



## Shell Exploration & Production

February 8, 2013

Public Comments Processing  
Attn: Docket No. FWS-R7-ES-2012-0043  
Division of Policy and Directives Management  
U.S. Fish and Wildlife Service  
4401 N. Fairfax Drive, MS 2042-PDM  
Arlington, VA 22203  
Via Federal E-Rulemaking Portal: [www.regulations.gov](http://www.regulations.gov)

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**Re: Shell Gulf of Mexico, Inc. and Shell Offshore Inc. (Shell) Comments on Proposed Rule for the Issuance of Incidental Take Regulations in the U.S. Chukchi Sea**

Dear Mr. Perham,

This is to convey Shell's comment in response to the notice published in the Federal Register by the United States Fish & Wildlife Service (USFWS) on January 9, 2013 (Federal Register Vol. 78, No. 6), regarding the availability of the proposed rule concerning incidental take of marine mammals in the Chukchi Sea and the draft environmental assessment (EA). Please consider the following narrative discussion regarding key sections and statements in the proposed rules.

We are pleased with the proposed rule insofar as it complies with the Marine Mammal Protection Act and satisfies the USFWS's mandates under the Act. We agree with the conclusions reached by the USFWS in this statement:

"We conclude that any incidental take reasonably likely to occur as a result of carrying out any of the activities described under these proposed regulations would have no more than negligible impacts on walruses and polar bears in the Chukchi Sea region, and we do not expect any resulting disturbances to negatively impact the rates of recruitment or survival for the Pacific walruses and polar bears that are exposed to Industry activities. We expect that individual Pacific walruses and polar bears that are exposed to Industry activity would experience only short-term, temporary, and minimal changes to their normal behavior."

However, we have identified several areas of the proposed rules and preamble that are problematic. We have set forth comments relating to those areas below. Additionally, we offer strong support for the comments submitted by the Alaska Oil and Gas Association (AOGA), which we would encourage the USFWS to carefully review and fully implement.

### **Preamble Page 1969, Intentional Taking of Walruses**

The USFWS has included in its Incidental Take Regulations (ITRs) a statement relating to *intentional* takes—"[i]ce management activities that cause walruses to flush from or abandon ice would be considered intentional takes by the Service." This statement should be removed because intentional takes are outside the scope of ITRs. Additionally, the statement does not accord with the surrounding discussion on page 1969 of the potential effects on Pacific walruses from vessel traffic noise.

**Preamble Page 1971, Special Mitigation Measures for Coastal Haulouts, including Hanna Shoal**

Shell objects to the unwarranted inclusion of seasonal closures around coastal haulouts as a special mitigation measure. Both Jay et al. (2012) and Delarue et al. (2012) recognize the high correlation between intensive foraging at Hanna Shoal and surrounding shelf areas of high benthic biomass and the presence of sea ice in these areas. While foraging continues in these areas after the full melt of sea ice, the combination of reduced presence of the walrus in the areas and reduced susceptibility of walrus to disturbance at haulouts should limit the duration of potential closures to periods when ice is present within the areas. As most industry activities occur during periods when only minimal sea ice is present, area closures are not needed to maintain separation between industry operations and susceptible concentrations of hauled out walrus.

**18.118 (a)(2)(iii), 18.118(a)(5)(v), Groups of Walrus**

Shell objects to the use of the number “12” in the ITRs as a trigger for special regulatory protections for walrus. It seems that the USFWS has deemed as significant in its ITRs

“groups” or “aggregations” of 12 or more walrus. It is not clear what the USFWS relied on to arrive at the number “12.” Twelve individual walrus do not represent a significant portion of the population, which the USFWS has estimated at over 200,000 individuals. Additionally, while groups or aggregations of individuals may be indicative of biologically significant activities that are occurring within an area, e.g. feeding, breeding, socializing, etc., the USFWS has not indicated what potential biologically significant activities might be indicated by 12 individual walrus.

Further, it is unclear whether the definitions in these two criteria are internally consistent. The USFWS has not formally defined these terms in the ITRs, yet the use of two different terms implies a difference between the two. A “group” would seem to be characterized by some level of behavioral association or commonality of purpose among individual constituent animals. In contrast, an “aggregation” could include individuals that have no interaction or common purpose, but that simply co-occur within a designated space.

It is possible that the use of the number “12” with no further requirements in the ITRs could trigger special regulatory protections inappropriately. For example, data from prior characterization studies indicate that the 160 dB zone around an active seismic operation may include tens of kilometers. It is very possible that individuals spread evenly over such a large area may have no behavioral association or commonality of purpose.

