

From: Frank Grealish
Sent: 28 September 2011 03:39
To: Eamonn Murtagh
Subject: Framework Consultation Paper - MCS Kenny Responses

Eamonn,

Further to the above and my earlier email, I have managed to get on line and can therefore submit our comments.

For your information, note that I am Group Director with MCS Kenny in Galway. We specialise in providing engineering consultancy and software services to the offshore oil and gas industry.

Our submission on the Consultation Paper is based on our extensive experience in working with the regulatory authorities in other jurisdictions, including with the HSE in the UK and BOERME in the US.

I would be happy to talk through any of these points with you in the future.

Regards,

Frank Grealish
Director

MCS Kenny

Consultation Questions (in Microsoft Word format) from the Consultation Paper on the High Level Design of the Petroleum Safety Framework

| | |
|------------------------|---|
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List of Consultation Questions

The following list of questions was included in the Consultation Paper on the High Level Design of the Petroleum Safety Framework (CER/11/137) as Appendix III. The aim of this document is to facilitate the process of responding to the Consultation Paper by allowing respondents to electronically complete the questionnaire.

Respondents are invited to complete the table to indicate their position on the questions being asked. Respondents should outline YES or NO answers to each of the questions listed. If you have a further comment which will clarify your answer, this should be included in the Comments box.

Please note respondents are in no way obliged to respond to the questionnaire provided and are welcome to submit comments in their preferred format. However when preparing responses respondents should indicate which question or proposal their text refers to.

| Question/ Proposal | | Do you agree? | | Comments |
|--|---|---------------|----|---|
| | | Yes | No | |
| Section 4. Proposed Scope & Components of the Framework | | | | |
| 1. | Please comment on the CER proposal to define the scope of the Petroleum Safety Framework to include all of the CER's functions under Part IIA of Act? | √ | | |
| 2. | Please comment on the CER proposals to have a specific focus upon major accident hazards for the safety regulation of designated petroleum activities under Part IIA of the Act. | √ | | |
| 3. | Do you agree with the proposed definition of major accident hazard, set out in section 3.2.2.3, in the context of the CER safety regulation of designated petroleum activities? Please comment. | √ | | Need to ensure that it covers major accidents in deep waters offshore. |
| 4. | Do you agree with the CER's proposed approach to carry out its function to monitor compliance by petroleum undertakings' with their general duty in co-operation with other existing statutory authorities? | √ | | It is important to keep the regulation straightforward and remove overlap between regulatory bodies. Therefore makes sense that SER has sole responsibility for safety. |
| 5. | Please comment on CER proposals for the main components of the Framework as: a) A Statement of Strategic Intent; b) ALARP Demonstration Guidance; c) Agreed Interfaces, Co-operation & Co-ordination with Regulatory Authorities; d) A Permissioning System; e) A Compliance Assurance System; | √ | | |

| Question/ Proposal | | Do you agree? | | Comments |
|--|---|---------------|----|--|
| | | Yes | No | |
| | f) An Incident Investigation System; g) An Enforcement System; h) A Safety Reporting and Published Safety Information System; and i) A Continuous Improvement System. | | | |
| 6. | Are there additional high level components which the CER should consider for inclusion within the Framework? | √ | | |
| Section 5: Strategic Intent of Petroleum Safety Framework | | | | |
| 7. | Do you agree that the proposed vision for the Framework should be: <i>A safe Irish petroleum exploration and extraction industry.</i> | √ | | |
| 8. | Do you agree that the proposed mission statement for the Framework should be: <i>To independently regulate petroleum exploration and extraction activities to protect life.</i> | √ | | Suggest change from "protect life" to "protect life and the environment". Appreciate that maybe this overlaps the EPA, but for offshore oil and gas applications they are very closely linked. |
| 9. | Please comment on the proposed five key roles of the CER under the Framework as follows: 1. <i>Foster and encourage safety in petroleum exploration and extraction activities;</i> 2. <i>Actively monitor & enforce compliance of petroleum undertakings with their obligations;</i> 3. <i>Promote a regulatory framework that encourages continuous</i> | √ | | |

