

July 3, 2018

sent electronically to kim.phillips@canada.ca

Kim Phillips Senior Regulatory Officer Offshore Petroleum Management Division Natural Resources Canada Atlantic Canada Energy Office 1801 Hollis Street, Suite 700 Halifax, NS B3J 3C8

Dear Ms. Phillips:

#### Re: CAPP Comments on the Atlantic Offshore Occupational Health and Safety Initiative Proposed Policy Intent for Atlantic OHS Regulations

The Canadian Association of Petroleum Producers (CAPP) is pleased to have this opportunity to provide comments on the Proposed Policy Intent for the Atlantic OHS Regulations released on May 8<sup>th</sup>, 2018. CAPP members are committed to the safe and responsible exploration, development and production of Canada's petroleum resources. Our comments, provided in this letter and in the attached table, are founded upon our collective operating experience in Canada and around the world.

CAPP continues to emphasize that a performance based international regulatory perspective is required to support the development of the OHS Regulation. This permits industry to utilize the internationally based resources and infrastructure, which are unique and technically complex in their function.

The regulatory query process has been and continues to be a burdensome process for both the regulator and industry. This process typically contemplates internationally recognized standards and guidelines to demonstrate equivalency to prescribed regulations and standards, further emphasizing the fact that international standards should be accepted through the performance based approach.

The following discussion pertains to specific areas which CAPP believes need further consideration in policy intent and future regulation.

#### Policy Overlap between FORRI & OHS

In our review of the both OHS policy intent and the policy intent for the Framework regulations CAPP has observed a significant number of areas that should be reviewed for unnecessary duplication and redundancy as this overlap could result in misinterpretation and incorrect application of the regulations.

CAPP suggests meeting with the FORRI and OHS Technical working groups to discuss the areas of overlap prior to the regulations being published in *Canada Gazette I*. Attached is a comparison of potential overlap between the FORRI and OHS Policy Intent Documents (PID).

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#### **Living Accommodations**

In reference to Section 149 which states: "The maximum number of employees sleeping in one room is two except where emergency circumstances warrant it, special arrangements may be instituted subject to the prior approval of the Chief Safety Officer."

The policy intent pertaining to the maximum number of persons sleeping in a cabin requires improvement so that there is no room for misinterpretation on intent. The C-NLOPB indicated that their interpretation of this section would only be 1 person sleeping in a room at a time, with a maximum of two assigned to a room provided they are on opposite shifts (thus only one in the room at a time). The C-NLOPB indicated that this would apply to regular operations and up-staff periods.

Offshore facilities need to increase the number of personnel on board (POB) during maintenance turnarounds to more than two people per room to efficiently execute the scope of work.

The actual language in the OH&S Policy Intent documentation is not necessarily problematic ("The maximum number of employees sleeping in one room is two except where emergency circumstances warrant it, special arrangements may be instituted subject to the prior approval of the Chief Safety Officer") if industry are permitted to maintain the status quo and up-staff for turnarounds.

#### **Foreign Flagged Vessels & Installations**

Similar to Canadian flagged vessels, foreign flagged vessels are governed by comprehensive technical and regulatory regimes that includes statutory requirements established under the Flag state as well as globally adopted international requirements that include SOLAS, International Maritime Organization, Maritime Labour Convention as well as Class Rules. These vessels and installations are designed and constructed to internationally recognized standards and should receive equivalency when verification and monitoring is conducted by a recognized classification society.

It is CAPP's view that the regulations should permit the adoption of codes and standards that have been accepted by flag states and classification societies for foreign flagged vessels and installations. Organizations such as CSA, CGSB and UL must be encouraged to develop standards that reflect both Canadian and international requirements.

#### Part 38 Diving Safety

In our review of Part 38 Diving Safety, CAPP continues to identify significant areas where policy intent requires further development to ensure that future regulation provides clarity, consistency and can be reasonably implemented by industry and enforced by regulatory authorities. Although we have addressed several subjects in this letter we discuss numerous sections in the attached specific comments.

CAPP believes that additional working sessions should be conducted to address the concerns with current policy intent in Part 38.

#### **Classification of Dive Vessel**

A classed, Flag state and SOLAS compliant vessel used for temporary diving operations should not be subject to Certificate of Fitness requirements under the Framework Regulations.

Policy Intent requires that a Diving Vessel be classed by a Classification Society as well as meet the requirements under the Framework Regulation. The application of the Framework Regulation will continue to result in the avoidable situation where the arduous Regulatory Query Process must be applied to obtain the required work authorization. It is important that some mechanism is established to permit Offshore Supply Vessel (OSV) to be fitted with a Dive Spread without having to formally apply the Framework Regulations as they will have met their Class requirements and often operate under an existing work authorization. It is recognized that the Diving Equipment installed on an OSV requires certification however; it is unnecessary and unreasonable to apply installation requirements under the Framework Regulation to the vessel.

**Classification societies** are licensed by Flag states to survey and classify vessels and installations and issue certificates on their behalf. They classify and certify marine vessels and structures on the basis of their structure, design and safety standards. A classification society's specialized and technical workforce comprises of ship surveyors, mechanical engineers, material engineers, piping engineers, and electrical engineers. Surveyors employed by a classification society inspect vessels during their construction and operations phases to certify that their design, components, and machinery are developed and maintained in accordance with the standards set for their class.

The Framework regulations will apply to petroleum operations in areas where a DSV or OSV may not be necessary (i.e., western Newfoundland) as diving operations in near-shore or sheltered waters could be performed utilizing a dive barge. In this case it would be considered unreasonable to apply the Framework Regulations as diving operations utilizing a barge occurs safely and regularly on a global scale.

Similar to Canadian flagged vessels, foreign flagged vessels are governed by comprehensive technical and regulatory regimes that include statutory requirements established under the Flag state as well as globally adopted international requirements that include SOLAS, International Maritime Organization, Maritime Labour Convention as well as Class Rules. These stringent and proven requirements should be sufficient to permit the use of OSV for diving operations exempt from the Framework Regulations.

Again, operators and the Boards will be faced with a Regulatory Query Process that is unnecessary and should be modified during the consultation process.

#### **Diver Medicals**

Under the current policy intent, Dive Physicians will be required to become members of the Canadian Royal College of Physicians and Surgeons of Canada in order to perform dive medicals for offshore divers.

All DSV's entering Canadian waters, for the most part, have foreign divers who have obtained their medicals within other global jurisdictions. Physicians from these other global areas will not have a license to practice medicine in Canada and certainly not have the Royal College qualification. Thus the current policy intent introduces a significant and unnecessary requirement for Canalization of the medical certificates where it has been demonstrated in the United Kingdom and Norwegian jurisdictions that the medical certificate issued in either jurisdiction is deemed acceptable to both. There is no logical reason that divers holding recognized valid certificates from these jurisdictions should be subject reexamination to be permitted to perform temporary diving work in Canada.

Under the proposed policy intent, any foreign diver will likely have to obtain a second medical in order to work in Canadian waters, for what have historically been very short periods of time. In all likelihood they would have to get their second medicals in Canada as no foreign Physicians would qualify under the new standard. Under the current version of the Atlantic Canada Medical Assessment for Fitness to Work Offshore the determination of equivalency of medical assessments from other jurisdictions or regulatory authorities is left to the discretion of the Operator. CAPP believes this should also apply to diving personnel in that it is the Operators responsibility to validate medical certificates and ensure the fitness of offshore divers.

