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Dear Victoria

Subject: HBREF programme sub-group – Submission from the International Association of Drilling Contractors

I enclose information further to IADC's participation in a technical working group of the European Commission. IADC believes this information is relevant to the gap analysis being undertaken pursuant to the Commission's examination of the future direction for the proposed best available techniques reference document for hydrocarbons extraction in European Union jurisdiction (HBREF).

IADC makes no request that this submission, or any part of it, be treated as 'confidential' and has no objection to the publication of this response on the official website of the Union. A number of our partner associations and exploration and production (E&P) industry bodies have submitted a response to you. The views expressed herein are made without prejudice to any comments that have been offered separately to you by any of our industry associates.

IADC is a not for profit organisation with nearly 2,000 member companies representing the worldwide drilling industry. Pertinent to this consultation, our membership includes the vast majority of worldwide drilling contractors, and most of the drilling contractors currently providing contract-drilling services within the area subject to EU Member State and EEA jurisdiction.

I would like to first establish the context in which IADC's comments are offered in the form of a preliminary statement.

Preliminary statement by IADC

1. Role of the drilling contractor

Drilling contractors and certain others furnish the rigs, equipment and personnel to conduct well operations on behalf of the operator. The rewards of the contractors reside solely in the profit from the lease of the rig/ equipment/ personnel to the operator/licensee, which is the entity that receives the benefit from any hydrocarbons that may be found in the licensed area. Whereas the drilling contractor hires out his rig on a fit for purpose basis to the operator, it is the latter that determines the specification of a rig required to safely and efficiently conduct well operations at the particular location, and then selects such a rig on a competitive basis – i.e. there will be a number of rigs that may meet the operator's specifications and the owners of those rigs will compete for the opportunity to undertake the well activity. This relationship prevails throughout the world based upon the arrangement that the operator/licensee is in possession of (often confidential) information regarding the subsurface properties at the well location, and the drilling contractor markets his rig for a range of operational conditions including maximum and total drilled depth, well pressure and temperature maxima, and (offshore) water depth and metocean characteristics.

In Union waters and on land, any rig owner that tenders to an operator for the function of conducting well operations will specify *inter alia* the operational limits of the rig, the relevant control measures for the anticipated hazards and the contractor's safety and environmental management system[1]. These establish that the rig and its staff are capable of undertaking the operator/licensees proposed well operation.

Offshore, the division of liabilities in our industry provides that the drilling contractor may be liable for discharges and emissions and accidental spills relating to the day-to-day operation of his mobile offshore drilling unit (MODU). The operator/licensee is held liable for any spills and discharges of fluids derived from the underground strata in the licensed area, howsoever produced.

These important distinctions are usefully enshrined in the recent offshore safety directive (OSD) 2013/30/EU[2], which also amends the environmental liability directive (ELD). In this context, IADC respectfully endorses both the covering

[1] The SEMS will, by the nature of a rig's purpose, describe how the rig contractor's management system is to align with the SEMS of the operator/licensee, setting out the chain of command etc. Within the EU this takes the form of a bridging document (see API Bulletin 97)

[2] Reference Article 3 (1)-(4) on superordinate responsibilities of the operator; Article 7 on liability of the licensee for environmental damage under Dir.2004/35/EC (ELD)

narrative and technical submissions submitted to you by the International Association of Oil and Gas Producers (IOGP).

The technical submission herein enclosed refers as closely as is practicable to the matters for which drilling contractors may be responsible and does neither duplicate nor contradict the IOGP submissions.

2. International standards to apply to mobile drilling units; certification under ISO 14001

By their nature, MODU's move between jurisdictions and rarely operate in the jurisdiction in which they were constructed, and often are maintained and subject to major surveys out with the operating jurisdiction. All MODU's are subject to flag state rules, international standards, class conditions, MARPOL, International Maritime Organisation (IMO) MODU Codes and so on. Many owners active in Union waters maintain certification under ISO 14001[3] . Wherever MODU's operate there are likely to be regional codes and requirements, such as OSPAR in the north east Atlantic region, and the Barcelona Protocol in the Mediterranean region. It is therefore entirely suitable for regulators to expect and where appropriate apply international standards for MODU's in their waters.

