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SUBMITTED ELECTRONICALLY AT GGEIS@boem.gov

Mr. Gary D. Goeke
Regional Assessment Section
Office of Environment (MS5410)
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

Re: **[Center for Regulatory Effectiveness Comments on Bureau of Ocean Energy Management Draft Programmatic Environmental Impact Statement \(“DPEIS”\) For Geological and Geophysical Exploration on the Atlantic Outer Continental Shelf; Comments due on May 30, 2012¹](#)**

Dear Mr. Goeke:

The Center for Regulatory Effectiveness (“CRE”) is pleased to submit the following comments on the Bureau of Ocean Energy Management’s (“BOEM”) Draft Programmatic Environmental Impact Statement (“DPEIS”) for Geological and Geophysical (“G&G”) Exploration on the Atlantic Outer Continental Shelf (“OCS”).

I. EXECUTIVE SUMMARY

Seismic and other oil and gas G&G has caused no harm under current, longstanding regulation by BOEM.

Nevertheless, the DPEIS proposes a new Draft Protocol for regulating seismic airgun surveys. The CRE asks BOEM to confirm or deny that the DPEIS’ Draft Protocol is only proposed for the Atlantic, and is not intended for any other water body.

¹ Available online at <http://www.boem.gov/oil-and-gas-energy-program/GOMR/GandG.aspx>

The DPEIS' new Draft Protocol is significantly more stringent than BOEM's currently effective NTL 2012 G0-2.² BOEM's responses to CRE's comments on BOEM's seismic Information Collection Requests ("ICRs") mean that current regulation under NTL 2012 G0-2 is sufficient, and that there can be no significant change in this NTL without new ICRs and new OMB review under the Paperwork Reduction Act ("PRA"). BOEM's current ICRs do not authorize the DPEIS' new Draft Protocol.

The current BOEM ICRs would not have been submitted and approved if current regulation were inadequate, unless there's been a significant change in knowledge since the ICRs were submitted. There has been no significant change in knowledge except that it's even more obvious now that seismic compliant with NTL 2012 G0-2 is harmless.

NMFS' external Peer Review Report for the Acoustic Integration Model ("AIM") recommends that there be additional peer review each time AIM is applied. The additional peer review should be performed in accordance with OMB's Peer Review Bulletin. The additional peer review should be performed in order to determine each AIM application's compliance with Council for Regulatory Environmental Modeling ("CREM") Guidelines.

There is no public record showing that AIM has been peer reviewed for its proposed application in the Atlantic PEIS. BOEM should identify in the public record each and every AIM peer review that they believe has occurred. BOEM should allow public comment on those and all other peer reviews relevant to the DPEIS.

All AIM peer reviewers should be advised of the Information Quality Act ("IQA") requirements applicable to BOEM.

NMFS' Peer Review Report for AIM states that the AIM input data on behavioral effects are inadequate. BOEM also repeatedly states that adequate input data do not exist for most of the marine mammals that AIM models.

Consequently, before BOEM uses AIM to estimate Takes BOEM should conduct external peer review of AIM in order to determine, among other issues, whether the behavioral effects data input into the model are adequate to estimate Takes.

Passive Acoustic Monitoring ("PAM") should be required in the Atlantic, and PAMGUARD should be encouraged. PAM is already being required in most NMFS regulation of seismic, and it is "strongly encouraged" by BOEM's NTL 2012 G0-2, so this is not a significant change in current regulation.

Finally, the DPEIS, and all BOEM information disseminations, must meet IQA requirements. These IQA requirements apply to any outside or third-party information that BOEM uses or relies on.

² Available online at <http://www.bsee.gov/Regulations-and-Guidance/Notices-to-Lessees/2012/2012-JOINT-G02-pdf.aspx>

II. SEISMIC AND OTHER OIL AND GAS G&G CAUSE NO HARM UNDER CURRENT, LONGSTANDING REGULATION

With regard to oil and gas G&G in the Arctic, NMFS recently stated:

“There is no specific evidence that exposure to pulses of airgun sound can cause PTS [physical injury] in any marine mammal, even with large arrays of airguns.”

“To date, there is no evidence that serious injury, death, or stranding by marine mammals can occur from exposure to airgun pulses, even in the case of large airgun arrays.”

“NMFS does not expect any marine mammals will incur serious injury or mortality in the Arctic Ocean or strand as a result of the proposed seismic survey.”

“Thus, the proposed activity is not expected to have any habitat-related effects on prey species that could cause significant or long-term consequences for individual marine mammals or their populations.”

“Data on short-term reactions by cetaceans to impulsive noises are not necessarily indicative of long-term or biologically significant effects. It is not known whether impulsive sounds affect reproductive rate or distribution and habitat use in subsequent days or years. However, gray whales have continued to migrate annually along the west coast of North America despite intermittent seismic exploration (and much ship traffic) in that area for decades (Appendix A in Malme *et al.* 1984; Richardson *et al.* 1995), and there has been a substantial increase in the population over recent decades (Allen and Angliss 2010). The western Pacific gray whale population did not seem affected by a seismic survey in its feeding ground during a prior year (Johnson *et al.* 2007). Similarly, bowhead whales have continued to travel to the eastern Beaufort Sea each summer despite seismic exploration in their summer and autumn range for many years (Richardson *et al.* 1987), and their numbers have increased notably (Allen and Angliss 2010). Bowheads also have been observed over periods of days or weeks in areas ensonified repeatedly by seismic pulses (Richardson *et al.* 1987; Harris *et al.* 2007).”³

³ NMFS’ Federal Register notice available online at <http://www.gpo.gov/fdsys/pkg/FR-2012-05-01/pdf/2012-10386.pdf>

A recent NMFS Biological Opinion concluded that marine mammals are flourishing and increasing in the Arctic during increasing oil and gas seismic activities there:

“Data indicate that bowhead whales are robust, increasing in abundance, and have been approaching (or have reached) the lower limit of their historic population size at the same time that oil and gas exploration activities have been occurring in the Beaufort Sea and, to a lesser extent, the Chukchi Sea.”