Subsequently, would it not be more practical and consistent with current practice to accept, as equivalent, other reputable international certification bodies that are responsible for ensuring the qualifications and competence of foreign physicians currently performing these offshore diver medicals?

This policy intent has the potential to introduce impractical complications and may become an obstacle to bringing DSVs into Canadian waters thus policy intent that requires physicians to have a license to practice medicine in Canada should be removed.

#### Substitutions

The development of guidance, codes of practice and interpretation notes are time consuming for all involved and should not become a primary tool to address regulatory uncertainly as clear regulatory guidance is paramount. To this point, we encourage language that defines "substitutions", how the process works and makes use of the 'Regulatory Query' process, while providing reference and clarity to *Accord Act* requirements such as section 205.069 the Chief Safety Officer Powers to grant substitutions.

#### Conclusion

CAPP's attached detailed comments and previous submissions identify those sections of the document in which consideration of performance based policy text pertaining to equipment maintenance and inspection must be incorporated into regulation in order to meet the intent of policy based regulation.

We look forward to continued engagement with Natural Resources Canada, the Provinces of Newfoundland and Labrador and Nova Scotia and members of the Project Team as they develop the Occupational Health and Safety Regulations.

If you have any questions please do not hesitate to contact me at 709-724-4200.

Sincerely,

R. Paul Barner

R. Paul Barnes Director, Atlantic Canada and Arctic

c.c. Chris Carter, NL Department of Natural Resources Kim Himmelman, NS Department of Energy

Attachment

# Comparison of Potential Overlap between the FORRI and OHS Policy Intent Documents (PID)

FORRI PID	OHS PID
S3.2 (P1) – Management System	TBD (P3) – OHS Management System
S3.4 (P1) – Safety Plan	
S3.6 (P1) – Contingency Plans	TDB (P3) – Emergency Preparedness and Response
S4.2 (P1) – Emergency Procedures	
S4.1 (P1) – Availability of Documents	TBD (P3)
S4.4 (P1) – Storage & Handling of Consumables /	S11-14 (P1) – Waste Materials
S4.5 (P1)Handling of Chemical Substances & Waste	TBD (P3) – Hazardous Substances
	S73 (P2) – Storage of Materials
S4.6 (P1) – Tampering with Equipment	S1(b) (P2) – General Requirements
S14.4 (P2) – Management and Access of Records	S3 (P2) – Records of Inspection, Maintenance, Repairs
	and Modifications to Equipment
* All stipulated records requirements throughout	* All stipulated records requirements throughout PID
PID	
S14/7/14.8 (P2) – Incident Notification /	TBD (P3) – Haz. Occurrence Reporting
Investigation Reporting	
S6.20 (P3) – Ventilation of Hazardous & Non-	S65-77(P1) – Ventilation
Hazardous Areas	S?? (P2) – Ventilation of ETS areas
S6.21 (P3) – Electrical Standards	S85 (P2) – Electrical Safety Program
S7.13 (P3) – Cranes and Handling Devices	S35 (P2) - Design, Installation and Protection of
	Materials Handling Equipment and Areas
	S50 (P2) - INSPECTION, TESTING, MAINTENANCE,
	CERTIFICATION AND REPAIR
	S60 (P2) – Crane Operations
Definitions – Accidental Event	TBD (P3)
Definitions – Diving Operations	TBD (Diving Phase)
Definitions – Hazardous Areas	Definitions (P2) – Hazardous Areas
Definitions – Qualified Person	Definitions (P1) – Competent Person / Qualified
	Person
	Definitions (P2) – Qualified Person (this is now a
	combination of the two terms in Ph1)

SECTION	REVISED POLICY INTENT	CAPP COMMENTS
3	<ol> <li>An employer must ensure that any equipment used is inspected</li> <li>a) by the user, before each use; and</li> <li>b) by a competent person, annually, or as specified in any applicable Part of these regulations.</li> </ol>	It is unclear what "equipment" is captured by this section - is it materials handling equipment (as per the definition) or something broader; the requirement for annual inspection may be unnecessary - depending on the equipment definition.
		It is proposed that it is not always possible or warranted to check equipment prior to each use. There is concern that specifying inspection requirements in a prescriptive nature could dilute the importance of pre-use checks when they are indicated such as with personal fall protection equipment. Additionally, not all equipment requires annual inspection. There are often standards, best practices and OEM requirements that govern such frequency. Additional comments are included in the CAPP OHS Phase 1 Letter. It is believed that the intent of this section is to cover hand tools that would be used to perform work on an installation. It is unrealistic to think that all equipment used on an installation is inspected prior to each use. Most equipment is designed and intended to be used as a complete system and in an "automatic" fashion and is essentially in service at all times although may not be called into action for any reason (i.e. duty fire pumps, emergency generator, etc). It is recommended that hand tools be specified or the text revised to specific in identifying what equipment it is intended within the policy text to prevent misinterpretation.
Sections 3, 4 & 18		In reference to Sections 3, 4, 18 pertaining to Inspection, maintenance, and record keeping for tools and equipment the policy intent implies <b>ALL</b> tools and equipment, but it is not practical to have 'formal' documented inspection, training, and record keep of basic hand tools and other types of equipment, e.g. some galley equipment, that is not managed in SAP. CAPP proposes that the language be revised to permit the determination of recordkeeping need for tools and equipment as defined by the manufacturer or where specific equipment necessitates retention of these records.

SECTION	REVISED POLICY INTENT	CAPP COMMENTS
4	Records of inspection, maintenance, repair and modification of equipment shall be kept by the employer, unless otherwise specified in these regulations, and be readily accessible to the equipment operator and a person inspecting and maintaining the equipment in accordance with Section 18.	In reference to Sections 3, 4, 18 pertaining to Inspection, maintenance, and record keeping for tools and equipment the policy intent implies <b>ALL</b> tools and equipment, but it is not practical to have 'formal' documented inspection, training, and record keep of basic hand tools and other types of equipment, e.g. some galley equipment, that is not managed in SAP. CAPP proposes that the language be revised to permit the determination of recordkeeping need for tools and equipment as defined by the manufacturer or where specific equipment necessitates retention of these records.
5	The equipment manufacturer's operation manual and maintenance manual for each piece of equipment in use at the workplace shall be readily available at the workplace (electronically or hardcopy).	See previous comment about scope of this item (equipment definition)
11	<ol> <li>The OHS Program shall correspond to the size, scope, nature and complexity of the employer's activities, and to the hazards and risks associated with those activities.</li> <li>An occupational health and safety program required under section 205.02/210.02 of the Act shall be a) the arrangements for coordinating and controlling the management and operation of activities among the operator, employers, suppliers and providers of services and others at the workplace; b) the processes for ensuring that persons contracted by the employer or for the employer's benefit comply with the program developed under this section and the Act and regulations; c) a list of any alternate standards used as alternatives to the prescribed standards (where conformance is permitted), d) conformity assessments demonstrating equivalency (or better) of any alternate standards used in the workplace (where conformance is permitted);</li> <li>e) all the programs required under these regulations;</li> <li>f) identification of the types of work, including those required pursuant to the Act, the regulations or by order of an officer, for which written safe work procedures are required;</li> <li>g) the preparation of those written safe work procedures; h) an emergency response plan;</li> <li>i) a plan for orienting and training employees and supervisors in workplace and job-specific safe and healthy work practices, plans, policies and procedures, and ensuring that employees are:</li> <li>i. trained and competent to perform their duties,</li> <li>ii. made aware of their responsibilities in relation to the processes and procedures required by this section,</li> </ol>	General Comment Reference to OH&S Program (vs Management System) and other programs. OH&S Program to be signed and dated. Is this the Safety Plan or something different? While we think that most of these things are embedded within an Operator's Management System, is there an expectation by NRCan and/or the Boards for something different? Interpretation of an OH&S Management "Program" vs an integrated management system requires clarification so there is no misinterpretation. The content of the OH&S Program may be embedded throughout the integrated management system, but does not exist in a standalone document. There are also numerous references to requirements for various types of "programs" throughout the document. Are these all considered to be standalone documents?