On land, rigs will often move between Member States, and are also subject to international codes of practice and standards, most notably API and ISO; but they are also subject to EU law governing environmental protection, safety, and equipment and machinery codes.

3. Use of chemicals in EU - REACH

All operations using or producing harmful chemicals are subject to the REACH regulation[4] that enforces universally recognised protection from harm to the environment and people. This is an important factor in considering the necessity and scope of HBREF.

4. Preference for risk based approach to control of hazards

[3] ISO 14000 is a family of standards related to environmental management to support organisations minimize the day-to-day, or occupational environmental impact on the environment. The standard also supports compliance with applicable laws, regulations, and other environmentally oriented requirements. The standards also provides for continuous improvement in environmental stewardship. The requirements of ISO 14001 are an integral part of Union's Eco-Management and Audit Scheme (EMAS). EMAS's structure and material requirements are more demanding, mainly concerning performance improvement, legal compliance, and reporting duties.

[4] Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency.

The Union has shown considerable global leadership in safety and environmental legislation at major hazard sites (OSD, Directive on extraction by drilling[5], Seveso directive[6]) whereby safety and environmental protection is assured on the basis of management of risk. Such legislation sets goals and outcomes that are to be attained by duty holders rather than prescribe detailed measures (inputs) that are to be taken. The E&P sector fully supports and deploys this approach wherever permitted. It is predicated on the creator of the risk being responsible for controlling the risk. It also accommodates the fact that there are literally infinite permutations of risk factors on any well onshore or offshore. All factors are accounted for in a risk based, outcome oriented approach to safety and environmental hazards management. The range of applicable practices and standards is alarmingly wide, as the submission by IOGP amply demonstrates.

Specific factors, threshold values and measures are entirely unsuitable to well operations, and may be of themselves a hazard. Therefore IADC strongly urges the Commission to withdraw from the attempt to produce the HBREF, as being potentially prescriptive and fallow (i.e. would require continuous updating, a requirement that is inappropriate in the BREF system).

5. Exclusion of major accident hazards from HBREF

Notwithstanding our position on withdrawal of the HBREF project, we would also note that, whether carried out onshore or offshore, drilling and well operations are major hazardous activities. There is a profound distinction between occupational environmental protection that deals with accidental spills, and foreseeable emissions and discharges that alter air/water/ground quality in the day-to-day conduct of operations, and major accident prevention. The former is the process whereby industrial activity may be permitted within environmental bounds established to balance beneficial economic activity and protection of the environment so as to prevent, where possible, taking territory out of economic use. The latter is the process of preventing entirely unacceptable major consequences[7] to people and the environment.

[5] Directive 92/91/EEC. This directive lays down the minimum requirements for improving the safety and health protection of workers in the mineral-extracting industries through drilling i.e. extraction of minerals (onshore and offshore), preparation of extracted materials for sale, etc.

[6] Directive 2012/18/EU (Seveso III) Lays down measures to prevent major accidents at industrial sites having dangerous substances exceeding specified threshold quantities, and to ensure appropriate preparedness and response should accidents nonetheless occur.

[7] See Directive 2013/30/EU: 'major accident' means, in relation to an installation or connected infrastructure:

(a) an incident involving an explosion, fire, loss of well control, or release of oil, gas or dangerous substances involving, or with a significant potential to cause, fatalities or serious personal injury;

(b) an incident leading to serious damage to the installation or connected infrastructure involving, or with a significant potential to cause, fatalities or serious personal injury;

IADC strongly believes it is neither feasible nor appropriate to set out best available techniques for contending with unallowable events – such as major accidents - and urges the Commission to exclude unplanned major accident scenarios (e.g. blow-outs) from consideration of the HBREF.

