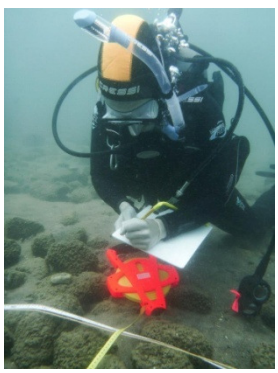
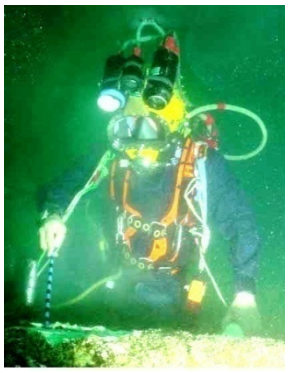
Port Of Fujairah

Diving Code





CODE OF PRACTICE

Safety and Health

At Work

For

Commercial Diving

Record of Change

Change No	Date	Description of Change	Page No
1	May. 01, 14	Add Injury / Incident Report Form	49-50

Revision History

Revision	Date	Description	Pages Affected	Total Pages	Prepared	Checked	Approved
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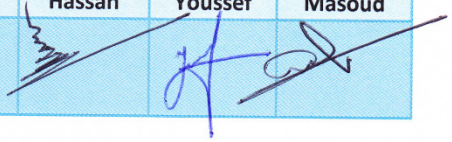
Signature							

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Introduction

INTRODUCTION

Purpose

Diving is the means of getting to and from a worksite and carrying out tasks. These tasks may be part of a wide range of industry from civil engineering to archaeology. Potential working divers should ideally already possess the technical skills that are relevant to the job. For example, construction workers may require welding qualifications, while divers involved in an archaeology project may require a degree in archaeology. You as a diver need to have both the diving skills and work skills that port / employers want.

Diving is considered to be a high hazard activity where diving operations involve a unique combination of occupational health and safety issues performed in an unforgiving environment where errors can quickly develop into fatal accidents. Individual risks must be managed if diving is to be conducted in a safe and efficient manner.

In the last 3 years period there were 4 fatal accidents in Fujairah.

Being desirous of promoting safety of life at sea, so the Port Policy is to support the Diving Group's work through the formulation of policy and legislation.

It is crucial that current international and local legislative standards are complied with in order to ensure a uniform approach to diving activities.

Scope

The purpose of this Code instruction is to provide comprehensive guidance that will allow Port of Fujairah to establish or support intervention and inspection programs in the commercial diving industry. Further, thisCode instruction provides guidance and information to ensure compliance with commercial diving operational standards and the consistent enforcement of these standards.

This code is to provide best industrial practices in a clear and complete format in order to contribute to the safety and well-being of all those working in the commercial diving industry, especially commercial divers, tenders, deck support personnel and supervisors.

All Diving companies have the right to choose the convenientdiving association for them to become a member in it along with their staff, which they deem appropriate for their business, provided that must be from the following Associations:

The International Marine Contractors Association (IMCA)

ASSOCIATION OF DIVING CONTRACTORS INTERNATIONAL (ADCI)

All ADCI or IMCA general member company diving personnel need to hold a current ADCI or IMCA certification or approval reflective of the assigned tasks to be performed.

The Port of Fujairah has agreed to abide by these International Consensus Standards for Commercial Diving and Underwater Operations. These consensus standards represent the collective operating philosophy and best industry practices of ADCI member companies & IMCA member companies and have been developed to present the minimum standards necessary for the conduct

of commercial diving operations, either offshore or inland. As in any activity for which minimum standards have been developed, there can be no substitute for careful planning and assessment of the job to be conducted and the conditions likely to be encountered.

Because a SCUBA diver has a limited breathing supply, does not usually have voice communication, and often is not monitored or controlled by surface-support personnel, the limits on this mode of diving are more stringent than for other diving modes and is not a suitable technique for diving under the scope of this code unless contractor comply with safety precaution mentioned in diving modes section.
This Code for Commercial Diving and Underwater Operations will be effective from 1st_of May 2014

All individuals, contractors, clients, members of ADCIorIMCA concerned with the safety of commercial diving and underwater operations are requested to submit to the portand address constructive criticism and recommendations for the improvement of this code. The port authority is responsible for final approval of any changes to this Code.

This code applies to all types of underwater work, whether inland or offshore, involving commercial diving. It is intended that this Code will complement applicable government rules and regulations as well as supplement industrial codes of safe practice for diving and underwater operations by providing a consensus of industry best practices for underwater diving operations. Nothing contained in this Code shall be construed to take the place of any law, rule or regulation of any governmental agency (local or federal)

Contractors must apply for Diving Permit **(Appendix D)**to the Port of Fujairah; Harbour Master's office 72 Hours, and updating 48 &24 Hours prior to commencement of any Diving Operations as normal procedures, this does not apply to emergency operations. Dive Permit will be issued after review of the documents attached **{Diving plan & risk assessment}(Appendix E &Appendix F)**and validity for the duration of the task.

Agent must apply for Master Declaration**(Appendix C)**to the Port of Fujairah; Harbour Master's office prior to commencement of any Diving Operations.

In case any of these mentioned points in this codeare not clear we shall take the previously mentioned diving associations ADCI & IMCA as a reference.

Duties, Roles and Responsibilities

Responsibilities

It is a duty of any person, including proprietors and managers of diving companies, who has responsibility for or control over a diving operation to ensure that diving is reasonably practicable, safe and is carried out in a safe and healthy manner. A diving contractor should be appointed to be directly responsible for a diving operation.

The following summarizes the responsibilities of various parties directly involved in an industrial diving operation, diving contractor, diving supervisor and diver who are required to comply with the duty imposed under ADCI & IMCA.

Clients and Their Representative

Definition

The client who has placed a contract with a diving contractor for a project. The client will usually be the operator or owner of a proposed or existing installation or pipeline where diving work is going to take place or a contractor acting on behalf of the operator or owner. If the operator or owner appoints an on-site representative then such a person should have the necessary experience and knowledge to be competent for this task; such as marine agents

The main contractor carrying out work for the client and overseeing the work of the diving contractor according to the contract. If the main contractor appoints an on-site representative then such a person should have the necessary experience and knowledge to be competent for this task.

The installation or offshore manager who is responsible for the area inside which diving work is to take place;

The master of a vessel (or floating structure) from which diving work is to take place who controls the vessel and who has overall responsibility for the safety of the vessel and all personnel onboard and will need to inform the diving supervisor of any possible change in position-keeping ability as soon as it is known, so he need to liaise closely at all times throughout the operation with the diving supervisor and the diving contractor.

