Safety Guide.

8.8.0 Emergency Planning and Evacuation

The Diving Officer shall make information on the treatment of diving related injuries available to divers and shall suggest training as appropriate. The Diver-in-Charge shall identify the location of the nearest emergency medical and operational hyperbaric facility and shall make arrangements for emergency notification of any transportation to the facilities in the event of an accident.

8.5.0 Plongée à partir d'un bateau

Le capitaine d'un bateau à partir duquel des opérations de plongée sont effectuées est responsable de ces opérations. Il a le pouvoir de mettre fin à toute opération qu'il juge dangereuse pour le bateau, l'équipage ou les membres de l'équipe de plongée.

Le capitaine doit s'assurer que les plongeurs sont tous remontés à bord avant de lever l'ancre, de faire tourner les hélices ou de se mettre en route.

8.6.0 Urgences

En cas d'urgence, lorsque la vie d'un plongeur est menacée par un danger imminent ou probable, un plongeur peut, à sa discrétion, s'écarter des règles énoncées dans ce guide. Dans ces situations, et pour toute autre situation inhabituelle (incidents, situations d'urgence ou accidents), un rapport doit être présenté à l'agent de plongée et transmis aux présidents des comités ministériel et régional de sécurité en plongée. Les accidents doivent aussi être déclarés, tel que mentionné au chapitre 5, au comité ministériel de Santé et Sécurité.

An emergency procedure which contains a listing including addresses, telephone numbers and radio frequencies of available recompression chambers, medical facilities and emergency evacuation agencies shall be readily available to the dive team (see Appendix C).

These procedures must be tested periodically.

8.8.1 Air Transport and Evacuation

The risk of decompression sickness after hyperbaric exposure is increased by flying. For maximum safety, a period of 24 hours should elapse between diving and flying. For divers where decompression is involved, 48 hours is strongly recommended. If medical emergency evacuation is required, in flight altitude should be kept to a minimum.

8.8.2 Diving after Treatment for a Pressure-related illness

Any diver who has suffered pressure-related illness shall not dive unless approval for further diving is given by a medical officer.

En cas d'urgence, l'équipe de plongée doit avoir à portée de la main une liste incluant adresses, no de téléphone et fréquences de radio. Des chambres hyperbares, installations médicales et services d'évacuation d'urgence, se reporter à l'annexe C.

Ces mesures d'urgence doivent faire l'objet d'exercices périodiques.

8.8.1 Transport et évacuation par la voie des airs

Le vol accroît les risques d'accidents de décompression chez les personnes ayant été exposées à des pressions excessives. Pour une sécurité maximale, il est préférable de laisser s'écouler 24 heures entre la plongée et le vol. Dans le cas des plongées à paliers de décompression, il est fortement recommandé d'attendre 48 heures. Si une évacuation d'urgence est nécessaire, le vol doit s'effectuer à la plus basse altitude possible.

8.8.2 Plongée après le traitement d'une maladie causée par une surexposition à des pressions élevées.

Un plongeur qui a souffert d'une maladie causée par une surexposition à des pressions élevées ne doit plonger qu'après avoir reçu l'autorisation d'un médecin.

8.8.0 Plans d'urgence et d'évacuation

L'agent de plongée doit mettre à la disposition des plongeurs de l'information sur le traitement des blessures propres à la plongée et proposer, au besoin, des cours de formation. Le plongeur en chef doit savoir où se trouvent les installations médicales d'urgence et les chambres hyperbares les plus proches. En cas d'accident, il doit prévenir le personnel de ces installations et voir au transport des blessés.

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Chapter 9: SPECIALTY DIVING OPERATIONS

9.1.0 Purpose

This chapter establishes the guidelines to be used for underwater activities that fall outside the excursion or equipment restrictions of a basic dive.

Specialty requirements are usually identified at the branch level, when the Diving Officer, in consultation with project managers and the diver in charge, recognize that an underwater project falls outside the restrictions of a basic dive. The diving officer analyses the project and then develops a supplement that describes the dive and outlines the training, equipment and operational requirements needed to complete the work.

The supplement is initially approved by the Regional Diving Safety Committee, and thereafter by the Departmental Diving Safety Committee. Once departmental approval has been obtained, the supplement is added to this chapter as a specialty diving operation.

9.2.0 Specialty Dives

Environmental conditions which warrant special equipment, techniques, and/or skills and which require special training include but are not limited to:

- repetitive diving;
- boat diving;
- deep diving;
- night diving;
- low visibility diving;
- net pen diving;
- current diving;
- kelp diving

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- altitude diving;
- blue water diving;
- contaminated water diving;
- towed diving;
- surface supplied diving;
- ice diving;
- hull inspection;
- decompression diving; and
- cave diving.

9.3.0 Repetitive Diving

9.3.1 Training

9.3.2 Equipment Requirements

9.3.3 Operational Requirements

ANNEX “J” EVALUATION CRITERIA

EVALUATION INSTRUCTIONS

The experience of the Bidder must be clearly identified by providing a summary/description of the previous projects/work experience and indicating when the work was carried out. In the case where the timelines of two or more projects or experience overlap, the duration of time common to each project/experience will not be counted more than once.

