```
1
            U.S. DEPARTMENT OF THE INTERIOR
 2
           BUREAU OF OCEAN ENERGY MANAGEMENT
 3
 4
 5
     In Re:
     Programmatic Environmental
 6
     Impact Statement
 7
     Proposed Geological and
     Geophysical Activities in the )
     Mid- and South Atlantic OCS
8
     Planning Areas
 9
10
11
12
               TRANSCRIPT OF PUBLIC HEARING
13
                      AFTERNOON SESSION
14
                         Sheraton Suites
                         422 Delaware Avenue
15
                         Wilmington, Delaware
                         Thursday, April 26, 2012
16
                         1:05 p.m.
17
18
19
     HELD BY: JAMES BENNETT - Division of
     Environmental Assessment Chief
20
21
     APPEARANCES:
22
         JILL LEWANDOWSKI
         MEGAN BUTTERWORTH
23
         KIM OLSEN
         ROBIN SCHURICHT
24
         CAREN MADSEN
25
```

MR. BENNETT: Well, good afternoon, 1 2 everybody. Welcome to this public hearing on the 3 draft programmatic environmental impact statement for geological and geophysical activities in the 4 Mid and South Atlantic. 5 Safety first. The exit is right 6 7 behind you there. There are also exits this way, 8 in the event of an emergency. The stairs are over by the elevator. And also, the restrooms 10 are just to the left by the reception desk. 11 My name is Jim Bennett. I'm the chief of the Division of Environmental Assessment 12 13 with the Bureau of Ocean and Energy Management at 14 headquarters. And I want to note that the Bureau of Ocean Energy Management, which was formed in 15 16 October of last year through reorganization, is responsible -- we are a bureau within the U.S. 17 18 Department of the Interior, and we're responsible 19 for the development and the environmental 20 protection of Outer Continental Shelf resources. 2.1 We are here to take your comments on 22 the draft programmatic EIS, but I want to make 23 sure that you're aware we have some people here 24 that if you have issues that you want to discuss 25 or questions that you have aside from any

- 1 comment-taking that we're going to do, we're here
- 2 for that purpose, as well.
- 3 These people include Jill
- 4 Lewandowski, who is a marine biologist with our
- 5 headquarters office. Megan Butterworth, who is
- 6 also a marine biologist at headquarters. And we
- 7 also have some folks from CSA International, who
- 8 do a lot of work for us on our Outer Continental
- 9 Shelf activities, including Kim Olsen, who is the
- 10 deputy project manager for this project, and
- 11 Robin Schuricht, who is outside at the reception
- 12 desk.
- So, like I said, we're here to hear
- 14 your comments. If you have questions, we'll be
- 15 happy to talk with you. And we would like,
- 16 before we take the comments, to give you a brief
- 17 overview of what the project is, and what the
- 18 environmental impact statement contains.
- 19 And with that, I'll turn it over to
- 20 Jill Lewandowski.
- MS. LEWANDOWSKI: Okay. So we're
- 22 going to take just a few minutes now to go
- 23 through the different parts of the document, the
- 24 purpose for it, what sort of content you can find
- 25 in there, what are the different alternatives or

- 1 policy options that we're considering here. And
- 2 you know, then, at that point, we'll move on to
- 3 taking actual official notes.
- 4 Just to give you an idea of where we
- 5 are, we have been doing a number of public
- 6 hearings since April the 16th. We're nearing the
- 7 end of them now. There's a few more -- two
- 8 happening today, both in Wilmingtons, and one
- 9 more in Atlantic City tomorrow.
- 10 So far we've had a pretty good
- 11 turnout in some cities, and there's been a lot of
- interest, so we have been pleased with the
- 13 turnout and the sorts of comments that we have
- 14 been receiving.
- What happens, if you're not familiar
- 16 with the NEPA process, this EIS is being issued
- 17 under the National Environmental Policy Act, and
- 18 that's basically the opportunity for us as the
- 19 Federal government to share with you what we're
- 20 thinking of, the things that we're considering as
- 21 we're looking at these potential actions, the
- 22 sorts of mitigations we're thinking of
- 23 considering, the different alternatives.
- 24 And what we do after we develop the
- 25 draft programmatic EIS is we put it out for

- 1 public comment. And that's probably what you all
- 2 have seen at this point, and we allow a comment
- 3 period of 60 days.
- 4 During that 60 days, people can
- 5 submit comments in writing. You can come to the
- 6 public meetings that we have, you can contact us
- 7 if you have questions. It's all generally
- 8 focused on being able to solicit that information
- 9 on what you think about the analysis that we've
- 10 provided so far, and what options that you have a
- 11 preference for.
- So again, we're here today to
- 13 provide you a little bit of an overview, and then
- 14 to also collect some comments from you. And we
- 15 do consider public input to be a very important
- 16 part of the NEPA process. It helps guide us into
- 17 what the stakeholders generally are feeling and
- 18 thinking about which direction that we should go.
- Now, the purpose of the EIS,
- 20 basically, it was developed to look at a suite of
- 21 geological and geophysical measures that we had
- 22 gotten about -- and we'll talk about this in a
- 23 minute, but we had received a number of
- 24 applications from industry, from the oil and gas
- 25 industry, to go ahead and explore the Outer

- 1 Continental Shelf in the Atlantic.
- We've also had a number of potential
- 3 wind farm locations that have also needed an
- 4 opportunity to explore those sites. And then we
- 5 do have a number of sand and gravel projects that
- 6 we operate in the Atlantic, where they also have
- 7 to use a lot of the same technology, albeit at
- 8 different intensive levels, to actually explore
- 9 these.
- 10 So what we wanted to do is look at
- 11 all of this programmatically, and see
- 12 cumulatively what the effects could be, may or
- 13 may not be, and what significant effects there
- 14 may or may not be, and make some decisions based
- 15 on that.
- So pretty much as we go through it
- 17 and I explain the alternatives, most of it is
- 18 based on a different level of mitigation
- 19 measures. And we'll explain that in a minute,
- and you'll see how we employ that to maybe help
- 21 provide some parameters to the surveys that may
- 22 or may not be decided on.
- This gives you an idea. We did want
- 24 to make the point that we have had interest from
- 25 industry. As the Government, we are not going