| Question/ Proposal | | Do you agree? | | Comments |
|-------------------------|--|---------------|----|--|
| | | Yes | No | |
| | <p><i>improvement of safety;</i></p> <p>4. <i>Work with other authorities to achieve our vision; and</i></p> <p>5. <i>Provide safety information to the public.</i></p> | | | |
| 10. | Are there additional CER roles which should be set out in defining the strategic intent of the Framework? | | | The US regulatory body (BOEMRE) invests significantly in technology studies and projects to support their understanding of best practices and this is something that CER should also consider. This possibly comes under Point 1 in the previous question. |
| 11. | <p>Please comment on the proposed three regulatory goals for the Framework:</p> <p>1. <i>That petroleum undertakings reduce risks to safety to a level that is ALARP;</i></p> <p>2. <i>That petroleum undertakings achieve safety performance commensurate with the best internationally; and</i></p> <p>3. <i>Engender confidence that the regulatory framework is protecting the public.</i></p> | √ | | |
| 12. | Are there additional high level regulatory goals which should be set out in defining the strategic intent of the Framework? | | | |
| Section 6: ALARP | | | | |
| 13. | Please comment on whether you consider the proposed basis of assessment that risk has been reduced to a level that is ALARP (as summarised in Figure 7) to be appropriate. | | | Figure 7 is a bit misleading in that it requires the basis of assessment to move towards QRA and "societal values" with increasing novelty, complexity and uncertainty. QRA |

| Question/ Proposal | | Do you agree? | | Comments |
|--------------------|---|---------------|----|--|
| | | Yes | No | |
| | | | | requires knowledge of failure statistics, which would be limited for more novel, complex solutions. |
| 14. | <p>Please comment on whether you consider it appropriate to set upper limits of tolerability for the following risk metrics relating to petroleum activities:</p> <ul style="list-style-type: none"> • Individual risk to workers; and • Individual risk to members of the general public. | | √ | It would be difficult to set limits without also defining clearly the procedure and methodology to calculate the risk metrics. |
| 15. | Should societal risk be addressed within the Petroleum Safety Framework? If so, should it be treated implicitly and/or explicitly? | | √ | No as this issue has not been developed thoroughly in countries which have much more mature oil and gas industries. |
| 16. | Are there any other risk metrics which you consider should be adopted for the control of risks generated by designated petroleum activities? | | | |
| 17. | Do you consider it reasonable for the CER to align proposed risk criteria introduced under the Petroleum Safety Framework with criteria adopted by the HSA for land-use planning purposes? | √ | | Seems reasonable and consistent. |
| 18. | <p>Please comment on whether you consider the Petroleum Safety Framework should introduce a lower ALARP limit in terms of individual and societal risk. If so, whether the lower limit should be:</p> <ul style="list-style-type: none"> • left to the petroleum undertaking to set; or • advisory? | | √ | Do not see significant benefit in this. |
| 19. | If upper limits are introduced for either individual or societal risk, | | | Suggest to follow example of Norway which has a good |

| Question/ Proposal | | Do you agree? | | Comments |
|--|---|---------------|----|--|
| | | Yes | No | |
| | <p>please comment on whether the limits should be:</p> <ul style="list-style-type: none"> ▪ left to the petroleum undertaking to set; ▪ advisory; or ▪ mandatory? | | | track record in safety. |
| Section 7: Permissioning System and Designated Petroleum Activities | | | | |
| 20. | <p>Having regard to the requirements of the Act, please comment on the CER's proposed criteria for the designation of petroleum activities and associated infrastructure as follows:</p> <p>In order to be designated, a petroleum activity is required to meet each of the following criteria:</p> <ul style="list-style-type: none"> (i) the activity and associated infrastructure requires a petroleum authorisation. (ii) the activity has the potential to generate petroleum related major accident hazards. (iii) the activity and associated infrastructure is connected to, or has the potential to be physically connected to, the reservoir; and (iv) The petroleum activity is not entirely regulated by or under another Act of the Oireachtas and its designation allows for the optimum operation of the permissioning regime | | | Does this designation cover such as shuttle tanker for transport of dead crude, and associated CALM buoy operations. |
| 21 | Respondents' views are invited as to the specific application of the | | | Construction activity could be construed to include |

| Question/ Proposal | | Do you agree? | | Comments |
|--------------------|--|---------------|----|--|
| | | Yes | No | |
| | designation criteria to the construction and installation of petroleum infrastructure. | | | completion of wells and commissioning, which would be classified as petroleum activities. It is recommended that the safety case should cover all design, construction and installation activities up to hot commissioning in a single phase. |
| 22. | Please comment on the application of the proposed designation criteria to exploration activities. | | √ | Would make sense to include development drilling with exploration drilling. |
| 23. | Please comment on the application of the designation criteria to extraction activities. | √ | | |
| 24. | Please comment on application of the designation criteria to conveyancing activities. | √ | | In the movement of fluids category it is recommended to list "risers" as a separate subcategory to pipelines. Particularly for floaters the dynamic loads on risers require that special attention is paid to them. Also may need to include seawater as a production fluid as seawater under high pressure is often pumped into the reservoir for pressure maintenance. |
| 25. | Please comment on application of the designation criteria to decommissioning activities. | | | |
| 26. | Please comment on the CER's proposed approach to dealing with connected activities within the appropriate safety case rather than designation of such supporting activities. | √ | | |
| 27. | Please comment on the six proposed principles underpinning the design of the permissioning system. | | √ | It is considered to include the CER at the design stage to be excessive regulation. |