“To our knowledge, no whales or other marine mammals have been killed or injured by these past seismic operations, and the BCB population of bowhead whales continues to increase at an annual rate estimated more than 3 percent.”⁴

BOEM, when it was still MMS, concluded with regard to the entire Outer Continental Shelf that:

“[T]here have been no known instances of injury, mortality, or population level effects on marine mammals from seismic exposure....”⁵

In reaching this conclusion, BOEM relied on a report by the National Academy of Sciences’ National Research Council, which stated:

“With the exception of the beaked whale strandings, connections between anthropogenic sound in the oceans and marine mammal deaths have not been documented. In the presence of clear evidence of lethal interactions between humans and marine mammals in association with fishing and vessel collisions (Clapham et al., 1999; Laist et al., 2001), the absence of such documentation has raised the question of the relative importance of sound in the spectrum of anthropogenic effects on marine mammal populations. Anthropogenic ocean noise is thought not to be a factor in any of the recent major declines in marine mammal populations, such as Steller sea lions (*Eumetopias jubatus*; NRC, 2003a), harbor seals (*Phoca vitulina*; Pitcher, 1990), fur seals (York, 1987), and Aleutian Island sea otters (*Enhydra lutris*; Doroff et al., 2003). No scientific studies have conclusively demonstrated a link between exposure to sound and adverse effects on a marine mammal population.”⁶

BOEM itself recently issued a Final Supplemental Environmental Impact Statement for a Gulf of Mexico OCS Oil and Gas Lease Sale. This final SEIS for the GOM concluded that, despite more

⁴ Pages 64-65, ENDANGERED SPECIES ACT: SECTION 7 CONSULTATION BIOLOGICAL OPINION, Incidental harassment authorization to allow for incidental takes of marine mammals during shallow hazards survey in the Chukchi Sea, Alaska, 2011 (NMFS 2011), available online at http://www.nmfs.noaa.gov/pr/pdfs/permits/statoil_biop2011.pdf

⁵ See, e.g., Outer Continental Shelf Oil & Gas Leasing Program, 2007-2012 Final Environmental Impact Statement, page V-64 (MMS April 2007), available online at

<http://www.boemre.gov/5-year/2007-2012DEIS/VolumeII/5and6-ConsultationPreparers.pdf>

⁶ Marine Mammal Populations and Ocean Noise: Determining when Noise causes Biologically Significant Effects, Oceans science board (2005), page 15, available online at <http://www.nap.edu/openbook.php?isbn=0309094496>.

than 50 years of oil and gas G&G, “there are no data to suggest that activities from the preexisting OCS Program are significantly impacting marine mammal populations”:

“Overall, within the CPA [GOM Central Planning Area], there is a long-standing and well-developed OCS [oil and gas] Program (more than 50 years); there are no data to suggest that activities from the preexisting OCS Program are significantly impacting marine mammal populations.”⁷

In sum, past regulation of OCS oil and gas G&G has adequately protected the environment. With the possible exception of reasonable temporal and zoning restrictions in order to protect the endangered right whale, there is no reason to believe a different approach is required in the Atlantic.⁸

III. NEW ICR AND OMB REVIEW ARE NECESSARY BEFORE BOEM COULD IMPLEMENT ITS DRAFT PROTOCOL FOR ATLANTIC SEISMIC

CRE has previously filed two comments that are relevant to the PEIS and seismic.⁹ BOEM’s responses to these two comments agree with CRE on an important point: BOEM will have to prepare a new Information Collection Request (“ICR”) for public comment and for Office of Management and Budget (“OMB”) review before BOEM could regulate seismic in a manner that is significantly different from current regulation under NTL No. 2007-G02.

First, on September 30, 2011, BOEM published Federal Register notice that BOEM was submitting an ICR to OMB for review. This notice also responds to comments that CRE submitted on BOEM’s draft ICR. This ICR is for regulations that apply to offshore seismic.¹⁰

Second, on October 21, 2011, BOEM published Federal Register notice that BOEM was submitting another ICR to OMB for review. This notice responds to comments that CRE submitted on BOEM’s draft ICR. This ICR is also for regulations that apply to offshore seismic.¹¹

⁷ Page 4-231 of document available online at <http://www.boem.gov/Environmental-Stewardship/Environmental-Assessment/NEPA/nepaprocess.aspx>. Click on “Gulf of Mexico OCS Oil and Gas Lease Sale: 2012; Central Planning Area Lease Sale 216/222; Final Supplemental Environmental Impact Statement; Volume I: Chapters 1-4; Volume II: Chapters 5-8, Appendices, and Keyword Index.”

⁸ CRE takes no position in these comments on the DPEIS’ specific proposed temporal and zoning restrictions for the North Atlantic Right Whale.

⁹ CRE’s comments on the September 30th ICR are available in www.regulations.gov, Docket ID # BOEM-2011-0011-0003, <http://www.regulations.gov/#!documentDetail;D=BOEM-2011-0011-0003>. CRE’s comments on the October 21st ICR are available in www.regulations.gov, Docket ID # BOEM-2011-0036-0003, <http://www.regulations.gov/#!documentDetail;D=BOEM-2011-0036-0003>.

¹⁰ BOEM’s September 30, 2011 Federal Register notice of the ICR’s submission to OMB is available online at <http://www.gpo.gov/fdsys/pkg/FR-2011-09-30/html/2011-25262.htm>. The OMB file for this ICR is available online at http://www.reginfo.gov/public/do/PRAViewICR?ref_nbr=201108-1010-003.

¹¹ BOEM’s October 21, 2011 Federal Register notice of the ICR’s submission to OMB is available online at <http://www.gpo.gov/fdsys/pkg/FR-2011-10-21/html/2011-27331.htm>.