The client responsibilities

- Agreeing to provide facilities and extend all reasonable support to the diving supervisor or contractor in the event of an emergency. Details of the matters agreed should form part of the planning for the project;
- Considering whether any underwater or above-water items of the plant or equipment under their control may cause a hazard to the diving team. Such items include:
    - Vessel/floating structure propellers and anchor wires
    - Underwater obstructions

- Pipeline systems under pressure test or with a pressure lower than the pressure at the diver work location
- Subsea facilities
- Water intakes or discharge points causing suction or turbulence
- Gas flare mechanisms that may activate without warning
- Equipment liable to start operating automatically
- Appropriate isolations and barriers (mechanical, electrical, optical, hydraulic, instrumentation isolations and barriers)

- The diving contractor will need to be informed of the location and exact operational details of such items in writing and in sufficient time to account for them in the risk assessments;
- Ensuring that sufficient time and facilities are made available to the diving contractor at the commencement of the project in order to carry out all necessary site-specific safety and familiarization training;
- Ensuring that other activities in the vicinity do not affect the safety of the diving operation. They may, for example, need to arrange for the suspension of supply boat unloading, overhead scaffolding work, bunkering etc.;
- Ensuring that a formal control system, for example, a permit-to-work system, exists between the diving team, the installation manager, Port's safety officer and/or the master;
- Providing the diving contractor with details of any possible substance likely to be encountered by the diving team that would be a hazard to their health, e.g. drill cuttings on the seabed. They will also need to provide relevant risk assessments for these substances. This information should be provided in writing and in sufficient time to allow the diving contractor to carry out the relevant risk assessments;
- Providing the diving contractor with information about any impressed current system on the work site or in the vicinity and details of the system. This information should be provided in writing and in sufficient time to allow the diving contractor to carry out the relevant risk assessments;
- Keeping the diving supervisor informed of any changes that may affect the diving operation, e.g. vessel movements, deteriorating weather etc.

Diving Contractor

Definition

On any diving project there needs to be one company in overall control of the diving operations. This will normally be the company who employs the divers. If there is more than one company

employing divers then there will need to be a written agreement as to which of these companies is in overall control.

The company in control is called the diving contractor. The name of the diving contractor should be clearly displayed and all personnel, clients and others involved in the diving operation should be aware who the diving contractor is.

The diving contractor will need to define a management structure in writing. This should include arrangements for a clear handover of supervisory responsibilities at appropriate stages in the operation, again recorded in writing.

The diving contractor's responsibilities

- A diving project plan;
- An overall quality management system which includes a safety management system;
- Appropriate insurance policies ensuring full compensation for divers involving accidents at work;
- Risk assessments for mobilization/demobilization, the operation of the equipment and work tasks to be undertaken and the contingency/ emergency plans;
- A management of change procedure;
- A safe and suitable place from which operations are to be carried out;
- The diving contractor shall ensure that there are sufficient people with **suitable competence** to carry out safely and without risk to health both the diving project and any action (including the giving of first-aid) which may be necessary in the event of a reasonably foreseeable emergency connected with the diving project.
- Suitable plant and equipment supplied, audited and certified in accordance with the relevant IMCA or ADCI documents, and including equipment supplied by diving personnel;
- Plant and equipment correctly and properly maintained;
- A suitable plan which includes emergency and contingency plans;
- Sufficient personnel of the required grades in the diving team;
- Personnel holding valid medical and training certificates and qualified and competent in accordance with the IMCA or ADCI Training, Certification & Personnel Competence tables;
- Suitable site-specific safety and familiarization training provided to all members of the dive team;
- Adequate arrangements to ensure that the supervisor and dive team are fully briefed on the project and aware of the content of the diving project plan and the dive plan;
- Project records kept of all relevant details of the project, including all diving operations;

- A procedure for near-miss and incidents/accidents reporting, investigation and follow-up;
- Adequate arrangements for first aid and medical treatment of personnel;
- Clear reporting and responsibility structure laid out in writing;
- Diving supervisors appointed in writing and the extent of their control documented;
- The latest approved version of the diving contractor documents and plans at the work site and being used;
- All relevant regulations/standards complied with as mentioned earlier, such as this code and IMCA or ADCI.

Diving Supervisor
Definition

- Supervisors are appointed by the diving contractor in writing and are responsible for the operation that they have been appointed to supervise. Unless an offshore manager or diving superintendent has been provided by the diving contractor then the diving supervisor is the diving contractor's representative at the work site. A diving supervisor should only hand over control to another supervisor appointed in writing by the diving contractor. Such a handover will need to be entered in the relevant operations logbook.
- Supervisors can only supervise as much of a diving operation as they can personally control both during routine operations and if an emergency should occur.
- The supervisor with responsibility for the operation is the only person who can order the start of a dive, subject to appropriate work permits etc. Other relevant parties, such as a diving superintendent, offshore manager, ship's master, client representative or the installation manager, can, however, tell the supervisor to terminate a dive for safety or operational reasons.
- There will be times, for example during operations from a DP vessel, when the supervisor will need to liaise closely with other personnel, such as the vessel master or the DP operator. In such circumstances, the supervisor must recognize that the vessel master has responsibility for the overall safety of the vessel and its occupants.
- The supervisor is entitled to give direct orders in relation to health and safety to any person taking part in, or who has any influence over, the diving operation. These orders take precedence over any company hierarchy. These orders could include instructing unnecessary personnel to leave a control area, instructing personnel to operate equipment, etc.

The diving supervisor responsibilities

- They should satisfy themselves that they are competent to carry out this work and that they understand their own areas and levels of responsibility and who is responsible for

any other relevant areas. Such responsibilities should be contained in the relevant documentation. They should also ensure that they are in possession of a letter from the diving contractor appointing them as a diving supervisor. Have adequate knowledge, training and familiarization with all life-support and ancillary equipment designated to the diving operations.

- Be fully cognizant of all relevant governmental regulatory agency regulations that apply to the diving operation and the diving mode employed, and the employer's basic safe practices/operations manual. See that all rules and regulations are followed.
- They will need to make sure that the personnel they are to supervise are competent to carry out the work required of them. They should also check, as far as they are reasonably able, that these personnel are fit and in possession of a valid medical certificate of fitness;
- While actually on duty, be in immediate control and available to implement emergency procedures. The diving supervisor is not permitted to dive unless another qualified diver is present who has also been appointed and designated to assume responsibility.
- The diving supervisor must also ensure, prior to commencing a diving operation, in addition to parties directly involved in the diving operation, that masters of craft, pilots of submersibles, harbor masters, managers of off shore installations, pipelines, civilengineering sites, inland waterways, and all persons responsible for anything that affects the diving operation are advised that diving or underwater operations are to be undertaken.
- They will need to check that the equipment they propose to use for any particular operation is adequate, safe, properly certified and maintained. They can do this by confirming that the equipment meets the requirements set down in this code. They should ensure that the equipment is adequately checked by themselves or another competent person prior to its use. Such checks should be documented, for example, on a pre-prepared checklist, and recorded in the operations log for the project;
- They will need to ensure that all possible foreseeable hazards have been evaluated and are fully understood by all relevant parties and that, if required, training is given. In addition, prior to commencement of a project an on-site job safety analysis (JSA) needs to be carried out. If the situation has changed, further risk assessment and management of change will need to be undertaken. They will need to ensure that the operation they are being asked to supervise complies with the requirements of this code and IMCA or ADCI code.
- Personally inquire if all personnel on the dive team are qualified and physically able to perform tasks assigned. Make an assessment of the physical condition of the divers prior to each dive to determine if any physical impairment is present that would be detrimental to the diver's health and safety in the water or under hyperbaric conditions.
- They will need to establish that all involved parties are aware that a diving operation is going to start or continue. They will also need to obtain any necessary permission before starting or continuing the operation, normally via a permit-to-work system from port's safety officer
- The supervisor will need to have clear audible and, if possible, visual communications with any personnel under their supervision. For example, a supervisor will be able to control the raising and lowering of a diving bell adequately if there is a direct audio link with the winch operator, even though the winch may be physically located where the supervisor cannot see it nor have ready access to it.