6. Application of new standards to existing installations

Finally, we make the point that international authoritative codes applying to the offshore MODU fleet take account of the investment in construction and ongoing maintenance of integrity, class and insurance. An offshore rig costs anywhere between $250 million and $1 billion, and the return on capital is just around 8%, and capital amortization takes between 15 and 25 years. The global system for the management of ageing installations is rigorous but commences immediately a MODU leaves the construction yard. A MODU built to IMO MODU Code 1989, will not be expected to comply with the 2009 MODU Code. However certain safety and environmental critical elements will be updated to later codes when replacement or major repair is required.

It would be entirely inappropriate to interfere with this long-standing and well organized procedure by the Union attempting to prescribe latest standards on existing installations in response to every item of new knowledge and invention.

7. *Note on the submission*

Our technical submission is a 3-column document that in the left side lists the elements ascribed to the sub-group's consideration; the middle column lists specific standards and applicable legislation that provides relevant measures of protection; the right column provides context to the legislation in narrative form.

We also provide a brief supplemental information paper, organized by topic. This is intended to be illustrative, not definitive, and is offered for your convenience.

Yours sincerely

Executive Vice President

Policy, Government & Regulatory Affairs, IADC

(c)any other incident leading to fatalities or serious injury to five or more persons who are on the offshore installation where the source of danger occurs or who are engaged in an offshore oil and gas operation in connection with the installation or connected infrastructure; or

(d) any major environmental incident resulting from incidents referred to in points (a), (b) and (c).

ANNEX I – KEY ENVIRONMENTAL ISSUES FOR OFFSHORE ACTIVITIES TO BE CONSIDERED BY THE SUBGROUP			
Issue	**Relevant activities/processes/techniques**	**Legislation / Guidelines**	**Explanatory notes**
Seabed disturbance	1. Sea-bed infrastructure impact, e.g. pipework, concrete mattresses, rock dumping, anchoring, piling, jacket footings in-situ	ISO 19905-1 - "site specific assessment of MOUs" Operators EIA	The operator is required to consider this in the Environmental Impact Assessment. See Preliminary Statement part 1. The Operator will restore the seabed to original condition if required by authorities. For MOUs/MODUs the ISO standard is used Refer to Preliminary Statement part 2 in relation to International Standards Damage relates to anchor scars or leg penetrations. For exploration: natural recovery or affected area may be trawled over at end of work. Sites typically in use for many years during production.
	2. Drill cuttings pile material and toxic contaminants on seabed	OSPAR Operators EIA	Cuttings handling takes place in accordance with the Operators discharge permit. Best practice is to only permit to discharge cuttings from the first sections of the well where there is no reservoir hydrocarbons and the fluids adhering to cuttings are approved for discharge The drilling contractor obligation will be limited to minimising impacts in terms of having a high capacity for reception, cleaning, storage and facilitating back load of contaminated cuttings for safe disposal onshore.
Discharges to sea	3. Handling of residual chemical additives/hydrocarbons (planned/accidental releases to sea, e.g. mud additives in cuttings, drainage water containing hydrocarbons, cement, BOP fluid and bilge water)	Harmonized Offshore Chemicals Notification Format (HOCNF) used in North Sea and NE Atlantic and requirements for test and registration for offshore use for lubricants and chemicals used in closed systems in volumes greater than 3.000 kg per year. OSPAR REACH 2013 EPA VGP (US) MODU code (14.5) IMO – MARPOL	Planned (Permitted) discharges For marine almost all the items covered by OSPAR in N Sea and other either national rules or area conventions in other parts of the world. For MODUS MARPOL requirements also apply. OSPAR decisions prohibit the use of diesel as a drilling fluid and places restrictions of OBM discharges to sea. No untreated whole mud, or mud that has been mixed with drill cuttings may be discharged to sea. The discharge into the sea of cuttings contaminated with OBM at a concentration greater than 1% by weight on dry cuttings is prohibited. Chemicals and other substances are only discharged according to the Operators discharge permit. Chemical deployment controlled in EU under REACH regime. See Preliminary Statement part 3 Chemical injection spillage of chemicals in connection with chemical transfer and operation of chemical injection skid (REACH). On MODU's applies only to drilling and related operations (completion, temporary abandonment etc) Production operations chemical injection applies to operator. Oily water discharge will take place through an Oily Water separator or shipped onshore for discharge in compliance with MARPOL. NOTE: relevant code applies to period of construction of MODU (see Preliminary Statement Part 6