The OMB file for this ICR is available online at

BOEM's September 30th Federal Register notice explains:

"We received two comments in response to the Federal Register notice. The first comment, from the Marine Mammal Commission, supported our request to OMB. The second comment, from the Center for Regulatory Effectiveness, requested that we should state that we are not submitting any ICRs for seismic regulations that are more stringent than current regulations, including NTL 2007-G02. Response: For the renewal of this ICR, we are not requesting anything more stringent than in current NTL 2007-G02 and 30 CFR 250, subpart B regulations, which are covered under OMB Control Number 1010-0151. We have no plans, at this time, to change the content of or the resultant burdens imposed by NTL 2007-G02. Therefore, BOEMRE should move forward with the required information collection to ensure compliance with OMB deadlines. If the lawsuit settlement or resulting decree requires changes to the NTL and/or DOI regulations, information collection coordination and OMB approval will occur before any NTL is reissued or regulations are promulgated."¹²

Similarly, BOEM's October 21st Federal Register Notice explains:

"We received two comments in response to the Federal Register notice. The first commenter, the Marine Mammal Commission stated that it was in support of our submission to OMB. The second commenter, Center for Regulatory Effectiveness, requested two actions. One, that we should state that we are not submitting any ICR for seismic regulations that is more stringent than current regulations, including NTL 2007-G02. Response: For the renewal of this ICR, we are not requesting anything more stringent than in current 30 CFR 551 regulations; NTL 2007-G02 is covered under OMB Control Number 1010-0151. Second, that we wait to submit the ICR to OMB. There is current on-going litigation pertaining to seismic regulations (BOEM vs environmental plaintiff(s)). Response: This particular ICR renewal pertains mostly to revising the form currently in use due to new developments in technology; we are not requesting any new requirements. If the lawsuit settlement or decree requires changes to the form and/or DOI regulations, information collection coordination and OMB approval will occur before the form is reissued or regulations are promulgated."¹³

The referenced NTL No. 2007-G02 is entitled "Implementation of Seismic Survey Mitigation Measures and Protected Species Observer Program." Since the above-quoted Federal

http://www.reginfo.gov/public/do/PRAViewICR?ref_nbr=201106-1010-004

¹² Page 60681 of BOEM's September 30, 2011 Federal Register notice of the ICR's submission to OMB, available online at <http://www.gpo.gov/fdsys/pkg/FR-2011-09-30/html/2011-25262.htm>.

¹³ <http://www.gpo.gov/fdsys/pkg/FR-2011-10-21/html/2011-27331.htm>, page 65523.

In the above-quoted Federal Register notices, BOEM responds to CRE comments which explain in greater detail that environmental group plaintiffs are suing BOEM in New Orleans federal court over regulation of seismic in the GOM. CRE's ICR comments state concerns regarding the regulatory impact of any settlement, and the need for public comment on and OMB review of any such impact.

register notices, BOEM has replaced this 2007 NTL with a 2012 NTL: *Notice to Lessees and Operators of Federal Oil, Gas, and Sulphur Leases in the OCS, Gulf of Mexico Region, Implementation of Seismic Survey Mitigation Measures and Protected Species Observer Program*.¹⁴ This 2012 NTL is substantially the same as the 2007 NTL. The 2012 NTL states that it:

“supersedes and replaces NTL No. 2007-G02. It does not introduce any new types of mitigation measures; however, it clarifies how you should implement seismic survey mitigation measures, including ramp-up procedures, the use of a minimum sound source, airgun testing and protected species observation and reporting. The measures contained herein apply to all onlease/ancillary activity surveys you conduct under 30 CFR 550 and all off-lease surveys you conduct under 30 CFR 551.”¹⁵

By contrast, on page C-39, Vol. II, of the DPEIS there is a “Draft Seismic Airgun Protocol.” BOEM acknowledges that this Draft Protocol differs significantly from NTL 2012-G02, which we discuss above in these comments.

We assume that the DPEIS’ new Draft Protocol is only proposed for the Atlantic, and that it is not intended for any other area. We ask BOEM to confirm or deny our assumption in BOEM’s response to CRE’s comments.

For the reasons stated above, BOEM’s current ICRs do not authorize the DPEIS’ new Draft Protocol. This new Draft Protocol could not be applied in the Atlantic or anywhere else without a new ICR and OMB review.

Unless there is something about the Atlantic that requires and justifies a different seismic protocol, the DPEIS Draft protocol should not be applied anywhere.¹⁶ CRE’s ICR comments referenced above explain that, for at least two reasons, BOEM should not send OMB any revised ICRs for seismic regulation that is more stringent than currently imposed by NTL-G02. First, BOEM has repeatedly and correctly stated that current regulation of seismic adequately protects the environment. In other words, current regulation of seismic is all that’s necessary for the proper performance of BOEM’s functions. Therefore, under the Paperwork Reduction Act BOEM should not submit, and OMB should not approve, ICRs for more stringent seismic regulation. Such ICRs would violate the PRA because they would be unnecessary for proper performance of BOEM’s functions.

Second, any ICRs for more stringent seismic regulation would also violate the accuracy requirement of BOEM’s Information Quality Act Guidelines. The PRA requires that BOEM certify that ICRs are necessary for the proper performance of BOEM’s functions. That

¹⁴ This document is available online at <http://www.bsee.gov/Regulations-and-Guidance/Notices-to-Lessees/2012/2012-JOINT-G02-pdf.aspx>.

¹⁵ *Id.*

¹⁶ We acknowledge the possibility that protecting the endangered North Atlantic Right Whale might justify some reasonable time and place restrictions for G&G in the Atlantic. However, the DPEIS’ new Draft Protocol does not contain any such provisions.

certification would be inaccurate in the case of ICRs for more stringent seismic regulation. Current regulation of seismic, and ICRs based on current regulation, are all that is necessary for proper performance of BOEM's functions.