- Ensure diving operations are carried out from a suitable and safe location on the surface
- The supervisor will need to have direct communications with any diver in the water at all times, even if another person needs to talk to, or listen to the diver
- Be aware of the procedures to follow to obtain medical support in the event of an accident, either diving or non-diving related. Ensure a two-way communication system is available at the dive location to obtain emergency assistance.
- Develop or modify and produce pre- and post-dive checklists for the operation.
- Ensuring that proper records of the diving operations are maintained.

ENTRY-LEVEL TENDER/DIVER

Definition

The tender/diver is assigned by the diving supervisor or designated diving person in charge (DPIC) to perform various duties.

The diver responsibilities

- Inform the diving supervisor if there is any medical or other reason why they cannot dive.
- Ensure that their personal diving equipment is working correctly and is suitable for the planned dive;
- Ensure that they fully understand the dive plan and is competent to carry out the planned task;
- Comply with all commands and instructions from the diving supervisor or designated diving person in charge (DPIC) during the conduct of diving operations.
- know the routine and emergency procedures;
- Ensure that the deepest depth attained during the dive has been established before the ascent.
- Safely transition from the water to the decompression chamber without avoidable delay.
- Report any equipment faults, other potential hazards, near misses or accidents;
- Report any medical problems or symptoms that they experience during or after the dive;
- Check and put away personal diving equipment after use;
- Keep their logbooks up to date and presenting it for signing by the diving supervisor after each dive.
- Maintain a high level of physical fitness.
- Act as a standby diver or tender when directed to do so. Be capable and qualified to carry out all of the duties and responsibilities of the diver as set forth above. (The standby diver is the individual possessing the required training and experience to enter the water at the diving station in order to render assistance to a stricken diver).

DIVING MODES AND COMPETENCE OF DIVERS

DIVING MODES AND COMPETENCE, QUALIFICATIONS OF DIVERS

Diving Modes

Diving modes can be categorized according to the breathing apparatus used:

1. **SCUBA air diving**: Self-contained underwater breathing apparatus (SCUBA) has inherent limitations, so should not be used for the conduct of commercial diving operations and is not a suitable technique for diving under the scope of this codeexcept where it can be shown to be more safe and efficient than the alternative modes of diving.
   The following are the minimum requirements for self-contained diving operations:

Minimum Personnel Requirements

- One diving supervisor.
- One Diver.
- One tender/diver who shall be properly equipped and capable of performing the duties of a standby diver. (When two divers are simultaneously in the water and can maintain visual contact, they can act as standby diver for each other.)

Operational Guidelines

- Two-way audio-communications between the diver and topside are required.
- The planned time of a scuba diving operation shall not exceed either the no decompression limits or the air supply duration of the cylinders exclusive of the reserve supply. The cylinder pressure shall be determined immediately before each dive. Dive depths shall not exceed 100 fsw (30 m).
- Scuba dives shall not be conducted against currents exceeding one knot.
- Scuba dives shall not be conducted in enclosed or physically-confining spaces.
- During all scuba dives, a standby diver shall be available while a diver is in the water.
- Scuba divers shall be line-tended from the surface, or accompanied by another diver in the water in continuous visual contact during the diving operations.
- Diving on scuba will only be allowed during daylight hours.
- All divers on scuba shall wear a buoyancy compensator and whistle or other audio signaling device.
- During periods of low or poor surface visibility, the diver shall also carry a lighted beacon.
- Scuba divers shall be equipped with a diver-carried EGS.
- Scuba divers shall be equipped with a submersible pressure gauge (tank contents gauge).

2. **Surface-supplied air diving:** air diving using surface supplied equipment for carrying out work not exceeding 50 meters in depth; and

3. **Surface Supplied Mixed Gas Diving (H_eO_2 -N_2O_2):**Divers breathing a mixture of oxygen and nitrogen or heliumunder pressure, whether compressed natural air or an artificial mixture, are at risk of both oxygen toxicity and nitrogen narcosis as the depth increases. The diving procedures will therefore need to specify the maximum depth for the mixture being used. Breathing mixtures other than oxygen and nitrogen (or air) will need to be used when diving takes place deeper than 50 meters of water. When nitrox diving is carried out the partial pressure should not exceed 1.5 bar absolute. For diving exceeding 50 meters in depth, bell diving should be used in which the diver is transported in a diving bell from the surface to the work site underwater and then returned to the surface in the bell and subsequently to a surface recompression chamber for decompression.

COMPETENCE, QUALIFICATIONS AND TRAINING OF DIVERS

Basically, any diver (including standby diver and extra diver) or other diving team member who is competent to take part in an industrial diving operation should have the training and experience necessary to perform the assigned task in a safe manner. Regarding competence to dive in a particular diving mode, a diver should have training and experience in various aspects of the respective mode, specified in IMCA or ADCI codes. Documentary proof of competence can be a certificate, obtained by training or assessment of experience up to international standard.
The training and experience in general terms should include:

- Technique of the required diving mode;
- The assigned underwater work;
- The use of tools, equipment and system relevant to the assigned task; and
- Safe practices and emergency procedures.

Member companies of the ADCI or IMCA employ persons to perform as certified commercial divers in the following categories:

- Entry-level tender/diver.
- Air diver.
- Mixed-gas diver.
- Bell /Saturation diver.
- Air-diving supervisor.
- Mixed-gas diving supervisor.
- Bell /Saturation-diving supervisor.
- Bell /Saturation technician.
- Life-support technician.
- Deck crew/Riggers.

Competence is not the same as qualification. A person who has a particular qualification, such as a diver training certificate, should have a certain level of competence in that area but the diving contractor and the diving supervisor will need to make sure that the person has the detailed competence necessary to do the specific task required during the particular diving operation.
The different members of the diving team will require different levels and types of competence and qualifications as mentioned in ADCI or IMCA codes.
Diplomas issued by a civilian or military educational organization are for the purpose of attesting that an individual has received the necessary basic formal training to enter a vocational field. Such

instruments should not be used to verify that the graduate can perform in the field without further on-the-job training and experience with actual demonstration of competency.

Numbers of Personnel/Team Size

The diving contractor will need to specify the size of team based on the details of the project and the risk assessment. For safe operation, this may need to include additional deck support personnel and other management or technical support personnel, such as project engineers or maintenance technicians.

The diving contractor will need to provide a sufficient number of competent and qualified personnel to operate and maintain all the equipment and to provide support functions to the diving team, rather than relying on personnel provided by others for assistance (e.g. clients, ship crews, etc.).

If personnel who are not employed by the diving contractor are to be used in the diving team for any reason, such as technicians, they will need to be carefully considered for competence and suitability before being included. Such personnel can create a hazard to themselves and others if they lack familiarity with the contractor's procedures, rules and equipment. There will be exceptions to this requirement such as technicians employed by the vessel owner. In such circumstances, these personnel, whose principal duties may be associated with the diving or ship's equipment, may form part of the diving team. Such an arrangement will need to be confirmed in writing, together with the responsibilities of these individuals.

To allow a diving operation to be conducted safely and effectively a number of eventualities should be considered when deciding team size and make up including the following:

- Type of task;
- Type of equipment (air, saturation etc.);
- Deployment method;
- Location;
- Water depth;
- Operational period
- Handling of any foreseeable emergency situations.

The overriding factor must always be the safety of personnel during operation and maintenance. It is the absolute responsibility of the diving contractor to provide a well-balanced, competent team of sufficient numbers to ensure safety at all times.

