



# INTERNATIONAL ASSOCIATION OF DRILLING CONTRACTORS

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P.O. Box 4287 • Houston, Texas 77210-4287 USA  
10370 Richmond Ave., Suite 760 • Houston, Texas 77042 USA  
Phone: 1/713-292-1945 • Fax: 1/713 292-1946 • www.iadc.org

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Commandant (CG-545)  
United States Coast Guard  
2100 Second Street, SW – STOP 7581  
Washington, DC 20593-5781

Via e-mail: Timothy.J.Farley@uscg.mil

Re: *DEEPWATER HORIZON* Investigation

To whom it may concern:

The International Association of Drilling Contractors (IADC) is a trade association representing the interests of drilling contractors, onshore and offshore, operating worldwide. IADC's membership includes the vast majority of drilling contractors currently operating mobile offshore drilling units (MODUs) in the areas subject to the jurisdiction of the United States and MODUs registered in the United States.

The purpose of this letter is to provide comments on the Recommendations contained in Volume 1 of the Joint Investigation Team's "Report of Investigation into the Circumstances Surrounding the Explosion, Fire, Sinking and Loss of Eleven Crew Members aboard the Mobile Offshore Drilling *DEEPWATER HORIZON* in the Gulf of Mexico, April 20 – 22, 2010" (the Report).

Except as noted, IADC's comments are based solely on IADC's assessment of the Recommendations. They should not be interpreted as implying either support or disagreement with the Conclusions of the Report. They are offered without prejudice to comments that may be offered directly by IADC's members. Transocean, a member of IADC, and a Party-in-Interest to the Investigation, did not participate in the development of these comments.

## ***General Comments***

### ***Prevention versus mitigation***

IADC finds the recommendations of the Report to be overly focused on mitigation rather than prevention. It is unfortunate that BOEMRE's report of the investigation was not promulgated in time to be considered in parallel to the Coast Guard's Report. In IADC's view, the primary goal should be to concentrate all reasonably practicable measures on the prevention of the loss of well control, thus preventing the reoccurrence of such an incident. This said, IADC recognizes that the Report does identify weaknesses in certain barriers intended to mitigate the effects of such incidents and that these weaknesses need to be addressed.

## **Regulatory Structure**

IADC had considerable difficulty reconciling many of the Report's recommendations with IADC's understanding of the regulatory structure governing Mobile Offshore Drilling Units (MODUs) operating on the U.S. Outer Continental Shelf (OCS). Many of the recommendations seemingly focus on the operation of MODUs as vessels, rather than on the broader underlying issues associated with working conditions on the OCS.

IADC believes that it is critical that the Coast Guard articulates a clear regulatory structure, particularly as it applies to MODUs and other vessels, and that the Coast Guard's view of the regulatory structure is shared by the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE).

In particular, IADC believes that there is need for further clarity and coordination between the Coast Guard and BOEMRE with respect to:

- Those regulations which are interpreted by the Coast Guard and/or BOEMRE as applying to MODUs and other vessels or floating facilities that are temporarily attached to the seabed under the direct application of the provisions of 43 U.S.C. 1333(a)(1), *i.e.*:

"(a)(1) The Constitution and laws and civil and political jurisdiction of the United States are hereby extended to the subsoil and seabed of the outer Continental Shelf and to all artificial islands, and all installations and other devices permanently or temporarily attached to the seabed which may be erected thereon for the purpose of exploring for, developing, or producing resources therefrom, or any such installation or other device (other than a ship or vessel) for the purpose of transporting such resources, to the same extent as if the outer Continental shelf were an area of exclusive Federal jurisdiction located within a state . . ."

- Those regulations promulgated by the Coast Guard that apply to MODUs and other vessels and floating facilities engaged in "activities on the Outer Continental Shelf" that are issued pursuant to 43 U.S.C. 1347(c), *i.e.*:

"(c) The Secretary of the Department in which the Coast Guard is operating shall promulgate regulations or standards applying to unregulated hazardous working conditions related to activities on the Outer Continental Shelf when he determines such regulations or standards are necessary. The Secretary of the Department in which the Coast Guard is operating may from time to time modify any regulations, interim or final, dealing with hazardous working conditions on the Outer Continental Shelf."

- Those regulations promulgated by BOEMRE that apply to MODUs and other vessels and floating facilities that are issued pursuant to the Secretary's general authority over the administration of the leasing of the OCS under 43 U.S.C. 1334(a), *i.e.*:

"(a) The Secretary shall administer the provisions of this Act relating to the leasing of the outer Continental Shelf, and shall prescribe such rules and regulations as may be necessary to carry out such provisions. The Secretary may at any time prescribe and amend such rules and regulations as he determines to be necessary and proper in order to provide for the prevention of waste and conservation of the natural resources of the outer Continental Shelf, and the protection of correlative rights therein, and, notwithstanding any other

provisions herein, such rules and regulations shall, as of their effective date, apply to all operations conducted under a lease issued or maintained under the provisions of this Act. In the enforcement of safety, environmental, and conservation laws and regulations, the Secretary shall cooperate with the relevant departments and agencies of the Federal Government and of the affected States. . . .”

There is obviously room for considerable overlap between the Coast Guard’s jurisdiction over “unregulated hazardous working conditions” and BOEMRE’s general authority over the administration of the leasing of the OCS.

Over time, a series of Memoranda of Agreement have been developed to identify and clarify the responsibilities of the Minerals Management Service (BOEMRE’s predecessor) and the Coast Guard. In IADC’s view, these have been helpful; however, the Coast Guard’s chronic inattention to the continued evolution of activities on the OCS, and its failure to complete the rulemaking to amend 33 CFR chapter I, subchapter N, has forced BOEMRE (and previously, the MMS) to expand its regulatory reach beyond the terms of these Agreements.

IADC continues to be concerned by seemingly duplicative regulatory requirements imposed by the Coast Guard and BOEMRE, particularly where the agencies appear to have divergent views regarding the placement of regulatory responsibility. For example, the Coast Guard’s expectation that a self-propelled foreign-flag MODU would be certified to the International Safety Management Code (presumably under the application of 43 U.S.C. 1333(a)(1) and the derivative application of 46 U.S.C. 3302), with responsibilities placed with the unit’s master, must operate in parallel with BOEMRE’s expectation that the same unit would be subject to a Safety and Environmental Management System in accordance with 30 CFR, part 250, subpart S (SEMS Rule), with responsibilities placed with the lessee/operator.

### ***Amendment of the MODU Code***

The report makes numerous recommendations that the Commandant work with the IMO to amend the “MODU Code” without clearly specifying whether the proposed amendments are intended to be applied prospectively (*i.e.*, through amendment of the 2009 MODU Code so as to apply to future new construction) or retrospectively (*i.e.*, through amendment of the 1979, 1989 and 2009 MODU Codes so as to apply to existing units).

As the Coast Guard is aware, it would be possible to amend the 2009 MODU Code by resolution of the IMO’s Maritime Safety Committee; however, amendment of the 1979 MODU Code or 1989 MODU Code would require an IMO Assembly resolution and would be more burdensome.

IADC is willing to work with the Coast Guard and other interested parties to consider, and as may be appropriate, develop amendments to the MODU Code(s).

IADC notes the general absence in the Report of any recommendations for amendment of either 33 CFR chapter I or subchapter N or 46 CFR chapter I, subchapter I-A. IADC believes that amendment of both will be necessary; however, in order to promote the use of international standards (*i.e.*, the MODU Code), except where specifically noted, IADC would recommend that:

- No rulemaking be initiated to amend 46 CFR chapter I, subchapter I-A until after any related amendments to the MODU Code(s) are agreed by the International Maritime Organization; and

- In its rulemaking to amend 33 CFR chapter I, subchapter N, and associated guidance, the Coast Guard clarifies its intent regarding the acceptance of the various editions of the MODU Code.

### ***Specific Comments related to the Recommendations***

The following are IADC's specific comments on the recommendations of the Report. For ease of reference, the text of the recommendations (*in italics*) has been reproduced below followed by IADC's comments.

#### ***1. Explosion Protection***

*1.A. It is recommended that Commandant work with the IMO to amend the MODU Code to include clear requirements for the long term labeling and control of all electrical equipment in hazardous areas. In addition, requirements should be established for the continued inspection, repair and maintenance of electrical equipment in hazardous areas in the unit's safety management system.*

IADC agrees in part. IADC agrees that it is appropriate to consider amendments to the MODU Code(s) to include clear requirements for the long term control of electrical equipment in hazardous areas through a requirement to create and maintain a register of such equipment. Maintenance of the register could also be addressed in guidance associated with the ISM Code, API RP 75, or BOEMRE's SEMS Rule.