CRE's comments on these two ICRS are incorporated by reference into these comments by CRE on the DEIS.¹⁷

IV. BOEM SHOULD NOT USE THE AIM MODEL UNTIL IT HAS BEEN PEER REVIEWED FOR APPLICATION IN THE ATLANTIC

A) The Application Of The AIM Model in the DPEIS Should Be Peer Reviewed In Order To Determine Whether It Is CREM Compliant. Peer Review Should Be Conducted In Accordance With OMB's Peer Review Bulletin, and the Peer Reviewers Should Be Informed Of BOEM's IQA Requirements.

The DPEIS, Vol. 1, page 2-12, states that

“Incidental take of marine mammals was estimated for the proposed action scenario using the Acoustic Integration Model© (AIM), which is a 4D, individual-based, Monte Carlo statistical model designed to predict the exposure of receivers to any stimulus propagating through space and time (Appendix E).”

The DPEIS, Vol. 2, page E-3, further states that

“MAI's Acoustic Integration Model©, or AIM, is a software package developed to predict the acoustic exposure of marine animals from an underwater sound source. The unique and principal component of AIM is a 3D movement engine, which programs the geographic and vertical movements of sound sources and simulated marine animals. In 2006, the Center for Independent Experts (CIE) conducted a review and assessment of AIM. The CIE panel concluded that AIM is a credible tool for developing application models (Independent System for Peer Review, 2006).”

The DPEIS neglects to mention that the 2006 AIM Peer Review by CIE also stated that

“The three terms of reference required that the Panel evaluate whether AIM correctly implements the models and data upon which it is based; whether animal movements are adequately simulated; and whether AIM meets the Council for Regulatory Monitoring [sic] (CREM) guidelines for model development and evaluation.”

¹⁷CRE's comments on the September 30th ICR are available in www.regulations.gov, Docket ID # BOEM-2011-0011-0003, <http://www.regulations.gov/#!documentDetail;D=BOEM-2011-0011-0003>. CRE's comments on the October 21st ICR are available in www.regulations.gov, Docket ID # BOEM-2011-0036-0003, <http://www.regulations.gov/#!documentDetail;D=BOEM-2011-0036-0003>.

“The Panel agreed that AIM appears to be correctly implemented. However, all panelists had recommendations for further testing to be undertaken. They also agreed that animal movement appears to be appropriately modeled within AIM given the inadequacies of the available data.

With regard to whether AIM satisfies the CREM guidelines there was some diversity of opinion. This is understandable given that the CREM guidelines are not *directly* applicable to AIM since it is not an application model (but a tool for developing such models).”

“It follows, that the Panel agree that the use of AIM can lead to models which will meet the CREM guidelines. However, such models, at this stage, would need to be evaluated on a case-by-case basis (i.e., merely using AIM is not sufficient; it must be used appropriately for the specific application).”¹⁸

There is no public record showing that AIM has been peer reviewed for its application in the Atlantic DPEIS. If BOEM believes that peer review of the DPEIS application of AIM has occurred, then BOEM should identify those peer reviews in the public record, and BOEM should allow public comment on those peer reviews.

Peer review should be performed in accordance with OMB’s Peer Review Bulletin, and in order to determine each AIM application’s compliance with CREM Guidelines.¹⁹

The AIM peer reviewers should be advised of the Information Quality Act requirements applicable to BOEM. As OMB explained to EPA in a peer review proceeding:

“Since the development of Agency Information Quality (IQ) guidelines required by statute, many agencies have been using [peer review] charge language that tracks with the standards of their own IQ guidelines. For example, such language often focuses on whether or not the information in question is accurate, clear, complete, transparently and objectively described, and scientifically justified. We believe it may be useful for EPA to follow a similar approach and incorporate some of the language from your IQ guidelines into the formulation of the [peer review] charge questions.”²⁰

¹⁸ AIM Peer Review, page 1, available online at http://www.nmfs.noaa.gov/pr/pdfs/permits/lfa_aim_review.pdf.

¹⁹ OMB’s Peer Review Bulletin is available online at <http://www.whitehouse.gov/sites/default/files/omb/assets/omb/memoranda/fy2005/m05-03.pdf>.

The CREM Models Guidance is available online at <http://www.epa.gov/crem/cremlib.html#guidance>.

²⁰ OMB document available online at http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cts=1331655089425&ved=0CCUQFjAA&url=http%3A%2F%2Fpub.epa.gov%2Ffeims%2Ffeimscomm.getfile%3Fp_download_id%3D495502&ei=P3FfT-jzLsPh0QGw18SuBw&usq=AFQjCNGd_cMw9iCZalNgLZzgBTspzJwzcg&sig2=Q_vr76vteXyCY3lWiOb98.

2) The AIM Model should be externally peer reviewed to determine whether the behavioral effects data input into the model are adequate to estimate Takes.

The Aim Peer review report also stated:

“It was generally agreed by the Panel that the animal movement methods used in AIM were appropriate given the level of available data. The qualifier is important here. The Panel did not perceive a problem with AIM’s animal movement methods. They do acknowledge a problem with the absence of the type of data needed to realistically simulate animal movement within AIM.

Relevant extracts:

- At this point in time, I believe the reliability of AIM to assess the exposure hazard of marine mammals to anthropogenic sound is more limited by the realism of the animate engine module of AIM than the sound propagation modules ... animal behavior is far more complicated than behavior of physical systems (Getz 2006).
- ... requires that aggregative social, feeding, or predator avoidance behavior of individuals be taken into account. In the absence of data that allows aversion parameters to be set that would simulate such behavior, plausible scenarios need to be investigated under “what if ...?” scenarios that assumed that individuals aggregate for various reasons (Getz 2006).”²¹

The inadequacy of AIM’s knowledge base is further demonstrated by the discussion of AIM in BOEM’s 2011 Application to NMFS for GOM Take rules under the Marine Mammal Protection Act. For example:

“2.6.6 Animal Behavior Parameters

The specific animal behavioral parameters that were used in this analysis are provided below. Where the “Surfacing/Dive Angle” column is empty, there were no meaningful data available and, as such, 75° was used as a default value...”²²

There were “no meaningful data available,” and “75°” was used as AIM’s default value, for the vast majority of marine mammals modeled: *i.e.*, beaked whales; dwarf and pygmy sperm whales; blackfish: false killer whale, pygmy killer whale, melon-headed whale, and pilot whale; killer whales: Risso’s dolphin; bottlenose dolphin; stenella: spinner, atlantic/pantropical spotted, and striped dolphins; fraser’s dolphin; and rough toothed dolphin.