**Preamble Page 1976, 18.118 (a)(3)(ii), Aircraft Operating Conditions and Unmanned Aerial Systems (UAS)**

Shell requests that the USFWS exempt unmanned aerial systems (UAS) from the requirements in the ITRs pertaining to aircraft. In the alternative, Shell requests that the USFWS modify flight altitude restrictions in consideration of the future use of UAS in coastal, onshore, and offshore portions in the Chukchi Sea.

New technologies, such as UAS, are urgently needed to monitor marine resources in Arctic offshore and nearshore areas so that Outer Continental Shelf (OCS) exploration and development activities can be conducted with minimal impact to species of concern. UAS platforms of varying size and capability currently exist and are being used to monitor marine mammals throughout the United States. Flight parameters for UAS are determined by a variety of factors, including mission objectives, vehicle size, onboard imaging system, and wind conditions. To date, typical flight altitudes have ranged from as low

as 50 to 100 feet for monitoring Steller sea lion haulouts (Walker 2012)<sup>1</sup>, to 300 to 400 feet during surveys of ice seals (NOAA 2009)<sup>2</sup> and approximately 1,000 feet during field tests in Washington (Koski et al. 2009)<sup>3</sup> and Alaska.

These aircraft can be launched and recovered from a vessel or shorebase and may be able to provide reliable platforms to monitor marine resources of concern as well as environmental conditions (e.g., ice reconnaissance or “scouting”). UAS platforms are less restricted than manned aircraft insofar as they can operate with less regard to distance to land or weather conditions. More importantly, UAS have a significantly lower noise signature than manned aircraft and consequently can fly at lower altitudes without disturbing marine mammals in the water or on terrestrial or sea ice haulouts. UAS can therefore enable marine mammal monitoring to proceed under low ceiling weather conditions that would otherwise prevent manned survey flights.

#### **18.118 (a)(4)(ii), Spacing Requirements for Seismic Vessels and Exploratory Drilling Operations**

Shell objects to the inclusion of minimum spacing requirements for seismic source vessels and exploratory drilling operations in the ITRs. These requirements are not supported by the USFWS within the proposed ITRs, which lack any biological description as to why contemporaneous exploration activities must be conducted at a distance of 15 miles. It is possible that the USFWS adopted this technical requirement from Geological and Geophysical (G&G) permits issued by the Bureau of Ocean Energy Management (BOEM) for simultaneously operating 2D and/or 3D seismic surveys. The full text of that stipulation is included herein:

*The Permittee shall maintain a minimum spacing of 15 miles between their deep penetration seismic-source vessels and any other concurrently operating deep penetration seismic-source vessel. If there is not 15 miles between seismic-source vessels, one source vessel must cease operations. The BOEM must be notified by means of the weekly report whenever a shutdown of operations occurs in order to maintain this minimum distance.*

BOEM’s intent for this activity separation distance is to avoid overlap of underwater acoustics from concurrent seismic operations where such overlap may negatively impact the quality of subsurface seismic data acquisition. The minimum spacing stated in the BOEM stipulation does not claim a biological significance. However, it appears that the USFWS may have misappropriated this separation requirement under the assumption that it was intended for biological design. Assuming that was the case, the USFWS has committed several errors of interpretation.

First, the USFWS does not provide any concrete analysis from either a biological or subsistence perspective on the necessity of geographically separating concurrent “Industry” activities. Without such analysis, there is no basis for concluding that activity separation distances are necessary to avoid adverse impacts on walrus and their availability for subsistence uses by Alaska Natives.

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<sup>1</sup> Walker, G. 2012. Augmenting Steller Sea Lion Surveys in the Western Aleutians with Unmanned Aircraft, Semiannual Progress Report. North Pacific Research Board. 15th July 2012.

<sup>2</sup> National Oceanic and Atmospheric Administration. 2009. Ship-Based Unmanned Aircraft System (UAS) Surveys of the Bering Sea Pack Ice from the NOAA Ship McArthur II (NOAA Cruise: MC2-09-02). NOAA – U.S. Department of Commerce, National Marine Fisheries Service, Alaska Fisheries Science Center, National Marine Mammal Laboratory. Seattle, WA.

<sup>3</sup> Koski, W.R., Allen, T., Ireland, D., Buck, G., Smith, P., Macrander, A., Halick, M., Rushing, C., Sliwa, D., and McDonald, T. 2009. Evaluation of an Unmanned Airborne System for Monitoring Marine Mammals. *Aquatic Mammals* 2009. 35(3):347-357.