IADC disagrees with the recommendation for labeling of such equipment.

- Existing standards for labeling/marketing of such equipment were not developed to assure that the labels/marks would remain reliably visible for the life of the equipment;
- Installation of the equipment so that the label/marketing remains visible is problematic; and
- From its experience with labeling requirements on inspected vessels, Coast Guard should be well aware of the long term problems associated with the maintenance of labels on equipment and practical problems associated with replacing such labels should they be damaged or destroyed.

IADC would also note that the underlying issue being addressed with this recommendation is not restricted solely to MODUs, but would be common to any vessel or facility having electrical equipment installed or utilized in potentially hazardous (classified) locations. Therefore, other Coast Guard, BOEMRE and SOLAS regulations are also implicated by this recommendation.

*1.B. It is recommended that Commandant work with the IMO to amend the MODU Code to provide more detailed guidance for the design and arrangement of fixed automatic gas detection and alarm systems as specified in paragraph 9.8 of the MODU Code (paragraph 9.11). The guidelines should include as a minimum, the recommended type and number of gas detectors, their arrangement, alarm set points, response times, wiring protocols and survivability requirements.*

IADC disagrees with this recommendation.

IADC questions whether it is the need for more detailed guidance that is at issue, or whether it is the visibility of the guidance that exists. As with fire detection systems, purchasers of such systems rely upon the expertise of the system's manufacturer to determine the number of gas detectors, their arrangement, alarm set points, response times and wiring protocols. For MODUs, most fire and gas detection systems are under a type approval by the unit's classification society. Specifics of the wiring, layout, equipment used are reviewed by the flag State or Recognized Organization acting on its behalf. However, unlike fire detection systems, there are currently no regulatory requirements established by the IMO (or the Coast Guard) for such systems to obtain "system" approval.

At this time, IADC is not convinced that creation of a regulatory requirement for type or "system" approval is warranted.

If type approval of such systems is to be considered, IADC would note that the underlying issue being addressed with this recommendation is not restricted solely to MODUs, but would be common to any vessel or facility where there is a need for fixed gas detection and alarm systems. Therefore, other Coast Guard, BOEMRE and SOLAS regulations are also implicated by this recommendation.

*1.C. It is recommended that Commandant work with the IMO to amend the MODU Code to provide more detailed guidance for establishing fire and explosion strategies on board units using dynamic positioning systems for station keeping. The guidelines should provide a hierarchy of recommend automatic and manual emergency shutdown actions following gas detection in vital areas. The guidelines should also provide accepted approaches for the design and arrangement of the emergency power source necessary for station keeping in the event of a flammable gas release.*

IADC believes that consideration of an amendment to the MODU Code (or IMO MSC/Circ. 645, *Guidelines for Vessels with Dynamic Positioning Systems*) is premature and may be inappropriate in any case.

As the Coast Guard is aware, IADC identified the need for stationkeeping capabilities of DP units to be considered as part of emergency power management during the development of the 2009 MODU Code, so this is clearly an issue of concern to IADC.

There is a much broader underlying issue here – determining an appropriate response strategy for detection of flammable (or toxic and flammable) gas on a MODU or other OCS facility, bearing in mind that such a problem might arise during combined operations (e.g., a jack-up cantilevered over a fixed platform).

In testimony provided to the Congress, BOEMRE, and the Chemical Safety Board, IADC has highlighted that many of the major hazards for which risk controls on MODUs must be established relate to matters falling under the jurisdiction of multiple regulatory agencies. Accordingly, the controls that are established must not only satisfy the MODU owner's risk tolerance, along with that of the client (the lessee/operator), but also that of the Coast Guard and BOEMRE. And, as recognized in the recommendation, these controls must address not only equipment (automatic shutdowns) but matters of personnel competence and professional judgment (manual shutdowns).

IADC would hope that the basic premise during examination of this issue would be to prioritize, in order:

- (1) The protection of life;
- (2) The protection of the asset, to the extent that protection of the asset may be preferable to its abandonment in terms of protection of life; and
- (3) The protection of the environment.

IADC is working with the American Petroleum Institute to develop API/IADC Bulletin 97, *Well Construction Interface Document Guidelines*, which will provide guidance on a framework for such holistic discussions between the lessee/operator and the drilling contractor with respect to drilling operations.

On the narrower issue of power management for DP operations, IADC notes that this issue was introduced for discussion at the April 2011 DNV Rig Owners' Committee meeting. IADC suggests that an appropriate preliminary step would be to hold focused discussions involving the Coast Guard, BOEMRE, ABS, DNV and the owners of DP MODUs operating on the OCS.

*1.D. It is recommended that Commandant work with the IMO to amend the MODU Code to require specific minimum values for explosion design loads to be used in calculating the required blast resistance of structures. In addition, unified guidelines for performing the required blast resistance calculations should be developed.*

IADC believes this recommendation is premature. IADC does not believe that this is an issue where a technical solution can be developed in the IMO. The solution must first be developed outside IMO and then, if deemed appropriate, taken to IMO for consideration. Further, there are implications for other vessel types (e.g., liftboats) and facilities that are not subject to the MODU Code.

The primary goal should be to concentrate all reasonably practicable measures on prevention of the release of materials that could threaten life, lead to escalation or cause unacceptable loss. This said, loss of well control and the threat of a consequential explosion are hazards that should be mitigated and current regulatory and industry standards for assessing the threat and mitigating the hazard are lacking.

Since the *Piper Alpha* incident in July 1998, there has been considerable effort expended by the oil and gas industry, along with certain government participants, to disseminate knowledge and best practices and to develop guidance on the prevention and mitigation of fires and explosions and on the protection of facilities and personnel against fires and explosions. However, this effort has not focused on the risks specifically associated with MODU operations. So while the general methodologies may be appropriate, the standards and guidelines that have been developed are not directly applicable to MODUs. An initiative to reach a consensus agreement on fire and blast scenarios applicable to MODUs and MODU operations would be appropriate.

It is IADC's view that the existing standards for determining the required fire and blast resistance of oil and gas industry facilities are generally of a goal-setting nature and are not well suited for prescriptive application.

These standards are also most effectively applied in the design stage. While they can be used for assessing existing facilities, cost-effective solutions can be elusive.

*1.E. It is recommended that Commandant work with the IMO to amend the MODU Code to require an explosion risk analysis of the design and layout of each facility. The analysis should use accidental blast loads defined by the Organization, to determine whether the levels of protection for accommodation areas, escape paths and embarkation stations provided by the prescriptive requirements in the Code are adequate.*

See IADC's response to 1.D. above.

*1.F. It is recommended that Commandant work with the IMO to amend the MODU Code to require ventilation inlets for machinery spaces containing primary and emergency sources of power to be located as far as practicable from hazardous locations.*

IADC believe this is already addressed in the 2009 MODU Code. IADC believes that it may be appropriate to consider amending the 2009 MODU Code to recommend that ventilation inlets be separated when redundancy is needed.

*1.G. It is recommended that Commandant prepare and submit a "lessons learned" information paper to the IMO strongly recommending that existing facilities reevaluate the placement of supply air intakes for main and emergency power sources, coordinated with the fire and gas detection system logic. The paper should recommend that training, policies and procedures are implemented to shut down ventilation systems and close dampers in the event flammable gas is detected in critical locations.*

IADC agrees. However, IADC believes that such a report must also include appropriate information from the anticipated BOEMRE report providing recommendations on measures that could have prevented the incident.

*1.H. It is recommended that Commandant pursue the regulatory changes for dynamic positioned vessels recommended in Appendix I, including clear designation of the person in charge under both operating and emergency conditions for all MODUs operating on the U.S. OCS.*

IADC's General Comments regarding Regulatory Structure (above) are applicable.

IADC is concerned that the regulatory changes recommended in Appendix I are far more reaching in their implications than they may appear on casual reading, particularly with regard to the issues of ship design, manning, and operations. While, in theory, IADC's concerns and IADC's individual member's concerns could be addressed during the rulemaking process, IADC is all too well aware of recent instances where industry comments to the rulemaking docket on issues unique to the offshore oil and gas industries were not understood by the Coast Guard, with the result that compliance with the final rules, when promulgated, was impossible. If this rulemaking is pursued, it will raise complex issues, and it will be vitally important that a mutual understanding of these issues is reached.

IADC notes the reference to both the OCS Lands Act and the reciprocity provisions in 46 U.S.C. 3303 in paragraph 24 of Appendix I. IADC would specifically seek clarification that the provisions of the existing 33 CFR 140.101(s), 143.207(c), and 146.205(c) are intended to give effect to 46 U.S.C. 3303 with respect to both MODUs

'attached' to the seabed and those engaged in "activities on the Outer Continental Shelf."