- 1 out there doing these surveys ourselves.
- 2 Generally industry has to come to us and request
- 3 it. And right now, we've had about 11 different
- 4 applications over the last few years to conduct
- 5 these more deep seismic surveys for oil and gas.
- We know there's been a number of
- 7 interests we've had for site assessment plans for
- 8 renewable projects like wind farms. And then, of
- 9 course, I mentioned we also have a sand and
- 10 gravel program that goes on, and those geological
- 11 surveys associated with the sand and gravel also
- 12 have to be permitted.
- This slide gives you an idea of the
- 14 types of areas and the interest levels. Where it
- darker, that's where more people have expressed
- 16 interest in exploring them, than where it
- 17 lighter.
- 18 And of course, this doesn't put into
- 19 effect any mitigations. This does not assume
- 20 that all these folks would be out there at the
- 21 same time, even if we were to approve them.
- So, the proposed action. I
- 23 mentioned there's a number of permits that we've
- 24 had in, but just to make it clear, it's for the
- 25 two planning areas. We do actually have actually

- 1 four planning areas in the Atlantic, but the only
- 2 two we're talking about here are the Mid-Atlantic
- 3 and the South Atlantic.
- 4 So it does not cover anything
- 5 essentially north of Delaware or south of sort of
- 6 the -- not even the midpoint of Florida. And it
- 7 is to cover not just oil and gas program
- 8 activities, but also renewable program activities
- 9 and marine minerals, is what we would call sand
- 10 and gravel.
- 11 Geological and geophysical. If
- 12 you're not familiar with those terms, geological,
- 13 that's a lot of things that are done sort of in
- 14 the ground to test, whether it be to drill, from
- 15 light, sort of shallow test drilling, not the
- 16 type of drilling you would see like with an
- 17 exploratory -- where they're actually going to
- 18 drill a well that could actually produce. This
- 19 is just some test drilling.
- Geophysical, most people are
- 21 familiar with seismic surveys. That's the type
- 22 of survey, geophysical survey that gets the most
- 23 interest. And they can use a lot of different
- 24 sources, sounds sources to do that. Sometimes
- 25 it's airguns, sometimes it could be a boomer, a

sparker, a chirper. 1 2 There's a lot of different things 3 that can be used, and the type of equipment that's used and the size of it has a lot to do 4 with what kind of effect there might be or may 5 not be on the environment. 7 Routine operations, we're going to 8 go through pretty much in the analysis. We do have a suite of subject matter experts that do 9 10 the analyses, with CSA International. 11 Basically what happens in an 12 analysis is you have meteorologists, 13 archaeologists, biologists, physical 14 oceanographers, socioeconomic. 15 You have all those folks that are 16 looking at this, and you're looking at what's 17 been proposed and you're looking at all the 18 different alternatives, and you're looking at all the available information and the science, and 19 you're trying to decide and provide a written 20 21 analysis of what you think the impact could be to the various resources, with and without the 22 23 mitigation. 24 And so, when we -- we do it 25 generally by routine operations, and you can see

- 1 the list there. And we also do the same analysis
- 2 for what we would call accidental events. In
- 3 this case it would be a fuel spill from a seismic
- 4 vessel.
- 5 And all the different "-ologies" I
- 6 mentioned, this slide gives you a little bit of
- 7 an idea of the different resource areas. This is
- 8 not a complete slide, but it will give you an
- 9 idea that we are trying to look at the
- 10 environment and the ecosystem as a whole, and not
- 11 just a few, you know, select resource groups out
- 12 of that.
- 13 Three alternatives that we've
- 14 identified in here. And again, we take the
- 15 proposed action, which is the level of activity
- 16 that's been put in front of us, whether it's been
- 17 through, again, applications we've received or
- 18 whether it's through interest that we know and
- 19 have been informed of that will be coming up.
- 20 And from there, when it comes --
- 21 because this is an EIS, it has a heavy focus on
- 22 noise exposure, because these -- the actions
- 23 themselves do put noise into the water.
- So the alternatives that we've
- 25 broken down in here are basically the first one,

- 1 alternative A, is going to include a lot of basic
- 2 mitigation that we already associate with seismic
- 3 surveys in other areas of the U.S.
- 4 We've also put on there a time area
- 5 closure for North Atlantic Right Whales, and also
- 6 put in some additional mitigation. And I'm going
- 7 to show you those maps in a minute, so you'll get
- 8 to see visually what we're talking about.
- 9 Alternative B, I would say that
- 10 takes all the mitigations that were in
- 11 alternative A and it adds some additional ones to
- 12 it. It expands the time area closures. It adds
- 13 a small time area closure for sea turtles that
- 14 are nesting in Florida.
- 15 It talks about a separation distance
- 16 between surveys that are operating at the same
- 17 time, in order to allow a greater movement
- 18 corridor if an animal needs to move around, move
- 19 around vessels that are operating.
- 20 And alternative B does also require
- 21 a passive acoustic monitoring. If you're not
- 22 familiar with that, we basically do require that
- 23 there's visual observers that are out there on
- 24 these vessels, and that within a certain distance
- 25 from the vessel, from the sound source, they look

- 1 for marine mammals and sea turtles. And if they
- 2 see one, then the equipment either can't be
- 3 started up or it has to be shut down.
- 4 What passive acoustic monitoring
- 5 does is it adds another component. In addition
- 6 to the visual observers, you actually have
- 7 somebody down there listening. That's all
- 8 they're doing. They're listening to the sounds
- 9 that are going on out there.
- 10 You can actually triangulate a
- 11 position of a whale, if you're able to pick up
- 12 their noise. Because we recognize you can't
- 13 always see the animals, you know. And if you can
- 14 listen as well as look, that could potentially be
- 15 a greater protective measure.
- 16 And then alternative C is kind of a
- 17 combination of no action and status quo. No
- 18 action meaning that we wouldn't move forth on any
- 19 oil and gas, but right now we do have some
- 20 approvals that are going on for the smaller
- 21 surveys that are associated with renewables and
- 22 sand and gravel. So that would sort of maintain
- 23 its status quo, where we would look at those
- 24 actions one action at a time.
- Okay. This is alternative A. So

- 1 we're looking here at the Right Whale closures,
- 2 and down in this area here you can see is where
- 3 there is critical habitat that's been designated
- 4 for the North Atlantic Right Whale.
- 5 And that's because that's an area
- 6 that's been identified by the National Marine
- 7 Fisheries Service as an area they do breed. They
- 8 have very new calves there, and it's an area that
- 9 has lots of protections to it, regardless of what
- 10 sort of anthropogenic activities might happen
- 11 there.
- 12 And there's also these corridors,
- 13 during certain times of the year, these pockets
- 14 that have been designated by NMFS again to be
- 15 reduced speed zones. So if you have a lot of
- 16 commercial vessels coming in there, there's an
- 17 issue with ship strikes from large ships and
- 18 Right Whales.
- 19 So we are just sort of -- we feel
- 20 that as a basic option in this alternative A,
- 21 that that's something that has to be in there;
- 22 that basically, we would have these time area
- 23 closures.
- MR. PFEISTER: How far out do
- 25 those -- do these areas qo?