The 2011 application candidly acknowledges many other inadequacies in the data that AIM uses to model behavioral effects on specific marine mammals in the GoM. For example:

²¹ AIM Peer Review, page 7, available online at http://www.nmfs.noaa.gov/pr/pdfs/permits/lfa_aim_review.pdf

²² 2011 Application, Appendix A at page 61, available online at http://www.nmfs.noaa.gov/pr/pdfs/permits/boemre_application2011.pdf

“Bryde’s Whale

There is a paucity of data for this species. Since they are similar in size, data for both Sei and Bryde’s whales have been pooled to derive parameters. Note that Sei whales are rare in the Gulf of Mexico, but their similarities to Bryde’s whales was used to determine some of their movement parameters.

“Surface Time

No direct data available, fin whale values used.

Dive Depth

No direct data available, fin whale values used.”²³

“Beaked Whales

Data on the behavior of beaked whales are sparse. Therefore, all beaked whale species have been pooled into a single animal.”²⁴

“Dwarf and Pygmy Sperm Whales (Kogia spp.)

Data on dwarf and pygmy sperm whales are rare, and these species are very similar, so data for these two species have been combined.”²⁵

“Blackfish: False Killer Whale, Pygmy Killer Whale, Melon-headed Whale, Pilot Whale

Studies describing the movements and diving patterns of these animals are rare and sparse. Therefore, they have been combined into a single “blackfish” category. As more data become available, these species will be split into separate animals”²⁶

“Killer Whale

There is a remarkable paucity of quantitative data available for killer whales, considering their coastal habitat and popular appeal. Nevertheless, most data from “blackfish” were used to model *Orcinus orca*, with the exception of dive depth. The different feeding ecology of these species makes very deep dives apparently unnecessary. When additional data allow, separate animals for “resident” and “transient” killer whales will be developed.”²⁷

“Risso’s Dolphin

Dive Time

²³ *Id.* at page 61.

²⁴ *Id.* at page 64.

²⁵ *Id.* at page 65.

²⁶ *Id.* at page 66.

²⁷ *Id.* at page 68.

No data on dive times could be found. The values for blackfish, which have a similar ecological niche, were used.”²⁸

“Rough toothed dolphin

Dive Depth

No dive depth data are available; depths are based upon other species.”²⁹

Nothing in the DPEIS suggests that these fatal problems with the AIM input data have been solved.

V. PAM SHOULD BE REQUIRED AND PAMGUARD ENCOURAGED

The DPEIS at Vol.1, pages ix-x, asks whether Passive Acoustic Monitoring (“PAM”) should be encouraged or required in the Atlantic. For the following reasons, we recommend that PAM be required and use of PAMGUARD should be encouraged.

A) NMFS Already Routinely Includes PAM As a Monitoring or Mitigation Requirement in Ihas, Loas or Rules That NMFS Issues Under the MMPA.

A published article by NMFS’ staff discusses NMFS’ currently required uses of PAM.³⁰ In just the year 2011, NMFS included PAM requirements in, *e.g.*:

- An L-DEO seismic survey in the Western Gulf of Alaska, available online at <http://www.nsf.gov/geo/oce/envcomp/shillington-2011-final-ea-23-may.pdf>, and issued permit at http://www.nmfs.noaa.gov/pr/pdfs/permits/ldeo_wgoa_issued_iha.pdf;
- An industry seismic survey in Cook Inlet, Alaska, available online at http://www.nmfs.noaa.gov/pr/pdfs/permits/apache_ak_iha_application2011.pdf;
- University of Alaska Geophysics Institute seismic survey in the Arctic Ocean, using PAM , available at http://www.nmfs.noaa.gov/pr/pdfs/permits/uagi_iha_issued.pdf;
- An industry seismic IHA for the Chukchi, available online at http://www.nmfs.noaa.gov/pr/pdfs/permits/statoil_iha_issued2011.pdf; and
- An USGS seismic survey in Central Gulf of Alaska, available online at http://www.nmfs.noaa.gov/pr/pdfs/permits/usgs_goa_iha2011.pdf.

²⁸ *Id.* at page 70.

²⁹ *Id.* at page 74.

³⁰“The use of acoustic monitoring in the National Marine Fisheries Service marine mammal incidental take authorizations,” Shane Guan, Office of Protected Resources, NOAA/NMFS, presented at 160th Meeting of the Acoustical Society of America (Nov. 15 – 19, 2010), Session 1pAB: Animal Bioacoustics, available online at <http://scitation.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=PMARCW000011000001010002000001&idtype=cvips&doi=10.1121/1.3606451&prog=normal>

The Navy and NMFS are also requiring that PAM be used with Navy sonar. With NMFS' concurrence, the Navy stated that "Passive acoustic monitoring for low frequency sounds generated by marine mammals will be conducted when SURTASS [sonar] is deployed."³¹

Recent Brazilian studies have recommended the increased use of PAM to help protect sea life from marine sound:

"The possibility of detecting marine mammals by hydrophone arrays linked to special software (Passive Acoustic Monitoring – PAM) has shown promise as a monitoring tool for some species of marine mammal with frequent vocalization (e.g. Swartz et al., 2002; Mellinger, 2004). PAM has been suggested as an alternative or additional technique to improve the effectiveness of monitoring marine mammals (Lewis et al., 1998). This acoustic technique has been used to complement visual surveys during periods of darkness and may have advantages over the visual technique in areas with strong wind and poor visibility (Swartz et al., 2003). Considering all of these factors, it is recommended to start experiments with PAM in Brazilian waters as an auxiliary tool to document the presence of marine mammals during seismic surveys."³²

