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BEFORE
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Good morning Chairman Murkowski, Ranking Member Cantwell, and members of the Senate Energy and Natural Resources Committee. My name is Mark Rockel. I am a Principal Consultant from Ramboll Environ and have over 30 years of experience in natural resource economics within the academic, government, trade group, and consulting arenas.

The Office of Information and Regulatory Affairs (OIRA), a division of the Office of Management of Budget (OMB) is tasked with the review of new rules promulgated by regulatory agencies. A series of executive orders has dictated that the benefits of new regulations not be outweighed by the costs of compliance, and not ultimately serve to stifle innovation, creativity or the efficient function of markets. It is through this lens that the OIRA reviews an agency's regulatory impact assessment (RIA) of its own proposed rules to ensure that draft regulations align with the presidential directives set forth in these executive orders. Ramboll Environ had prepared an analysis to inform the OIRA's review of regulations promulgated by the Department of Interior (DOI) governing oil and gas exploration activities in the Alaska OCS (Arctic Regulations). Included is a benefit-cost analysis (BCA) of three elements that may be included in the draft Arctic Regulations: (1) a same season relief rig (SSRR) requirement; (2) a seasonal limitation on drilling; and (3) a requirement that an operator demonstrate capacity to respond to 100 percent of its Worst Case Discharge (WCD) with mechanical recovery tools alone.

The results of this analysis illustrate a substantial disconnect between these rule elements and the presidential directives outlined above. The OIRA should apply its authority under Executive Order 12866 to return the draft Arctic Regulations to the DOI if any of the three elements analyzed are present in the actual rule.

Same Season Relief Rig

An SSRR requirement would direct all Arctic operators to contract a second rig capable of drilling a relief well and maintain that rig in proximity to the theater such that the rig would be available to drill a relief well prior to the onset of winter ice. Over a twenty-year exploration and appraisal phase, the present value of a SSRR requirement is nearly 3.2 billion dollars in cost to the lessee. In contrast, the benefits of a SSRR requirement over the same time period are estimated at only 791 million dollars. The relatively minor benefits associated with a SSRR requirement are due in part to the low probability of a well blowout in the shallow exploration and appraisal wells being pursued in the U.S. Arctic OCS.

The nominal benefits associated with a SSRR requirement can also be explained by the substantial barrier and control technologies that operators have in place both to mitigate the risk of a loss of well control, as well as to respond if such an event occurs. There is a hierarchy of technologies and responses that, depending on the situation, could provide not only a faster, more environmentally protective response than a relief well, but one that is more cost efficient. The availability and use of other

technologies to stop a loss of well control is reinforced by U.S. government records; since 1971 there has not been a single blowout event in the U.S. controlled by a relief well.

Given the relative costs and benefits of a SSRR requirement, the codification of such a requirement cannot be supported. Further, the modest benefits from such a requirement could be preserved (and potentially exceeded given advancing technologies) if the U.S. adopted a performance standard calling for SSRR equivalency.

Seasonal Drilling Limitation

A seasonal drilling limitation refers to the requirement that an Arctic operator cease drilling into hydrocarbons at a prescribed date calculated based on the anticipated onset of winter ice. Over a twenty-year exploration and appraisal phase, the present value of such a seasonal limitation requirement is 6.8 billion dollars in cost to the lessee. Such a condition also results in losses to the nation in the amount of 89 billion dollars. In contrast, the benefits of a seasonal drilling limitation are estimated at 301 million dollars over the same period. The rationale underlying the seasonal drilling limitation is that it is necessary to ensure that an operator has time to use a SSRR to drill a relief well prior to the onset of winter ice. Yet, as discussed in the preceding section, drilling a relief well is not the only method, or most efficient method an operator could use to control a late season blowout. However, even where the assumption is made that a relief well is the only (or preferred) response, the benefits gained from imposing a blackout window are minimal. Regulations already require that an operator submit a Critical Operations Curtailment Plan (COCP) as a part of its Exploration Plan (EP) to demonstrate that it has a plan to curtail operations in response to emerging hazards in the environment. Further, in other areas where the BOEM regulates offshore oil and gas activities, including the Gulf of Mexico, the agency does not regulate prescribed end of season dates based on seasonally re-occurring environmental threats, such as hurricanes. Given the relative costs and benefits of a seasonal drilling limitation, the codification of seasonal drilling limitations cannot be supported. Whether and if an operator is required to end its drilling season should be driven by whether the assets the operator is bringing to the theater are capable of safely drilling for the period of activity the operator has planned.

100% Mechanical Recovery Capacity

A 100 percent mechanical recovery capacity requirement refers to the requirement that an operator demonstrate in its Oil Spill Response Plan (OSRP) that is has mechanical recovery assets available to respond to its entire Worst Case Discharge using those assets alone, as opposed to other tools such as In Situ Burning (ISB) or dispersants. Currently, operators in the Chukchi and Beaufort Seas are required to meet this requirement due to the North Slope Subarea Contingency Plan, which is a part of the Alaska Federal/State Preparedness Plan for Response to Oil & Hazardous Substance Discharges/Releases. The cost of this requirement over a twenty-year exploration and appraisal phase is 119 million dollars to lessees. There are no environmental or social benefits attributable to this requirement if you compare it with an approach that allows an operator to develop its OSRP using the Net Environmental Benefits Analysis (NEBA) approach that is applied in other U.S. OCS regions and around the world. Requiring an operator to maintain mechanical assets sufficient to account for 100 percent recovery of its WCD in proximity to the drill site is inefficient and may result in additional impacts to the environment. This requirement significantly increases the number of vessels an operator must maintain in theater to support its drilling activities. With additional vessels comes the potential for additional environmental impacts. These impacts cannot be justified considering that in the event of an actual oil spill an emergency response team may determine the best option for responding is not with mechanical

recovery tools, but with ISB or dispersants. Depending on spill characteristics and metaocean conditions, dispersants and ISB are more effective at cleaning up an oil spill than is mechanical recovery equipment. Given the relative costs and benefits of a 100 percent mechanical recovery capacity requirement, the codification of such a requirement cannot be supported. Any Arctic Regulations dealing with oil spill response should allow operators to apply a NEBA approach and account for all appropriate response tools.

Conclusion

The proposed rule elements are not performance based, even where obvious performance based approaches are available and would achieve the desired objectives. This analysis has demonstrated that allowing for SSRR equivalency, performance based season limitations, and strengthening the dependence on the NEBA approach may be less costly, and more effective regulatory approaches that respond to the call for performance based regulatory approaches found in Executive Order 12866. The conclusion of the review is that the costs of the potential elements reviewed significantly exceed their benefits. In addition, if codified in a regulation, these elements would be inconsistent with U.S. policy guidance directing agencies toward performance based regulations and would not be in harmony with international standards and best practices. Denmark, Canada, and Greenland have all adopted elements of performance-based regulation for drilling requirements, well control, and independent verification and oil spill response.

Performance-based regulation is outcome driven. The regulator sets goals and objectives to be achieved and allows room for a variety of avenues to compliance, rather than prescribing methods, practices, or technologies that must be used to achieve a goal or objective. Performance-based regulation tends not to constrain markets or technological innovation, but rather provides incentives for market mechanisms to spur technological advances, bringing about operational and environmental improvements efficiently as companies strive to compete.

Thank you for allowing me the opportunity to testify today.