SECTION	REVISED POLICY INTENT	CAPP COMMENTS
	<ul> <li>III. made aware of the activities of others and provided the information that will enable them to perform their duties in a manner that is safe;</li> <li>I) the processes for supervising employees to ensure that they perform their duties in a manner that is safe;</li> <li>I) a hazard identification system that includes: <ul> <li>i. procedures and schedules for regular inspections;</li> <li>ii. procedures for the prompt investigation of incidents to determine cause(s) of the incident and action(s) necessary to prevent a reoccurrence;</li> <li>iii. procedures for resuring the reporting of hazards by employees and other persons in the workplace;</li> <li>iv. process for the correction of hazards, including the identification of those persons accountable for the correction of hazards;</li> <li>v. procedures for reporting by the employer to the committee or coordinator all identified incidents, nonconformities, hazards;</li> <li>m) a system for ongoing monitoring of workplace occupational health and safety, and if changes in hazards are identified, the prompt follow-up and control of identified hazards;</li> <li>n) provisions for establishing and operating an occupational health and safety committee, including provisions respecting:</li> <li>i. maintenance of membership records,</li> <li>iii. access by the committee to management staff with the authority to resolve health and safety issues; iv. access to information about the health and safety matters required under the Act and the regulations, and</li> <li>v. a plan for training committee members as required under the Act and these Regulations;</li> <li>3) An employer that is required to develop, implement and maintain an occupational health and safety program at least every 3 years, or:</li> <li>i. where there is a change of circumstances that may affect the health and safety of persons in the workplace,</li> <li>ii. where the operator makes changes to its management system, and</li> </ul> </li> </ul>	For Section 11.3 The review requirement should recognize that some aspects of the OHS program are more critical than others and allow for less frequent review of non-critical aspects of the program
18	4. Records related to inspection maintenance, repair, modification of the equipment or tools	Refer to previous comments to Sections 3 and 4.
	For as long as the tool or equipment is in use and minimum 5 years after the date the tool or equipment is taken out of service.	What is the requirement or expectation for record retention for equipment and tools that are not tracked in a formal maintenance management system i.e., SAP? What does this look like in practical terms?

SECTION	REVISED POLICY INTENT	CAPP COMMENTS
		The reference to "tools" is unclear in this context as it implies all tools. Also, is it intended that records be retained for any inspection, maintenance, repair, or modification to equipment and tools?
22	<ol> <li>An investigation report identifying the causal factor(s), root cause(s), corrective and preventative action(s), and other information of the incident or other hazardous occurrence must, within 14 days after the occurrence, be submitted to the:         <ul> <li>a) Operator;</li> <li>b) committee or the coordinator; and</li> <li>c) the Board.</li> </ul> </li> <li>The report to the Board must be in the form and manner prescribed by the Board.</li> </ol>	Currently, the OHS Transitional Regulations state 14 days while the Drilling and Production Regulations state 21 days. The 14-day report requirement is not aligned with the current D&P Regulations and given the rotational shift nature of offshore work is too short; suggest this be revised to 21 days to allow sufficient time to conduct an investigation and recognize the offshore schedule. Investigations typically involve contractor personnel who due to their rotation, may or may not be readily available to participate in an investigation. Additional, comprehensive and complex investigations take time and technical resources to ensure root-cause analysis is correct to prevent recurrence and report timelines should recognize this desired outcome! Conclusion - the 14 day time period to complete the report - while consistent with the current Transitional OHS Regs can be too short to allow a full investigation; time line needs to recognize the rotational schedule for the offshore workforce; suggest that 21 days would be more appropriate.
25	<ol> <li>The employer who has control over the workplace shall conduct a risk assessment of the workplace and develop, implement and maintain an emergency plan that sets out the procedures, practices and resources and monitoring necessary to effectively prepare for and mitigate against the effects of, or/and evacuation from, any reasonably foreseeable emergency that might compromise the health and safety of employees.</li> <li>Where there are multiple employers in a workplace, they must either abide by:         <ul> <li>a) emergency procedures developed and implemented by the employer who has control over the workplace, or</li> <li>b) emergency procedures that have been integrated with those of the employer who has control over the workplace.</li> </ul> </li> <li>The emergency response plan shall include, at minimum:</li> </ol>	CAPP agrees this information needs to be available; however, if ER plans are to be publicly available / disclosed, then there may be security related concerns with disclosing this information; suggest have the information prominently displayed at the site.

SECTION	REVISED POLICY INTENT	CAPP COMMENTS
	<ul> <li>a) The maximum number of personnel who can safely occupy the workplace, as well as a process for updating the list of the personnel on board;</li> <li>b) The minimum amount of people needed on board to be able to operate safely in the event of an emergency;</li> <li>c) the name, address and contact information of the Operator, where the Operator is not the same as the Employer who has control over the workplace;</li> <li>d) Contact information for support craft or other means of transport to be used to evacuate the workplace,</li> <li>e) a drawing illustrating the arrangement of the workplace that will clearly show</li> <li>i. the location of all exits, stairways, elevators, corridors, fire escapes and any other routes of exit,</li> <li>ii. location, quantity and type of emergency and protection equipment;</li> <li>iv. the location of safety critical emergency shut-down switches;</li> <li>v. the location of first aid stations, medical rooms and casualty clearing areas; and</li> <li>vii. scale of the drawing and the name of the person who verified the drawing</li> </ul>	
35	<ol> <li>2) Notwithstanding the above, the following drills and exercises must be conducted at the minimum frequency specified below:         <ul> <li>a) A fire drill conducted monthly;</li> <li>b) A drill to practice mustering must be conducted weekly; and</li> <li>c) A drill to practice evacuation and abandonment of the workplace, including lowering of davit-launched lifeboats (without launching) where applicable, must be conducted at least monthly;</li> <li>3) Everyone in the workplace must participate in the applicable drills, so scheduling must account for the various shift rotations to ensure everyone is familiar with how to respond and is proficient in carrying out their duties during an emergency.</li> <li>4) Where a person visits the workplace on an infrequent basis, and is therefore not part of the regularly scheduled drills and exercises, the employer must make arrangements to ensure these persons are accompanied by someone who is familiar with the drill and emergency response measures when on board.</li> <li>5) Drills and exercises related to potential scenarios that require donning of marine abandonment suits must require new employees, during their first rotation, to practice donning the suit.</li> <li>7) Where the workplace is equipped with lifeboats:</li> </ul> </li></ol>	<ul> <li>2c) Monthly lowering of lifeboats may not be achievable due to weather conditions; suggest this be tied to the risk assessment referenced in subsection (1).</li> <li>3) Suggest this be worded to reflect that not everyone on the platform has a role in responding to an emergency (most people simply muster in response to the alarm); also needs to recognize that this has the potential to interrupt the sleep patterns for those off shift if "everyone" must participate.</li> <li>4) The site orientation and new worker policies covering expectations of drills and ER measures should cover this - particularly for work areas. The proposed wording is not always practical on board (e.g. accommodations area, lounge areas etc).</li> <li>5) Donning of the abandonment suit is done in BST training and included in offshore orientation and video demonstration refresher. As per current regulation an evacuation drill must be conducted at least once (a) every week at a drilling unit and an offshore production facility; and (b) every 12 months at a workplace other than a workplace referred to in paragraph (a). There may not be a drill/exercise that includes suit donning</li> </ul>