IADC understands the concern identified regarding the designation of the Person in charge. In this regard IADC would note the definition in 33 CFR 141.10 is somewhat ambiguous in that it infers that a master may be a Person in charge without further designation. The definition reads:

Person in charge means the master or other individual designated as such by the owner or operator under § 146.5 of this subchapter or 46 CFR 109.107.

As a related matter, IADC would express concerns regarding:

- The possible need for identification of an "overall" Person in charge for combined operations, *e.g.*, a jackup cantilevered over a fixed platform; and
- The lack of requirements or guidance regarding the training and qualifications for a person designated as the Person in charge. (See also IADC's comments regarding Recommendations 3.D. and 3.E., below.)

*1.I. It is recommended that Commandant work with the IMO to evaluate the need to create a requirement for flag states to audit classification societies acting on their behalf as a recognized organization.*

IADC is aware of ongoing work by the IMO to develop a Code for Recognized Organizations that would appear to satisfy this Recommendation.

*1.J. It is recommended that Commandant evaluate the need to establish unannounced regulatory inspections.*

IADC views this as an internal Coast Guard issue. Such inspections are authorized by statute.

*1.K. It is recommended that Commandant work with Recognized Organizations to evaluate the need to create a complete stand-alone regulatory check list that does not rely on the result of other surveys to ensure a 100% regulatory check of the MODU.*

IADC would express the following concerns regarding this recommendation:

- A complete stand-alone regulatory check list would include many items that, while specified in regulation, do not warrant verification, inspection or examination, *e.g.*, elements of design that are not easily altered.
- A complete stand-alone regulatory check list would be counter to initiatives aimed at structuring "risk-based" inspections.
- Certain "regulatory checks" are performed by technical specialists, *e.g.*, those leading to issuance of a Cargo Ship Safety Radiotelephone Certificate.
- Certain regulatory requirements seemingly defy codification, *e.g.*, those associated with responsibility of the United States to act as *Administration* when it is the coastal State in accordance with Article 2 of MARPOL 73/78, as amended.

IADC would also note that the underlying issue being addressed with this recommendation is not restricted solely to MODUs, but would be common to any vessel or facility, whether or not engaged in activities on the OCS.

*1.L. It is recommended that Commandant evaluate the need for improving inspection guidance documents and case work entry standards to ensure the proper documentation of Certificate of Compliance examinations.*

IADC views this as an internal Coast Guard issue.

## **2. Fire Protection**

*2.A. It is recommended that Commandant work with the IMO to amend the MODU Code to require that fire pump systems should be self contained and depend on no other onboard systems. This should include dedicated fuel supplies for at least 18 hours of operation.*

IADC cannot support this recommendation.

The underlying issue being addressed with this recommendation is not restricted solely to MODUs, but would be common to any vessel or facility, including those US flag vessels subject to inspection and certification by the Coast Guard.

This recommendation could not be assessed without referring to the Conclusions portion of the Report so as to ascertain that the intent was to mandate the installation of a diesel-driven fire pump.

It appears necessary to state that pumps operate by creating low pressure at the inlet which allows the liquid to be pushed into the pump by atmospheric or head pressure (pressure due to the liquid's surface being above the centerline of the pump). Even with a perfect vacuum at the pump inlet, atmospheric pressure limits how high the pump can lift the liquid. Thus, for a pump to be directly driven by a diesel engine, it would either need to be installed within the pontoons of a semi-submersible unit (or within the legs of a jack-up unit), which would create extreme difficulties with respect to the air inlets and exhausts for the engines; or if installed on deck, would require mechanical coupling of the pump to the engine by a drive shaft extending from the deck to the pump's location; which may exceed 30 meters in distance. Further, evolving demands for emission controls on diesel engines seem to be driving toward a requirement that diesel engines, even those dedicated to emergency operations, be fitted with selective catalytic reduction units, which would present further challenges to the installation and operation of such engines.

*2.B. It is recommended that Commandant work with the IMO to amend the MODU Code to require H-60 fire separations between the drilling area and adjacent accommodation spaces as well as any spaces housing vital safety equipment.*

IADC would not rule out the possibility that a fire and blast study (see Recommendation 1.D.) would lead to the conclusion that a level of protection may be required that is greater than that provided by "A-60" class bulkheads and decks.

To meet coastal-State requirements, several IADC members have installed structural fire protections systems meeting "H" class standards. In order to allow such systems to be accurately reflected in required fire control plans, IADC has previously suggested that provisions be made in the IMO's guidelines for fire control plans to indicate the installation of "H" rated bulkheads and decks, where fitted. These suggestions were rejected by the IMO.

IADC would note that any proposal to amend the MODU Code to require “H” class standards would need to be preceded or accompanied by a proposal to amend the Fire Test Procedures (FTP) Code to establish standards within IMO for a “H” (hydrocarbon) fire and corresponding performance standards for bulkheads and decks intended to resist such fires. It would also be necessary to agree to amended standards for equipment penetrations of such bulkheads and decks, for openings and passages transiting such bulkheads and decks, and for the aforementioned fire control plans.

*2.C. It is recommended that Commandant work with the IMO to amend the MODU Code to develop uniform guidelines that can be used as a basis for performing engineering evaluations to ensure that the level of fire protection of the bulkheads and decks separating hazardous areas from adjacent structures and escape routes is adequate for likely drill floor fire scenarios.*

IADC’s response to Recommendation 1.D. applies to this recommendation.

*2.D. It is recommended that Commandant work with the IMO to amend the MODU Code to require a fixed deluge system or multiple high capacity water monitors for the protection of the drill floor and adjacent areas. Consideration should be given to requiring automatic operation upon gas detection.*

Even after reference to the Conclusions, IADC is unable to discern a clear objective for the installation of these systems.

Mandating the installation of such systems has been considered by several coastal State petroleum regulatory authorities, with varying results. Such a mandate was considered, and dismissed, during the development of the 2009 MODU Code, with the conclusion that any regulatory mandate for the installation of such systems should be left to the discretion of individual coastal State regulatory authorities.

Consideration of this recommendation should be preceded by the development of agreed fire and blast scenarios for MODUs (see Recommendation 1.D.)

*2.E. It is recommended that Commandant work with the IMO to amend the MODU Code to require a fire risk analysis to supplement the prescriptive requirements in the MODU Code. The risk analysis should be a performance-based engineering evaluation that utilizes defined heat flux loads to calculate the necessary levels of protection for structures, equipment and vital systems that could be affected by fires on the drill floor, considering the unique design, arrangement and operation of each MODU.*

IADC does not believe that the MODU Code is an appropriate vehicle for implementation of such a recommendation. The recommendation states that consideration should be given to the **unique design, arrangement and operation** of each unit. A MODU’s unique design, arrangement and operation are tailored, at the direction of the client (lessee/operator) to a particular operation or well (e.g., the risks associated with an exploratory high-pressure, high-temperature well differ significantly from those associated with re-entry into a producing well with little or no associated gas production). It would be inappropriate for a flag State or Recognized Organization acting on behalf of a flag State to undertake this responsibility.

IADC would also remind the Coast Guard that similar risks are associated with open-hole operations that are conducted by vessels that are not certified as MODUs, such as liftboats and well stimulation vessels.

IADC would note that BOEMRE's SEMS Rule mandates the completion of a facility-level hazards assessment. If BOEMRE's SEMS Rule requires the evaluation envisioned by this recommendation, IADC does not see the need for Coast Guard action in this regard. (See IADC's comments related to Recommendation 5.E., below.)

### **3. Evacuation / Search and Rescue**

*3.A. It is recommended that Commandant work with the IMO to amend the IMO MODU Code to establish performance standards concerning the maximum allowable radiant heat exposure for personnel at the muster stations and lifesaving appliance lowering stations, along with guidelines for calculating the expected radiant heat exposure for drill floor fire events for each MODU hull type.*

IADC's responses to Recommendations 1.D. and 1.E apply to this recommendation.

*3.B. It is recommended that Commandant work with the IMO to harmonize the IMO MODU Code with International Convention for the Safety of Life at Sea (SOLAS) regulation III/16.7 to require adequate emergency lighting of Muster Areas, Lifeboat and Liferaft Lowering Stations and the corresponding waters into which the lifeboats/liferafts will be launched.*

IADC agrees with this recommendation.

IADC would also note the lack of standards in this regard under 33 CFR chapter I, subchapter N, to address this issue on other vessels and facilities engaged in operations on the OCS for which this could also be an issue.