| Question/ Proposal | | Do you agree? | | Comments |
|--------------------|---|---------------|----|--|
| | | Yes | No | |
| 28. | Please comment on the proposed approach for a Well Work Safety Permit and supporting safety cases. | | | Both the provisional well design SC and the well design SC result in a single Well Work Safety Permit. It is not clear whether the provisional well design SC is only provided to CER for information/review/comment purposes. |
| 29. | Please comment on the proposed approach for a Pre-Construction Safety Permit and supporting safety case. | | √ | This seems to be excessively bureaucratic. The design and construction of the facility should be covered by the Production Safety Case and instead of requiring multiple safety cases to be developed at intermediate stages, alternatively the framework could require preliminary safety cases to be developed at intermediate stages. |
| 30. | Please comment on the proposed approach for a Production Safety Permit and supporting safety cases. | | √ | As with Question 29, it is considered to be overly bureaucratic to have the separate Design and Production SCs. |
| 31. | Please comment on the proposed approach for a Combined Operations Safety Permit and supporting safety case. | | √ | It is not clear why this aspect of operation should not be covered by the Production SC. |
| 32. | Please comment on the proposed approach for a Decommissioning Safety Permit and supporting safety case. | | | |
| 33 | Comments are welcome on how the CER should approach safety case assessments. | | √ | Where CER does not have the requisite expertise it should look to outsource to competent third parties and if possible these should be locally based so as to ensure familiarity with the Irish regulations and specific requirements for developments offshore Ireland. |

| Question/ Proposal | | Do you agree? | | Comments |
|--|---|---------------|----|---|
| | | Yes | No | |
| | | | | Also CER personnel should look to participate in industry initiatives related to safety, integrity management, operations, etc.. This would help to ensure that CER is aware of current industry best practice. |
| 34. | Respondents' views are invited on how the 5 year safety case review process should be implemented, including comment on the options presented for the review process, and suggested alternatives. | √ | | If there is a material change then a re-submittal should be required. However, otherwise the approach used in the UK would be recommended, as it ensures an independent review of the risk assessments. The assessments in this case would need to account for the operation history of the facility over the previous 5 years and any degradation of the facility. |
| 35. | Please comment on the above proposals regarding co-ordination of the CER permissioning system with other statutory processes. | √ | | |
| Section 8: Compliance Assurance | | | | |
| 36. | Please comment on the CER's proposed broad scope and approach to audit and inspection of petroleum undertakings? | √ | | Agree in principle. A saying in the industry is that "you get what you inspect and not what you expect". However, CER would not have the resources or the expertise to supervise every aspect of a large offshore development and therefore the objective should be to ensure that the operator or a third party does this. |
| 37. | Please comment on the proposal that CER's inspectors can be a mixture of both in-house staff and third party independent competent persons. | √ | | Refer also to the CVA process used in the USA, which is similar. |

| Question/ Proposal | | Do you agree? | | Comments |
|--------------------|--|---------------|----|---|
| | | Yes | No | |
| 38. | Should the CER seek to co-ordinate its audit and inspection activities with other statutory bodies where possible? | √ | | With respect to the comment on lifting equipment, note in many cases this is covered by having a marine warranty company verifying all offshore lifting activities in addition to checking that all equipment has appropriate certificates and permits. |
| 39. | The CER is interested in respondents views on whether the audit and inspection schedule should be risk-based and involve a few visits per facility per year, or should be undertaken on a prescriptive frequency and, if so, what frequency? | √ | | Would recommend a risk based approach, so as to focus on areas of concern. |
| 40. | Please comment on the CER proposal that a Verification Scheme should form part of the Compliance Assurance system of the Petroleum Safety Framework. | √ | | Refer also to the CVA process used in the USA, which is similar. |
| 41. | Do you agree that if verification is adopted, that the verifier should be a third party independent person referred to as an Independent Competent Person (ICP)? Please comment. | √ | | Agree. This is consistent with the CVA process in the USA. Note that in the USA it is typical to CVA separately covering design and construction activities. |
| 42. | If the ICP approach is adopted by the CER, who should contract the ICP – the CER or the petroleum undertaking? | √ | | The operator as this is consistent with other jurisdictions. |
| 43. | Do you think that approval of the ICP is required and, if so, by whom? | √ | | Yes by CER. |
| 44. | Should the CER, or a 4 th party audit the verification scheme? | √ | | CER |