Second, the USFWS has broadened the minimum spacing requirement beyond that implemented by BOEM to apply to *any* industry exploratory drilling operation and *any* seismic source vessel, regardless of the underwater acoustic footprint of the concurrent activities or the maritime assets included within the activities. Exploration drilling sounds are typified by continuous low frequency sounds that even at their source may not reach 160 dB (the sound radii “defining the walrus disturbance zone” within the proposed regulations). These sounds do not constitute disturbance-level sounds out to the distance of 15 miles set forth in the USFWS’s proposed rule. Recordings of exploratory drilling sounds by the drillship *Discoverer* in 2012 in the Chukchi Sea did not even reach the 160 dB sound level of the “walrus disturbance zone” *at the source*, i.e., at the drillship itself, and were at 120 dB at less than one mile from the drillship. For these reasons, subjecting exploratory drilling vessels to the minimum spacing requirements is not scientifically supported.

Historic recordings of 3D seismic in the Chukchi Sea in 2007 indicated that the 160 dB radii from the 3D seismic source (the seismic vessel) is five miles. This distance recorded to 160dB, or “defining the walrus disturbance zone,” does not substantiate a separation of 15 miles even between two seismic source vessels, much less between seismic source vessels and exploratory drilling operations. There is no basis for this minimum spacing requirement. There are already vessel exclusion zone distances and “seismic sound” disturbance stipulations built into the proposed regulations that establish measures to avoid acoustic impacts and physical disturbance impacts to walrus in water or hauled out on ice.

#### **Preamble Page 1959, Ice Scouting**

Shell disagrees with the USFWS’s characterization of “ice scouting” as a mitigation measure. Ice scouting as practiced by Shell is part of an adaptive management approach to assessing whether ice in proximity to exploration drilling operations may require management. The USFWS should recognize Shell’s commitment to implementing an adaptive management approach to ice management, but not explicitly require “ice scouting,” which by itself is not a defined practice in the ITR.

The USFWS states at preamble page 1959 that ice management would be the cause of “any potential disturbance to walrus[es]” that are “hauled out within range of drilling operations.” This statement should be modified to reflect that ice management is just one of the potential disturbances to walrus hauled out within range of drilling operations. Mitigation measures for other potential disturbances are addressed in other sections of the preamble and regulations.

#### **18.118 (a)(4)(ii), Numerical Limitation on Seismic and Drilling Operations**

Shell objects to statements in the ITRs that dictate what level of exploration activities can be authorized in the Chukchi Sea. The number of seismic and drilling operations that can be permitted in the Chukchi Sea are issues that are properly addressed by agencies charged with permitting activities as opposed to permitting harassment. If the USFWS includes a numerical limitation on seismic and drilling operations, it will prevent operators from engaging in exploration activities that exceed the proscribed limit, despite the absence of data to show that additional activities will have an impact on protected species.

The USFWS identifies the proper scope of the ITRs on page 1944 of the preamble:

*These regulations would not authorize, or “permit,” the actual activities associated with oil and gas exploration, e.g. seismic testing, drilling, or sea floor mapping. Rather, they would authorize the nonlethal, incidental, unintentional take of small numbers of polar bears and walrus associated with those activities based on standards set forth in the MMPA. The Bureau of Ocean Energy Management (BOEM), the Bureau of Safety and Environmental Enforcement (BSEE), the U.S. Army Corps of Engineers (COE), and the*

*Bureau of Land Management (BLM) are responsible for permitting activities associated with oil and gas activities in Federal waters and on Federal lands. The State of Alaska is responsible for permitting activities on State lands and in State waters.*

Despite this language, as currently drafted the ITRs *do* dictate what level of exploration activities can be authorized—“[n]o more than two simultaneous seismic operations and three offshore exploratory drilling operations will be authorized in the Chukchi Sea region at any time.” This language is problematic because BOEM and BSEE will not authorize an activity unless a MMPA authorization, Incidental Harassment Authorization (IHA) or Letter of Authorization (LOA) is obtained. For example, exploration plan approvals from BOEM are conditioned on the issue of an IHA or LOA. Refusal by the USFWS to provide an IHA or LOA effectively disapproves an exploration project, such as a seismic survey or an exploration drilling project.