SECTION	REVISED POLICY INTENT	CAPP COMMENTS
	a) lifeboats must be boarded by employees wearing survival suits and securing themselves on a seat in a manner that ensures that each employee participates in this exercise at least every 6 months.	scheduled during their first rotation. Thus CAPP suggests that this may be an unrealistic expectation.
	b) Coxswain receive workplace specific training on the use of the lifeboat and associated launching equipment	Why is there a requirement to do this offshore during their first rotation?
	<ul> <li>c) An annual lifeboat lowering exercise to test the integrity and operation of the lifeboat and launching equipment,</li> <li>d) When environmental conditions permit, lifeboats are launched and maneuvered in the water annually;</li> <li>e) where environmental conditions do not permit a launch to achieve (d) above, operators must work in consultation with the manufacturer and Certifying Authority, to test and/or complete additional inspections of all components normally tested by regular lifeboat launches.</li> </ul>	<ul> <li>7 a) Suggest revising the frequency to once every two years; based on current offshore rotational schedules the current wording results in employees do this once every 4th hitch which over time will likely become less valuable from a learning perspective.</li> <li>7b) What is workplace specific coxswain training? Is this formal, documented training? CAPP requests clarification if this requirement differs from the "Survival Craft Coxswain and Survival Craft Coxswain" training outlines in the Atlantic Canada Offshore Petroleum Standard Practice for the Training and Qualifications of Offshore Personnel.</li> <li>7d) Lifeboats launched and maneuvered in water annually. See previous</li> </ul>
		CAPP Phase 3 comments. Is there an expectation for lifeboats to be launched? What happens with previous RQs?
	Instructions and Training	Interpretation of "training and instruction". This implies formal training with record keeping, but often training is imparted through informal orientation, on the job awareness, etc. that may not be considered "training".
36	For every drilling, production or accommodation installation, the employer must provide a standby vessel that has capacity to reach personnel within 20 minutes and that provides safe refuge for all employees who have evacuated from a workplace.	There should be some recognition that the vessel can be more the 20 minutes away - agreed by the Vessel Master and OIM; this may be necessary to protect the vessel and crew - under the direction of the Master CAPP request clarification that this requirement encompasses a shared standby vessel.
42	2) A risk assessment must be carried out to determine the number and location of automated external defibrillators required in a workplace, but	The policy intent makes significant reference to the use of a "risk assessment" for the determination of various health and safety aspects of equipment, systems or training. CAPP believes that policy intent should not prescribe the mechanism or approach to use but rather prescribe the goal or expectation. The policy should state the number and location of automated external defibrillators be sufficient to ensure they are readily available. What is meant by risk assessment?

SECTION	REVISED POLICY INTENT	CAPP COMMENTS
43	<ol> <li>The employer shall carry out a risk assessment, in consultation with a physician, to determine the appropriate type and quantity of medical supplies and equipment necessary for the workplace, giving consideration to the following:         <ul> <li>a) number of personnel on board;</li> <li>b) nature of work and activities carried out in the workplace and the real and potential hazards related to that work or activities;</li> <li>c) distance to and response time for emergency medical services;</li> <li>d) layout of the workplace;</li> <li>e) environmental factors, including thermal considerations.</li> </ul> </li> </ol>	Refer to Section 42. Section 43 is prescriptive as the policy is describing the methodology to be used when it should be stating the expectation or goal and the employer must use the most appropriate mechanism to satisfy and comply or meet the expectation or goal. What is meant by risk assessment?
	Part 7 on Fatigue Management	In reference to Part 7 on Fatigue Management CAPP recommends that the requirements for consecutive hours of work and related rest periods are prescriptive and may conflict with the provision of the Labour Relations Act applicable under the Act. The policy text is inconsistent with the accepted work shifts, rotation schedules and control measures that currently exist on all offshore installations to manage worker fatigue.
49	1) Every employee shall be provided with a minimum 11 consecutive hours of rest in any given 24-hour period.	<ul> <li>This policy intent is not consistent with the current Best Practice and industry code of practice. CAPP recommends alignment of policy intent with the requirements stated in the Code of Practice - Fatigue Management in the Canada – Newfoundland and Labrador Offshore Petroleum Industry, specifically sections:</li> <li>5 Fatigue Management</li> <li>6 Work Rotations and Hours of Rest</li> <li>7 Variances</li> </ul>
56	Violence and harassment prevention program	Please clarify what is meant by "program".

SECTION	REVISED POLICY INTENT	CAPP COMMENTS
62	<ol> <li>Prior to an employee entering any workplace, the Operator shall ensure that employees are provided, and the Employer shall provide training, in, at minimum:         <ul> <li>a) offshore survival training, in accordance with a training program accepted by the CSO.</li> <li>b) regulatory awareness, including Employee rights and responsibilities;</li> <li>c) hydrogen sulfide safety, for workplaces involved in drilling and production;</li> <li>d) hazardous substances as per Part 30;</li> <li>e) first aid as per Part 6.</li> </ul> </li> </ol>	Suggest this be reworded to better reflect Right to know, right to participate, right to refuse (as opposed to "regulatory awareness").
72	All personal protective equipment must be a) inspected and tested by a competent person; and b) maintained in good working order and in a clean and sanitary condition by a competent person.	Proposed policy text: a) must be certified and inspected by a competent person (as applicable) b) maintained in good working order and in a clean and sanitary condition.
83	1) Where a hazard from gas exists, personal gas monitors shall be worn by every employee on production facilities.	CAPP request clarification if 4 head multi gas monitors to be worn by all vs H2S monitors?
86	2) Risk assessment to be carried out by Employer who has control over the workplace to determine the number and type of suits required, selection of sizes of suits necessary, and location of suits in the workplace.	Refer to CAPP comments in Sections 42 & 43.
149	The maximum number of employees sleeping in one room is two except where emergency circumstances warrant it, special arrangements may be instituted subject to the prior approval of the Chief Safety Officer.	The requirement that limits only two employees sleeping per cabin will be problematic if Operators are not allowed to up-staff for turnarounds, etc. Rationale:
	150 While onboard, every employee shall be assigned their own separate bed or bunk	The actual language in the OH&S Policy Intent documentation is not necessarily problematic ("The maximum number of employees sleeping in one room is two except where emergency circumstances warrant it, special arrangements may be instituted subject to the prior approval of the Chief Safety Officer") if we are able to maintain the status quo and up-staff for turnarounds.
		However, communication from the C-NLOPB indicated that their interpretation of this section would only be 1 person sleeping in a room at a time, with a maximum of two assigned to a room provided they are on opposite shifts (thus only one in the room at a time). The C-NLOPB indicated that this would apply to regular operations and up-staff / manning periods.