When a dive is taking place, a diving supervisor (or a life support supervisor for chamber operations only during closed bell/ saturation diving) will need to be in control of the operation at all times. For larger projects, more than one supervisor may be needed on duty and a diving superintendent to be in charge of the overall diving operation. Each supervisor will only be able to provide adequate supervision of a defined area of operations, including dealing with foreseeable contingencies or emergencies.

Minimum Personnel Requirements for all types of diving as mentioned in IMCA or ADCI codes.

Medical

MEDICAL FITNESS OF DIVER

Certificate of Medical Fitness to Dive

In general any person, who is likely to be subjected to pressure greater than atmosphere, must be medically fit. A diver must be medically examined and should be in possession of a Certificate of Medical Fitness to Dive. A valid Certificate of Medical Fitness to Dive should be issued by a medical practitioner must be with special experience in underwater or occupational medicine. The certificate of medical fitness to dive is a statement of the diver's fitness to perform work under water and is valid for as long as the doctor certifies, up to a maximum of 12 months. The certificate should contain the details specified in IMCA or ADCI codes and should be entered into the Diver's Log Book. A new certificate of fitness should be obtained if the diver has been sick for a continuous period of 10 days or more, or requires hospitalization of 72 hours or more.

The physiology of diving and the problems encountered by an ill or injured diver are not subjects which most doctors understand in detail. For this reason it is necessary that any doctor who is involved in any way with examining divers or giving medical advice in relation to divers has sufficient knowledge and experience to do so.

The medical examination looks at the diver's overall fitness for purpose. It includes the main systems of the body - cardio-vascular system, respiratory system, central nervous system - and ears, nose and throat, capacity for exercise, vision and dentition.

The medical examiner of divers who certifies their fitness to dive needs to have an understanding of the working environment of the diver, which is normally gained by undertaking an appropriate training course. Such a doctor, however, may be unable to give the necessary advice in relation to treatment of decompression sickness or other diving related injury.

It is very important that a diver should be physically and psychologically fit before commencing a diving operation. Diving should not be undertaken if the person is suffering from any illness. Common cold and any other respiratory tract infections are temporary disqualifying conditions for diving. To avoid emergencies caused by medical conditions and the development of long term health problems, a diver should be medically examined for fitness before employment for underwater work. He should be examined even before he commences training and at regular intervals of not exceeding 12 months during his career.

A person is considered unfit to dive if he has any medical condition which:

- May impair his safety or safety of other diving team members while diving;
- May be significantly aggravated by diving; or
- May significantly increase the likelihood of developing long term health problems associated with diving.

A minimum amount of medical equipment will need to be at a diving site to provide first aid and medicaltreatment for the dive team. First aid kits should be held in the diving bell, chambers and hyperbaric rescue facility. In addition specialized medical equipment needs to be held at the dive site. The minimum amount will depend on the type of diving, but a standard list has been agreed in ADCI or IMCA codes

Decompression Illness after Diving

Divers are at risk of decompression illness (DCI) after diving. It is difficult to treat decompression illness if recompression facilities are not immediately available. The diving project plan will therefore need to specify that divers remain close to suitable recompression facilities for a set time following a dive.

There are two basic types of hyperbaric chamber

A sealable diving chamber, closed bell or dry bell is a pressure vessel with hatches large enough for people to enter and exit, and a compressed breathing gas supply to raise the internal air pressure. Such chambers provide a supply of oxygen for the user, and are usually called hyperbaric chambers whether used underwater or at the water surface or on land to produce underwater pressures. However, some use submersible chamber to refer to those used underwater and hyperbaric chamber for those used out of water. There are two related terms which reflect particular usages rather than technically different types:

- Decompression chamber, a hyperbaric chamber used by surface-supplied divers to make their surface decompression stops
- Recompression chamber, a hyperbaric chamber used to treat or prevent decompression sickness.

A chamber is required on scene

For dives deeper than 100 fsw (30 Meters) and for any dive requiring decompression, so an emergency recompression chamber (two compartments Chamber) must be on site. A certified operator other than the diver must be available to operate the chamber. A bailout reserve breathing supply with sufficient air for the diver to return to the surface in a controlled manner must be carried by the diver.

Air Decompression Policy

It is the Port policy not to plan or perform decompression diving. **No exceptional exposure diving will be planned**. If an emergency situation occurswhere the no-decompression limit is exceeded due to entrapment, entanglement ortiming device failure, in-water decompression is permitted to avoid injury to the diver. The U.S. Navy based Standard Decompression. Tables shall be used to calculate decompression depths and times. Normal diving procedures shall be conducted in the Unlimited /No- Decompression. Repetitive diving procedures will be followed carefully; each diver shall always know his repetitive group and last time of reached surface, so that surface intervals can be quickly determined for daily dive planning. The dive team supervisor shall ensure that all divers are trained on the use of standard and repetitive diving procedures.
For all other diving modes less than 30 Meters, all diving companies must have a decompression chamber available in Fujairah for any emergency, but for example if two diving companies share in

One decompression chamber, so in case ofillness (DCI) of any diver, Port of Fujairah has the right to cease the diving activity for both companies until the patient is treated.
Any diver showing signs or symptoms that cannot be attributed to any other cause must be treated for decompression sickness. Unless the treatment is taken care of by a medical specialist, the diving supervisor is responsible for carrying out first aid and treatment work, and where necessary should consult the diving contractor's medical adviser.
The majority of cases of decompression sickness occur within the hour or two following a dive. If decompression has been shortened or bypassed, the diver may suffer fromdecompression sickness before he reaches the surface. Occasionally however, decompression sickness may become apparent many hours or even days after a dive. Symptoms that occur after 24 hours (although less likely to be due to decompression sickness) should be referred for medical advice. If there is any doubt about making the diagnosis it should be assumed that the diver is suffering from decompression sickness and should be treated accordingly.

Work Planning

Diving Project Plan

Before any diving is carried out there should be a diving project plan in existence. Dive planning will vary according to the tasks and conditions of the diving operation. A dive plan will be included as part of the Dive Hazard Analysis. The dive plan must be completed and approved. The diving project plan should consist of documents such as:

- Dive site description
- Diving mode selection
- Surface and underwater conditions and hazard analysis
- Air supply requirements
- Diving equipment, systems and required support equipment
- Dive team assignments and responsibilities
- No-Decompression limits
- Emergency procedures (accident/near-accident and incident notification, reporting and investigation procedures)
- Evacuation procedures and recompression treatment procedures
- A management of change procedure
- Adverse weather working policy
- Diving/operating/maintenance procedures
- Mobilization/demobilization plans
- Step-by-step work procedures
- Contractors manuals (submitted one time only) and documentation
- Code, standards and reference documents
- Communication and responsibility organigrams
- Equipment audit reports and certification
- permits-to-work
- Minimum gas/breathing mixture requirements
- Any location-specific hazards identified by the client
- Suitable emergency and contingency plans, including: lost bell recovery; rescue of divers from a habitat; and hyperbaric evacuation for surface orientated and saturation diving operations. These should be agreed by all relevant parties

Prior to commencement of the project a safety management system interface document should be in place, which reflects and defines the safety management interface between client, diving contractor, sub-contractors and third parties. The document shouldinclude the relevant documentation and management systems of all parties involved as well as the responsibilities, communication protocol, emergency response, operational procedures and practices for managing health and safety during the project.