*3.C. It is recommended that Commandant work with the IMO to amend the Lifesaving Appliances (LSA) Code and its testing recommendations to ensure the adequacy of lifesaving appliance standards.*

IADC has previously recommended to the Coast Guard, and to the IMO that the standards for lifesaving equipment be revised to reflect a range of assumed occupant mass (e.g., to supplement the existing standards for 75 kg and 82.5 kg with standards for 90 kg, 97.5 kg and 105 kg, with corresponding body sizes). In making this recommendation, IADC presumed that requirements would be established to assure that the lifesaving equipment provided was appropriate for the population to be accommodated. This recommendation was not supported by the IMO. IADC continues to believe that it is appropriate to do so.

The underlying issue being addressed with this recommendation is not restricted solely to MODUs, but would be common to any vessel or facility engaged in activities on the US OCS. In this instance, IADC believes this issue should first be addressed in Coast Guard regulations in titles 33 and 46 of the Code of Federal Regulations.

IADC would note that this issue has been addressed by the petroleum regulatory authorities of several countries, including Australia, Canada, Norway and the United Kingdom. IADC views the lack of internationally recognized standards associated with the policies adopted by these countries as problematic.

*3.D. It is recommended that Commandant remove or specifically define the term “when practicable” in Title 46 Code of Federal Regulations (CFR) § 109.213(d)(1)(vii). It is further recommended that Commandant work with the IMO to amend the IMO MODU Code, Section 14.11.2.7.*

IADC did not find the term “when practicable” in the cited regulation.

The Recommendation fails to provide a specific suggestion for the amendment to section 14.11.2.7 of the MODU Code. As Chapter 14 of the 2009 MODU Code includes provisions for training manuals and onboard training aids paralleling the requirements of SOLAS, IADC believes that it may not be necessary to amend the MODU Code.

*3.E. It is recommended that Commandant work with the IMO to amend the International Convention on Standards for Training, Certification and Watchstanding (STCW) to establish MODUs as a “Special Ship” within Chapter V and develop specialized training standards and competencies for masters, officers, particular ratings and special personnel assigned to MODUs to include training for crowd control and crisis management.*

The underlying issue being addressed with this recommendation is not restricted solely to MODUs, but would be common to any vessel or facility engaged in activities on the US OCS. In this instance, IADC believes that this issue should first be addressed in Coast Guard regulations in 33 CFR chapter I, subchapter N.

IADC also disagrees with the premise that STCW is the appropriate instrument to address this concern. In IADC’s view, it would be more appropriate to amend IMO resolution A.891(21) to include training for crowd control and crisis management. IADC believes that resolution A.891(21) is already in need of amendment to reflect the Manila Amendments to the STCW Convention and Code.

IADC is willing to work with the Coast Guard and other interested flag-States to develop a justification for amendment of resolution A.891(21) along with the text of the proposed amendments, for submission to the IMO’s Maritime Safety Committee for its consideration.

*3.F. It is recommended that Commandant work with the IMO to amend the IMO MODU Code to include the type, frequency, extent, randomness and evaluation criteria for all emergency contingency drills.*

The underlying issue being addressed with this recommendation is not restricted solely to MODUs, but would be common to any vessel or facility engaged in activities on the US OCS. In this instance, IADC believes this issue should first be addressed in Coast Guard regulations in 33 CFR chapter I, subchapter N.

IADC also disagrees with the premise that STCW is the appropriate instrument to address this concern. These concerns are already addressed in resolution A.891(21), and the provisions resolution A.891(21) could be expanded, if necessary. Resolution A.891(21) is referenced in the 2009 MODU Code.

IADC is willing to work with the Coast Guard and other interested flag-States to develop a justification for amendment of resolution A.891(21) along with the text of

the proposed amendments, for submission to the IMO's Maritime Safety Committee for its consideration.

*3.G. It is recommended that Commandant work with the IMO to amend the STCW to develop standards and competencies for the operation of lifesaving appliances that serve liferafts.*

IADC has interpreted the recommendation as intending to address the operation of **launching** appliances servicing liferafts.

The underlying issue being addressed with this recommendation is not restricted solely to MODUs, but would be common to any vessel or facility engaged in activities on the US OCS using davit launched liferafts. In this instance, IADC believes this issue should first be addressed in Coast Guard regulations in titles 33 and 46 of the Code of Federal Regulations.

With respect to MODUs, IADC would note that Chapter 14 of the 2009 MODU Code includes provisions for training manuals and onboard training aids paralleling the requirements of SOLAS which addresses, in part, this concern.

If the Coast Guard accepts this recommendation, IADC believes that any justification for new work that is submitted to IMO should be accompanied by the complete text of any proposed amendments to the STCW Code.

*3.H. It is recommended that Commandant evaluate the adequacy of inflatable liferafts served by a launching appliance installed on MODUs whose hull design is not of a traditional ship's hull and determine if other suitable lifesaving appliances could enhance occupant safety.*

IADC would support such a study. However, such a study must also evaluate the alternatives, recognizing that the challenges associated with launching survival craft (of any type) from great heights on OCS facilities and vessels that do not have a traditional ship's hull form are not limited to MODUs.

IADC believes that relevant comments were submitted in response to the Coast Guard's 7 December 1999 proposal to amend 33 CFR chapter I, subchapter N. Those comments may warrant re-examination in light of the recent addition of 46 U.S.C. 3304 affecting the conditions of approval for certain survival craft.

*3.I. It is recommended that Commandant work with the IMO to develop a symbol for "knife" and require the placement of a label to identify its location in all lifesaving appliances requiring the tool.*

IADC supports the recommendation as it applies to davit-launched liferafts. Further study is warranted with respect to knives as required equipment in other lifesaving appliances. Corresponding amendments to the provisions of 46 CFR part 160 would seem appropriate.

*3.J. It is recommended that Commandant work with the IMO to amend the IMO MODU Code to prohibit the dual purpose acceptance of life boats as rescue boats, and adopt the "widely separated location" philosophy applied to the quantity and location of rescue boats on board MODUs.*

IADC does not agree with this Recommendation. The underlying issue being addressed with this Recommendation is not restricted solely to MODUs, but would be common to all SOLAS vessels as well as any vessel or facility engaged in activities on the US OCS. Are rescue boats provided to respond to a man overboard, or to effect the retrieval of persons who may either be forced to directly enter the water (or choose to do so) in the event of an incident of a vessel or facility? IADC believes it is the former.

In this instance, if the Coast Guard accepts this Recommendation, IADC believes this issue should first be addressed in titles 33 and 46 of the Code of Federal Regulations. IADC believes that relevant comments were submitted in response to the Coast Guard's 7 December 1999 proposal to amend 33 CFR chapter I, subchapter N. Addressing this issue at IMO would require amendments to both SOLAS and the LSA Code.

IADC would also note that the Emergency Evacuation Plan in 33 CFR chapter I, subchapter N, which is subject to approval by the Coast Guard, requires the identification of the means and procedures for retrieving persons from the water during an evacuation.

*3.K. It is recommended that Commandant revise the 33 CFR, Subchapter N regulations, to establish designated standby vessels for MODUs engaging in oil and gas drilling activities on the U.S. Outer Continental Shelf (OCS).*

IADC does not agree with this Recommendation.

This issue has been the subject of prior rulemakings, *i.e.*, CGD 84-098b, 54 FR 21572, May 18, 1989, as amended by USCG-1998-3799, 63 FR 35530, June 30, 1998. Despite this tragic incident, IADC does not believe that a change is warranted.

If the Coast Guard accepts this recommendation, IADC notes that the underlying issue being addressed with this Recommendation is not restricted solely to MODUs, but would be seemingly common to any vessel or facility engaged in drilling or open-hole operations on the US OCS. A significant percentage of loss-of-well-control incidents (blowouts), both on the US OCS and worldwide, have occurred during operations other than "drilling" operations.

*3.L. It is recommended that Commandant work with the IMO to amend the IMO MODU Code to address the need for a fast rescue boat/craft on board MODUs.*

IADC does not agree with this Recommendation. IADC's response to Recommendation 3.J. applies to this Recommendation.

*3.M. It is recommended that Commandant amend 46 CFR § 109.213 and work with the IMO to amend the IMO MODU Code to require the performance of a man overboard drill on at least a quarterly basis.*

IADC disagrees with the specifics, but not the substance, of this recommendation.

The underlying issue being addressed with this Recommendation is not restricted solely to MODUs, but would be seemingly common to any vessel or any permanently

or temporarily manned facility engaged in operations on the US OCS. Accordingly, it is appropriate to firstly address this issue in 33 CFR chapter I, subchapter N.