1 They're about 20 MS. LEWANDOWSKI: 2 nautical miles. MR. PFEISTER: 20 nautical miles? 3 4 MS. LEWANDOWSKI: Yeah. 20 nautical miles. And so, I do also want to make the point, 5 and it's a very important point. These are time 6 7 area closures for the use of seismic airguns. There are other sources that can be used to do 8 these surveys that don't produce -- that are not 9 10 as intensive with the noise that they produce. 11 And those kind of surveys we would still consider 12 on a case-by-case basis with the appropriate 13 protective measures. 14 MR. NICHOLS: Do the alternative 15 time area closures pertain to the renewables 16 currently, or are they excluded in this closure? 17 MS. LEWANDOWSKI: Well, if a 18 renewables use -- the question was, do these time 19 area closures, would they also apply to 20 renewables? Yes, if they use the seismic airqun 2.1 it would. Same for sand and gravel. 22 So we're really making that 23 distinction between the use of the seismic airguns versus a small suite of other tools that 24 25 can be used, that we don't feel put the same

- 1 amount of energy into the water as an airgun.
- 2 So it really doesn't matter what
- 3 it's used for. It's just whether or not it's
- 4 used.
- 5 Okay. This is alternative B, and
- 6 you can see there's some additional areas. That
- 7 20 nautical mile corridor has generally been sort
- 8 of extended through this whole area. Down off of
- 9 Florida there's been -- there's a sea turtle
- 10 nesting area here, that there's a small closure
- 11 area that we would add with that.
- 12 And again, to reinforce, the closure
- 13 areas would be for the use of airguns. If
- 14 someone were to come to us not proposing to use
- 15 airguns, we would look at that, even if it falls
- 16 within those times of year. Okay?
- 17 And this is just a close-up off of
- 18 Brevard County, Florida, where you can see, here
- 19 is the sea turtle closure area.
- 20 And I'll show you a slide in a few
- 21 minutes that compares all of these alternatives
- 22 together. Oh. Actually, here it is. So,
- 23 alternative A would have the Right Whale closure.
- 24 Alternative B would expand that. And of course,
- 25 C is a sort of no action/status quo.

1 The seismic survey protocol, that's 2 the same across alternatives A and alternative B. 3 And the seismic survey protocol is basically, you have to have visual observers on board, you have 4 to establish a distance from the vessel that you 5 need to observe, and if a whale or a dolphin or a 6 7 sea turtle were to come up, or a pinniped, a seal,' were to come up within that established 8 area, then that visual observer could shut down 9 10 the survey until the animals were to pass. Or 11 you don't start up the survey. 12 The protocol also has a measure in 13 there for ramp-up, and that's basically where you 14 slowly turn on your sound source, and you add to 15 it gradually, so you don't put it on at full 16 intensity at once. You actually sort of build. 17 And the thought behind that is that 18 animals, if they find it bothersome, have the 19 opportunity to move away from the area before it 20 actually gets to a hearing level that might be 21 more bothersome. 22 MR. NICHOLS: My name is John 23 Nichols. I live in Middletown, Delaware. questioning the mitigation measures and asking 24 25 whether or not the -- any of the mitigation

measures currently apply to any activity 1 2 associated with renewable energy? 3 MS. LEWANDOWSKI: Renewables? Yes. MR. NICHOLS: Which ones, please. 4 5 MS. LEWANDOWSKI: Right now, again, if it's not an airgun, the time area closure --6 7 we haven't imposed a time area closure yet. This 8 would be an airgun or non-airgun issue. If a renewable was to propose an airgun and it was 9 within that time period within the time area 10 11 closure, that alternative would say the answer is 12 no, you can't. 13 If they propose another type -- and 14 this could be the same for oil and gas or sand and gravel. If they propose another type of 15 16 sound source during that time period where the closure is in place, we could consider it. Okay? 17 It's really, it's not what it's for, it's really 18 19 what equipment it's using. Okay? 20 MR. NICHOLS: Okay. 2.1 MS. LEWANDOWSKI: And then the 22 seismic survey protocol, that is -- sand and 23 gravel, renewables, they all use that. Passive acoustic monitoring. What 24 25 we do for alternative A is we have it optional

- 1 there. And why would it be optional? Well,
- 2 right now, as it stands, if you can't observe
- 3 that exclusion zone, that distance from the
- 4 vessel, then you can't start up your survey.
- 5 What we're saying in alternative A
- 6 is if you can still observe it acoustically by
- 7 listening through passive acoustic monitoring,
- 8 then that's an incentive for you to use it, and
- 9 you could start your surveys at night, if you
- 10 were able to observe your exclusion zone
- 11 acoustically.
- 12 Alternative B would require that
- 13 that be in place at all times. And then when you
- 14 get down to these -- the separation between the
- 15 simultaneous surveys, alternative A does not
- 16 require that. Alternative B would. And again,
- 17 that separation, the thought behind that is to
- 18 allow sort of a corridor for animals to move in
- 19 between vessels that might be out there at the
- 20 same time.
- 21 Also, guidance for vessel strikes,
- 22 marine debris awareness. These are all things
- 23 that we already have in place in other areas that
- 24 we would also implement here. And there's also
- 25 protocols for the non-airgun surveys that are

- consistent with what we apply for any type of 1 2 survey that's out there. Okay? 3 Just real briefly, so far with the draft, the initial analyses that the subject 4 matter experts have completed, this gives you a 5 general sense of where we felt were -- what we 6 7 felt were the sort of range, or the limit of 8 impacts to these different sources. 9 And you can see, certainly marine 10 mammals, sea turtles, are definitely going to be the ones that rise up, and having the greatest 11 12 potential for negligible to moderate impacts, 13 because the sound sources that are being used for 14 these surveys, for the most part these are the
- 17 potential for them to have effects.
- We also will use this NEPA process,

animals that will be able to hear them. And so,

19 and all the information that we gather through

because they hear them, there's a greater

- 20 it, to do a host of other consultations under a
- 21 variety of other statutes.

15

16

- We will do, under the Native Species
- 23 Act, we will consult with the Fish and Wildlife
- 24 Service and the National Marine Fisheries Service
- 25 about any endangered species that might be in the

area, any additional measures that may or may not 1 2 have to be put in place for those species. We will also do a consultation under 3 the National Historic Preservation Act to make 4 sure that any cultural resources out there, any 5 shipwrecks, all of those things, are protected. 6 7 We will also, we ourselves are not 8 going to have the responsibility for doing the Marine Mammal Protection Act, but we are having 9 10 National Marine Fisheries Service on as a 11 cooperating agency, because they are in charge of 12 issuing the Marine Animal Protection Act 13 authorizations. 14 And industry will basically need to 15 go to them if there's a survey proposed that 16 could potentially take a marine mammal. And we would have directives in any authorization we 17 18 issue that that would have to be in place. 19 that's just some of them. 20 We also do essential fish habitat 21 consultations. So we can ensure that any 22 activities that we might authorize, that we know

what the different issues are with fisheries and

fish, and that we can put any necessary

mitigations in there, if need be.