Risk Management Process

The diving contractor should have a risk management process in place which addresses the project lifecycle and should include the following:

- Risk identification meetings prior commencement of the development of step by step work procedures
- Final risk assessment when the step by step work procedures have been finalized

- Risk assessments of mobilization/demobilization plans and the contingency and emergency plan
- Mobilization and familiarization of the offshore personnel
- A job safety analysis (JSA) should be completed prior to initiating the work
- A toolbox meeting should be held at the start of each shift or prior to any high-risk operation
- Dive plan. This should be used for each dive to brief the divers. It should contain the tasks to be carried out, hazards, risks and precautions to be taken.

Environmental Considerations

The safe and efficient deployment and operation of divers is dependent upon suitable environmental conditions. For any given situation the combination of these conditions can be dramatically different and it is the responsibility of the diving supervisor to assess all available information before deciding to conduct, to continue or to finish diving operations. Each diving contractor should normally define clear environmental limits (adverse weather working policy). Diving supervisors should also ensure that they understand the implications of any other limitations which apply to vessels/fixed and floating structures and deployment systems.

Communications

Effective communications are essential to ensure that all personnel directly involved in operations are made fully aware of the work being undertaken and that during operations all parties are kept aware of the status of any unusual situation.
Communications between the diving team and any other relevant personnel (such as marine crew, DP operators, crane operator) are important for safe and efficient operation
Effective communications are vital to the safety and success of any operation. To ensure this the diving supervisor needs to be given access to the communications service of the vessel or fixed/floating structure on which operations are based, as and when required.
Continuous, two-way voice communications between the diver(s) and the surface will be maintained throughout the diving operation. If communications are lost, terminate the dive and use line pull signals for diver's ascent to surface
Communication systems encompass all available media and equipment: word of mouth, reports, telephone, telex, email, fax, radio, etc.
All such communications will need to be recorded, and the recording kept for minimum 24 hours before being erased. If an incident occurs during the dive, or becomes apparent after the dive the communication record will need to be retained until the investigation has been completed.

Launch and Recovery Procedures and System Certification

Because of the variety of diving systems, support locations and deployment systems, it is not possible to define every launch/recovery procedure and system in this Code.
A diving contractor should ensure that the launch and recovery system(s) used for diving operations have been tested and certified by a competent person.
It is the responsibility of the diving supervisor to ensure that a safe launch/recovery procedure exists that is understood by all members of both the diving and the support installation crews. The procedure should progress in smooth, logical steps and be designed so that all personnel involved in the operation are fully aware of the situation at all times.

LIFE-SUPPORT EQUIPMENT: REQUIREMENTS, MAINTENANCE AND TESTING GENERAL

Equipment such as helmets, masks, bailout systems, regulators, etc., that provide direct life support shall be of a type familiar to the diver and subject to a planned maintenance system.
Due to the life-support nature of diving, personnel involved in the operation, maintenance and repair of diving systems and equipment shall have appropriate training and experience in the maintenance and use of type of equipment used.
The diving supervisor shall ensure that all diving systems and equipment have been examined and tested prior to diving to determine their condition and suitability for service. No diving operation shall be permitted to commence until all systems and equipment have been thoroughly tested for proper functionality.

MAINTENANCE RECORDS

Suitable equipment logs shall be established and maintained in a correct and current condition.
Life-support equipment shall have a unique identity traceable to the equipment/maintenance log.
Entries made in the equipment log shall describe the nature of the work performed, including the dates of modification, repair or test; the name of the individual performing the work or test; and the particular piece of equipment involved.
A preventive maintenance program is required for all life-support equipment.

Emergency and Contingency Plans

Emergency and Contingency Plans

Emergency procedures are the actions or procedures needed to regain control of a situation and prevent or minimize injury to the diver or support personnel.
Accidents and emergencies require a quick response if they are to be prevented from becoming more serious. Before starting diving operation, the diving contractor should make detailed planning and assessment for possible emergencies at all depths and locations and the availability of emergency services. He should also ensure that there are effective means of communication between the diving location, the people who has control of the location and the emergency services.
If a diving operation is being carried out without a recompression chamber on site, the diving contractor has a specific responsibility to locate the nearest chamber (in Fujairah) prior to the operation, and to make arrangements to use the chamber in the event of an emergency.
General emergency procedures and any procedures specific to the operation as well as information on the arrangements for emergency services should be provided in the contractor manual which should be accessible to all diving team members.
The diving contractor's operations manual should contain a section laying out the actions required of each member of the diving team in the event of a foreseeable emergency occurring during operations.
The following list, which is not exhaustive, identifies the type of possible emergencies to be considered:

- Dealing with an injured, lost diver or unconscious diver
- Fire in a chamber or around the dive system
- Evacuation from a vessel or fixed/floating structure which is on fire or sinking(emergency evacuation)
- loss of pressure in chambers or bell
- faulty or broken equipment
- Adverse environmental conditions
- Loss of communications
- Fouled or entrapped diver
- Oxygen toxicity

In addition to the general safety requirements concerned withthe prevention of injury or illness to divers, it must always beborne in mind that:

- A diver should not go, and must never remain underwater if he does not feel well
- Any loss of consciousness underwater may prove fatal
- Any illness occurring during or after a dive must be assumed to be due to the dive until it is proved otherwise; and
- Taking drugs or alcohol prior to dive is prohibited

All divers should have training and experience in first aid and basic underwater medicine so that, in a medical emergency, all diving team members have sufficient knowledge to proceed with appropriate treatment or corrective action in consultation with the diving supervisor. A diver should possess a valid certificate in first aid, including cardiopulmonary resuscitation, issued by organizations such as IMCA, ADCI or equivalent organizations. For diving operations beyond the no-decompression limit or in remote locations where the assistance of a medical practitioner cannot be obtained quickly, at least one member of the diving team should have further training and

experience in diving rescue and first aid, and be able to go underwater to perform rescue operation without compromising the team (i.e. not the supervisor).
Medical instructions and equipment should be provided at the diving location to enable all diving team members to carry out first aid or to save life in an acute situation. All accidents and incidents requiring first aid or medical intervention should be accurately recorded in the diving operations log book.
A seriously injured or ill diver should be subjected to a brief structured examination before treatment is started and any findings should be reported to the diving supervisor.
Any case involving decompression sickness resulted from an industrial diving operation, the patient should be sent to the recompression treatment center

Contingency Plan

A contingency plan and appropriate procedures, which have been risk assessed, should be in place. These plans/procedures should include:

- The location and arrangements for medical support
- The personnel and equipment required for the evacuation of a surface supplied diver with omitted decompression. The plans/procedures should cover the method of evacuation of the diver to a designated chamber identified for recompression
- Recovery of an injured or unconscious diver
- Fire in a chamber or around the diving system
- Fire on board the vessel, small craft or on the quayside
- Evacuation from the vessel or quayside in the event of fire or explosion
- Loss of pressure in the recompression chambers
- Faulty or broken equipment
- Approach of severe weather

ACCIDENT REPORTING

Diving accidents or incidents are defined as an injury or diving illness occurring during or as a result from the dive or hyperbaric exposure. A diving incident is any adverse consequence that caused or could have caused injury to personnel and/or damage to equipment, facilities, or the environment. Accidents in diving operations can range from minor injuries and mishaps to life threatening injuries or decompression illness, even loss of life. All accidents and incidents, regardless of the severity or whether or not the employee is injured, must be reported to the Port of Fujairah Harbour Master (thru control tower).All diving accidents requiring medical treatment or resulting in a serious injury or death will be reported in accordance with the Code form.
A key element of any successful accident prevention program is the timely reporting and investigation of all accidents and incidents. Determining the root cause of an incident and implementing corrective actions will lead to a continual improvement to the dive operations. All personnel involved in the dive operation, the diver or topside personnel, the supervisor and the DP must freely discuss the incident to determine what went wrong and ways to prevent recurrence.
All diving accidents must be reported immediately to Harbour Master and Safety Officer and include the following initial information:

- Nature of the incident
- Extent of injury, including symptoms and time of onset

- Treatment and results
- Possible cause
- Actions taken to prevent or minimize the injury or illness

In order to learn from near-miss incidents and incidents and prevent them from happening again diving contractors should have a procedure in place for reporting and investigation of near-miss incidents and incidents. The findings of these investigations should allow the contractor to take the appropriate corrective actions.