B) BOEM's NTL Comes Close To Requiring PAM

BOEM's *Notice to Lessees and Operators of Federal Oil, Gas, and Sulphur Leases in the OCS, Gulf of Mexico Region, Implementation of Seismic Survey Mitigation Measures and Protected Species Observer Program* ("NTL") has a section which strongly encourages the use of PAM:

“Experimental Passive Acoustic Monitoring

Whales, especially sperm whales, are very vocal marine mammals, and periods of silence are usually short and most often occur when these animals are at the surface and may be detected using visual observers. However, sperm whales are at the greatest risk of potential injury from seismic airguns when they are submerged and under the airgun array. Passive acoustic monitoring appears to be very effective at detecting submerged and diving sperm whales, and some other marine mammal species, when they are not detectable by visual observation. BOEM and BSEE strongly encourage operators to participate in an experimental program by including passive acoustic monitoring as part of the protected species observer program. Inclusion of passive acoustic monitoring does relieve an operator of any of the mitigations (including visual observations) in this NTL **with the following exception:** Monitoring for whales with a passive acoustic array by an observer proficient in its use will allow ramp-up and the subsequent start of a seismic survey during times of reduced visibility (darkness, fog, rain,

³¹ <http://www.surtass-lfa-eis.com/Measures/index.htm>.

³² Effectiveness of Monitoring Marine Mammals during Marine Seismic Surveys off Northeast Brazil, Parente and de Araújo, *Journal of Integrated Coastal Zone Management* 11(4):409-419 (2011), available online at http://www.aprh.pt/rgci/pdf/rgci-251_Parente.pdf.

etc.) when such ramp-up otherwise would not be permitted using only visual observers. If you use passive acoustic monitoring, include an assessment of the usefulness, effectiveness, and problems encountered with the use of that method of marine mammal detection in the reports described in this NTL. A description of the passive acoustic system, the software used, and the monitoring plan should also be reported to BSEE at the beginning of its use.”³³

C) BOEM Should Require PAM in the Atlantic Because PAM Is A Valuable Supplement to Visual Monitoring

NMFS rejects as impracticable arguments that seismic should shut down during times of poor visibility. NMFS instead requires PAM during these times in order “to further enhance the detection of marine mammals.”³⁴ For the same reason, BOEM should require PAM use in the Atlantic during times of poor visibility, especially since NMFS is already requiring its use under the MMPA.

D) BOEM Should Encourage Use of PAMGUARD

NMFS recently proposed to issue a seismic IHA to L-DEO which includes PAMGUARD use. NMFS explains here that

“Passive Acoustic Monitoring

Passive acoustic monitoring will complement the visual monitoring program, when practicable. Visual monitoring typically is not effective during periods of poor visibility or at night, and even with good visibility, is unable to detect marine mammals when they are below the surface or beyond visual range. Acoustical monitoring can be used in conjunction with visual observations to improve detection, identification, and localization of cetaceans. The acoustic monitoring will serve to alert visual observers (if on duty) when vocalizing cetaceans are detected. It is only useful when marine mammals call, but it can be effective either by day or by night, and does not depend on good visibility. The acoustic observer will monitor the system in real time so that he/she can advise the visual observers if they acoustic detect cetaceans. When the acoustic observer determines the bearing (primary and mirror-image) to calling cetacean(s), he/she alert the visual observer to help him/her sight the calling animal(s)....

The acoustic signals received by the hydrophones are amplified, digitized, and then processed by the Panguard software.”³⁵

³³ This document is available online at <http://www.bsee.gov/Regulations-and-Guidance/Notices-to-Lessees/2012/2012-JOINT-G02-pdf.aspx>

³⁴ NMFS’ Federal Register of IHA issued to Shell for seismic in Cook Inlet, Alaska, 77 FR 27724 (May 11, 2012), available online at <http://www.gpo.gov/fdsys/pkg/FR-2012-05-11/pdf/2012-11296.pdf> .

³⁵ Page 25984 of Federal Register notice available online at <http://www.gpo.gov/fdsys/pkg/FR-2012-05-02/pdf/2012-10627.pdf>

Academic groups (University of St. Andrews, Oregon State University, Herriot Watt University, and Scripps Institute of Oceanography), environmental groups (EcoLogic), and select oil and gas companies (through the International Association of Oil and Gas Producers) have spent considerable time, effort and money developing the freely available version of PAM called PAMGUARD. The PAMGUARD web site discusses PAMGUARD in considerable detail, and provides free, public access to PAMGUARD.³⁶

This site explains why PAMGUARD should be used as a supplement to visual monitoring, and it is worth quoting at some length:

“The default method for detecting marine mammals at sea is to look for them. Visual observations play a vital role, but marine mammals are difficult to spot on the sea surface, especially when weather and light conditions are poor. In addition...visual techniques are next to impossible at night but often operators wish to continue noise producing activities round the clock...[A]coustic cues can often be detected more reliably at greater ranges and are less affected by weather and sighting conditions and animals can be detected acoustically equally well day and night. Passive Acoustic Monitoring isn't a panacea but for many species it can significantly increase the probability that they are detected and increase the effectiveness of mitigation.”

“WHY DID WE NEED PAMGUARD?”

Good acoustic monitoring software existed before PAMGUARD but there were a number of reasons that justified developing something new.

In the first place, it was realised that there was a real value in having a single software that marine mammal observers (MMOs) could become familiar with and use on a variety of different vessels. Ideally that software should be freely available, interface to a wide range of hardware configurations and work on many different computer platforms. (Pamguard achieved cross platform compatibility by being written in Java.)

None of the existing programs were open source. This meant that the functioning and performance of the algorithms within them was often not clear and it wasn't possible for a group of users to contribute to and to support it. There was also a long term risk that the software might be withdrawn from use or become outdated.