23

24

25

1 So, the next steps is May 30th is 2 the end of the comment period. From there, we will take all the comments that we received 3 through these public meetings, all the written 4 comments that came in, a lot of agencies will 5 also provide us different comments, and we'll 6 7 basically just go through all of them. We do look at all of them, we do 8 9 read all of them. We try to then, in our final 10 document, respond to all of them. There will be 11 a section in there that is just a response to all 12 the comments that we received. 13 And where new information has been 14 brought up, or something we hadn't considered, 15 then we go back to the drawing board and we look at our analysis and we decide -- you know, we 16 look at the new information and we decide what 17 18 may or may not need to be changed, based off of 19 that. 20 And so, the goal at this point, as 21 far as our timeline, is that we would finish this 22 final EIS by this November. And then what 23 happens after you initiate an EIS is the agency with the action has to issue a record of 24 25 decision, and that will be our agency's decision

- 1 on what we're going to do, and it will be based
- 2 off of the analysis in this NEPA document, as
- 3 well as all of the other environmental
- 4 consultations that we do, as well as a host of
- 5 other information that's put before our director.
- 6 And that record of decision is expected in
- 7 December of this year.
- 8 Again, I already mentioned, we have
- 9 close of the comment period. Mr. Bennett's going
- 10 to come up and just lay out how we're going to
- 11 move to the next step of this public meeting, as
- 12 far as collecting your comments, but I do want to
- 13 point out, we do have an e-mail address up there
- 14 where additional comments can always be e-mailed
- 15 to.
- 16 We also have a website for this
- document, and there's information on the website
- 18 that gives you background fact sheets on
- 19 geological and geophysical surveys. It shows you
- 20 the applications from oil and gas that we've
- 21 received to date. There's a lot of great
- 22 information up there.
- But do, if you're going to have
- 24 comments beyond what you provide today, do make
- 25 sure you get it in by the close of that comment

- 1 period on May 30th.
- Okay. And with that, I think I'll
- 3 turn it back over to Mr. Bennett.
- 4 MR. BENNETT: Thank you, Jill.
- 5 Okay. We're going to take comments now. I want
- 6 to thank you, Jill, and I want to again mention
- 7 to everybody, if you have questions about the
- 8 information that was provided, we'll be happy to
- 9 talk with you, particularly after we close out
- 10 the comments. But we do want to give the
- 11 opportunity for people to make public comment.
- I only have a couple of people
- 13 signed up right now, and the way we'll work this
- is we'll call on those folks, those two people,
- 15 and then we'll open up the floor afterwards for
- 16 people to make additional comments.
- 17 Normally we ask folks to self-police
- 18 at three minutes or so for comments, but I don't
- 19 think we're going to have too much of a problem
- 20 here with the volume of comments, so I don't
- 21 think that's an issue. And again, we'll allow
- 22 time afterwards to speak further, if need be.
- I do want to note that what is of
- 24 most value to us is comments on the draft
- 25 environmental impact statement, so that we can

- 1 assure that we have the best available
- 2 information to provide to decision-makers. And
- 3 I'd also ask you to please address your comments
- 4 here to the panel.
- 5 And with that, we can start with
- 6 John A. Nichols.
- 7 MR. NICHOLS: My name is John
- 8 Nichols. I live in Middletown, Delaware, and I'm
- 9 here in support, in favor of the seismic studies
- 10 offshore. As everyone in this room is aware, we
- 11 have an energy -- we have energy issues in this
- 12 country. Absent this type of study, we're not
- 13 going to be able -- be able to even identify what
- 14 the potential solutions are. This is not going
- 15 to take place until 2018.
- 16 It's a beginning point. I'd also
- 17 ask that any standards that are applied to oil
- and gas also apply equally to the renewable
- 19 industry as it pertains to the study and any
- 20 mitigation proposals that would be put forth.
- 21 To the extent that any studies are
- 22 conducted by the Federal government, I would ask
- 23 that any of those -- for offshore wind, that I --
- 24 that those costs be borne by the industry
- 25 directly; that we as a taxpayer aren't paying for

- 1 them.
- 2 Currently, wind and solar amount to
- 3 an infinitesimal amount of energy in this
- 4 country. This offshore wind proposal to site
- 5 turbines out there has its own environmental
- 6 impact. We should be studying that, as well.
- 7 Wind right now is subsidized 100
- 8 times more than fossil fuels, and these are
- 9 direct pass-through subsidies. My concern is
- 10 that by siting -- by developing these programs to
- 11 site offshore wind, we, the citizens of the state
- 12 and the country, are going to have to continue to
- 13 subsidize what is a very inefficient source of
- 14 energy.
- So, frankly, in my opinion, we could
- 16 just eliminate the studies for the offshore wind.
- 17 It is a waste of money. Thank you.
- MR. BENNETT: Thank you. Amy Rowe.
- 19 MS. ROWE: Hello, my name is Amy
- 20 Rowe. I live in Newark, Delaware. I have a
- 21 Ph.D. in energy and environmental policy. My
- 22 area of expertise is migratory fish, migratory
- 23 marine fish, and I am making a statement today on
- 24 behalf of the Delaware chapter of the Sierra
- 25 Club. I serve as the conservation chair for the

- 1 Delaware chapter of the Sierra Club, and I have
- 2 reviewed the environmental impact assessment
- 3 draft.
- 4 The Delaware chapter of the Sierra
- 5 Club opposes high-intensity seismic exploration
- 6 of the Atlantic Continental Shelf, and we oppose
- 7 that for several reasons. This action would
- 8 place the nation as a whole, the state of
- 9 Delaware, and the Atlantic aquatic biodiversity
- 10 at risk. It's a risk that we believe is too
- 11 dangerous to take.
- 12 We are at a crossroads in our
- 13 nation's energy policy, and we have tremendous
- 14 opportunities to develop renewable energy sources
- 15 that can provide energy to our nation without the
- 16 devastating impacts and climate impacts of fossil
- 17 fuels.
- 18 Pardon me?
- 19 UNIDENTIFIED SPEAKER: Nothing.
- MR. BENNETT: Please.
- 21 MS. ROWE: Thank you. Pursuit of
- 22 the nation's resources of offshore oil and gas
- 23 exploration diverts us from the needed task at
- hand.
- 25 Climate change poses a serious risk