			Contaminated water such as drain water is not discharged overboard but sent to shore for treatment. For subsea BOP's, control fluid is environmentally friendly and can routinely be discharged to the sea. Surface BOPS are closed system with no discharge. Before dumping cement, diluted cement is pumped to rig floor until clean. Unplanned discharges As above
	4. Activities with potential for accidental hydrocarbon spills, e.g.: 1. Well blowout (Tier 3) **Note: should not apply in BREF –** see Preliminary Statement part 5 2. In-field riser/flowline rupture, topsides vessel / heat exchanger rupture, fuel tank loss of containment, topsides drainage system failure (Tier 2) 3. Bunker hose failure, dropped tote tank, small-hole riser leak,	4.1 Procedures Generic: ISO 14001 Certification. IOGP 476 training standards (e.g. as applied by WellSharp). Equipment**:** API S 53, API 16D and API RP 64. OSPAR Directive 2013/30/EU & relevant implementation by Member States e.g. UK/DECC:OSD - The Offshore Installations (Offshore Safety Directive) (Safety Case etc.) Regulations 2015 *IADC North Sea Chapter -Oil Pollution Emergency Plan Template for Non-Production Mobile Offshore Drilling Units, issued June 2015* 4.2 N/A 4.3 Bunker hoses and handling	ISO 14001: QA system for integrated systems to prevent env. damage from operations; ensure legal compliance; secure continuous improvement. See Preliminary Statement Part 2 Well control training and procedures are in accordance with IOGP technical report 476. This sets standards for well control training delivery mechanisms, such as IADC WellSharp (2015) Blow Out Prevention equipment is designed and maintained in accordance with API S 53, API 16D and API RP 64. This section should apply solely to operational deployment (e.g. pressure testing casing or cement plugs) not blow out prevention. (Preliminary statement 5 applies) Further requirements by the original equipment manufacturer are imposed for the assurance of fit-for-purpose equipment. The OSPAR recommendation 2010/18 on the prevention of significant acute oil pollution from offshore drilling activities came into force in September 2010 and establishes a process for assessing the relevance of the results of the US and EC reviews of the Macondo well incident with a view to taking additional action by the OSPAR Commission if needed and within the scope of the Convention. As per Offshore Safety Directive, equipment is subject to hazard identification, risk analysis and identification of performance requirements for critical systems (safety and environment). These requirements are in turn subject to independent verification. 4.2 has little relevance for the drilling contractor (to be advised by Operators/owners of offshore production plants) 4.3 For Bunkering**:** Industry standard is for hydrocarbon bearing bunker hoses to be equipped with breakaway

	helideck fuel spills (Tier 1) 4. (Note events listed here by Tier are for indicative purposes only, actual spills may vary)	in accordance with MARPOL annex 1. GOMO ISGOTT – International Safety Guide for Oil tankers and terminals OCIMF Guide to Purchasing, Manufacturing and testing of Loading and Discharge hoses for offshore moorings 4.4 N/A	couplings and non-return valves. All bunker hoses are equipped with flotation devices to aid the monitoring for leaks - Visual inspection of hoses and connections. Watchman posted at filling station to monitor hose throughout cargo operations. Leak test of hoses prior to use.
	5. Handling of oil-based drilling mud cuttings (e.g. disposal to sea)	OLF 093 Guidelines for waste handling in the offshore sector OSPAR	Generally, oil based drilling cuttings will not be discharged to sea in European waters. Oil based drill cuttings are shipped to shore for treatment, or in some cases re- injected
	6. Planned liquid hydrocarbon discharge to sea surface	MARPOL	Oily water discharge (if relevant) will take place through an Oily Water separator or collected on board for discharge onshore in compliance with MARPOL.
	7. Handling/treatment of hydrocarbon-contaminated waste water (e.g. produced water) (discharge to sea, etc. during well completion and clean up, and during production).	OSPAR ref no 2005- 15, OLF 085 Guidelines for test measuring and analysis of produced water OLF 044 Guidelines for reporting of emissions	Drilling units do not normally discharge produced water to sea given the nature of their operations. Produced water above 30 ppm - will not be discharged to sea. In a well testing situation, produced water will be subject to the operators discharge permit.
	8. Storage and handling of completion fluids (accidental loss of containment and discharge to sea of e.g. corrosion inhibitor, biocide, oxygen scavenger)	OSPAR Directive 2013/30/EU (OSD)	Completion fluids are routinely stored and transferred in tanks and lines which are covered by a double barrier requirement (blinding/valves/bunding). Where discharge could result in major accident to the environment and arise from a major accident, preventive measures will be based on risk assessment in a report on major hazards (‘safety case’) pursuant to Directive 2013/30/EU
	9. Storage and loading of hydrocarbon cargo (accidental loss of containment and discharge to sea)	N/A for drilling rigs	Stored segregated from incompatible materials and with secondary containment
	10. Well closure / plugging	Directive 2013/30/EU (OSD) Directive 1992/92/EEC	Subject to operator’s risk assessment – see Preliminary Statement part 1 Rig safety case (RoMH in Directive 2013/30/EU) provides generic assurance of integrity

