

Phillips, Kim (NRCan/RNCan)

From: Carroll, Clarence <Clarence.Carroll@dnvgl.com>
Sent: Friday, October 27, 2017 2:10 PM
To: Phillips, Kim (NRCan/RNCan)
Cc: Kennedy, Richard
Subject: RE: Offshore Diving Stakeholder Engagement - CLOSES TODAY
Attachments: Offshore Diving CAN.docx

Kim

We appreciate the opportunity to review following documents related to 'Offshore Diving'

- Offshore Diving Stakeholder Engagement Session dated October 2, 2017
- Offshore Diving – Proposed Policy Intent for Atlantic OHS Regulations & FORRI Framework regulations dated September 15, 2017.

Some queries related the Stakeholder Engagement presentation

- Page 3 – Is it intended the same diving regulations for the two Offshore Accord areas.
- Page 5 – Should workplace also include diving equipment where people live and work - (ie Bells, Living Chambers, Hyperbaric Life Boats (emergency)) or is it intended that "marine installation or structure" would capture this?
- Page 7 – 'performance based requirements.' – will need to capture 'safety critical' definitions as they relate to diving plant, diving vessel, subsea area as there may be different owners or covered by different COF's and Diving Authorizations. Example Diving on an Installation with one COF for Dive Vessel and One COF for Offshore Installation and each having own authorizations.
- Page 12 – notes in both documents '.. must be fit for purpose'. Without providing any basis for achieving such a statement.
- Page 14 – References other jurisdictions throughout the world. A number of the references are proven and currently applicable. Should they not be referenced for compliance purposes?
- Page 23 – equipment should also be suitable for use in such contaminated waters. Knowledge of the type of contamination??

The commentary for Policy Intent document is issued in native format for your use.

Advise should you have any questions or require discussion with DNVGL diving section personnel.

Best Regards,
For Det Norske Veritas (Canada) Ltd

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From: Phillips, Kim (NRCan/RNCan) [<mailto:kim.phillips@canada.ca>]
Sent: Friday, October 27, 2017 9:51 AM
To: Phillips, Kim (NRCan/RNCan)
Subject: Offshore Diving Stakeholder Engagement - CLOSES TODAY

Good morning,

Just a reminder, the comment period for the offshore diving policy intent closes today. If you haven't already done so, please forward me any feedback you would like to have considered in the ongoing development of the future regulations.

Best regards,

Kim Phillips

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Dated – October 27, 2017

Comments to Offshore Diving – Proposed Policy Intent for Atlantic OHS Regulations & FORRI Framework Regulations

Overall Commentary

- A) It is unclear how the supplied Atlantic OHS documents and FORRI Framework is intended to work together. Should we read the policy intent for offshore diving as an input for formulating the 6.27 section of the framework regulations or should it be considered as leading to a standalone document?
- B) Should it be a standalone document then it should be noted that only the dive vessel is directed to the framework requirements. As there are many systems excluded in this document example: chamber fire suppression/LARS (Launch and Recovery System) requirements this could lead to highly variable interpretations by Certifying Authorities or others involved.
- C) In our view utilising an existing standard such as the IMO Diving code and then placing specific interpretations or additional requirements would be a simpler way forward. E.g. The IMO code allows use of bell in evacuation which is badly out of date, however, adding here that it should be a HLB would allow that modification.
- D) Use of a code intended for diving with additional shelf requirements would also be simpler to apply than for example interpreting what applies for diving vessels within the other framework requirements which are not designed for that purpose.
- E) Further in 6.27, it is stated that DSVs should be SOLAS compliant. The escape for divers simply cannot comply with SOLAS, by utilising the IMO code for diving it allows compliance with SOLAS in the normal structure where additional codes such as SPS (Special Purpose Ship) allow variations to SOLAS.
- F) We would also urge that this opportunity be taken to state the boards position on the requirement for one or two HLBS.

Proposed Policy Intent Document

General

In our view the document mixes typical OHS requirements with technical requirements and may lead to inconsistencies when using in conjunction with the framework agreement.

It appears the approach to risk may be confusing and can or may lead to a reduction of standards. There is no overall statement as to the level of redundancy required. The typical codes require normal operations after a single failure (including operator error) and then an emergency state.

For example, without such a general position a requirement such as para 16) may be interpreted as the state after a single failure.

The timeline is considered somewhat problematic, the definition of the redundancy required occurs during the project plan, which operationally speaking occurs after design and build of the vessel, normally to a prescriptive code.