## Canadian Association of Petroleum Producers

SECTION	REVISED POLICY INTENT	CAPP COMMENTS
		Offshore facilities need to increase the number of personnel on board (POB) during maintenance turnarounds to more than two people per room to efficiently execute the scope of work.
		The POB onboard a facility is not equally split between the day and night shifts.
		Section 149, 150 – Language around max number of persons sleeping in a cabin requires improvement so that there is no room for misinterpretation on intent. CAPP's interpretation of current wording is that it will be acceptable to have three persons assigned to a room during up manning, 2 on day shift and 1 on night shift, each with their own bed with approval from the Chief Safety Officer. It was also indicated that no RQs would be issued, not even for turnarounds.
		Recommendation: Clarify language or provide explicit direction to Boards that two people can sleep in the same room at the same time and that approval can be obtained from the Chief Safety Officer to increase the number of people in a room for up-staffing / manning for maintenance turnarounds.
208	Pressure and piping systems located on a marine installation or structure shall comply with the requirements outlined in Section 7.3 of the Framework Regulations (draft policy intent	Question whether this section is necessary - since it is covered elsewhere.
235	1) No person is permitted to enter a materials handling area while operations are in progress unless that person is essential to the conduct, supervision or safety of the operations.	CAPP requests clarification as it is unclear what is considered "universally recognized".
	<ol> <li>The main approaches to any materials handling area must be posted with (universally recognized) warning signs and secured to avoid inadvertent access of unauthorized persons.</li> </ol>	
304	In the International Code of Practice, "should" must be read as expressing a mandatory requirement for a rope access program unless deemed not reasonably practical to do so. If deemed not reasonably practical, the employer must demonstrate to the Board prior to undertaking the activity that adequate controls are in place to mitigate or eliminate risks associated with the task.	The last sentence implies "demonstrating to the Board" each time - it may be more efficient and effective to have safe work practice that covers exceptions to the quoted standard - rather than possible multiple deviations.
317	The components of a fall-arrest system must be certified to the following standards, as applicable: a) CSA Z259.17 Selection and Use of Active Fall Protection Equipment and Systems; b) CSA Standard Z259.2.5, Fall Arresters and Vertical Lifelines; c) CSA Standard Z259.2.4 Fall Arresters and Vertical Rigid Rails; d) CSA Standard Z259.1, Body Belts and Saddles For Work Positioning and Travel Restraint;	The regulatory query process typically contemplates internationally recognized standards and guidelines to demonstrate equivalency to prescribed regulations and standards, further emphasizing the fact that these international standards should be accepted through the performance

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	e) CSA Standard Z259.2.2, Self-Retracting Devices; f) CSA Standard Z259.2.3, Descent Devices; g) CSA Standard Z259.11, Energy Absorbers and Lanyards;	based approach. This has been outlined in previous CAPP submissions pertaining to the Transitional OHS Regulations.
	h) CSA Standard Z259.12, Connecting Components for Personal Fall Arrest Systems (PFAS);	Where it becomes necessary for international vessels and installations conducting short term or seasonal operations to adopt Canadian or North American requirements the impact of this requirement extends beyond the substitution of equipment. There is also a competency matter when equipment is substituted or standards are changed as personnel have to be re-trained and competencies are then impacted. In addition, developed and implemented inspection, maintenance and management systems are impacted as well. Thus the net effect of forcing adherence to a Canadian or North American standard may not result in safer systems of work when considered in totality.
335	<ol> <li>If electrical equipment is energized or may become energized, an employee must not work on the equipment unless the equipment is isolated in accordance with Part 29.</li> <li>Notwithstanding the above, where work must be conducted on equipment in an energized state due to equipment design or operational limitations, then:         <ul> <li>a) work permit is required that shall be in accordance with Part 12; and</li> <li>b) the employer must develop and the work must be carried out in accordance with safe work procedures.</li> <li>3) In addition to subsection (2), in the case of work being carried out on energized power systems (which includes a plant and equipment essential to the generation, transmission or distribution of power), the permit to work is signed by the Offshore Installation Manager (OIM), or equivalent level position aboard the marine installation or structure, or a competent person that has been designated to represent the OIM or equivalent position;</li> </ul> </li> </ol>	What is considered "energized power systems"? Most electrical troubleshooting occurs when equipment is powered up, and generally does not require an OIM signature on those permits. Would work on a generator control panel or accessory equipment fall into this category? Would "equipment essential to the distribution of power" include work inside distribution panels?
381	<ul> <li>3) Every employer shall, in consultation with the workplace committee or coordinator, as the case may be, review and, if necessary, revise the employee education and training program <ul> <li>a) at least once a year;</li> <li>b) whenever there is a change in conditions in respect of the presence of hazardous substances in the workplace; and</li> <li>c) whenever new hazard information in respect of a hazardous substance in the workplace becomes available to the employer.</li> </ul> </li> </ul>	CAPP proposes that an annual review frequency is too great; suggest 5 years is more reasonable given the amount of training provided and the fact that the training requirements do not change appreciably each year.

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397	<ol> <li>If a hazardous product, other than a hazardous product referred to in paragraph 396(1)(c), is received in the workplace by an employer, the employer shall, without delay, obtain a supplier safety data sheet in respect of the hazardous product from the supplier, unless the employer is already in possession of a supplier safety data sheet that         <ul> <li>a) is for a hazardous product that both has the same product identifier and is from the same supplier;</li> </ul> </li> </ol>	Under the new CHS and WHMIS 2015, SDSs are required to be accurate at the time of sale. An SDS will be required to be updated when the supplier becomes aware of any "significant new data". The definition of "significant new data" is:
	b) discloses information that is current at the time that the hazardous product is received; and c) was prepared and dated less than three years before the day on which the hazardous product is received.	"New data regarding the hazard presented by a hazardous product that change its classification in a category or subcategory of a hazard class, or result in its classification in another hazard class, or change the ways to protect against the hazard presented by the hazardous product." (Source: Canada Gazette, Part II, Hazardous Products Regulations, Section 5.12 (1))
		This definition means that an SDS must be updated when there is new information that changes how the hazardous product is classified, or when there are changes to the way you will handle or store or protect yourself from the hazards of the product.
		SDSs will be required to be updated within 90 days of the supplier being aware of the new information. If you purchase a product within this 90 day time period, the supplier must inform you of the significant new data and the date on which it became available in writing.
		Note: The requirement to update a material safety data sheet every three years, as was the case under WHMIS 1988, no longer applies. For WHMIS 2015, the SDS must be accurate at the time of every sale or importation of the hazardous product. Suppliers have an ongoing responsibility to make sure SDSs and labels are accurate and compliant.
		The requirement to have Safety Data Sheets (SDSs) updated every three years (397.1.c) is inconsistent with the federal Hazardous Products Act and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Maintaining this requirement will be challenging as suppliers will not necessarily be updating SDSs every three years.
425	1) If an employee is required to use a machine or tool, they must be instructed and trained by a	1) Instruction and training by a competent person on the use of a machine or
	competent person in all aspects of the machine of tool for which they are responsible.	machine and tool, e.g. basic hand tools, tools of the trade, etc. What will be
	2) Every employer must maintain a manual of operating instructions for each type of machinery and	the expectation of the regulator on this topic?
	employee who is required to use the tool or machine to which the manual applies.	

