



July 28, 2017

Bureau of Safety and Environmental Enforcement
Regulations and Standards Branch
45600 Woodland Road
Sterling, VA 20166

To Whom It May Concern:

The Offshore Operators Committee (OOC), the American Petroleum Institute (API), the National Ocean Industries Association (NOIA), and the Louisiana Mid-Continent Oil and Gas Association (LMOGA) hereinafter referred to as the Joint Trades, respectfully submit the following comments. Comments submitted on behalf of the Joint Trades are submitted without prejudice to any member's right to have or express different or opposing views. It is from this perspective that these comments have been developed.

The Joint Trades

The Offshore Operators Committee (OOC) is an organization of 41 oil and gas producing companies and 57 service providers to the offshore industry who conduct essentially all of the Outer Continental Shelf (OCS) oil and gas exploration and production activities in the Gulf of Mexico (GOM). Founded in 1948, the OOC is a technical advocate for the oil and gas industry regarding the regulation of offshore exploration, development and producing operations.

API is a national trade association representing over 625 member companies involved in all aspects of the oil and natural gas industry. API's members include producers, refiners, suppliers, pipeline operators, and marine transporters, as well as service and supply companies that support all segments of the industry.

NOIA is the only national trade association representing all segments of the offshore industry with an interest in the exploration and production of both traditional and renewable energy resources on the U.S. OCS. The NOIA membership comprises more than 325 companies engaged in a variety of business activities, including production, drilling, engineering, marine and air transport, offshore construction, equipment manufacture and supply, telecommunications, finance and insurance, and renewable energy.

LMOGA, founded in 1923, is a trade association exclusively representing all sectors of the oil and gas industry operating in Louisiana and the Gulf of Mexico. LMOGA serves exploration and production, refining, transportation, marketing and midstream companies as well as other firms in the fields of law, engineering, environment, financing and government relations. LMOGA's mission is to promote and represent the oil and gas industry operating in Louisiana and the Gulf of Mexico by extending

representation of our members in the Louisiana Legislature, state and federal regulatory agencies, the Louisiana congressional delegation, the media and the general public.

After extensive review, the Joint Trades do not agree with the BAST determination related to methane gas detection. The primary mitigation related to methane gas exposure to helicopter operations is having the proper safeguards in place through established procedures and training for the aircrew members. The ability to detect methane would not mitigate the consequences of potential methane intake. Rather, operational discipline, adequate training, and effective communication protocols between facilities and helicopter pilots are critical to maintaining safe operations.

Detailed Response

The Joint Trade Comments on the NTSB Recommendations

The recommendations from the NTSB are based on only two recorded events that occurred in the last 6 years. One event occurred on March 24, 2011 and the other occurred on August 13, 2013. It is important to note that in this same time frame (2011-2016), the Gulf of Mexico (GOM) fleet annually averaged 276,769 flight hours, 742,036 flights and approximately 2,006,550 passengers carried.¹

The recommendations from NTSB are very specific and state that BSEE and the USCG should collaboratively identify and develop comprehensive systems and procedures to mitigate the risk of methane gas ingestion by helicopter. Secondly, NTSB recognized API's current efforts in updating API RP 2L in their recommendation to API which was to finalize those revisions that addressed the consideration of venting of natural gases as a risk to helicopters in heliport design and location. BSEE cannot ignore parts of these recommendations and only focus on one aspect (detection system). BSEE must consider ALL of the recommendations, procedures (operational discipline) and recommended practices, as well as systems. It is important to note that it is highly unlikely that either of the two helicopter incidents would have been prevented by gas detectors on the heliport perimeter as they occurred after takeoff.

The Joint Trade Comments on the Price Waterhouse (PWC) Methane Gas Detection (MGD) Study

Per BSEE BAST Definition, "Best available and safest technology (BAST) means the best available and safest technologies that the BSEE Director (Director) determines to be economically feasible wherever failure of equipment would have a significant effect on safety, health, or the environment."

In the Methane Gas Detection study (BSEE TAP Project #733), BSEE has defined the TIO to be "*Based on an evaluation of commercially available technology, what is the lowest level of methane (at or above the Lower Flammability Limit) that can be detected in a cost effective and feasible manner in the vicinity of the helidecks?*"

In the context of BSEE definitions above, the OOC formed a MGD Task Group to perform a comprehensive review of the PWC study. As stated in the study, upon completion of the study and specifically of the Subtask C 4.5.3, monitoring and warning systems, PWC recommended that "in order to minimize or eliminate the risks presented to helicopter operations due to the release of methane or other combustible gases on OCS facilities, BSEE should explore the use of methane gas detection devices as a way to provide early warning to helicopter pilots and facility personnel." The OOC MGD task group disagrees with such conclusions, and would like to point out that a monitoring or warning system: 1) will not prevent methane

¹ Refer to Helicopter Safety Advisory Conference (HSAC) website for data, <http://www.hsac.org/library>.

gas intake; 2) is not a substitute for operational discipline and pilot competency; and in fact, 3) may, instead, lead to a false sense of security. The opinion of the OOC MGD task group is that The Methane Gas Intake can be more effectively prevented via operational discipline, Pilot training in hazard recognitions, and adherence to the Helicopter Safety Advisory Conference recommended practices.