- 1 to Delaware. We have miles of coastline and
- 2 large expanses of low-lying areas, and Delaware
- 3 is particularly vulnerable to the impacts of
- 4 climate change.
- 5 The nation's continued commitment to
- 6 developing renewable energy resources places the
- 7 state -- developing offshore wind resources -- or
- 8 offshore oil and gas resources, places the state
- 9 of Delaware at a disproportionate risk to climate
- 10 change and sea level rise.
- 11 The lessons from the Deepwater
- 12 Horizon oil spill two years ago should provide
- 13 caution in the development of offshore oil and
- 14 gas. Delaware's coastal and aquatic resources
- 15 provide tremendous value to the state, which
- 16 would be harmed in the case of an oil spill. And
- 17 Deepwater Horizon has proven the risks of such
- 18 activities.
- 19 The high-intensity seismic testing
- 20 itself places wildlife at risk. The draft PEIS
- 21 claims that these risks are moderate, minor, or
- 22 negligible, though we disagree.
- 23 Acoustic pollution has been
- 24 demonstrated in peer-reviewed and scientific
- 25 literature to cause significant and detrimental

- 1 impacts to aquatic life. The greatest amount of
- 2 wildlife depends on the Continental Shelves for
- 3 foraging, habitat, and reproduction, on earth,
- 4 and acoustic and seismic testing places not only
- 5 endangered species, such as whales and sea
- 6 turtles, directly at risk with noise pollution,
- 7 but it also threatens the multitude of species
- 8 which aquatic life depends upon.
- 9 So we, the Delaware chapter of the
- 10 Sierra Club, ask the Bureau of Ocean Energy
- 11 Management to protect the state of Delaware and
- 12 the marine environment by prohibiting acoustic
- 13 seismic testing and offshore oil and gas
- 14 development on the Atlantic Continental Shelf.
- 15 Thank you.
- 16 MR. BENNETT: Thank you. Okay.
- 17 That's all we have signed up. Did anyone -- is
- 18 anyone here who wants to speak that is not signed
- 19 up and wants the opportunity to speak? Could you
- 20 make sure you state your name clearly for the
- 21 reporter.
- MR. PFEISTER: So my name is Doug
- 23 Pfeister, P-f-e-i-s-t-e-r. I'm with the Offshore
- 24 Wind Development Coalition. And I just wanted to
- 25 make two points. Actually, a point and a

- 1 question. And I just wanted to emphasize the
- 2 significant differences between offshore wind and
- 3 offshore renewable energy, as compared with
- 4 offshore oil and gas.
- 5 Offshore renewable energy is a clean
- 6 energy source. We just use the wind, in the case
- 7 of offshore wind, to produce the electricity, and
- 8 the wind resource is actually quite high
- 9 offshore, as well.
- 10 And not only is the wind resource
- 11 high, there is a huge resource out there in terms
- 12 of area, in terms of the OCS, that can be --
- where offshore turbines can be placed and
- 14 generate a lot of electricity. A lot of
- 15 electricity.
- So, I want to emphasize those
- 17 differences. They are important. The resource
- is quite large on the OCS for offshore wind.
- 19 And then I quess my question is,
- 20 or -- I don't know, are you taking questions, or
- 21 are you just taking comments?
- MR. BENNETT: We can provide a
- 23 clarification point of fact, if you have that
- 24 sort of a question.
- 25 MR. PFEISTER: Okay. I just wanted

- 1 to compare the document, and I haven't gone
- 2 through it extensively, with the final EA that
- 3 came out for the Mid-Atlantic -- for the
- 4 Mid-Atlantic wind energy areas on the site survey
- 5 work that would be going on there.
- 6 So I wanted to -- if you could
- 7 respond to that, that would be great. If you
- 8 could talk about the comparisons between the two
- 9 documents. If you can't, that's just something I
- 10 would like to flag, that those two documents,
- 11 unless there's good reason, should be consistent
- 12 with one another.
- MR. BENNETT: Okay. Well, we can
- 14 take that as a comment. I think it's a more
- 15 involved conversation than we have in this forum,
- 16 but we'll be happy to talk with you afterwards.
- 17 MR. PFEISTER: Okay. Thank you.
- 18 MR. BENNETT: Is there anyone else
- 19 who has not had an opportunity to speak that
- 20 would like to do so? If not, is there anyone
- 21 that wants to say anything more with regard to
- 22 their comments? Yes?
- MR. NICHOLS: Yeah. I'd like to
- 24 address the wind energy issue.
- MR. BENNETT: And he's John Nichols.

1 Specifically again --MR. NICHOLS: 2 it's John Nichols. Two years ago the State of 3 Texas, which has the most installed wind capacity 4 of any state in the United States, had a record demand during a particularly hot summer day. 5 They have 10,000 megawatts of 6 7 installed wind. During that particularly hot 8 summer day, they got exactly 5 percent of the wind energy, from the state the size of Texas, in 9 10 order to meet consumer demand during that peak 11 demand day. That's 500 megawatts of the 12 installed 10,000. 13 Wind is a waste of money. And the 14 reason it's a waste of money is because of 15 meteorological events, these high pressure 16 systems that cover Texas, which shut down wind 17 turbines, in an area larger than the area we're 18 looking at with respect to development of offshore wind potential. Shut it down. The same 19 20 thing is going to happen on the Atlantic coast. It will shut it down, from Florida to Maine. 21 22 Any expenditure of monies on 23 offshore wind is a waste of money. 30 percent average capacity, 5 percent peak demand. And 24 25 these are global numbers.

1 We should not be putting any more 2 money into wind. We should not be looking at 3 this as a resource. It is a waste of money. The transmission cost alone will break the bank. 4 Τn the last year, offshore wind costs have gone up 5 6 100 percent. 7 So I am opposed to development of the Outer Continental Shelf for offshore wind. 8 Ι am supportive of oil and gas. It's a dense 9 10 energy resource. The cost per unit of energy is 11 substantially less. It's the only use that our 12 Offshore Continental Shelf should be put to. 13 Thank you very much. 14 MR. BENNETT: Thank you. Is there anyone else who wants to expand their comments? 15 16 MR. PFEISTER: I'd be happy to 17 respond to that, unless you feel that it's --18 MR. BENNETT: Well, no. We're not 19 asking you to respond. If you have an additional 20 comment to make to the panel for the purposes of 2.1 this public hearing, we'll be happy to hear it. 22 MR. PFEISTER: Okay. I'd like to 23 make an additional comment then. 24 MR. BENNETT: All right. 25 MR. PFEISTER: Again, this is Doug

