## Follow Up on Telephone Discussion of Cooling Water Intakes

joe.p.smith to: Isaac Chen
Cc: robert.kuehn, Frank.Elliott, rfrazer, James.Hoggan, jljohnson, Sofia.Lamon, Kathryn.Maness, Tammy_Meador, gnorthington, ppainter, erachal, shelby.g.pennington, Joanna_Spires, awebster,

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Isaac -

The purpose of this note is to follow up on our discussion concerning the use of seachest CWIS at offshore facilities and comments that operators have had with respect to conducting monitoring of the functioning of intakes. As an industry organization, OOC relies on voluntary submission of information from member companies. As a result, we cannot claim to have comprehensive information concerning practices by Gulf of Mexico operators.

In 2009, OOC sponsored a review of remote monitoring techniques (OOC, 2009) that could be used to address the permit requirement. I have sent this report to you for your information under separate cover as the file is too large to send by e-mail.

Seachest Intakes

Seachest intakes have been and will continue to be used on mobile offshore drilling units such as semisubmersible drilling rigs or drill ships. Only a few of the intakes on existing production facilities are categorized as seachests. We are aware of one planned new production facility that will employ an intake categorized as a seachest. Other operators have responded that they do not plan to use seachest intakes on new offshore production facilities. As a result, it appears that at least some seachest-type intakes will be used on future offshore production facilities.

Monitoring of Intakes

Operators of mobile offshore drilling units pointed out that visual inspection of intakes either by divers or by remotely operated vehicles (ROVs) requires that drilling activities be shut down on dynamically positioned drill ships because safety concerns make it impossible to have divers in the water or to operate ROVs near the ocean surface when the thrusters required for dynamic positioning are in operation. Drilling rig operators suggest that routine monitoring be conducted by measurements with remote monitoring equipment that senses the flow rate and velocity through the intakes and that actual visual monitoring be conducted during planned periods of no drilling or transit activity (e.g. routine shipyard maintenance periods or when loitering at sea between jobs). It is noted that due to the inherent variability of rig scheduling (e.g. due to contract, technical, logistical issues), the periods available to visually monitor intakes can be somewhat difficult to predict. Given that instrumentation provides an alternative means of sensing fact velocity, this suggests that the frequency of required direct visual monitoring requirements be practically based on 6 month or annual periods for dynamically positioned rigs.

Operators of fixed production facilities commented that fixed production facilities do not have permanently installed ROVs. Making weekly inspections with ROVs would require hiring vessel-based ROVs and would

be very costly. Additionally, these vessels are not always readily available. Operators commented that the expense, maintenance costs, and manpower time associated with deploying a camera at the frequency of once per week would be burdensome, and would add minimum value. Operators believe that using remote monitoring devices intended to determine flow velocity through the intake are more practical and actually provide a better indication of any blockage that could potentially increase intake face velocity and thus increase the potential for impingement. Operators of fixed production facilities have also suggested that, when necessary, visual inspections by divers or ROVs can be scheduled during planned maintenance periods to augment the information provided by remote monitoring.

Other Matters Related to Regulation of Cooling Water Intake Structures

We recognize that regulations address impingement of marine life on intake screens as well as entrainment in cooling water intakes. We believe that the existing limitation of intake face velocity to 0.5 ft/s represents the best available technology for preventing losses due to impingement. During our discussions of the plans for the entrainment monitoring program, we submitted to Region 6 information from the scientific literature indicating that almost all species of fish at life stages large enough to be impinged are able to swim at speeds in excess of 0.5 ft/s and should be able to avoid the very limited volume of water column where such speeds exist (Smith, 2009). Accordingly, we believe that limiting the face velocity of intakes represents the best approach to minimizing impingement. The importance of intake velocity was recognized by EPA in the recently published fact sheet on the proposed new cooling water intake structure regulation (EPA, 2011), where it was stated that "Alternately, the facility could reduce their intake velocity to 0.5 feet per second. At this rate, most of the fish can swim away from the cooling water intake of the facility."

Finally, as we have previously suggested, leaving the entrainment monitoring requirement for new facilities in its current form in the upcoming permit, perhaps with a note indicating that the study is underway, seems like a sensible option to us. The baseline study submitted to Region 6 in 2009 documents an analysis of literature data and modeling which suggests that the impact on fisheries of entrainment in intakes at new facilities is extremely small. The current study will provide EPA with data to test the validity of that conclusion. Given that the projected impacts of cooling water We feel that the baseline study provides a reasonable technical basis for a decision to maintain the current requirement for entrainment monitoring for the next permit pending the results of our ongoing study.

Best regards,

Joe Smith
Chair, Cooling Water Intake Structure Steering Group

References

EPA (2011); "Proposed Regulations to Establish Requirements for Cooling Water Intake Structures at Existing Facilities" Fact Sheet EPA 820-F-11-002 accessed April 8, 2011 at

http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/upload/factsheet_proposed.pdf

OOC(2009); "Review of Techniques for Remote Monitoring of Cooling Water Intakes Relevant to Visual Inspection Requirements", report prepared by Alden Research Laboratory for the Offshore Operators Committee, September 2009.

Smith, J.P. (2009); "Response to EPA Comments Dated November 13, 2009 Concerning Plans for an Industry Wide Entrainment Monitoring Study", memorandum to Isaac Chen dated December 1, 2009; attached (file Resp11_13_09comments.pdf) to email from joe.p.smith@exxonmobil,com dated December 10, 2009.

Phone 713 431 4532
Fax 713 431 6387

Postal Address
J.P. Smith (URC-URC-SW502)
ExxonMobil Upstream Research Co
P.O. Box 2189
Houston TX 77252-2189

Shipping Address
J.P. Smith URC-URC-SW502
ExxonMobil Upstream Research Co
3319 Mercer St
Houston TX 77027