As stated above, ability to detect methane would not mitigate the potential methane intake. Rather, operational discipline, adequate training, and effective communication protocols between facilities and helicopter pilot are critical to safe operations. This is further supported by the conclusions noted in Subtask C.4.5.1 – review and assess helideck construction standards: As stated in the report,

“A comprehensive examination of U.S. regulatory agencies and statutes revealed that there are no regulatory requirements or guidance promulgated by these agencies for mitigation of hazards posed by APG [associated petroleum gases]. However, it was noticed that **the recommendations** provided in API RP 14-J: Recommended Practice for Design and Hazard Analysis for Offshore Production Facilities, 2nd Edition (May 2001) and the draft version of API RP 2L-1: Recommended Practice for Planning, Designing, and Constructing Heliports for Fixed Offshore Platforms, 4th Edition (May 1996, Reaffirmed January 2012) **are sufficiently comprehensive to ensure that hazards presented by APG are considered and mitigated** [emphasis added].”

It is important to note that API RP 14J (cited above) is incorporated into the regulations at 30 CFR 250.800(b) and (c), 250.842(b), and 250.834, 250.836, and 250.880(c).

Further, the recommendations made by PWC are based on flawed conclusions drawn from the FAA investigation data. In section 1.1 of the report, PWC writes “Associated Petroleum Gas (APG) ingestion was identified, by the NTSB, as the direct and proximate cause of one mishap.” PWC then proceeds to cite ten additional helicopter incidents and attempts to link those incidents to APG ingestion without any substantial evidence. It seems that PWC was doing some “reaching” on all but one other report that may have involved APG.

The Joint Trades Synopsis of the PWC Cited Incidents:

The OOC MGD Task Group performed a comprehensive review of the incidents where the contributing factor of the incident might have been methane gas intake.

- Bell 206B-3, N2750F at unidentified facility near Grand Isle, LA, February 26, 1992 (NTSB FTW92LA075) – “power loss undetermined”, no mention of flares in the report. This incident SHOULD NOT have been included in the PWC analysis.
- Bell 206L-3, N347AL at Marathon SP86, May 2, 1995 (NSTB FTW95FA186) – conclusion by the NTSB was; “LOSS OF ENGINE POWER DUE TO INGESTION OF EXHAUST FUMES FROM AN OIL PLATFORM FLARE BOOM” – It is the opinion the OOC task group that the exhaust gas eliminated the required oxygen necessary for combustion, hence the power loss. Not the same as raw gas ingestion (APG) from an unignited flare. This incident would still fit into the parameters of how can we prevent this from happening.
- Bell 206L-3, N81SP at West Cameron 149, March 6, 2004 (NTSB FTW04LA088) – Even though “undetermined”, FOD was mentioned in the NTSB report. No mention of flares in the report. This incident SHOULD NOT have been included in the PWC analysis.

- Bell 206B, N496RL at South Timbalier 187, November 5, 2004 (NTSB DFW05LA017) – Undetermined cause, no mention of flares in the report. This incident SHOULD NOT have been included in the PWC analysis.
- Bell 206B, N3RL at East Cameron 219, May 11, 2007 (NTSB DFW07LA109) – Pilot failed to maintain directional control per the NTSB. No mention of flares in the report. This incident SHOULD NOT have been included in the PWC analysis.
- Bell 206L-3, N330P at High Island 138, July 22, 2007 (NTSB DFW07LA169) – pilot error, no mention of flares in the report. This incident SHOULD NOT have been included in the PWC analysis.
- Bell 206L-4, N317RL at South Timbalier 178A, July 26, 2010 (NTSB CEN10IA438) – cause could not be determined, no mention of flares in the report. This incident SHOULD NOT have been included in the PWC analysis.
- Sikorsky S-76B, N56RD at Vermilion 376A, April 17, 2012 (NTSB CEN12FA250) – stuck “stepper” motor, no mention of flares in the report. This incident SHOULD NOT have been included in the PWC analysis.
- Bell 407, N1197 at Eugene Island 182A, May 30, 2014 (NTSB CEN14IA270) – “improper repair of the combustion case”, no mention of flares in the report. This incident SHOULD NOT have been included in the PWC analysis.
- Bell 206L-3, N54LP at Main Pass 107D, October 9, 2013 (NTSB CEN14FA004) – “liberation of a second stage turbine blade” the report does mention the flare and potential gas cloud. Should be included in the BSEE analysis

Hence, the task group recommends that BSEE stop the MGD BAST determination with the Technology Improvement Objective (TIO).