- 1 Pfeister with the Offshore Wind Development
- 2 Coalition. I'll just speak to offshore wind. I
- 3 don't know land-based wind as well as I know
- 4 offshore wind.
- 5 And the point that this gentleman
- 6 just made, it's very different for offshore wind,
- 7 because of how the wind blows offshore. In fact,
- 8 as demand goes up during the day for electricity,
- 9 so does the wind resource offshore.
- 10 I can't speak to other geographic
- 11 areas in the United States, especially those on
- 12 land, but offshore specifically, the wind goes up
- 13 as demand for electricity goes up. So, that's
- 14 the sole point I'd like to make about offshore
- 15 wind and demand.
- 16 MR. BENNETT: Okay. Thank you for
- 17 your comments. Is there anyone else who would
- 18 like to expand their comments? If not, we are
- 19 adjourned.
- Thank you very much for your
- 21 comments. We appreciate you being here. And I
- 22 want to remind everyone that the comment period
- is open until May 30th. Even if you haven't had
- 24 an opportunity to provide the comments verbally
- 25 here, please feel free to get us comments, either

```
by snail mail or via the web. We appreciate it.
 1
 2
                    We are adjourned. Thank you.
                    (Hearing concluded at 1:38 p.m.)
 3
 4
 5
 6
 7
 8
 9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
```

_			
1	INDEX		
2		PAGE	
3	SPEAKER: John Nichols	24	
4	SPEAKER: Amy Rowe	25	
5	SPEAKER: Doug Pfeister	28	
6	SPEAKER: John Nichols	30	
7	SPEAKER: Doug Pfeister	33	
8			
9	CERTIFICATE OF REPORTER	36	
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
1			

1	REPORTER'S CERTIFICATE	
2		
3	I, JULIANNE LaBADIA, Registered Diplomate	
4	Reporter and Notary Public, do hereby certify	
5	that the foregoing record, pages 1 through 35	
6	inclusive, is a true and accurate transcript of	
7	my stenographic notes taken on April 26, 2012, in	
8	the above-captioned matter.	
9	IN WITNESS WHEREOF, I have hereunto set my	
10	hand and seal this 27th day of April, 2012, at	
11	Wilmington.	
12		
13		
14		
15		
16	Julianne LaBadia, RDR, CRR	
17		
18		
19		
20		
21		
22		
23		
24		
25		

Index:	-0	logies	aur	atic
muca.	-0	iogics.	.ayı	iauc

		on 50551011 on 0 1/20/2012	mach. orogresaquatic
		additional	3:25 4:23
_	A	11:6,11 15:6	6:17 9:18
-ologies 10:5	Absent 24:12	20:1 22:14	,
0109100 10 0		23:16 32:19,	15:21 16:2
1	accidental 10:2	23	amount 15:1
		address 22:13	25:2,3 28:1
10,000 31:6,12		24:3 30:24	Amy 25:18,19
100 25:7 32:6	12:4 17:24	adds 11:11,12	analyses 9:10
11 7:3	18:7 27:23 28:4,12	12:5	19:4
	·	adjourned	amal-saia 5:0
16th 4:6	acoustically	33:19 34:2	analysis 5:9 9:8,12,21
1:38 34:3	18:6,11	afternoon 2:1	
	Act 4:17		22:2
	19:23 20:4,	agencies 21:5	animal 11:18
20 14:1,3,4	9,12	agency 20:11	20:12
15:7	action 7:22	21:23	animals 12:13
2018 24:15	10:15 12:17,	agency's 21:25	16:10, 18:18
21 13	18, 21:24 26:7	ahead 5:25	19:15
3		airgun 14:20	
	action/status	15:1 17:6,8,	anthropogenic 13:10
30 31:23	15:25	9	
30th 23:1	actions 4:21	airguns 8:25	applications 5:24 7:4
33:23	10:22 12:24	14:7,24	10:17 22:20
	activities 2:4	15:13,15	
5	3:9 8:8	albeit 6:7	applied 24:17
5 31:8,24	13:10 20:22		apply 14:19
·	27:18	alternative 11:1,9,11,20	19:1 24:18
500 31:11	activity 10:15	12:16,25	approvals
	17:1	13:20 14:14	12:20
6	actual 4:3	15:5,23,24	approve 7:21
60 5:3,4	add 15:11	16:2 17:11,	April 4:6
	16:14	25 18:5,12,	aquatic 26:9
	addition 12:5	15,16	27:14 28:1,8
	-	alternatives	27.11 20.1,0

In Re: Programmatic Environmental Impact Statement Public Hearing Afternoon Session on 04/26/2012 Index: archaeologists..closure

archaeologists	average 31:24	biodiversity	24
9:13	aware 2:23	26:9	case 10:3
area 11:4,12,	24:10	biologist 3:4,	
13 13:2,5,7,		6	
8,22 14:7,	awareness	1.4.1	case-by-case
15,19 15:8,	18:22	<pre>biologists 9:13</pre>	14:12
10,11,19			caution 27:13
16:9,19	В	bit 5:13 10:6	chair 25:25
17:6,7,10	back 21:15	blows 33:7	change 26:25
20:1 25:22	23:3	board 16:4	27:4,10
29:12 31:17		21:15	•
areas 7:14,25	background 22:18		changed 21:18
8:1 10:7		boomer 8:25	chapter 25:24
11:3 13:25	bank 32:4	borne 24:24	26:1,4 28:9
15:6,13	based 6:14,	bothersome	charge 20:11
18:23 27:2	21:18 22:1	16:18,21	chief 2:12
30:4 33:11	basic 11:1	break 32:4	
assessment	13:20		chirper 9:1
2:12 7:7		breed 13:7	cities $4:11$
26:2	basically 4:18 5:20 9:11	Brevard 15:18	citizens 25:11
associate 11:2	10:25 13:22	briefly 19:3	
	16:3,13	_	City 4:9
assume 7:19	20:14 21:7	broken 10:25	claims 27:21
assure 24:1		brought 21:14	clarification
Atlantic 2:5	basis 14:12	build 16:16	29:23
4:9 6:1,6	beginning		
8:1,3 11:5	24:16	bureau 2:13, 14,17 28:10	
13:4 26:6,9	behalf 25:24	•	clear 7:24
28:14 31:20	Bennett 2:1,11	Butterworth 3:5	climate 26:16,
authorization	23:3,4 25:18		25 27:4,9
20:17	26:20 28:16	C	close 22:9,25
	29:22 30:13,	call 8:9 10:2	23:9
authorizations	18,25 32:14,	23:14	
20:13	18,24 33:16		close-up 15:17
authorize	Bennett's 22:9	calves 13:8	closure 11:5,
	Delille CL B 44.7	capacity 31:3,	13 14:16