Risk Assessment

A Risk Assessment is nothing more than a common sense approach to identifying significant hazards; who is likely to be affected by those hazards; the risks associated with the hazards; what measures you will take to control the risks – thus reducing the harm to anyone during diving activities; recording the precautions / procedures you have put in place. The assessment needs to be reviewed periodically while the activity is ongoing or whenever there is a significant change
A risk assessment should include the initial risk evaluation and risk level (e.g. high, medium, low) and, if required, further risk reducing measures and the residual risk level. Based on the risk assessment the decision on whether the work can go ahead safely and what precautions need to be taken can be made. The risk assessment shouldalso identify onshore/offshore personnel responsible for ensuring the precautions agreed during the risk assessment are carried out.

Definitions:

Hazard- anything can cause harm.
Risk - is the chance, high or low, that somebody will be harmed by the hazard.

5 Steps to Risk Assessment

Step 1: Look for the hazards.
Step 2: Decide who might be harmed and how.
Step 3: Evaluate the risks. Decide whether existing precautions are adequate or more should be done to lower the risk.
Step 4: Record your findings.
Step 5: Review your assessment and revise if necessary.

Job Safety Analysis (JSA)

The purpose of the JSA is to provide a written document identifying hazards associated with each step of a job and develop solutions that will reduce, eliminate or guard against hazards. On the JSA, sentences should be short and simple. The attached sample JSA form in the appendicescan be copied and used as is or modified to suit individual company needs.

Potential Hazards

- Identify possible hazards associated with each step and list that hazard opposite the job step.
- Consider potential accident causes (strain, sprain, slip, fall, cut, crush, etc.).
- Consider environmental and health hazards (vapors, gasses, heat, noise, toxicity, etc.).
-

Recommend Safe Procedures and Protection

- Develop solutions for each potential hazard and list the solution opposite the hazard.
- Detail controls, e.g., ventilate, isolate, allow to cool, secure, guard, train, etc.
- List of personal protective equipment (PPE) required, e.g., gloves, eye protection, respirators, fall protection, etc.

Assign Responsibility

- Assign a specific person the responsibility of implementing the safety procedures or protection required.

Personnel Involved

- Identify the persons preparing, reviewing and approving the JSA.
- Distribute the JSA to all personnel involved in the job or task and ensure that each person is familiar with the contents of the JSA.

Revising the JSA

The JSA should be reviewed and updated whenever new equipment, products or procedures are introduced into the work site. This isespecially true if an accident has occurred on a task upon which a JSA has been performed.

Equipment

Equipment Certification and Planned and Periodic Maintenance

Guidance exists on the frequency and extent of inspection and testing required of all items of equipment used in a diving project, together with the levels of competence required of those carrying out the work. All of the equipment used in a diving operation will need to comply with at least these requirements. Suitable certificates (or copies) will need to be provided at the worksite for checking.

Diving equipment is used under offshore conditions, including frequent immersion in salt water. It therefore requires regular inspection, maintenance and testing to ensure it is fit for use, e.g. that it is not damaged or suffering from deterioration. Regular maintenance is an important factor in ensuring the safe operation of a diving system.

Diving contractors should give due consideration to recommendations given in manufacturers' maintenance manuals, amount of use, previous operational experience and guidance given in IMCA or ADCI codes.

An equipment register will need to be maintained at the worksite, with copies of all relevant certificates ofexamination and test as well as design specifications and calculations of the equipment.

Manuals and Documentation

A major factor in a safe and efficient diving operation is the supply of a comprehensive set of manuals, checklists and logbooks appropriate to the operation. It is the responsibility of every contractor to ensure that each diving system is supplied with the necessary documentation including at least the following:

- contractor's operations manual
- system equipment technical manuals
- daily diary/report book
- planned maintenance system
- repair and maintenance record
- systems spares inventory
- pre-/post-dive checklist

Equipment Location and Operational Integrity

The choice of equipment location will be determined by the type of installation (a fixed structure may differ from a vessel or floating structure), the detail of the type of diving equipment involved, the integrity of any handling system with respect to lifting points or load bearing welds, and structures etc. In this respect it should be ensured that in-date test certificates for all equipment are available where required.

In some applications the diving system may be required to operate in a hazardous area (e.g. an area in which there is the possibility of danger of fire or explosion from the ignition of gas, vapour or volatile liquid). All diving equipment used in such an area must comply with the safety regulations for that area.

Diving supervisors should also comply with any specific site requirements and where required obtain an appropriate permit-to-work before conducting diving operations.
Equipment location is often dependent on available deck space. However, if it is possible then placing the diving deployment system close to a ship's centre of gravity will minimize motion.
A deck layout or plan should be prepared prior to mobilization in order that a suitable equipment location and the service connections required are clear to all parties.
Before welding any part of the diving system to a vessel or fixed/ floating structure, the position of fuel tanks and any other possible problem should be ascertained.

Suitability

The diving contractor will need to make sure that the equipment provided for the diving project is suitable for the use to which it will be put, in all foreseeable circumstances on that project.
Suitability can be assessed by the evaluation of a competent person, classification society, clear instructions or statements from the manufactureror supplier and physical testing. New, or innovative, equipment will need to be considered carefully, but should not be discounted because it has not been used before.
All equipment and plant supplied for use in a diving operation will need to comply with IMCA or ADCI standards.
In addition to the equipment and plant certification mentioned above, portable diving systems and fixed diving systems should as a minimum conform to this code, applicable national regulations/ standards and flag state requirements.

Self Auditing

Diving contractors should have a process in place for self-auditing their diving systems and equipment, during mobilization and on an annual basis, in accordance with IMCA or ADCI guidelines

Glossary of Terms

A number of specialized terms are used in this code. It is assumed that readers are familiar with most of them. However, a number of them, although in use for many years, could be misunderstood. These terms are defined below to ensure that readers understand what is meant by them in this code.