In most cases there was no commitment to supporting and updating the software and as it wasn't open source it would be difficult for other programmers to

³⁶ The industry-sponsored PAMGUARD website is available online at <http://www.pamguard.org/home.shtml>

provide such support. Some of the software, though excellent, was not designed for real time monitoring by a single operator in field conditions.”³⁷

PAMGUARD has now undergone beta testing.³⁸

BOEM should encourage the use of PAMGUARD by discussing it favorably in the final PEIS for the Atlantic, and in other EISs and other appropriate documents published by BOEM.

VI. BOEM’S IQA REQUIREMENTS APPLY TO THIRD-PARTY OR OUTSIDE INFORMATION IF BOEM USES OR RELIES ON THE INFORMATION

The DOI/BOEM IQA requirements are available online,³⁹ and they won’t be discussed in detail here, except to emphasize their applicability to outside or third-party data that BOEM uses or relies on.

The DOI/BOEM IQA guidelines state they apply to third party information

“where the Department distributes information submitted by a third party in a manner that suggests that the Department endorses or adopts the information, or indicates in its distribution that it is using or proposing to use the information to formulate or support a regulation, guidance, or other Departmental decision or Position.”

“V. Third Party Information Under the Information Quality Guidelines.

If the Department relies upon technical, scientific, or economic information submitted or developed by a third party, that information is subject to the appropriate standards of objectivity and utility. The standards of these Information Quality Guidelines apply not only to information that the Department generates, but also to information which can be verified that other parties provide to the Department, if the Department disseminates or relies upon this information. In instances where the information is relied upon but is not verifiable, the source must be made transparent to the public, and such original information will not be subject to these Information Quality Guidelines.

Departmental personnel who conduct scientific activities shall be held accountable for the integrity of the information they collect and analyze, and the conclusions they present.”⁴⁰

³⁷ PAMGUARD site available online at http://www.pamguard.org/31_PamguardBackground.html.

³⁸ Ocean Science Consulting, “Advisors to the New Zealand Government,” blog entry dated March 15, 2012, available online at <http://www.osc.co.uk/blog/index.php/2012/03/ongoing-beta-testing-of-pamguard/>.

³⁹ See <http://www.boemre.gov/qualityinfo/PDF/MMSQualityInfoGuidelines-Final.pdf> for the MMS/BOEM IQA Guidelines, and <http://www.doi.gov/archive/ocio/guidelines/515Guides.pdf> for the DOI IQA Guidelines.

OMB explains that "if an agency, as an institution, disseminates information prepared by an outside party in a manner that reasonably suggests that the agency agrees with the information this appearance of having the information represent agency views makes agency dissemination of the information subject to these [DQA] guidelines."⁴¹

Several months later, in reviewing agency-specific DQA guidelines, OMB further explained how the DQA guidelines covered outside or "third party" information relied upon by an agency in a rulemaking. OMB used the draft Department of Transportation ("DOT") DQA guidelines as an example:

"DOT incorporated these principles from the OMB guidelines by stating that an agency disseminates information if it relies on information in support of a rulemaking. 'If the Department is to rely on technical, scientific, or economic information submitted by, for example, a commenter to a proposed rule, that information would need to meet appropriate standards of objectivity and utility' (DOT, 3). 'The standards of these guidelines apply not only to information that DOT generates, but also to information that other parties provide to DOT, if the other parties seek to have the Department rely upon or disseminate this information or the Department decides to do so.' (DOT, 8). . . . Other agencies, particularly those likely to be involved with using and/or disseminating 'influential' information, must include similar provisions in their guidelines."⁴²

In correspondence with CRE, NMFS acknowledges that both the OMB Government-wide and NMFS' own DQA guidelines apply to outside or third-party information if NMFS uses or relies on that information.⁴³

VII. BOEM SHOULD ISSUE AN ICR FOR PUBLIC INPUT ON NON-FEDERAL DATA THAT SHOULD BE USED FOR G&G ACTIVITIES IN THE ATLANTIC

BOEM should seek public input on which non-Federal data and information to use for the G&G Activities in the Atlantic. Accordingly, BOEM should obtain an ICR for the public input on non-Federal data to be incorporated, and provide the public with a public comment period on the ICR.

This is the precise procedure followed by the Department of Health and Human Service (HHS) when HHS sought "Public Input to Nominate Non-Federal Health and Health Care Data Sets and Application for Listing on Healthdata.gov." HHS set an important precedent for incorporating

⁴⁰ Pages 6,7 at <http://www.doi.gov/archive/ocio/guidelines/515Guides.pdf>.

⁴¹ Page 8454 of OMB Federal Register notice available online at <http://www.whitehouse.gov/sites/default/files/omb/assets/omb/fedreg/reproducible2.pdf>.

⁴² *Memorandum for the President's Management Council*, June 10, 2002, on "Agency Draft Information Quality Guidelines," from John D. Graham, Administrator of OMB's Office of Information and Regulatory Affairs, at 6-7 of Attachment, available online at http://www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/iqg_comments.pdf.

⁴³ See, e.g., NMFS' letter to CRE available online at http://thecre.com/pdf/NOAA-IWC_Letter.pdf.

non-Federal data into federal databases, specifically data.gov. BOEM should closely follow the process established by HHS by obtaining an ICR.

BOEM should establish “rules of governance” for allowing non-federal parties that contribute to G&G activities in the Atlantic to have a link to the BOEM website. This would permit greater stakeholder involvement and public participation in the Atlantic OCS G&G activities. The rules governing the family of CRE’s Interactive Public Dockets should be considered when establishing such rules:

1. *No Barrier to Entry*: Any person or organization can post on a CRE IPD as long as the posts do not contain profanity and do not include personal attacks on federal employees.
2. *Interactive*: All posts on CRE IPD’s have the capability for a reader to either post comments on an existing post or initiate a new post.
3. *Accept Criticism*: The host of the IPD must allow dissenting opinions to be expressed on the IPD.
4. *Hassle Free*: CRE IPD’s require no registration, no personal information including email address and will accept anonymous posts and with large attachments.