| Question/ Proposal | | Do you agree? | | Comments |
|--------------------|---|---------------|----|---|
| | | Yes | No | |
| | | | | |
| 45. | Do you agree with the CER proposal that the Scope of Verification should be hardware Safety Critical Elements? | √ | | |
| 46. | Do you agree with the CER proposal to apply the verification scheme offshore and onshore? | √ | | |
| 47. | Do you agree with the CER proposal to apply the verification scheme throughout the lifecycle of petroleum infrastructure? Please comment. | √ | | Agreed for wells and facility design and construction. For operations it is more important that a comprehensive integrity management system is in place, though this could also be subject to third party audit. |
| 48. | Do you agree with the CER view that a separate well examination scheme and well management audit scheme should operate? Who should conduct this scheme? Please comment. | √ | | Agreed, though it would need specialist consultants to undertake. |
| 49. | Should ALARP be explicitly included within the verification scheme guidance? Please comment. | | | |
| 50. | The CER is interested in respondents views on whether the CER should approve the verifications scheme in the scenario where the petroleum undertaking contracts the ICP? | √ | | Having the CER approve the verification scheme ensures that the Operator gives it the correct focus. |
| 51. | Do you agree with the CER proposal to introduce a balanced set of leading and lagging indicators within the Safety Case Guidelines for routine reporting by the petroleum undertaking to the CER? Please comment. | √ | | Agreed though it should be in the context of the operator having a comprehensive integrity management system in place, that results in the development of annual fitness to operate statements for all safety critical items. |

| Question/ Proposal | | Do you agree? | | Comments |
|---------------------------------------|---|---------------|----|---|
| | | Yes | No | |
| 52. | Please comment on the appropriate means for ensuring compliance by petroleum undertakings with their general duties, and the CER's proposed approach to monitoring. | | | |
| Section 9: Petroleum Incidents | | | | |
| 53. | <p>Please comment on the proposals for the following to be to be classified as petroleum incidents to be notifiable to the CER:</p> <ul style="list-style-type: none"> • All events/occurrences that result in the loss of human life; • Those events/occurrences which result in a personal injury to a member of the general public; • Those events/occurrences which result in personal injury which relate to a major accident hazard; • All events/occurrences that result in damage to the structural integrity of petroleum infrastructure; • All events/occurrences that result in the structural integrity of petroleum infrastructure being compromised; and • Near misses which have the potential to cause a major accident including the failure of plant and equipment or procedural failures which could have the potential to cause a major accident or could significantly impair an undertaking's response to a major accident. | √ | | Add any event that results in a loss of production fluid to the environment, as this is a key indicator of safety issues. |
| 54. | Please comment on the CER's proposed approach to the investigation of petroleum incidents and follow up actions. | | | |

| Question/ Proposal | | Do you agree? | | Comments |
|--|--|---------------|----|----------|
| | | Yes | No | |
| 55. | Please comment on the proposal that the CER will seek to liaise and co-operate with other relevant authorities in the incident investigation process? | | | |
| Section 10: Agreed Regulatory Interfaces and Co-operation | | | | |
| 56. | The CER are interested in respondents' comments on the proposed interface, co-ordination and co-operation arrangements. Specifically are such arrangements beneficial and are there other authorities the CER ought to have such arrangements in place with? | | | |
| 57. | Please comment on the proposals for information sharing under the interface, co-ordination and co-operation arrangements? | | | |
| 58. | Please comment on the proposals for greater alignment of the permissioning processes under different statutory regimes and inclusion for the interface, co-ordination and co-operation within arrangements with other statutory authorities. | | | |
| 59. | Please comment on the proposals for co-ordinated audits/inspections and related information exchange under the interface, co-ordination and co-operation arrangements. | | | |
| Section 11: Enforcement | | | | |

| Question/ Proposal | | Do you agree? | | Comments |
|--|--|---------------|----|----------|
| | | Yes | No | |
| 60. | Please comment on CER's proposals on enforcement. In particular the proposals with respect all persons included on a petroleum authorisation submitting a joint safety case | | | |
| Section 12: Safety Reporting and Published Safety Information | | | | |
| 61. | Please comment on the CER proposals for the publication and content of the Annual Report on the Petroleum Safety Framework | | | |
| 62. | Please comment on the CER proposals for the information it intends to publish | | | |
| 63. | The CER is interested in respondents views on the criteria the CER should apply when considering an application by petroleum undertakings on the exclusion of certain information. | | | |
| Section 13: Continuous Improvement | | | | |
| 64. | The CER is interested in respondents views on the proposed approach to continuous improvement | | | |