To do this on a complete system with accepting an underlining code as a base would be a daunting task and be predisposed to operational mitigation rather than technical. There is also a mix of specific

requirements example: ROV communications that are below the existing normal level, mixed with general point to consider other relevant communication requirements. This practice can give the impression of a new minimum.

"IMO" should be added as an acronym

A definition of emergency should be added to clarify intent for example in 16 where 24 hour's life support is understood to mean in the event of primary and backup system failure

A definition of "surface compression chamber" should be added, 19 reads as requirements to a "standby" chamber however being under decompression generally.

A definition of Dive Plant should be added in order to connect with 5.1 installations and vessels (phase 3). Dive Plants as an example are generally incorporated as complete systems on dedicated diving vessels

Dive project plan

1)

Is it envisaged that the dive project plan is intended for review by the applicable certifying authority under Petroleum Board requirements. Although not clear in the policy framework it is taken Dive Vessels for "Offshore" diving operations in areas under Petroleum Board jurisdiction will continue to require a certificate of Fitness as one of the inputs required to obtain Diving Authorisation. Trust a reference to COF Regulations related to same is to be included in the Framework.

m) o) & n) would typically be heavily tied in with the construction and design of the system while the personnel listed DSS etc. will have a strong operational direction.

It is noted that m) requires an identification of the components/sub systems that require redundancy however there is no guidance on acceptance criteria related to no single failure of active and passive components or any single operator error should lead to a dangerous situation.

Guidance on failures that are mitigated by recovering a bell or otherwise halting operations should also be considered where the work being performed cannot be safely stopped due to environmental risk, etc. resulting from the facility being maintained/repaired.

Dive safe work procedures

4)

19c) is there to be a minimum size for use greater than 8 hours? In practice the logic of time limitations should be carefully considered (in our rules also). All Saturation chambers are designed for long term habitation. However for surface supplied diving normal use in supporting decompression is not the worst case for size and facilities. For surface systems, the longest use including where additional people may need to enter the chamber will be after an event. As such the sizing of surface system chambers should be based around the requirements of such treatment. Note requiring the assessment of chamber facilities duration and size based upon 33 may not be appropriate to Living chambers support divers.?

19 e) & b) seems to cover the same items and a decision should be made whether to be general or specific. Note that in e) cooling is not mentioned

25 Reference should be incorporated for other normally used International regulations, codes and standards in addition to the noted CSA requirement. For example: has there been a full gap analysis completed for CSA noted requirements against international industry requirements for such foreign flagged diving vessels and the diving plants. Would such reviews be made available for industry use?

35) Thought could be given to expand this point - diver location, bell location and other points that represent an operational risk. Example: subsea structure etc.

38)

1b) Note Habitat is mentioned here for the first time, though could be given to defining how habitats will be approached and if any other additional requirements should be added. Norsok provides the most detailed guidance we are aware of. Consider to have this item addressed to include minimum design requirements, environmental conditions, means to maintain at offshore site and hazards with working inside such habitats along with emergency requirements. Differences between fabric type habitats and structural habitats.

1c) Redundancy is only mentioned for heating breathing mixture, is this the only minimum redundancy? Is it intended that all heating for diving plant? What about emergency power associated with this?

3) suggest: at all depth's the system may operate and extended to environmental control in general.

41)

1) This is not always possible technically. Suggest critical systems instead of components and manned control centre as dive control room may confuse from the Dive/SAT control split. Also, some alarms are best sent to vessels engine control room or bridge.

43) Which requirements would be applicable to the back up and emergency (example: through water communications?)

53) only time fire is mentioned specifically. Chamber protection internal and external to be captured.

54) The paragraph focus is from vessel to water (physical risks) time to chamber from last in water stop should also be considered.

54 1) this assessment should apply regardless of freeboard even with a LARS, location of portable LARS on V tall structures and stern v side arrangements, wave heights etc.

3) where the divers cannot be considered to return by themselves i.e. large freeboard the secondary recovery system should be able to recover all divers not just deploy the standby.

Note that the Typical approach as per IMO is primary secondary and tertiary, while this paragraph is aimed at when a LARS is required it can be read and weaken existing redundancy concepts.

Consider input on who has authority to stop a dive and return of divers to safety onboard when environmental conditions deteriorate.

55) the use of HRF versus LSP 57) should be clarified, the definition of LSP allows decompression within the lifeboat. As both are must is the LSP intended to extend the time to get to the HRF, a backup or an alternative to an HRF.

Note no standards are given for launch of the HLB (eg LSA code) or the HLB itself.