Certification	A document that confirms that a particular test or examination has been carried out or witnessed at an identified time on a specific piece of equipment or system by a competent person
Classification	A diving system built in accordance with a classification society's own rules, can, at the owner's request, be assigned a class
Company medical adviser	A nominated diving medical specialist appointed by a diving contractor to provide specialist advice
Competent	Having sufficient training or experience (or a combination of both) to be capable of carrying out a task safely and efficiently
DCI	Decompression illness
Deck decompression chamber (DDC)	A pressure vessel for human occupancy which does not go under water and may be used as a living chamber during saturation diving, diver decompression or treatment of decompression illness. Also called compression chamber, recompression chamber, deck chamber or surface compression chamber
Dive plan	A plan prepared for each dive or series of dives to brief the diver(s) about the work to be undertaken including the necessary safety precautions to be taken
Diving project plan	Documents and information available on-site at a diving project and should include mobilization and demobilization plans, the diving technique/procedures to be used, step-by-step diver work procedures, identification of hazards and control and contingency procedures for any foreseeable emergency
Diving system	The whole plant and equipment for conducting diving operations
Diving bell	A pressure vessel for human occupancy which is used to transport divers under pressure either to or from the underwater work site. Also called closed diving bell or submersible decompression chamber
Diving medical specialist	A doctor who is competent to manage the treatment of diving accidents, including, where appropriate, mixed gas and saturation diving accidents. Such a doctor will have undergone specialized training and have demonstrated experience in this field
Dynamic positioning (DP)	A system that automatically controls a vessel's position and heading by means of thrusters. A typical DP system consists of a control system (including power management and position control), reference systems (such as position, heading and environmental references) and power systems (including power generation, distribution and consumption)
EGS	Emergency Gas Supply
Habitat	An underwater structure inside which divers can carry out dry welding and which is fitted out with life support facilities
HAZOP	Hazard and operability study
HES	Hyperbaric evacuation system
JSA	Job safety analysis. Also called SJA (safe job analysis), JHA (job hazard analysis), TRA (task risk assessment)
MOC	Management of change. This is a process that needs to take place to revise an existing approved design/fabrication or work/installation procedure

Medical examiner of divers	A doctor who is trained and competent to perform the annual assessment of fitness to dive for divers. Medical examiners of divers may not possess knowledge of the treatment of diving accidents
Risk assessment	The process by which every perceived risk is evaluated and assessed. As part of the process control measures to be established to prevent harm before an operation commences should be identified. The findings and actions will be documented. A risk assessment is part of the risk management process
ROV	Remotely operated vehicle
Standby diver	A diver other than the working diver(s) who is dressed and with equipment immediately available to provide assistance to the working diver(s) in an emergency
Subsea	(especially of processes or equipment used in the oil industry) situated or occurring beneath the surface of the sea
Wet bell	A basket with a closed top section which is capable of containing a dry gaseous atmosphere to provide a refuge for the divers. It is not a pressure vessel. A supply of spare gas will be carried on the wet bell. Also called an open bottom bell

Appendices

Job Information

Appendix A

Contractor (Dive Company): **Ship's /Job Name:**

Dive Location:

Dive Purpose/Type of Work: **Dive Supervisor:**

Date: **Duration:**

Item	Note	Y/N/NA	Remarks
Access			
Depth Actual			
Altitude			
Depth Corrected			
Non Decom. Limit			
Temperature			
Maximum Bottom Time			
Bottom Condition			
Entanglement			
Weather			
Current			
Vertical Ascent			
Visibility Water			
Lights Required			
Video Recommended			
Camera Recommended			
Surface Support			
Special Equipment			
Team Coordination			
Dive Plan			
Emergency Equipment			
Hospital			
Physician			
Recom. Chamber			
Ambulance			
Radio / Telephone			
Diver's Experience			

Job Safety Analysis

Appendix B

Company:	Location:	Date:	Page --- ---of---------	New ☐ Revised ☐
Job Or Task				
No	**Basic Job Steps**	**Potential Hazards**	**Recommended Safe Procedures / Protection**	**Responsibility**
Prepared By:		**Reviewed By:**		**Approved By:**
Distribution:				

Vessel: **Appendix C**

Call Sign:

IMO No:

VSAT Tel.:

FBB Tel.:

E-Mail:

Master Declaration

I, Capt. (Full Name), being anchored / berthed off Fujairah, declare that I will comply with all port formalities and instructions while the diving operation is performed by (Diving Company Name).

I also declare the following:

- International Signals will be displayed ("A" Flag& "Diver Down" Flag)
- Vessel will be secured anchored / moored at jetty
- Job requirements will discuss with dive supervisor
- Environmental conditions (Weather / Tide forecast) will be supplied to dive supervisor
- Propeller/s – Bow thruster will be secured – Turning gear engaged
- All underwater electrical devices will be shut off
- Port Authority / other vessels nearby been will be advised
- All machinery related to diving will be isolated
- Working channel will be established with dive supervisor
- Rudder will be isolated and stationary
- All sea intakes / or overboard discharge lines not in use, will be secured by double valve protection and locked-out / tagged-out
- Lookout men will be posted
- Main Engine / turning gear will be disengaged, locked-out, tagged-out
- Cathodic protection system, sonar, echo sounder, Doppler log will be switched off
- All applicable emergency tools, materials, equipment will be checked and be ready for use

Master Signature

Vessel Stamp

Appendix D

Dive Work Permit

DIVE WORK PERMIT	Permit #
Diving Company (Contractor):	Vessel:
Personnel who are to carry out Dive Work outside of designated area must be authorised. A risk assessment or Job Safety Analysis (JSA) must be performed, with appropriate controls put in place, prior to work commencing.	
Are the personnel working on this dive work task Trained and Competent?	☐ YES ☐ NO
Has a trained and competent Standby Person been nominated?	☐ YES ☐ NO

SECTION 1 – Specification of Work

Location of Diving Operation		
Purpose /type of work:		
If operating over more than one day: Expected daily start and finish times:	Start Date/Time: / / .....hrs	Finish Date/Time: / / .....hrs

SECTION 2 – Control Measures

Is Dive Watch required? ☐ YES ☐ NO If YES indicates below the appropriate checking intervals.

☐ CONTINUOUS (Nominated Persons Below) ☐ CHECK INTERVAL ☐ CHECK INTERVAL AFTER WORK COMPLETION (Up to 4 hours)

Dive Watch Verification – Sign ONLY once you have completed the Dive Watch

Name:		Time:		Signature:	
Name:		Time:		Signature:	
Name:		Time:		Signature:	
Name:		Time:		Signature:	

*Permit may NOT be cancelled until Dive Watch complete

Area tested for Dive? ☐ YES ☐ NO		Result			
Contractor Representative		Signature:		Date:	/ /

SECTION 3 – Authorisation to Work

I accept this Permit, agree to the conditions detailed above and the associated procedure(s), and accept responsibility as the person directly in charge of the nominated work. I have read attached risk assessments / Job Safety Analysis, procedures and have observed risk controls in place.

Name:		Signature:		Date:	/ /

I authorise the Dive Work subject to conditions/precautions of the Risk Assessment / JSA indicated on this Permit.
Note: Risk Assessment/Task Analysis MUST be attached to this document for authority to be completed

Name:		Signature:		Date:	/ /

SECTION 4 – Completion, Suspension or Cancellation of Work Please TICK the appropriate response:

All work associated with this Dive Work Permit has been:	☐ COMPLETE ☐ CANCELLED ☐ SUSPENDED
The work area and adjacent areas have been inspected after completion of the work and all hazards have been made safe:	☐ YES ☐ NO
Equipment has been checked and restored correctly.	☐ YES ☐ NO

Additional Comments: .....

.....

.....