The USFWS provides no science-based rationale for the limit on the number of simultaneous operations. The USFWS states in the regulation that its purpose is to avoid “synergistic effects[.]” It is not clear what “synergistic effects” are to be avoided, but one would suspect that the agency could be referring to effects from ensonification. However, the potential areas of ensonification are quite small relative to the Chukchi Sea region, which encompasses 92,000 square miles. For example, modeling indicated that the area likely to be ensonified to 120 dB rms or greater by drilling with the drillship *Discoverer* would be limited to the area within 0.8 miles of the drillship. Acoustical monitoring of drilling in the Chukchi Sea in 2012 with the drillship *Discoverer* found the actual distance to the 120 dB level was only a 0.62 mile radius and an area of 1.2 square miles. OCS leases in the Chukchi Sea region are spread over an area 168 miles wide (East-West) and 114 miles long (North-South) – about 92,000 square miles. Certainly more than three such drilling operations, each with an ensonified area of about 1.2 square miles, could be conducted simultaneously within 92,000 square miles without synergistic effects. The same rationale holds true for seismic surveys. Monitoring of seismic activity in the Chukchi Sea between 2006 and 2010 found that the average distance between seismic source vessels and the point where their pulsed sounds attenuated to 160 dB or less was 6.4 mi (10.3 km). Vertical seismic profiles have a 160 dB radius of about 2.3 mi (3.7 km). Alternately, if the “synergistic effects” sought to be avoided in the ITRs are related to the physical presence of multiple vessels in the Chukchi Sea, these effects are already mitigated by vessel exclusion zone distances for Pacific walrus and polar bears.

While it is improper for the ITRs to include a limitation on seismic and drilling operations, the USFWS could include an annual limitation on the number of authorized incidental harassment takes. Industry could then design projects in a manner that limits the anticipated amount of incidental harassment. It would be arbitrary for the USFWS to limit the number of seismic and drilling operations in the Chukchi Sea because operations vary dramatically in terms of size, scope and therefore impacts to species. Because the real measure with which the USFWS is concerned is number of takes, Shell suggests simply using that as the standard.

#### **18.112, Geographic Region Subject to ITRs**

Shell objects to the USFWS’s modification to the geographic region set forth in AOGA’s petition. The onshore areas included in the petition, which were excised by the USFWS in the proposed rule, were included because operators may conduct onshore surveys in these areas. The USFWS should reinstate the geographic region set forth in AOGA’s petition, or alternately offer an explanation as to why it modified the map.

Shell Gulf of Mexico, Inc.

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**18.118 (b)(2)(i), Tracking of Walruses**

Shell strongly objects to the requirement that it “track animals” in any manner, whether by vessel, aircraft or telemetry equipment. Pursuit of a disturbed animal falls squarely within the definition of “harassment” set forth in the MMPA. It would be anomalous for regulations intended to limit incidental harassment of marine mammals to demand intentional harassment of those same species.

The proposed ITRs require that an applicant for a LOA submit a marine mammal monitoring and mitigation plan. The plan must include an evaluation of the effectiveness of mitigation measures, which “may require the use of additional vessels or aircraft or telemetry equipment to track animals encountered for extended periods of time.” For example, “walruses flushed from an ice floe would need to be tracked until they subsequently hauled out on the ice to rest.” These tracking requirements, directing Industry to intentionally pursue walruses flushed from ice, are well beyond the scope of ITRs and must be removed. ITRs are intended to authorize incidental harassment during the course of Industry projects where mitigation measures are designed to ensure the project has negligible impacts on walruses. Industry is not intentionally attempting to flush walruses from ice, but rather attempting to manage ice that poses risks to drilling rigs.

A requirement to track walruses implies a requirement that Industry have assets (aircraft, vessels, or telemetry) on “stand-by” to track walruses that may have been flushed from ice by another Industry asset. Because this requirement would demand that more Industry assets be deployed to the Chukchi Sea, it would result in an increase in the potential for harassment of walruses. For these reasons, Shell requests that the USFWS remove the reference in the ITR to tracking animals. Alternately, Shell would request clarification as to the circumstances under which it would be required to track animals, including clarification of the phrase “animals encountered for extended periods of time.”

Shell appreciates USFWS’s consideration of our comments as the agency moves toward the conclusion of the final ITR and EA. We are available to discuss any of our comments with representatives of the agency. You may contact me at (907) 646-7112 or at Susan.Childs@Shell.com if you or your representatives have any questions or comments.

Thank you,



Susan Childs

Alaska Venture Support Integrator, Manager

Cc: Craig Perham, U.S. Fish and Wildlife Service, Alaska Region