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# Atlantic OHS Initiative

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		2) This seems excessive - especially considering some tools are associated with / required by a particular craft and are included the basic training provided for that craft.
432	All hot work activities shall require a Work Permit in accordance with Part 12	Permit to Work or Control of Work requirements do not typically apply to hot work conducted inside work shop designed for that purpose.
		Proposed text: "All hot work activities conducted outside of a Hot Work approved work shop shall require a Work Permit in accordance with Part 12".
444	The workplace shall be evaluated by a competent person and identify and record any confined spaces that exist.	Management system elements such as the permit to work system and job safety analysis processes include provision to assess each work task (by a competent person) to identify specific hazards that require mitigation which include determination if it is a confined space. For example, a low lying area may be deemed a confined space when venting nitrogen in an adjacent area (while it may not normally be a confined space). It is more effective that the Permit to Work system require these assessments on an ongoing basis as opposed to maintaining a master list that is only periodically updated and incomplete from time to time. This policy implies a defined list of confined spaces is prepared in advance and updated every 3 years (clause 446); suggest a definition of confined spaces be required and then each work activity that requires a permit can be evaluated at the time to determine whether it is a confined space. Otherwise the list could change before the review in 446 is conducted, or alternatively state: An employer shall ensure that a competent person evaluates the work space during the job planning process (prior to the performance of work in that space) to identify and record if it is considered a confined space.
451	1) Where a confined space exists in the workplace, the employer shall, in consultation with the health and safety committee or health and safety representative, establish written work procedures that are to be followed by a person entering, exiting or occupying a confined space.	This should be clarified to focus on the confined space entry process - as opposed to every confined space entry (as seems to be implied by the current wording).

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456	The employer shall ensure: a) the opening for entry and exit is sufficient to allow safe passage of a person wearing personal protective equipment; b) mechanical and electrical equipment not required to perform the work in the confined space is i. disconnected from its power source, and ii. locked out and tagged in accordance with Part 30; c) electrical equipment required to perform the work is rated for use in a hazardous location; d) Any source, pipe and other supply lines whose contents are likely to create a hazard are blinded or disconnected to ensure that no contents are inadvertently discharged into the confined space; e) measures have been taken to ensure that, where an atmospheric hazard may arise, the confined space is continuously ventilated; f) liquid in which a person may drown or a free-flowing solid in which a person may become entrapped has been removed from the confined space; g) adequate illumination that is rated for use in a hazardous location is provided where appropriate; h) Adequate barriers are erected to prohibit unauthorized entry; i) PPE and emergency equipment identified in section 451(2)(b) are provided as close as reasonably practicable to the entrance to the confined space. j) An emergency rescue drill is completed.	<ul> <li>456 j) The policy under j) requiring an emergency drill required prior to entry to confined space (456.j) is impractical. There may be a case where aspects of a CSE rescue plan may need to be tested but this would be the exception rather than standard practice.</li> <li>Proposed text:</li> <li>j) where necessary, completion of a rescue drill to confirm it can be effected</li> </ul>
471	The Dive Contractor must establish, implement and maintain written diving safe work procedures and instructions that address, at a minimum: a) specific tasks to be carried out, as well as the equipment to be used; b) the outputs and findings of the hazard identification and risk assessment required under Section 470; c) diving from a dynamically positioned vessel, as applicable and in accordance with Section 472; d) the treatment of decompression illness and any planned or unplanned omitted decompression, including communication with Diving Physician Specialist;	Only a dynamically positioned vessel is listed here. This provision should not be limited to a DP vessel, it should include all vessels. Suggest "diving from a vessel. Where the vessel is a DP vessel, section 472 shall apply."
471	The Dive Contractor must establish, implement and maintain written diving safe work procedures and instructions that address, at a minimum: k) any other matters that may be applicable to the planned dive activity.	This statement is very generic and subjective. It basically states that the dive contractor must have written procedures for "any matter that may be applicable to the planned dive activity". This can lead to endless speculative scenarios in which the contractor would need to have written procedures. This is unachievable. Suggest specific scenarios and topic that are foreseeable and relevant.
472	2) There shall be dedicated and open communications between the Dive and DP Control Stations and each party shall inform the other immediately about any changes in operational circumstances.	What does "open" mean in this context? Does this employ communication hardware that is in a state of constant two-way transmission between the two stations, where there is no need to press a button to talk? Or does this mean "non-scripted discussion"?

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		For example, a dedicated telephone line is not easily transmittable because it requires a caller to dial and recipient to pick up and acknowledge.
		Suggest stating "dedicated and continuous transmission", or "dedicated and easily transmittable ".
476	1) When conducting a dive operation, a means to effectively locate, assist and recover all divers shall always be available in the event of a lost bell.	Recommend changing to "Acoustic transmission device".
	2) A diving bell shall be capable of sustaining the lives of trapped divers and protecting against hypothermia for at least 24 hours.	Also suggest adding "The Dive Support Vessel and designated rescue vessel shall be equipped with the equipment needed to receive and interpret acoustic device signal, and determine the physical location of the lost bell"
	3) A diving bell shall be equipped with a location device using the International Maritime Organization (IMO) recognized frequency to enable rapid location if the bell is lost.	
	4) The main umbilical system of a diving bell must be fitted with suitable protective devices to control loss of diving bell atmosphere if any of the components in the umbilical are ruptured.	
478	1) Standby divers must have had, except in the event of an emergency, 12 continuous hours off since a previous dive;	Does this mean surface supplied and saturation stand-by divers? Is this the surface supplied stand-by diver on a surface diving operation? Is this a surface stand-by diver for a saturation diving operation? Or is this a bell
	2) Notwithstanding the above, standby divers shall not have any residual inert gas as calculated by the decompression table in use.	stand-by diver (Bell Man).
		This statement is not detailed enough and is subjective.
479	Decompression must be carried out in accordance with decompression tables appropriate for the type and depth of diving, developed to minimize potential decompression sickness, and approved by the Diving Physician Specialist.	The Policy Intent Document says that a Diving Physician Specialist (DPS) must be licensed to practice medicine in Canada. The DPS must approve decompression tables.
		CAPP would like to understand the basis for this requirement and the level of review expected to be undertaken by the DPS given the origin and history of internationally used commercial diving decompression tables.
481	Accelerated decompression must only be used in extenuating, emergency circumstance	The term "accelerated" is subjective and confusing. If the intent of this requirement is to prevent decompression rate/speed faster than the approved decompression schedule prescribes, then it is recommended changing the statement to: "Decompression rates faster than that prescribed in the approved decompression rates faster than that prescribed in the approved decompression rates faster than that prescribed in the approved decompression rate faster than that prescribed in the approved decompression rate faster than that prescribed in the approved decompression rate faster than that prescribed in the approved decompression faster than the prescribed in the approved decompression faster than the prescribed in the approved decompression faster than that prescribed in the approved decompression faster than the prescribed in the prescribed decompression faster than the prescribed decompressic than the
		circumstances".