Contractor Representative	Signature:	Date: Time:

Continue Dive Work Permit

CHECKLIST- These items are to be considered in the Risk Assessment/Job Safety Analysis	
Divers fit & have valid diver's medicals?	Rudder isolated and stationary?
Diver's first aid & equipment to required level?	Lookout man posted?
Required number of diving Medics available?	Broadcast diving warnings throughout the vessel?
Safety equipment easily accessible & ready for use?	Warning notices /lck & tags outs in place?
Diving plant all certified?	Diving area safe?
Diving compressor intake in clean air area?	Safe entry in/out of sea?
Communication between bridge / Dive CR tested & working?	Approved work procedures present & complied with?
All non diving equipment used in supporting divers certified, checked prior to diving & fit for use?	Project safety plan / risk assessments present & complied with?
Dive recording & monitoring equipment present & working?	Safe level of support equipment present & available?
All machinery related to diving isolated?	Appropriate PPE provided & worn?
Working channel established with dive supervisor?	Divers briefed on job & safety aspects?
Is bunker vessel alongside and safety checklist completed with master?	Diver's individual equipment & tools checked prior to dive?
Active intake? Which one/s?	Diver's communication checked prior to the dive?
	Bridge / control tower informed of start & end of each dive?

Additional Checks Required/Completed

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Dive Work Definition –

Hazardous Area Definition –

Appendix E

Diving Project Plan

Date Submitted: **Submitted By:**

Dates Proposed: **Diving Company Name:**

Vessel / Project Name: **Project Dive Manager / Supervisor:**

General Dive Site Location:

Proposed # of Dives per day / week: **Estimated # of Divers:**

Max. and Average Dive Depths: **Min. Surface Interval Time:**

Mode:

☐ SCUBA ☐ Surface Supplied ☐ Others

Environment:

☐ Inland ☐ Inshore ☐ Offshore

Dive Entry:

☐ Shore ☐ Boat ☐ Other

Breathing Gas:

☐ Air ☐ Nitrox (40% O_2) ☐ Other

Air Compressor: Is the compressor being used owned by Diving Company.

☐ Yes ☐ No

SCUBA Cylinders: Hydrostatically tested within the past 5 years and visually inspected

☐ Yes ☐ No

Air Tools: Will air tools (lift bag, vacuum, drill…etc.) be used for this project.

☐ Yes ☐ No

Joint Diving Operations (diving conducted jointly with other contractor)

☐ Yes ☐ No If Yes, List Contractors.

Appendix E

Diving Project Plan

Oxygen at site: ☐ Yes ☐ No

First Aid at Site: ☐ Yes ☐ No

Dive Flag at Site: ☐ Yes ☐ No

Nearest Medical Treatment Facility to Dive Site:

- Location:
- Telephone:
- Transportation Method & Distance:

Nearest Recompression Treatment Facility to Dive Site:

- Location:
- Telephone:
- Transportation Method & Distance:

Emergency Contact Numbers:

Detailed Dive Plan:

(Describe sub-tidal techniques: add separate pages, diagrams and or a copy of the proposal if necessary)

Monitoring:
Before Diving:
Boating:
The Dive:
Dive Safety:

Appendix E

Diving Project Plan

List of sampling equipment and other tools not listed in dive plan:
(Sampling equipment, compressor, air tools: drills, vacuum, lift bags, scooters…etc.)

Collapsible quadrats Measuring poles Meter tapes Dive slates Dive lights Cameras and housings Replacement transect line Site marker buoys or down lines Others

Hazardous Conditions anticipated: (cold water, currents, deep depths, and low visibility….etc.)

Current: Low Visibility: Cold Water: Weather Conditions:

Appendix E

Diving Project Plan

Safety Precautions / Training:

Expected Dive team Members

Name	Depth Certification
1. **Diving Supervisor:**	
2. **Diver:**	
3.	
4.	
5.	
6.	
7.	
8.	

General Dive Plan Considerations

- **Any diver has the right to refuse to dive without fear of penalty if feels the conditions are unsafe or unfavorable or the dive violates the precepts of their training or the regulations of this code.**
- **All dive plans must be based on the competency of the least experienced diver.**
- **An ascent rate of 30ft/min and a precautionary stop at 15-20ft for 3-5min should be made for each dive.**
- **For all diving conducted under hazardous conditions a plan must be formulated to deal with such conditions.**

- **Plan dives conservatively and maximize surface intervals.**
- **A diver should wait at least 24 hrs. before flying or traveling to altitude (1000+ft) after any dive.**
- **An emergency plan should be reviewed for each project including the following: emergency contact information (including name, relation and telephone number) for each diver, nearest recompression chamber, nearest accessible hospital and anticipated means of transportation.**

Appendix F

Risk Assessment Guidelines

Risk Evaluation = Likelihood of occurrence x Severity of Risk

	Slightly Harmful = 1	Harmful = 2	Extremely Harmful = 3
Highly Unlikely = 1	Minimal Risk (1x1 =1)	Tolerable Risk (1x2 =2)	Moderate Risk (1x3 =3)
Unlikely = 2	Tolerable Risk (2x1=2)	Moderate Risk(2x2=4)	Substantial Risk (2x3=6)
Likely = 3	Moderate Risk (3x1=3)	Substantial Risk (3x2=6)	Intolerable Risk (3x3=9)

Here, "Tolerable Risk" means slightly higher than minimal, where any necessary measures taken make the remaining risk low. If you cannot get rid of a hazard completely what can you reasonably do to control the risks so that harm is unlikely?

When / What Actions are Necessary?

Risk Evaluation	Actions Necessary
Minimal / Tolerable Risk score 1or 2	No additional control measures required; monitor and maintain any measures already in place.
Moderate Risk score 3 or 4	Can you introduce further control measures to lower the risk? If not, proceed with caution and monitor activities thoroughly.
Substantial Risk score 6	Diving should not be carried out until the risk can be lowered. e.g. Additional safety equipment – personal, on site or on boat; safer access / exit point; more sheltered site.
Intolerable Risk score 9	Diving should not be considered / continued unless immediate measures can be put in place to reduce risks. Otherwise, abort the planned dive and try to arrange a safer alternative.

There will obviously be + / - to decisions on evaluation. Use common sense but always opt for maximum safety. Remember, the objective is to ensure the precautions you have taken are reasonable.

Appendix G

Port of Fujairah Diving Injury / Incident Report Form

Required Incident Reporting: All diving incidents requiring recompression treatment, or resulting in moderate (more than first aid) or serious injury (hospitalization required) or death shall be reported to the Port of Fujairah; Harbour Master's office within 24 hrs of the injury incident. The report will specify the circumstances of the incident and the extent of any injuries / illnesses.
Check the appropriate space (s) & complete the form:

General Information

Diving Company Name: _____

Vessel / Job Name: _____

Incident Location: _____

Date / Time Occurred: _____

Type of Incident: _____

Diver (s) injured Name (s): _____

Name of Diving Supervisor: _____

Was risk assessment carried out? _____

Task being performed: _____

Weather conditions and time of _____
Alleged incident: _____

Incident Detail

Brief description of incident; describe the circumstances and the extent of the injuries or illnesses

_____

_____

_____

Treatment Provided and Results **Appendix G**

Briefly list treatment given or repairs undertake:

_____

_____

_____

Treatment given by: _____

To whom incident reported: _____

Date/time incident reported: _____

Was casualty sent ashore for treatment? Yes ☐ No ☐

If So: How: _____

When: _____

Where: _____

Action taken to prevent re-occurrence

Name & Title of person submitting Report:

Signature: Date:

Mailing Address: Telephone/fax:

E-mail:

References

- IMCA D 014 Rev. 1 – October 2007
- ADCI Sixth Edition 2011
- U.S. Navy Diving Manual revision 6, 15 April 2008
- HSE Diving at Work Regulations 22nd October 2012