Examples of Operational Controls

Most aviation companies operating in the GOM follow the Helicopter Safety Advisory Committee recommended practices outlined below:

- HSAC-RP 92-4 Gas Venting/ Heliport Operational Hazard Warning(s) / Procedures,
- HSAC-RP 92-1 Helideck / Heliport Operational Hazards Warning(s) Procedures; and,
- HSAC-RP 93-2 Offshore Helidecks / Landing Communications.

Additionally, some aviation companies operating in the GOM have developed computer based training modules or similar delivery methodologies to educate and heighten the awareness of their pilots on the invisible hazard of methane gas.

Further, some operators are considering installing status lights on platforms to indicate helideck landing conditions. Currently, one operator is developing a pilot program for the use of helideck status lights on one of their deepwater facilities. The status light would be associated with the recommendations outlined HSAC RP 93-2 (referenced above) when obtaining the 5 minutes “green deck” approval radio call. Attached you will find the above recommended practices.

In closing, the Joint Trades disagree with the BAST determination related to methane gas detection. The PWC conclusions on which the determination is based, are flawed. The cited incidents in the PWC report and the HSAC data do not support the PWC conclusions or the need for a technology solution. Further, the ability to detect methane would not mitigate the potential methane intake. Rather, operational discipline, pilot training, and effective communication protocols are the safeguards critical to safe operations. The Joint Trades are willing to work with BSEE to address this concern through full analysis of the data, identification of operational controls and best practices, and share the lessons learned that would help mitigate threats of methane gas intake.

If you have any questions, or need additional information, please contact Evan Zimmerman at evan@offshoreoperators.com

Sincerely,



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Attachment

Recommended Practices

- HSAC RP 92-4, Gas Venting Helideck / Heliport Operational Hazard Warning(s) / Procedures

Operations near Gas Vent Booms

Ignited flare booms can release a large volume of natural gas and create a hot intense heat with little time for the pilot to react. Likewise, un-ignited gas vents can release reasonably large volumes of methane gas under certain conditions. Thus, operations conducted in close proximity to un-ignited gas vents require precautions to prevent inadvertent ingestion of combustible gases by the helicopter engine(s). The following is recommended.

1. Pilots

- (a) Gas will drift upwards and downwind of the vent. Plan the approach and takeoff to observe and avoid the area downwind or directly over the gas vent, remaining as far away as practicable from the open end of the vent boom.
- (b) Exercise caution when starting or landing on an offshore helideck when the deck is downwind of a gas vent.

2. Oil Field Supervisors

- (a) Notify nearby helicopter operators and bases of the hazard for planned operations.
- (b) Wind socks or indicator should be clearly visible to provide upward indication for the pilot.
- (c) High volume large gas vents should have red rotating beacons installed to indicate when gas is venting.

- HSAC RP 92-1, Helideck / Heliport Operational Hazard Warning(s) Procedures Background

1. A number of operational hazards can develop on or near offshore helidecks or onshore heliports that can be minimized through procedures for proper notification or visual warning to pilots. Examples of hazards include but are not limited to: (1) PERFORATING OPERATIONS - RP 92-2, (2) H2S GAS PRESENCE - RP 92-3. (3) GAS VENTING - RP 92-4, OR (4) CLOSED HELIDECKS or HELIPORTS - RP 92-5 (unspecified cause).
2. These and other operational hazards are currently minimized through timely dissemination of a written Notice to Airmen (NOTAM) for pilots by helicopter companies and operators. A NOTAM provides a written description of the hazard, time and duration of occurrence, and other pertinent information. ANY POTENTIAL HAZARD should be communicated to helicopter operators or company aviation departments as early as possible to allow the NOTAM to be activated.
3. To supplement the existing NOTAM procedure and further assist in reducing these hazards, a standardized visual signal(s) on the helideck/heliport will provide a positive indication to an

approaching helicopter of the status of the landing area. Recommended Practice(s) (RP) have been developed to reinforce the NOTAM procedures and standardize visual signals.

- HSAC RP 93-2, Offshore Helidecks / Landing Communications

Background

To enhance safety, and provide appropriate time to prepare for helicopter operations, the following is recommended when anticipating a landing on an offshore helideck.

Recommended Practices

1. Before landing on an offshore helideck, pilots are encouraged to establish communications with the company owning or operating the helideck if frequencies exist for that purpose.
2. When impracticable, or if frequencies do not exist, pilots or operations personnel should attempt to contact the company owning or operating the helideck by telephone. Contact should be made before the pilot departs home base/point of departure to advise of intentions and obtain landing permission if necessary.
**recommend a minimum of 20 minutes for planned arrival notice. This practice is a requirement of some offshore owner/operators.

Note 1: See HSAC RP 90-1 for Tanker Operations.

Note 2: Private use Heliport. Offshore heliports are privately owned / operated facilities and their use is limited to persons having prior authorization to utilize the facility.

Note 3: Some platform/vessel operators require specific notification procedures which must be adhered to for pre-landing and pre-takeoff. Aircrews are requested to familiarize themselves with these destination requirements.