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483	1) A diver must not fly within 24 hours after a dive.	Does this statement apply to all diving, such as non-decompression air diving and saturation diving? If so, this statement does not reflect the recommendations and practical guidance of any common commercial/military diving standard, such as USN, DMAC, etc There are circumstances where time restrictions are less and more than 24 hours. Recommend referencing Diving Medical Advisory Committee Guidance Note DMAC-07 Flying After Diving Recommendations.
485	<ul> <li>A surface compression chamber must: <ul> <li>a) be designed and constructed to be fit for the purpose and to ensure safety;</li> <li>b) provide a suitable environment for its occupants, including amenities appropriate to the type, depth and duration of the diving operation;</li> <li>c) contain sufficient space in at least one of its compartments to enable at least two occupants to lie down comfortably in the compartment and, if a person will be in the surface compression chamber for a period of: <ul> <li>a. eight consecutive hours or less, have an internal vertical diameter of at least 1.5 m; or</li> <li>b. More than eight consecutive hours, have an internal vertical diameter of at least 2 m;</li> </ul> </li> <li>d) be equipped with a medical lock;</li> <li>e) be fitted with adequate equipment, including facilities for <ul> <li>i. supplying to and maintaining for its occupants an appropriate breathing mixture,</li> <li>ii. lighting heating and cooling the compression chamber,</li> <li>iii. communications, and</li> <li>iv. removing carbon dioxide.</li> </ul> </li> </ul></li></ul>	This entire 485 section is confusing and subjective unless clearly specifying that the "Surface Compression Chamber" is used for saturation diving, or for decompression of bounce diving. All specifications here are applicable to surface supplied diver decompression techniques. The specification provided would not be acceptable to CSA Z275.1 or IACS class societies that certify decompression chambers used for saturation diving. Also decompression chambers used for decompression of surface divers do not have provisions for routine decompression exposure of >8 hours, however, certain decompression treatment tables used to treat decompression illness do have schedules longer than 8 hours.
487	3) The Dive Safety Specialist (DSS) appointed by the dive contractor must not have any other role assigned to them for the period of time that the dive activity takes place, unless that role is considered to be a significantly senior role on board.	What does 'unless that role is considered to be a significantly senior role onboard?
487	<ol> <li>The Operator shall designate, in writing, a Dive Safety Specialist who</li> <li>The DSS appointed by the dive contractor must not have any other role assigned to them for the period of time that the dive activity takes place, unless that role is considered to be a significantly senior role on board.</li> </ol>	The section on the Dive Contractor's Dive Safety Specialist is still subjective and confusing. A common practice currently is that the Dive Contractor will designate the planned Diving Supervisor, to also be the Dive Safety Specialist. During Saturation diving, where there are routinely two Dive Supervisors per 12 hour shift (totaling 4x Dive Supervisors on board the vessel), one of the Dive Supervisors is also designated the Dive Safety Specialist, which would put him having both positions (Dive Supervisor and DSS) fulfilled for 12 hours per day. This section needs to be better clarified to indicate if the DSS for the dive contractor is an "additional position" to the dive supervisor or if the Dive Supervisor and DSS can be one in the same person.

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490	1) All divers, dive supervisors and dive safety specialists shall hold valid diving competency certificates issued by a Canadian certifying body, acceptable to the CSO.	There are several diver certificates that are recognized by the current CANADIAN certifying body; the Diver Certification Board of Canada, which operates under MOU with other national diver certifying authorities, such as ADAS (Australia), UKHSE (UK) to name a few. Often these diver certificates are recognized and accepted by the DCBC, then a DCBC certificate is issued at considerable cost to the diver. Recommend changing this statement to read "competency certificates issued by, or acceptable to, a Canadian certifying body, that is acceptable to the CSO." As there are several divers that already have these recognized
		and acceptable certificates, it is onerous and adds considerable cost to an individual worker whom must seek 2x certificates for the same competency.
491	<ol> <li>All divers and supervisors shall hold current certification in standard first aid, as well as first aid oxygen administration.</li> <li>For saturation diving programs, all divers shall have diver medical technician certificate of competence.</li> <li>For surface supplied diving programs, a sufficient number of persons possessing diver medical technician certificate of competence shall be available to ensure at least one Diver Medical Technician is available at all times.</li> </ol>	Recommend changing to "Available at the immediate work site at all times". Often the contractor will provide one diver medical technician whom will also either be in the water diving, or in the bed, away from the dive work site, which effectively removes the technician from the ability to give rapid response.
493	All divers must be certified as physically and medically fit to dive by a diving physician examiner or diving physician specialist prior to performing their duties in a dive program, with medicals issued within the past 12 month period and remain valid for the duration of the work period; and, divers must disclose any change to their medical condition since their last assessment.	The understanding is that Dive Physicians will be required to become members of the Canadian Royal College of Physicians and Surgeons of Canada in order to perform dive medicals for offshore divers. All DSV's entering Canadian waters, for the most part, have foreign divers who have obtained their medicals within other global jurisdictions. Physicians from these other global areas will not have a license to practice medicine in Canada and certainly not have the Royal College qualification. Where does this leave the Dive Contractors and their dive crews? As a minimum, any foreign diver will likely have to obtain a second medical in order to work in Canadian waters, for what has historically been very short periods of time. In all likelihood they would have to get their second medicals in Canada as no foreign Physicians would qualify under the new standard. Under the current version of the Atlantic Canada Medical Assessment for Fitness to Work Offshore, the determination of equivalency of medical assessments from other jurisdictions or regulatory authorities is left to the discretion of the Operator.