		ronmental Impact Statement on Session on 04/26/2012	Index: closuresDelaware's
15:10,12,19,	18,21,24,25	consumer 31:10	cumulatively
23 17:6,7, 11,17	commercial	contact 5:6	6:12
closures 11:12	commitment	content 3:24	D
13:1,23 14:7,15,19	27:5 compare 30:1	Continental 2:20 3:8 6:1 26:6 28:2,14	dangerous 26:11
Club 25:25	compared 29:3	32:8,12	darker 7:15
26:1,5 28:10	-	continue 25:12	date 22:21
Coalition	compares 15:21	continued 27:5	day 31:5,8,11
28:24 33:2 coast 31:20	comparisons 30:8	conversation	33:8
coastal 27:14	complete 10:8	30:15	days 5:3,4
coastline 27:1	completed 19:5	<pre>cooperating 20:11</pre>	debris 18:22
collect 5:14	component 12:5		December 22:7
collecting	concern 25:9	corridor 11:18 15:7 18:18	decide 9:20 21:16,17
22:12	concluded 34:3	corridors	decided 6:22
combination	conduct 7:4	13:12	decision 21:25
12:17	conducted	cost 32:4,10	22:6
comment 5:1, 21:2 22:9,25 23:11 30:14	24:22 conservation 25:25	costs 24:24 32:5	decision-makers
32:20,23	considered	country 24:12 25:4,12	decisions 6:14
33:22 comment-taking	21:14	County 15:18	deep 7:5
3:1	consistent 19:1 30:11	couple 23:12	Deepwater 27:11,17
comments 2:21 3:14,16 4:13	consult 19:23	<pre>cover 8:4,7 31:16</pre>	Delaware 8:5 16:23 24:8
5:5,14 21:3, 5,6, 22:12,	consultation 20:3	critical 13:3	25:20,24
14,24 23:5, 10,16,18,20, 24 24:3	consultations 19:20 20:21	crossroads 26:12 CSA 3:7 9:10	26:1,4,9 27:1,2, 28:9,11
29:21 30:22 32:15 33:17,	22:4	cultural 20:5	Delaware's 27:14

	Public Hearing Afterno	on Session on 04/26/2012	Index: demandexpand
demand 31:5,	directives		14,21 26:13,
10,11,24	20:17	E	14,15 27:6
33:8,13,15	directly 24:25	e-mail 22:13	28:10 29:3,
demonstrated	28:6		5,6 30:4,24
27:24		e-mailed 22:14	31:9 32:10
	director 22:5	EA 30:2	ensure 20:21
dense 32:9	disagree 27:22		
Department	discuss 2:24	earth 28:3	environment 9:6
2:18		ecosystem	10:10 28:12
depends 28:2,8	disproportionate	10:10	environmental
_	27:9	effect 7:19	2:3,12,19
deputy 3:10	distance	9:5	3:18 4:17
designated	11:15,24	-	22:3 23:25
13:3,14	16:5 18:3	effects 6:12,	25:5,21 26:2
desk 2:10 3:12	distinction	13 19:17	equally 24:18
	14:23	EIS 2:22	
detrimental		4:16,25 5:19	equipment 9:3
27:25	diverts 26:23	10:21 21:22,	12:2 17:19
devastating	Division 2:12	23	essential
26:16	document 3:23	electricity	20:20
develop 4:24	21:10 22:2,	29:7,14,15	essentially 8:5
26:14	21·10 22·2, 17 30:1	33:8,13	_
		·	establish 16:5
developed 5:20		elevator 2:9	established
developing	30:9,10	eliminate	16:8
25:10 27:6,7	dolphin 16:6	25:16	event 2:8
		emergency 2:8	
<pre>development 2:19 27:13</pre>	Doug 28:22 32:25		events 10:2
		emphasize	31:15
28:14,24 31:18 32:7	draft 2:3,22	29:1,16	excluded 14:16
	4:25 19:4	employ 6:20	exclusion
33:1	23:24 26:3	end 4:7 21:2	
differences	27:20		18:3,10
29:2,17	drawing 21:15	endangered	exit 2:6
direct 25:9	_	19:25 28:5	exits 2:7
	drill 8:14,18	energy 2:13,15	
direction 5:18	<pre>drilling 8:15,</pre>		expand 15:24
	16,19	24:11 25:3,	32:15 33:18

	Public Hearing Afterno	UII SESSIUII UII V4/20/2V12	Index: expandsguide
expands 11:12	11:22	foraging 28:3	5:21 7:10
expanses 27:2	farm 6:3	formed 2:15	8:11,12 22:19
expected 22:6	farms 7:8	forum 30:15	geophysical 2:4
expenditure 31:22	<pre>favor 24:9 Federal 4:19</pre>	fossil 25:8 26:16	5:21 8:11, 20,22 22:19
expertise 25:22	24:22 feel 13:19	<pre>frankly 25:15 free 33:25</pre>	give 3:16 4:4 10:8 23:10
experts 9:9 19:5	14:25 32:17 33:25	front 10:16	global 31:25
explain 6:17,	<pre>feeling 5:17 felt 19:6,7</pre>	<pre>fuel 10:3 fuels 25:8 26:17</pre>	<pre>goal 21:20 good 2:1 4:10 30:11</pre>
exploration 26:5,23	final 21:9,22 30:2	full 16:15	government 4:19 6:25
exploratory 8:17	<pre>find 3:24 16:18</pre>	G	24:22
explore 5:25 6:4,8	finish 21:21	gas 5:24 7:5 8:7 12:19	gradually 16:15
exploring 7:16 exposure 10:22	fish 19:23 20:20,24 25:22,23	17:14 22:20 24:18 26:22 27:8,14	gravel 6:5 7:10,11 8:10 12:22 14:21 17:15,23
expressed 7:15 extended 15:8	fisheries 13:7 19:24 20:10, 23	28:13 29:4 32:9 gather 19:19	great 22:21 30:7
extensively 30:2	flag 30:10 floor 23:15	general 19:6	greater 11:17 12:15 19:16
extent 24:21	Florida 8:6 11:14 15:9,	<pre>generally 5:7, 17 7:2 9:25 15:7</pre>	greatest 19:11 28:1
	18 31:21	generate 29:14	ground 8:14
fact 22:18 29:23 33:7	focus 10:21	gentleman 33:5	groups 10:11
falls 15:15	focused 5:8	geographic	guess 29:19
familiar 4:15 8:12,21	folks 3:7 7:20 9:15 23:14, 17	33:10 geological 2:4	guidance 18:21 guide 5:16