Any amendment of the MODU Code to include requirements for man overboard drills should be accompanied by a corresponding amendment to IMO resolution A.891(21) to better describe such drills.

IADC notes that any mandate for such drills would be subject to the same challenges as are associated with the mandates for launching and recovery of lifeboats, *i.e.*, weather conditions may preclude strict adherence to a quarterly schedule. IADC understands that Brazil's recent proposal to consider issues related to the periodic launching of lifeboats with a view to amending the 2009 MODU Code has been accepted by the IMO's Maritime Safety Committee.

*3.N. It is recommended that Commandant revise the 33 CFR, Subchapter N regulations, to require the owner/operator of a MODU operating on the U.S. OCS, instead of the leaseholder, to develop and submit an emergency evacuation plan (EEP).*

IADC strongly disagrees with this Recommendation.

To be effective, the EEP must be able to draw on the resources available to the lessee/operator which are employed for routine logistics support of the lessee's OCS operations. It would be cost-prohibitive for a drilling contractor to attempt to maintain these resources available on a standby basis in order to meet the requirements of the EEP.

Further, it is the lessee/operator who ultimately determines the number of persons on board that must be accounted for in the EEP as well as the timing and nature of operations that might require special consideration under the EEP.

*3.O. It is recommended that Commandant revise the 33 CFR, Subchapter N regulations, to establish performance and evaluation criteria and require the annual exercise of the EEPs, including all identified emergency resources, equipment and agencies necessary to perform a mass evacuation.*

IADC agrees in general with this Recommendation, but notes that it is, in part, a matter internal to the Coast Guard.

IADC believes that the preparation and review for approval of EEPs has likely suffered from both complacency and habituation. EEPs may have become too focused on the 'routine' evacuation of personnel for hurricanes, rather than giving full consideration to the infrequent instance that might require abandonment of a facility.

Any effort in this regard should be coordinated with BOEMRE.

*3.P. The Joint Investigation Team concurs with the proposed improvements identified in Appendix G, Final Action Report On the SAR Case Study Into the Mass Rescue of Personnel off the Mobile Offshore Drilling Unit DEEPWATER HORIZON. The Joint Investigation Team concurs with the analysis in the report.*

IADC agrees with this Recommendation. Again, IADC notes that these are not issues that are exclusive to MODUs.

#### **4. Flooding & Sinking**

*4.A. It is recommended that Commandant revise the current policy with respect to response plan requirements for vessels engaging in oil and gas drilling activities on the U.S. OCS. Operator's response plans should specifically address responses to vessel fires in addition to well fires.*

IADC finds this recommendation confusing. IADC is unaware of any Coast Guard policy with respect to response plan requirements for vessels engaging in oil and gas drilling activities on the OCS.

IADC believes that the current regulatory requirements of the Coast Guard are appropriate.

Under current regulations, the responsibility for review and approval of lessee/operator response plans rests with BOEMRE. Is it the intent of this Recommendation to suggest that the Commandant recommend that BOEMRE revise their response plan requirements and review criteria? If so, this and other related issues are addressed in far greater detail in the 18 March 2011, *Incident Specific Preparedness Review (ISPR) on the Deepwater Horizon Oil Spill*.

*4.B. It is recommended that Commandant evaluate regulatory requirements for operators of vessels engaging in oil and gas drilling activities on the U.S. OCS to maintain a continuously manned shore based operations center for monitoring operations and maintaining primary and emergency communications for responding to casualties.*

IADC has no objection to the Commandant undertaking such an evaluation.

IADC would question why such an evaluation would be limited to "vessels" when other OCS facilities engage in "oil and gas drilling activities" and that their complexity and manning may exceed that of the largest MODU. IADC also notes that the "engaging in oil and gas drilling activities" would require further definition and clarification.

With regard to MODUs, IADC's members have indicated that they generally view the suggestion of a continuously manned shore based operations center as infeasible.

IADC is aware that BOEMRE is exploring the use of operations centers by the lessee/operators. It is IADC's view that this issue is more appropriately addressed as a general requirement of the administration of the lease than a vessel-specific activity.

*4.C. It is recommended that Commandant evaluate regulatory requirements for vessels engaging in oil and gas drilling activities on the U.S. OCS to relay daily loading information to a designated person ashore.*

IADC has no objection to the Commandant undertaking such an evaluation.

While IADC is not certain of definition of the universe of “vessels engaging in oil and gas drilling activities”, IADC presumes that this would encompass most operations undertaken by MODUs. In this regard, several of IADC’s members have indicated that they receive this information on a daily basis. However, it should be understood that the activities on a MODU are dynamic; the conditions stated in a morning report could have changed significantly from the time the report was submitted, and therefore, might not be suitable for carrying out a post-casualty stability evaluation.

*4.D. It is recommended that Commandant require that MODUs and floating production, storage and offloading vessels engaging in oil and gas drilling activities on the U.S. OCS be subject to the salvage and marine firefighting requirements of 33 CFR § 155, Subpart I.*

IADC’s comments regarding Recommendation 4.A. are applicable. This is an issue that should be examined jointly with BOEMRE. It would make little sense for the Coast Guard to establish salvage and marine firefighting requirements for “vessels engaging in oil and gas drilling activities on the U.S. OCS” (whatever they may be) when similar requirements for other OCS facilities, posing similar or greater hazards, do not exist.

*4.E. It is recommended that area committees evaluate the adequacy of their area contingency plans for responding to incidents involving vessels engaging in oil and gas drilling activities on the U.S. OCS.*

IADC views this as an internal Coast Guard issue.

*4.F. It is recommended that Commandant evaluate the current policy regarding the implementation of an incident commander to perform both the search and rescue mission coordinator and federal on scene coordinator duties during an event consisting of a mass rescue operation and a major marine casualty.*

IADC views this as an internal Coast Guard issue.

*4.G. It is recommended that Commandant review all organization policy on marine firefighting to ensure consistency.*

IADC views this as an internal Coast Guard issue.

*4.H. It is recommended that Commandant update the regulations to include the requirement to conduct a deadweight survey every five years for all (U.S. and foreign-flagged) column stabilized MODUs to be consistent with the current IMO MODU Code.*

IADC agrees that that the Coast Guard should update its regulations (presumably in title 46 of the Code of Federal Regulations) to reflect the 2009 MODU Code.

IADC notes that this would be a significant undertaking as these regulations were never updated to reflect the 1989 MODU Code.

IADC also suggests that this is a matter of low priority because there is a low likelihood that new MODUs will be built for US registry and believe that, as a commercial matter and to conform with classification society rules, should a US-flag unit be built, it would be designed to conform to the 2009 MODU Code.

## **5. Safety Systems: Personnel & Process**

*5.A. It is recommended that Commandant develop a risk-based Port State Control targeting program to provide additional oversight for foreign-flagged MODUs working on the OCS based on predetermined evaluation criteria, including the identity of the flag state.*

IADC does not support the recommendation as presented.

IADC supports the establishment of a risk-based program for targeting of inspections of vessels and facilities engaged in operations on the OCS. IADC sees no reason for not including US-flag vessels in the program. The purpose of the program should be to focus the Coast Guard's resources on "high risk" vessels and facilities engaged in activities on the OCS, irrespective of their flag.

IADC's view of the appropriate structure for such a program differs from the program description provided at the National Offshore Safety Advisory Committee (NOSAC) meeting in May 2011.

IADC recommends that for a MODU (or for other vessels that may be determined to be OCS units subject to examination under future amendments to 33 CFR chapter I, subchapter N) arriving from a foreign location, in conjunction with the examination for the Certificate of Compliance, the Coast Guard should perform a Port State Control Inspection as it would for foreign-flag ship arriving at a US port, in a manner that would lead to the results of this examination being included in the PSC report provided to the IMO. If this step is included in the program described at NOSAC, it is not evident.

Once on the US OCS, most foreign flag MODUs typically remain in service in the US OCS, and depart only if there are disturbances in the commercial arena.

IADC recognizes that the details of the targeting matrix to be used by the Coast Guard for this program remain under discussion and will evolve as experience with the program is obtained. IADC has no comments to offer regarding the details of the targeting matrix at this time, except to note that the Safety and Environmental Management System (under BOEMRE's SEMS Rule) of a MODU engaged in OCS activities has on-shore components, some of which are under the lessee/operator. These on-shore components, as well as the interface between the SEMS of lessee/operator and that of the vessel owner are vitally important.

*5.B. It is recommended that Commandant develop more comprehensive inspection standards for foreign-flagged MODUs operating on the OCS.*

IADC has no objection to this Recommendation, but would suggest the need to re-evaluate the inspection standards applied to US-flagged MODUs as well.