		(Extractive/drilling)	
Releases to air	11. Drilling rig (air emissions from drilling rig and associated supply and transport vessels)	EU- Directive 2010/75 IAPP – International Air Pollution Protocol	Offshore**:** Metering on consumers for optimisation of consumption through monitoring and control – MODUs record consumption. Relevant code applies to age of MODU. See Preliminary Statement part 6 Platforms- power typically from client main gas turbine generators. Through 14.5 in the MODU code, drilling units are obliged to be equipped to comply with the maritime pollution prevention conventions in force, both for operational and accidental releases. This includes emissions to air. Supply vessels and helicopters are under the governance of the Operator MODU operators maintain valid IAPP certification re emission limits.
	12. Flaring (emissions from during blowdown, completion or unplanned event)	API 520 ISO 232521	Blowdowns will invariably take place given an unplanned or accidental event and not flaring is thus not an option given the safety implications. Dimensioning of systems and height of flare towers is designed to minimise personnel exposure, and takes place in accordance with API 520 and ISO 232521 (for pressure relief and depressurisation - (the difference between BD and depress. being that depressurisation takes place in a controlled depressurisation segment by segment, while BD will relieve the entire system without operational delay.)
	13. Production (accidental gas releases due to loss of containment)	API 520 ISO 232521 Directive 2013/30/EU and MS regulations e.g. UK Safety Case Regulations (2015)	Loss of containment potential is minimised by design in reducing the number of potential release points (flanges, connections etc.) to the maximum extent that is technically feasible. ESD and BD sequences configured to reduce risks as far as is reasonably practicable. Not releasing pressure, (and hence potentially HCs) to atmosphere is not an option, given the urgency of the scenario and the higher incident severity potential of having HCs trapped in the system(s). Generic risk assessment by MODU owner; site specific by operator See Preliminary Statement parts 1 and 5
	14. Production (planned emissions from venting, fugitive emissions)	HOCNF REACH	Substances where releases can be anticipated will to the extent technically feasible be subject to the substitution principle and are subject to the internal chemical management system, categorisation as per HOCNF and as per REACH.
Physical presence	15. Drilling/production facilities (impact on commercial vessel operations e.g. shipping/fishing)	Subject to site specific risk assessments by operators IMO MODU Code	Operator risk assessment considers (e.g.) shipping lane density, defense zones, fishing grounds, wind farms International conventions applying to protection of vessels in navigation See
	16. Offshore facility lighting (impact on seabirds and migration)	IMO MODU Code EIAD Birds Directive 2009/147/EC	International conventions applying to lighting The operators Environmental Impact Assessments may require mitigating actions. To this point no disruption to migratory birds has been observed. Also applies during well testing (flaring) Operators EIA applies.
	17. Jacket decommissioning (physical presence of jacket footings left in situ)	N/A	N/A for MODUs. Scrapped rigs will be decommissioned onshore/alongside.