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		<ul> <li>Would it not be more practical to accept, as equivalent, other reputable international certification bodies that are responsible for ensuring the qualifications and competence of foreign physicians currently performing these offshore dive medicals? Reference to having license to practice medicine in Canada should be removed.</li> <li>This new rule has the potential to introduce impractical complications and may become an obstacle to bringing DSVs into Canadian waters.</li> <li>What is justification for not accepting a valid medical from Norway or Scotland as example as has been the case in the past? It is unlikely that physicians practicing outside of Canada will be licensed to practice in Canada.</li> </ul>
497	<ol> <li>The Dive Contractor shall ensure that the Diving Physician Specialist:         <ul> <li>a) is able to communicate directly with a diver inside the compression chamber,</li> <li>b) has visual and auditory aids to observe and examine the divers when needed, and</li> <li>c) has remote access to monitoring or clinical assessment technologies, as technology permits.</li> </ul> </li> <li>The person performing advanced first aid shall have priority and unimpeded access to suitable communication devices with the specialized diving physician, or any other competent personnel as may be required.</li> <li>Internet bandwidth (data transfer rate/communication access and speed) must be sufficient to provide chamber monitoring that allows the results of ongoing medical testing, such as electrocardiograms, to be transferred to the Diving Physician Specialist. This shall be tested and proven before the diving program commences.</li> </ol>	The intention of this is correct. However a scenario for consideration is that a DSV will often be working in a position near an offshore installation, which periodically will "blind" the satellite and prevent communications for various periods of time. This is often unavoidable, as is sea state decline that causes vessel movement which will often cause communication loss. Some reactions to this have been extreme, in that diving was suspended until communications were reestablished. Consideration for language that allows intermittent and unintentional communication loss should be included to avoid the overreaction of suspended diving.
498	The Dive Contractor shall ensure a means exists that permits a diver's location to be constantly known in the water.	The intent here is to have a diver located with a USBL acoustic transponder, which is common and advantageous. However in shallower water depths, the acoustic devices used today often do not work and are highly inaccurate. Recommend changing this intent to identify saturation divers, and surface diving deeper than 20msw. The geo-survey equipment, operator and software suite needed to operate the location capability is cost prohibitive, if the system does not accurately provide the data.

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504	504 1) The dive contractor shall ensure there is a system in place for active monitoring of critical components and equipment of the diving system that provides indications in the dive control room of the status of the system.	1) It is important to define and set criteria for "critical components". A Dive system FMECA is used to define "critical components" and this would classify roughly >1000 components in a common 12 man saturation diving system. Most of these items you cannot "monitor" from the dive control room.
	2) A system for recording and tracking dive system and diver equipment failures must be established, implemented and maintained.	<ul> <li>2) The system described here is available on very few Dive Systems in the world. Fathom Systems iBIS, iGA, CSMTS systems, and those from Drager are limited to 6-8 DSVs globally.</li> <li>The policy intent could limit the industry to utilization of two dive contractors globally, and cause costs for retrofitting other DSVs to &gt;\$1.5M minimum</li> </ul>
513	A breathing mixture supply system used for a dive must be appropriate for the depth and circumstances of the dives, but at minimum, any calculations for diver gas consumption shall be set no lower than 42.5L per minute.	Why use the 42.5 L/Min calculation? Industry standard, USN, IMCA and Class utilize a 40L/min flow rate, and NORSOK u-100/103 utilizes a 62.5 L/min flow rate. Dive equipment manufactures already calculate using these rates. Changing to 42.5L/min will cause severe shortage and capability of perfectly usable and acceptable dive equipment. There are also other industry established flow rates applicable to a "Dive Breathing Mixture" that are not referenced here, and can be misconstrued with this statement as is. For example 20L/min is the engineered and established flow rate for a Built in Breathing System (BIBS) when a diver is at rest.
		here.
516	<ol> <li>Gas cylinders must be suitable in design, fit for purpose and safe for use. Each cylinder shall be tested and have appropriate certification issued by a competent person.</li> <li>All gas storage units must comply with Canadian or international standards of colour-coding and marking of gas storage cylinders, quads and banks. Whatever standard is employed it shall be consistent for the project and readily identifiable. Where appropriate, pipe work shall also be colour- coded.</li> </ol>	Most IACS class certified DSVs do not have thoroughly colored piping systems, as this prevents thorough visual inspection of the pipe itself. Permanent labels attached to the pipe, spaced frequently apart, indicating the direction of flow is the most common and practicable solution for operators identification of pipe. This stated regulation would require that the piping be painted/colored adding considerable time and cost of maintenance, where there is a more practical solution already in place.
519	3) Saturation dive systems must include an appropriate arrangement in terms of size, capacity and location, and must include a minimum of two self-propelled hyperbaric lifeboats (SPHLs).	3) The intention of this statement is aligned with IOGP RP 478 Hyperbaric Evacuation standard, however this will severely limit the number of available
	4) Hyperbaric life boats must be equipped with enough gas and consumables to maintain life for a minimum of 72 hours.	Dive Support Vessels that can work in Atlantic Canada. Also this will all but eliminate the ability to place a mobile/portable saturation dive system on a

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	5) In the event of a hyperbaric evacuation, the hyperbaric life boats must be transferred to the hyperbaric reception facility as soon as possible, but at maximum, within 75% of 72 hours.	vessel of opportunity to performed sat diving, as there is no twin SPHL portable sat system in industry at this time.
		That being stated for awareness, CAPP recommends that further information be included in this statement to read "the DSV shall have an ability to evacuate the entire compliment of saturation divers from either the port or starboard side of the vessel. The DSV must be equipped with an SPHL on each side of the vessel". 24 man saturation diving system with twin 12 man SPHLs will not meet the intent of having the ability to evacuate all divers in the SOLAS defined damage condition of 20deg list at roll.
		5) The intention here is to meet IOGP RP 478 Hyperbaric Evacuation Standard. The intention here is to have a plan, with a measureable level of logistics testing and assurance that shows the SPHL can be in the immediate vicinity of the HRF in 75% of 72 hours. The remaining 18 hours is a factor of safety engineered into the total time to allow for the actual pitting, mating and pressuring of the SPHL to the HRF. CAPP would caution that the language here should be clear to show the transfer time should be 54 hours "to" the HRF, then 18 hours for the Transfer Under Pressure (TUP). Also the language could read 72 hours total elapsed time to have the divers transferred into the HRF. The intention of this time safety factor was to reduce the amount of hyperbaric evacuation plans that would not accurately plan and test for the variables that could/would likely impede the evacuation process, which could cause the overall elapsed time of transfer to exceed the 72 hour autonomous capability of the SOLAS/Class certified SPHL.
519	<ul> <li>6) A trial fit of the hyperbaric life boats to the hyperbaric reception facility transfer trunking shall be completed to test and verify the compatibility of the self-propelled hyperbaric life boats and the hyperbaric reception facility:</li> <li>a) Prior to commencing dive operations with the particular life boats and reception facility.</li> <li>b) Following any modification to the reception facility or life boats that could affect the fit and/or compatibility.</li> </ul>	Need to fully understand the intent/interpretation and expectation of the regulator for this clause. Requires discussion to define what is specifically meant by 'prior to commencing dive operations'.
523	All audio and visual communications must be recorded and all recordings must be kept for at least 48 hours after the diver has returned to the surface or the saturation living chamber.	Define all. Between which parties? To the diver, to the ROV shack, to the bridge, to the crane, to the deck foreman and/or to others?

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524	Notwithstanding the above (Section 523), where an incident has occurred during a dive program, communications records including all audio and visual recordings must be retained indefinitely by the Operator and the Dive Contractor.	What is definition of 'incident' in context of this specific requirement as depending on regulator expectation this can become extremely onerous? The term 'Incident' can be very broad. Define 'all audio and video' and how do we ensure that the Operator is provided 'all' the audio and video by Contractor?