*5.C. It is recommended that Commandant work with the IMO to develop a code of conduct for Recognized Organizations to ensure that verification of all flag state requirements are being conducted properly.*

IADC's comment regarding Recommendation 1.I. is applicable to this Recommendation.

*5.D. It is recommended that Commandant further develop the Operational Risk Assessment model (Appendix M) for use by MODU personnel and government inspectors.*

While IADC views this a primarily an internal issue for the Coast Guard, IADC offers the following comments:

- ISO has already developed recommendations for risk assessment, with ISO 31000 providing general guidance and ISO 17776 (which predates ISO 31000) providing guidance specifically for the petroleum and natural gas industries.
- Drawing upon principles of the ISM Code as the basis for an overall health, safety and environmental management system, and the principles of ISO 17776 for risk assessment, IADC has developed HSE Case Guidelines for MODUs. These guidelines are available (without charge) from the IADC website at:

<http://www.iadc.org/hsecase/index.html>

The IADC HSE Case Guidelines for MODUs have been developed specifically to address the control of risks associated with MODU operations. IADC notes in this regard that they address both the marine risks and the drilling risks associated with such operations. While as a marine regulator, it may be comfortable for the Coast Guard to attempt to ignore the drilling risks, it is IADC's view that these risks, along with the actions taken to mitigate these risks, are often interrelated and must be addressed holistically.

- As previously noted, IADC is working with API to develop Bulletin 97, which will provide guidance on integrating the health, safety and environment management systems of drilling contractors with those of their clients with respect to both marine and industrial risks.
- IADC believes that it is the guidelines applied to the audit of the combined health, safety and environmental management systems of the drilling contractor and the client, both onshore and offshore, that should be used to assess organizational risk. It is IADC's understanding that the Center for Offshore Safety is developing protocols for third parties performing audits of BOEMRE-required SEMS for (at this time) deepwater facilities. IADC understands that BOEMRE has been involved in the review of these protocols. It may be appropriate for the Coast Guard to be involved as well.

*5.E. It is recommended that Commandant work with International Association of Classification Societies to improve implementation of its Procedural Requirement 17.*

While IADC understands why the Report has identified this issue, it is IADC's view that too much emphasis is being placed on the ISM Code in relation to activities on the OCS – Focusing on the ISM Code does not address the broader underlying issues associated with the management of OCS activities.

- Only a relatively small percentage of the MODUs (and other vessels) engaging in activities on the OCS are subject to the ISM Code.
- The ISM Code is not well suited for addressing the risks associated with drilling operations, particularly with regards to the hazards that must be assessed and controlled by the lessee/operator, *e.g.*, the design and construction of the well.
- Drilling operations undertaken on moored MODUs (not self-propelled), jack-ups, and on both fixed and floating platforms are similar to those being undertaken on the DEEPWATER HORIZON at the time of the incident.

- BOEMRE's SEMS Rule requires the lessee/operator to establish a SEMS to manage virtually all activities on the OCS, including drilling operations by MODUs. MODU owners may use their compliance with the ISM Code as part of their demonstration to the lessee/operator that they have the necessary safety and environmental management system program elements in place to support the lessee/operator. However, as previously noted, from the standpoint of the placement of regulatory responsibility for overall operations, the ISM Code and BOEMRE's SEMS Rule are not aligned.
- BOEMRE has indicated that it will be issuing a Notice of Proposed Rulemaking to further refine its SEMS Rule.

IADC would strongly recommend that, with respect to safety and environmental management systems related to activities on the OCS, the Coast Guard's primary efforts should be directed towards working with BOEMRE to assure that its regulatory needs are being met and to gain mutual understanding of the placement of regulatory responsibility, particularly with regard to the ISM Code.

*5.F. It is recommended that Commandant initiate a rulemaking project that updates Title 33 CFR Subchapter N with respect to requirements for dynamic positioned vessels as per the guidance from Commandant (CG-0941).*

IADC's response to Recommendation 1.H. applies to this recommendation.

*5.G. It is recommended that Commandant revise the current marine casualty reporting requirements and drug testing requirements for foreign-flagged MODUs operating on the OCS and make them consistent with the requirements for U.S.-flagged MODUs.*

During the development of, and in response to proposed amendments to the marine casualty reporting requirements and drug testing requirements, IADC attempted to identify and correct ambiguities in the regulations, and to assure that there were no inadvertent differences in the applicability of the regulations to foreign-flagged vessels and U.S.-flagged vessels performing identical operations.

After the promulgation of these regulations, IADC worked with the Commander, Eighth Coast Guard District (CCGD8) to continue to address the ambiguities as they existed in the regulations. The results of this effort were memorialized in the CCGD8's letter of 15 June 2007, a copy of which is provided as enclosure (1).

Based on IADC's experience during the development of the regulations, it is IADC's view that it may be necessary to seek legislation if these requirements are to be made consistent.

IADC's efforts were directed solely towards providing clarification of the requirements with respect to MODUs. IADC did not attempt to address other vessels engaged in activities on the OCS or to other OCS facilities which suffer from similar ambiguity or deficiencies.

IADC would question why, from a public policy standpoint, there should be a mandate for post-incident drug testing of personnel on a MODU involved in a serious well control incident, when such testing would not be required with respect to an incident involving identical circumstances on a fixed or floating platform. If consistency of casualty and drug reporting requirements is necessary, does the Coast

Guard have authority to promulgate drug testing requirements under the provisions of 43 U.S.C. 1347(c)?

*5.H. It is recommended that Commandant evaluate the benefit of combining current OCS inspection responsibilities assigned to multiple OCMI zones into one inspection office responsible for covering all OCS inspection activities. (Conclusion 5.J)*

IADC views this as an internal Coast Guard issue. IADC would note, however, that the Coast Guard's OCS inspection responsibilities are not limited to the Gulf of Mexico.

*5.I. It is recommended that Commandant determine how to continue to maintain a properly trained and educated Coast Guard work force for MODU and OCS inspections.*

IADC views this as an internal Coast Guard issue.

*5.J. It is recommended that Commandant investigate the role of Safety Management System failures in recent marine casualties and based upon those investigation findings, determine if a change in the current inspection and enforcement methods is required to increase compliance with the ISM Code. The investigation should include a request to the National Research Council, Commission on Engineering and Technical Systems, Marine Board to perform a comprehensive investigatory assessment of the effectiveness of the ISM Code as used in the marine environment.*

IADC's response to Recommendation 5.E. applies to this recommendation.

IADC believes it would be instructive to have the report of BOEMRE's investigation into this casualty in order to assess the degree to which failures of the safety management system of the lessee/operator contributed to this casualty.

While an examination of the effectiveness of the ISM Code may be a worthwhile endeavor, IADC does not see how such an examination can be predicated on this casualty alone. Nor does IADC believe that either the Commandant or the Marine Board would have sufficient information available to undertake such an examination, given that the vast majority of experience with the ISM Code lies outside the jurisdiction of the United States.

Again, IADC would strongly recommend that, with respect to safety and environmental management systems related to activities on the OCS, the Coast Guard's primary efforts should be directed towards working with BOEMRE to assure that its regulatory needs are being met.

*5.K. It is recommended that Commandant work with BOEMRE to evaluate the benefits of shifting to a "Safety Case" approach similar to that used in the North Sea, a method in which there is a more holistic approach to safety.*

In testimony provided to the Congress, BOEMRE, and the Chemical Safety Board, as well as in meetings with senior Coast Guard officials, IADC has advocated the use of a Safety Case approach, particularly with respect to deepwater drilling operations. In this testimony IADC has emphasized the need for a holistic approach – particularly with regard to hazard identification and risk management. IADC has highlighted that the major hazards and associated controls associated with MODU operations rarely

fall within the jurisdiction of a single regulatory agency, and that overlapping requirements of regulatory agencies may complicate the effective application of the controls. One cannot holistically address safety when faced with the unyielding and overlapping demands of multiple narrowly-focused regulatory agencies.

There is no single "Safety Case" approach. While several offshore petroleum regulatory authorities have mandated or created the expectation of a Safety Case, the actual 'requirements' for the Safety Case vary considerably. As noted in the Introduction to IADC's HSE Case Guidelines for Mobile Offshore Drilling Units, the IADC Guidelines were developed to provide guidance that, if followed, would lead to the development of a Safety Case acceptable to multiple regulatory authorities. Some of the principle differences IADC has observed in the approach amongst differing regulatory authorities relate to:

- The degree to which health, safety, and/or environment are emphasized and are required to be addressed;
- The degree to which reliance on prescriptive regulations or prescriptive application of industry standards was replaced by the use of broadly described performance standards when the Safety Case approach was adopted;
- The level of review or acceptance of the Safety Case, in particular the hazard analyses, by the regulatory authority;
- The emphasis placed on, and the methods of conducting, audits of the safety management system; and
- Transparency in relation to the public release of information regarding audits of the Safety Case.