Marine biodiversity	18. Seismic surveying (impact on marine species due to high impact noise)	N/A	N/A

Annex II – Key environmental issues for onshore activities to be considered by the subgroup			
Issue	**Relevant activities/processes/techniques**	**Accepted approach / standard**	**Explanatory notes**
Releases to air	1. Power generation (air emissions)	Directive 97/68/EC and amendments EC 2/008/1/EC EC9 8389/EEC IAPP certification	Power typically from diesel electric generators. but may be direct ac power supply from grid supplied by client. License holder responsibility for reporting Drilling contractor responsibility relates solely to providing emissions complaint generators where used.
	2. Site equipment and vehicles (air emissions)	Directive 97/68/EC and amendments	Site vehicles insignificant sporadic use. Typically pick up, load handler or mobile crane. Within Europe site vehicle typically all road legal and comply with emissions standards for use.

IADC EU supplemental information by topic

Codes and conventions apply to existing installations relative to their entry into service or most recent major refitting.

Oil pollution emergency planning

Conventions /Legislation etc	Application	Implementation	Key requirements
IMO International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) Adoption: 30 November 1990; Entry into force: 13 May 1995	Ships and offshore installations worldwide	National regulation by signatory states	Oil Pollution Emergency Plan. Approval of plan is by the body that is the National Competent Authority for the convention. 5 yearly review of plans required
Bonn Agreement for cooperation in dealing with Pollution of the North Sea by oil and other harmful substances 1983	Within the Bonn Agreement area there are two further interstate agreements (Mancheplan and Norbit) which set out provision for a joint response by the Contracting States and also how the use of state intervention may be utilised when one or other's interests are threatened.	As above	
EU Directive 2005/35/EEC			
EU Directive 2009/18/EC	Investigation of accidents in marine transport sector Accidents include "*pollution, or the potential for such pollution to the environment caused by damage to a ship or ships*"	As above	

Harmful substances

Antifouling

Conventions /Legislation etc	Application	Implementation	Key requirements
IMO Control of Harmful Anti-Fouling Systems on Ships 2001 (implanted in EU by EC regulation782/2003)	All ship worldwide. The Regulations also apply to any Fixed or Floating Platform, FSU or FPSO as these fall into the definition of a Ship.	National regulation by signatory states. EU requires AFS certificate for all non-fixed rigs, platforms FPSOs or FSUs,	Ships must not apply or re-apply organotin compounds which act as biocides in anti-fouling systems from 1 January 2003. From 1 January 2008 all ships must either not have organotin systems on their hulls or external parts, or have a sealer coat to prevent it leaching out.

Biocides

Conventions /Legislation etc	Application	Implementation	Key requirements
EU Biocidal products directive 98/8/EC In force 1 Sept 2013 (Regulations EU 528/2012 The Biocides Regulation also refers)	All industries	National regulation by signatory states	Approved biocides us only

Air emissions

Conventions /Legislation etc	Application	Implementation	Key requirements
2010/75 EU directive Integrated pollution prevention and control	All industries	National regulation by signatory states	Approved biocides us only

Environmental impact asssessment

Conventions /Legislation etc	Application	Implementation	Key requirements
EIA directive 85.337.EEC Numerous amending directives e.g. 97/11 EC: 2003/35/EC	All industries	National regulation by signatory states	Approved biocides us only

Ballast water

Conventions /Legislation etc	Application	Implementation	Key requirements
Origins in United Nations Conference on Environment and Development (UNCED) Rio de Janeiro in 1992, in its Agenda 21, IMO International Convention for the Control and Management of Ships' Ballast Water and Sediments (the Ballast Water Management or BWM Convention) February 2004,	Offshore units, including floating production installations (FPIs), mobile offshore drilling units (MODUs), mobile offshore units (MOUs), floating gas storage and/or processing	International Ballast Water Certificate will be issued for a ship whose flag has ratified the BWM Convention; for other ships, a Ballast Water Management Certificate of Compliance will be issued. Both the Certificates and the Statement will be valid for five years subject to annual, intermediate and renewal surveys	