VIII. BOEM SHOULD PROCEED WITH THE PROPOSED G&G ACTIVITIES PURSUANT TO THE PROPOSED ACTION, ALTERNATIVE A.

The proposed action, Alternative A, would authorize G&G activities in support of all BOEM program areas – oil and gas exploration and development, renewable energy, and marine minerals – throughout the entire Area of Interest in Atlantic. Importantly, the proposed action should not be controversial because the scope of the PEIS does not evaluate specific proposals for oil and leasing, it merely provides an environmental analysis of G&G activities to gain a better understanding of the ocean bottom and subsurface for the possibility of future renewable energy development, extraction of marine minerals, and oil and gas development. The proposed action “would provide information about the location and extent of oil and gas reserves, bottom conditions for oil and gas or renewable energy installations, and marine minerals off the Atlantic coast of the U.S.”⁴⁴ The proposed action would provide BOEM with the appropriate knowledge and data to maximize ocean resources in the Atlantic, while also harmonizing competing ocean uses.

The proposed action, Alternative A, is the appropriate manner in which BOEM should conduct G&G activities in the Atlantic. BOEM concludes that “Alternatives A and B would both fulfill the statutory mission and responsibilities of this Agency for permitting G&G activities in the program areas managed by BOEM. Alternatives A and B both provide protective measures for important biological resources in the AOI that in some cases are protected species.” And as BOEM concedes, “potential impacts of Alternatives A and B are broadly similar,” and “most impacts under all three alternatives would be **negligible** or **minor**, and no **major** impacts were

⁴⁴ BOEM, *Atlantic OCS Proposed Geological and Geophysical Activities Mid-Atlantic and South Atlantic Planning Areas Draft Programmatic Environmental Impact Statement*, page 1-8.

identified.”⁴⁵ Nevertheless, Alternative A would provide BOEM with the most accurate and comprehensive understanding of the resources available in the Atlantic, while also minimizing impact to marine mammals. Thus, BOEM should proceed with Alternative A, but should do so by incorporating the recommendations in this comment above into the proposed action.

The proposed action will “use the information obtained by the G&G surveys to make informed business decisions regarding oil and gas reserves, engineering decisions regarding the construction of renewable energy projects, and informed estimates regarding the composition and volume of marine mineral resources.”⁴⁶

IX. BOEM SHOULD MAKE THE PUBLIC COMMENTS AVAILABLE TO THE PUBLIC

Public access to public comments on a public proceeding is basic prerequisite of open government.

For decades federal agencies have made public comments available to the public, first through docket rooms and then, as the internet developed, through online systems developed by each agency. Agency-specific solutions to providing public access to public comments were superseded by [Regulations.gov](http://www.regulations.gov). President Obama has emphasized the importance of the public comment portal and has enhanced its operation.

Despite the Administration’s emphasis on the use of Regulations.gov to promote public participation and collaboration in agency proceedings, the Bureau of Land Management has repeatedly refused to release public comments on the 2012 Oil Shale and Tar Sands PEIS. Instead, BLM has chosen to bypass the open process in favor of their own comment processing system, a system which excludes the public from reading public comments. Moreover, BLM’s internal comment processing system has the capabilities to post the comments online, which the previous administration had done in the 2008 Oil Shale and Tar Sands PEIS.⁴⁷ Despite these capabilities, BLM has chosen secrecy over transparency in the PEIS process.

BLM’s lack of transparency is troubling, especially in light of the current Administration’s Open Government Initiative. CRE urges BOEM to embrace a more transparent process in conducting the Atlantic PEIS by making the public comments available to the public immediately after the comment period closes.

⁴⁵ BOEM, *Atlantic OCS Proposed Geological and Geophysical Activities Mid-Atlantic and South Atlantic Planning Areas Draft Programmatic Environmental Impact Statement*, page 2-55 (emphasis in the original).

⁴⁶ BOEM, *Atlantic OCS Proposed Geological and Geophysical Activities Mid-Atlantic and South Atlantic Planning Areas Draft Programmatic Environmental Impact Statement*, page 1-8.

⁴⁷ 2008 PEIS Comments available at

http://ostseis.anl.gov/involve/draftcomments/dsp_commentlist.cfm?PageNum=1&browse#rec

X. CONCLUSION AND RECOMMENDED ACTIONS

BOEM should confirm or deny that the DPEIS' new Draft Protocol for seismic airguns is only proposed for the Atlantic, and is not intended for any other water body.

BOEM's current ICRs do not authorize the DPEIS' new Draft Protocol for seismic airguns. BOEM will have to apply for a new ICR and justify this new Draft Protocol before it could be used anywhere. Given the success of the current regulation and ICRs, BOEM will have difficulty supporting the new more stringent Draft Protocols.

BOEM should not use the AIM Model to estimate Takes in the Atlantic until AIM has passed peer review in accordance with OMB's Peer Review Bulletin. The additional peer review should be performed in order to determine in part whether AIM's application in the Atlantic complies with CREM Guidelines. The additional peer review should also be performed in order to determine whether the behavioral effects data input into the model are adequate to estimate Takes.

The public should have an opportunity to participate in this peer review. BOEM should identify in the public record each and every AIM peer review that they believe has occurred. BOEM should allow public comment on those and all other peer reviews relevant to the DPEIS. All AIM peer reviewers should be advised of the IQA requirements applicable to BOEM. Passive Acoustic Monitoring ("PAM") should be required in the Atlantic, and PAMGUARD should be encouraged.

Further, BOEM should obtain an ICR for the public input on non-Federal data and information that should be incorporated into the proposed action, and provide the public with a public comment period on the ICR. In addition, any non-Federal information that BOEM uses or relies on must meet IQA requirements.

Finally, BOEM should pursue Alternative A in the PEIS, but should do so by incorporating all of the above recommendations.

The CRE appreciates the opportunity to submit these comments, and looks forward to the agency's response. If you need further information regarding any issue discussed in this comment letter, please do not hesitate to contact me at secretary1@mbsdc.com or (202) 265-2383.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Jim Tozzi". The signature is stylized and written in a cursive-like font.

Jim Tozzi
Member, Board of Advisors