IADC has completed a gap analysis comparing BOEMRE's SEMS Rule against the IADC Guidelines and has concluded that the SEMS Rule contains all the essential elements of a Safety Case. This said, BOEMRE has declared that they do not believe that they have required a Safety Case. Further, IADC notes that BOEMRE has increased, rather than decreased, its reliance on prescriptive requirements as it moves toward full implementation of its SEMS Rule, which is contrary to the approach of most regulatory authorities that have chosen to implement a Safety Case.

BOEMRE's SEMS Rule is in place. The Congress is considering and is likely to pass legislation (S.917) that would mandate that BOEMRE promulgate regulations requiring a safety case be submitted along with each new application for a permit to drill on the OCS.

IADC sees no benefit in further evaluation of the Safety Case approach by the Coast Guard at this time. Rather, IADC would urge the Coast Guard to work with BOEMRE to assure that the SEMS Rule (as it may be amended) holistically addresses the hazards that pose risks to health, safety and the environment so that regulatory conflicts between BOEMRE and the Coast Guard are minimized and the concerns of both agencies are satisfied.

*5.L. It is recommended that Commandant require and coordinate expanded International Safety Management (ISM) Code examinations of all Transocean vessels that are subject to the ISM Code and engaging in oil and gas drilling activities on the U.S. OCS.*

While this will directly affect one of IADC's members, IADC views this as an internal Coast Guard issue.

*5.M. It is recommended that Commandant work with the Republic of the Marshall Islands to require an immediate annual verification of the safety management system of Transocean offices (Main and North America). Because this investigation has questioned DNV's performance as the recognized organization for the RMI, another approved recognized organization should perform the verification.*

While this will directly affect one of IADC's members, IADC views this as an internal Coast Guard issue.

IADC appreciates the opportunity to provide comments on this Report and requests that IADC's comments be given due consideration. If you have any questions about these comments, please contact me by phone at (713) 292-1945, ext. 207.

Sincerely,

A handwritten signature in black ink, appearing to read "Alan Spackman". The signature is fluid and cursive, with the first name "Alan" and last name "Spackman" clearly distinguishable.

Alan Spackman  
Vice President, Offshore Technical and Regulatory Affairs

Encl: CCGD8 letter 16213 of 15 June 2007

U.S. Department of  
Homeland Security

United States  
Coast Guard



Commander  
Eighth Coast Guard District  
Hale Boggs Federal Bldg.

500 Poydras Street  
New Orleans, LA 70130-3310  
Staff Symbol: (dpi-3)  
Phone: (504) 671-2152  
Fax: (504) 671-2269

16213  
June 15, 2007

Mr. John Pertgen  
International Association of Drilling Contractors  
10370 Richmond Avenue, Suite 760  
Houston, TX 77042

Dear Mr. Pertgen:

This is in response to your inquiry regarding recent changes to the regulations for post incident chemical testing of individuals involved in a serious marine incident (SMI) on a foreign flagged Mobile Offshore Drilling Units (MODUs) and questions regarding the immediate notification and written reports required following various marine casualty.

I applaud the partnership formed between the Eighth Coast Guard District and the IADC to develop a MODU casualty reporting matrix which details the applicable notification and follow-on chemical testing requirements based on the vessel's flag, location and current activity. The matrix reflects the current Federal Regulations and should aid your membership to determine the appropriate reporting and chemical testing requirements for any reportable marine casualty. I truly appreciate the time you spent working with members of my staff during the development of this document.

As always, it is a pleasure assisting you with Coast Guard matters affecting your organization and member companies. If you have any additional questions regarding this issue, please contact Lieutenant Commander Stewart, a member of my Inspections and Investigations staff, at (504) 671-2164.

Sincerely,

A handwritten signature in black ink that reads "T. D. Hooper".

T. D. HOOPER

Captain, United States Coast Guard  
Chief, Prevention Division  
By direction of the Commander  
Eighth Coast Guard District

Encl: (1) MODU Matrix for Marine Casualty Reporting and Chemical Testing Requirements

MODU Matrix for  
Marine Casualty Reporting and Chemical Testing Requirements

NO.	CLASS OF CASUALTY	CASUALTY DESCRIPTION	US FLAG VESSEL (MODU) ANYWHERE IN THE WORLD	FOREIGN FLAG VESSEL (MODU) ON U.S. NAVIGABLE WATERS (within 12 Miles) [OPERATING OR NOT OPERATING]	FOREIGN FLAG VESSEL (MODU) OUTSIDE U.S. NAVIGABLE WATERS (beyond 12 Miles) WHILE ON THE U.S. OUTER CONTINENTAL SHELF ENGAGED IN OCS ACTIVITIES [OPERATING]	FOREIGN FLAG VESSEL (MODU) OUTSIDE U.S. NAVIGABLE WATERS (beyond 12 Miles) WHILE ON THE U.S. OUTER CONTINENTAL SHELF NOT ENGAGED IN OCS ACTIVITIES [NOT OPERATING - i.e. STACKED, UNDER TOW OR TRANSITING]
			(Note 1)	(Notes 2 & 3)	(Notes 2 & 4)	(Notes 2 & 5)
1	MARINE CASUALTY	An occurrence causing property damage in excess of \$25,000 (Includes costs for labor and materials; Excludes cleaning, gas freeing, drydocking and demurrage)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	NA	NA
2	MARINE CASUALTY	Unintended grounding; OR intended grounding that creates a hazard to navigation, the environment or the safety of the vessel.	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	NA	NA
3	MARINE CASUALTY	Stranding (which affects the vessel's seaworthiness or fitness for service or route)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	NA	NA
4	MARINE CASUALTY	Foundering (which affects the vessel's seaworthiness or fitness for service or route)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	NA	NA
5	MARINE CASUALTY	Flooding (which affects the vessel's seaworthiness or fitness for service or route)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	NA	NA
6	MARINE CASUALTY	Collision (which affects the vessel's seaworthiness or fitness for service or route)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	NA	NA
7	MARINE CASUALTY	Allision (Including intended or unintended strike with a bridge)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	NA	NA
8	MARINE CASUALTY	Explosion (which affects the vessel's seaworthiness or fitness for service or route)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	NA	NA
9	MARINE CASUALTY	Fire (which affects the vessel's seaworthiness or fitness for service or route)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	NA	NA
10	MARINE CASUALTY	Loss of vessel's main propulsion, primary steering, or any associated component/control system(s) that affects vessel maneuverability.	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	NA	NA