It is mandatory that any past referenced diving-related project, Service Contract, or Standing Offer Agreements (SOA)s of the Bidder must be clearly identified by providing:

- **The name of the client organization;**
- **Name and phone number of the client’s representative;**
- **The period during which the service was provided (month and year); and**
- **A detailed outline of the service(s) provided – approximately 200 to 500 words**

NOTE: Bidders must complete the following charts and include with their bid submission. All copies of certifications must be included with the offeror’s bid submission to be considered compliant.

Mandatory Technical Criteria

The bid must meet the mandatory technical criteria specified below. The Bidder must provide the necessary documentation to support compliance with this requirement.

Bids which fail to meet the mandatory technical criteria will be declared non-responsive. Each mandatory technical criterion should be addressed separately.

TABLE A – MANDATORY TECHNICAL CRITERIA		
No.	Mandatory Criteria	Cross-Reference to Proposal (page #) (Bidder to complete)
MC1	<p>Company Experience</p> <p>The Bidder must demonstrate using project/work descriptions that it has been in the business of providing commercial diving services for a minimum of five (5) years from the RFSO closing date.</p>	
MC2	<p>Company Certification</p> <p>The Bidder must demonstrate that it has a valid letter of good standing from the Worker’s Compensation Board. A copy of the letter MUST be submitted with the bid.</p>	
	Company Letter of Attestation	

MC3	The Bidder must provide a signed statement by the Owner of the company that the company will maintain the Worker's Compensation Board coverage for the life of the Standing Offer Agreement, including subcontractors. A copy of the statement MUST be submitted with the bid.	
MC4	<p>Diver Experience and Certificates/Licenses</p> <p>The Bidder must propose a minimum of four (4) qualified Commercial Divers, and MUST submit the following qualifications for EACH diver proposed:</p> <ul style="list-style-type: none"> • A valid Commercial Divers Certification from the Divers Certification Board of Canada. A copy must be submitted with the bid; AND • A valid Diver Medical Certificate from the Canadian Association of Diving Contractors log book. A copy must be submitted with the bid; AND • A minimum of fifty (50) hours of diving experience per each diver. A copy from each personal divers' log book must show at least fifty (50) hours of diving time, and MUST be submitted with the bid. 	
MC5	<p>Insurance</p> <p>The Bidder must submit a certificate of insurance to validate that it has the necessary coverage of \$2 million dollars (CAD), defined in Annex C INSURANCE REQUIREMENTS.</p>	

Point-Rated Requirements

Bids which meet all the mandatory technical criteria will be evaluated and scored as specified in the tables inserted below.

The Bidder MUST achieve a minimum score of 70 points overall of the Point- Rated Criteria. Any bid which fails to meet the minimum required score on the Point-Rated Criteria will be deemed noncompliant and given no further consideration.

Bids which fail to obtain the required minimum number of points specified will be declared nonresponsive.

Each point rated technical criterion should be addressed separately.

TABLE B – POINT RATED CRITERIA				
No.	Rated Technical Criteria	Point Breakdown	Maximum Points	Cross-Reference to Proposal (page #) (Bidder to complete)
R1	<p>Company Experience</p> <p>The Bidder should demonstrate, using project descriptions, that it has acquired recent* experience providing commercial diving services, by submitting a detailed description of up to five (5) unrelated and completed projects.</p> <p>*Recent is defined as within the last five (5) years of the RFSO closing date.</p>	<p>Points will be awarded as follows:</p> <p>One project = 10 pts</p> <p>Two projects = 20 pts</p> <p>Three projects = 30 pts</p> <p>Four projects = 40 points</p> <p>Five projects or more = 50 points</p>	50	
R2	<p>Experience – Account Representative</p> <p>The Bidder should propose one (1) named resource who has previous experience in handling Contractor-client relations, Contract issues and dispute resolution related to diving services.</p>	<p>Points will be awarded as follows for months of experience:</p> <p>0 to 11 months = 0 points</p> <p>12 to 23 months = 5 points</p> <p>24 to 60 months = 10 points</p> <p>61 to 83 months = 15 points</p> <p>84 months or more = 20 points</p>	20	
R3	<p>Experience providing on-demand diving services</p> <p>The Bidder should demonstrate, using diving service agreements or Standing Offer Agreements, that it has recent* previous experience providing on-</p>	<p>Points will be awarded as follows:</p> <p>One (1) on-demand diving service agreement or Standing Offer Agreement = 10</p>	30	

	<p>demand diving services to private and/or public entities.</p> <p>*Recent is defined as within the past 60 months of the RFSO closing date.</p>	<p>points</p> <p>Two (2) on-demand diving service agreements or Standing Offer Agreements = 20 points</p> <p>Three (3) or more on-demand diving service agreements or Standing Offer Agreements = 30 points</p>		
<p>TOTAL EVALUATED SCORE: (Minimum 70 points required)</p>			<p>/100</p>	