MODU Matrix for  
Marine Casualty Reporting and Chemical Testing Requirements

NO.	CLASS OF CASUALTY	CASUALTY DESCRIPTION	US FLAG VESSEL (MODU) ANYWHERE IN THE WORLD	FOREIGN FLAG VESSEL (MODU) ON U.S. NAVIGABLE WATERS (within 12 Miles) [OPERATING OR NOT OPERATING]	FOREIGN FLAG VESSEL (MODU) OUTSIDE U.S. NAVIGABLE WATERS (beyond 12 Miles) WHILE ON THE U.S. OUTER CONTINENTAL SHELF ENGAGED IN OCS ACTIVITIES [OPERATING]	FOREIGN FLAG VESSEL (MODU) OUTSIDE U.S. NAVIGABLE WATERS (beyond 12 Miles) WHILE ON THE U.S. OUTER CONTINENTAL SHELF NOT ENGAGED IN OCS ACTIVITIES [NOT OPERATING - i.e. STACKED, UNDER TOW OR TRANSITING]
			<b>(Note 1)</b>	<b>(Notes 2 &amp; 3)</b>	<b>(Notes 2 &amp; 4)</b>	<b>(Notes 2 &amp; 5)</b>
11	MARINE CASUALTY	Failures impairing or impacting any aspect of the vessel's operation, components, or cargo	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	NA	NA
12	MARINE CASUALTY	Impairment of the vessel's seaworthiness, efficiency or fitness for route or service (including failure/damage to fire extinguishing system, lifesaving equip, power generating equip, or bilge pump syst)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	NA	NA
13	MARINE CASUALTY / SERIOUS MARINE INCIDENT <b>(Note 6)</b>	Any person employed on a vessel with an injury that requires professional medical treatment beyond first aid (which renders them unfit to perform routine duties)	1) Immediate notification; and 2) Written notification via: a) CG-2692 (within 5 days); <b>AND</b> b) CG-2692B (upon receipt of test results)	1) Immediate notification; and 2) Written notification via: a) CG-2692 (within 5 days); <b>AND</b> b) CG-2692B (upon receipt of test results)	NA	NA
14	MARINE CASUALTY (FOREIGN VESSEL OPERATING ON THE OCS)	Injury to five (5) or more persons in a single incident	Refer to # 13	Refer to # 13	1) Immediate notification via most rapid means available 2) Written notification via: CG-2692 (within 10 days)	NA
15	MARINE CASUALTY (FOREIGN VESSEL OPERATING ON THE OCS)	Injury causing any person to be incapacitated for more than 72 hours.	Refer to # 13	Refer to # 13	1) Immediate notification via most rapid means available 2) Written notification via: CG-2692 (within 10 days)	NA
16	DIVING CASUALTY	Injury or loss of life while diving from a MODU (Injury is defined as incapacitation greater than 72 hours or requiring hospitalization for greater than 24 hours)	1) Immediate notification; and 2) Written notification via: a) CG-2692 (within 5 days); <b>AND</b> b) CG-2692B (upon receipt of test results) [46 CFR 197.484 - 488]	1) Immediate notification; and 2) Written notification via: a) CG-2692 (within 5 days); <b>AND</b> b) CG-2692B (upon receipt of test results) [46 CFR 197.484 - 488]	1) Immediate notification; and 2) Written notification via: a) CG-2692 (within 5 days); <b>AND</b> b) CG-2692B (upon receipt of test results) [46 CFR 197.484 - 488]	1) Immediate notification; and 2) Written notification via: a) CG-2692 (within 5 days); <b>AND</b> b) CG-2692B (upon receipt of test results) [46 CFR 197.484 - 488]
17	SERIOUS MARINE INCIDENT <b>(Note 6)</b>	Death (one or more)	1) Immediate notification; and 2) Written notification via: a) CG-2692 (within 5 days); <b>AND</b> b) CG-2692B (upon receipt of test results)	1) Immediate notification; and 2) Written notification via: a) CG-2692 (within 5 days); <b>AND</b> b) CG-2692B (upon receipt of test results)	1) Immediate notification via most rapid means available 2) Written notification via: CG-2692 (within 10 days)	NA

MODU Matrix for  
Marine Casualty Reporting and Chemical Testing Requirements

NO.	CLASS OF CASUALTY	CASUALTY DESCRIPTION	US FLAG VESSEL (MODU) ANYWHERE IN THE WORLD	FOREIGN FLAG VESSEL (MODU) ON U.S. NAVIGABLE WATERS (within 12 Miles) [OPERATING OR NOT OPERATING]	FOREIGN FLAG VESSEL (MODU) OUTSIDE U.S. NAVIGABLE WATERS (beyond 12 Miles) WHILE ON THE U.S. OUTER CONTINENTAL SHELF ENGAGED IN OCS ACTIVITIES [OPERATING]	FOREIGN FLAG VESSEL (MODU) OUTSIDE U.S. NAVIGABLE WATERS (beyond 12 Miles) WHILE ON THE U.S. OUTER CONTINENTAL SHELF NOT ENGAGED IN OCS ACTIVITIES [NOT OPERATING - i.e. STACKED, UNDER TOW OR TRANSITING]
			(Note 1)	(Notes 2 & 3)	(Notes 2 & 4)	(Notes 2 & 5)
18	SERIOUS MARINE INCIDENT <b>(Note 6)</b>	Damage to property in excess of \$100,000 (Includes costs for labor and materials; Excludes cleaning, gas freeing, drydocking and demurrage)	1) Immediate notification; and 2) Written notification via: a) CG-2692 (within 5 days); <b>AND</b> b) CG-2692B (upon receipt of test results)	1) Immediate notification; and 2) Written notification via: a) CG-2692 (within 5 days); <b>AND</b> b) CG-2692B (upon receipt of test results)	NA	NA
19	SERIOUS MARINE INCIDENT <b>(Note 6)</b>	Total loss of any United States inspected vessel	1) Immediate notification; and 2) Written notification via: a) CG-2692 (within 5 days); <b>AND</b> b) CG-2692B (upon receipt of test results)	NA	NA	NA
20	SERIOUS MARINE INCIDENT <b>(Note 6)</b>	Discharge of oil of 10, 000 gallons or more into the navigable waters of the United States.	1) Immediate notification; and 2) Written notification via: a) CG-2692 (within 5 days); <b>AND</b> b) CG-2692B (upon receipt of test results)	1) Immediate notification; and 2) Written notification via: a) CG-2692 (within 5 days); <b>AND</b> b) CG-2692B (upon receipt of test results)	NA	NA
21	SERIOUS MARINE INCIDENT <b>(Note 6)</b>	Discharge of reportable quantity of hazardous substance into the navigable water or environment of United States	1) Immediate notification; and 2) Written notification via: a) CG-2692 (within 5 days); <b>AND</b> b) CG-2692B (upon receipt of test results)	1) Immediate notification; and 2) Written notification via: a) CG-2692 (within 5 days); <b>AND</b> b) CG-2692B (upon receipt of test results)	NA	NA
22	SIGNIFICANT HARM TO THE ENVIRONMENT	Significant harm to environment within 12 NM, U.S.Territorial Sea (A film or sheen upon or discoloration of surface of water or adjoining shoreline; or sludge or emulsion deposited beneath the surface of water or adjoining shoreline) [46 CFR 4.03-65]	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	NA	NA
23	SIGNIFICANT HARM TO THE ENVIRONMENT	Significant harm to environment beyond 12NM to the limit of the EEZ (Exceeding allowable limit from Oily Water Separator, 15 ppm; or discharge of a Noxious Liquid Substance in bulk) [46 CFR 4.03-65]	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	1) Immediate notification; and 2) Written notification via CG-2692(within 5 days)	1) Immediate notification; and 2) Written notification via CG-2692 (within 5 days)	1) Immediate notification; and 2) Written notification via CG-2692 (within 5 days)

MODU Matrix for  
Marine Casualty Reporting and Chemical Testing Requirements

NO.	CLASS OF CASUALTY	CASUALTY DESCRIPTION	US FLAG VESSEL (MODU) ANYWHERE IN THE WORLD	FOREIGN FLAG VESSEL (MODU) ON U.S. NAVIGABLE WATERS (within 12 Miles) [OPERATING OR NOT OPERATING]	FOREIGN FLAG VESSEL (MODU) OUTSIDE U.S. NAVIGABLE WATERS (beyond 12 Miles) WHILE ON THE U.S. OUTER CONTINENTAL SHELF ENGAGED IN OCS ACTIVITIES [OPERATING]	FOREIGN FLAG VESSEL (MODU) OUTSIDE U.S. NAVIGABLE WATERS (beyond 12 Miles) WHILE ON THE U.S. OUTER CONTINENTAL SHELF NOT ENGAGED IN OCS ACTIVITIES [NOT OPERATING - i.e. STACKED, UNDER TOW OR TRANSITING]
			(Note 1)	(Notes 2 & 3)	(Notes 2 & 4)	(Notes 2 & 5)
		<b>Note 1</b> - Requirements per 46 CFR 109.411, 46 CFR 4.03-1 and 46 CFR 4.05				
		<b>Note 2</b> - For the purpose of this matrix, a MODU is considered to be "operating" when it is engaged in an OCS activity (any offshore activity associated with exploration for, or development or production of, the minerals of the Outer Continental Shelf.) as defined in 33 CFR 140.10.				
		<b>Note 3</b> - Requirements per 46 CFR 4.03-1 and 46 CFR 4.05.				
		<b>Note 4</b> - Reporting requirements per 33 CFR 146.301, 33 CFR 146.303 and 33 CFR 151.15				
		<b>Note 5</b> - Foreign MODUs outside U.S. Navigable Waters and not engaged in OCS activities are not subject to the provisions of 33 CFR 146.301. However, reporting requirements remain for certain oil discharges (33 CFR 151.15) and commercial diving casualties (46 CFR 197.484 and 486).				
		<b>Note 6 - 46 CFR 16.240 requires testing of all personnel directly involved in a Serious Marine Incident.</b> This means any individual whose order, action or failure to act is determined to be, or cannot be ruled out as, a causative factor in the events leading to or causing the serious marine incident.				
		GENERAL NOTE: These CG-2692 reporting requirement do not supercede or replace any other reporting such as: MARPOL, National Response Center (NRC), OSHA, MMS, EPA, etc.				