	hot 31:5,7	25:3	
н	huge 29:11	information 5:8	J
habitat 13:3 20:20 28:3	I	19:19 21:13, 17 22:5,17,	Jill 3:3,20 23:4,6
hand 26:24 happen 13:10 31:20	<pre>idea 4:4 6:23 7:13 10:7,9 identified</pre>	22 23:8 24:2 informed 10:19 initial 19:4	Jim 2:11 John 16:22 24:6,7 30:25
happening 4:8	10:14 13:6	initiate 21:23	31.2
happy 3:15	<pre>identify 24:13</pre>	input 5:15	K
23:8 32:16, 21	<pre>impact 2:3 3:18 9:21</pre>	<pre>installed 31:3,7,12</pre>	Kim 3:9
harmed 27:16 headquarters	23:25 25:6 26:2	<pre>intensity 16:16</pre>	kind 9:5 12:16 14:11
2:14 3:5,6 hear 3:13 19:15,16	<pre>impacts 19:8, 12 26:16 27:3 28:1</pre>	<pre>intensive 6:8 14:10 interest 4:12</pre>	L land 33:12
32:21 hearing 2:2	implement 18:24	6:24 7:14,16 8:23 10:18	land-based 33:3
16:20 32:21 34:3	important 5:15 14:6 29:17	<pre>interests 7:7 Interior 2:18</pre>	large 13:17 27:2 29:18
hearings 4:6	imposed 17:7	International	larger 31:17
heavy 10:21	incentive 18:8	3:7 9:10	lay 22:10
helps 5:16	<pre>include 3:3 11:1</pre>	involved 30:15	left 2:10
high 29:8,11 31:15	including 3:9	issue 13:17 17:8 20:18	lessons 27:11
high-intensity 26:5 27:19 Historic 20:4	<pre>industry 5:24, 6:25 7:2 20:14 24:19,</pre>	21:24 23:21 30:24 issued 4:16	level 6:18 10:15 16:20 27:10
Horizon 27:12,	24 inefficient	issues 2:24 20:23 24:11	levels 6:8 7:14
host 19:20 22:4	25:13 infinitesimal	issuing 20:12	Lewandowski 3:4,20,21

In Re: Programmatic Environmental Impact Statement Public Hearing Afternoon Session on 04/26/2012

	Tuble Hearing Afterno	on Session on 04/26/2012	index: iiieneeded
14:1,4,17	22:24 23:11,	Megan 3:5	mitigations
17:3,5,21	16 28:20,25	megawatts	4:22 7:19
life 28:1,8	32:20,23	31:6,11	11:10 20:25
light 8:15	33:14	mention 23:6	moderate 19:12
lighter 7:17	making 14:22 25:23	mentioned 7:9,	27:21
 limit 19:7		23 10:6 22:8	money 25:17
list 10:1	mammal 20:9,16	meteorological	31:13,14,23 32:2,3
	mammals 12:1	31:15	·
listen 12:14	19:10	meteorologists	monies 31:22
listening	Management	9:12	monitoring
12:7,8 18:7	2:13,15		11:21 12:4
literature	28:11	Mid 2:5	17:24 18:7
27:25	manager 3:10	Mid-atlantic	move 4:2 12:18
live 16:23	maps 11:7	8:2 30:3,4	16:19 18:18
24:8 25:20	_	Middletown	22:11
	marine 3:4,6 8:9 12:1	16:23 24:8	movement 11:17
locations 6:3	13:6 18:22	midpoint 8:6	multitude 28:7
lot 3:8 4:11	19:9,24	migratory	marcicade 2017
6:7 8:13,23	20:9,10,12,	25:22	
9:2,4 11:1	16 25:23		
13:15 21:5 22:21 29:14	28:12	mile 15:7	nation 26:8,15
	matter 9:9	miles 14:2,3,5	nation's
lots 13:9	15:2 19:5	27:1	26:13,22
low-lying 27:2	meaning 12:18	minerals 8:9	27:5
	measure 12:15	minor 27:21	National 4:17
M	16:12	minute 5:23	13:6 19:24
made 33:6	measures 5:21	6:19 11:7	20:4,10
mail 34:1	measures 5.21 6:19 14:13	minutes 3:22	Native 19:22
Maine 31:21	16:24 20:1	15:21 23:18	nautical 14:2,
	meet 31:10	mitigation	3,4 15:7
maintain 12:22		6:18 9:23	nearing 4:6
make 2:22	meeting 22:11	11:2,6	needed 6:3
6:14, 7:24	meetings 5:6	16:24,25	26:23
14:5 20:4	21:4	24:20	20.23

Index: life..needed

In Re: Programmatic Environmental Impact Statement Public Hearing Afternoon Session on 04/26/2012

	T ubile Hearing Arterne		muex. negligibleperiou
negligible		Olsen 3:9	
19:12 27:22	0	open 23:15	P
NEPA 5:16 19:18 22:2	observe 16:6 18:2,6,10	33:23 operate 6:6	P-f-e-i-s-t-e-r 28:23
nesting 11:14 15:10 Newark 25:20 Nichols 14:14 16:22,23 17:4,20 24:6,7,8 30:23,25 31:1,2 night 18:9 NMFS 13:14 noise 10:22,23 12:12 14:10 28:6	observers 11:23 12:6 16:4 Ocean 2:13,15 28:10 oceanographers 9:14 OCS 29:12,18 October 2:16 office 3:5 official 4:3 offshore	<pre>operating 11:16,19 operations 9:7,25 opinion 25:15 opportunities 26:14 opportunity 4:18 6:4 16:19 23:11 30:19 33:24 oppose 26:6 opposed 32:7</pre>	<pre>p.m. 34:3 panel 24:4 32:20 parameters 6:21 Pardon 26:18 part 5:16 19:14 parts 3:23 pass 16:10 pass-through 25:9 passive 11:21</pre>
non-airgun 17:8 18:25 north 11:5 13:4 note 2:14 23:23 notes 4:3 November 21:22 number 4:5 5:23 6:2,5 7:6,23 numbers 31:25	24:10,23 25:4,11,16 26:22 27:7, 8, 28:13,23 29:2,3,4,5, 7,9,13,18 31:19,23 32:5,8,12 33:1,2,4,6, 7,9,12,14 oil 5:24 7:5 8:7 12:19 17:14 22:20 24:17 26:22 27:8,12,13, 16 28:13 29:4 32:9	<pre>opposes 26:5 option 13:20 optional 17:25 18:1 options 4:1 5:10 order 11:17 31:10 Outer 2:20 3:8 5:25 32:8 overview 3:17 5:13</pre>	8:20 23:11,

Index: negligible..period

In Re: Programmatic Environmental Impact Statement Public Hearing Afternoon Session on 04/26/2012

	I ubile Hearing Arterno	on Session on 04/26/2012	inaex: permitsquo
21:2 22:9	points 28:25	prohibiting	27:12,15
23:1 33:22	policy 4:1,17	28:12	29:22 33:24
permits 7:23	25:21 26:13	<pre>project 3:10,</pre>	
permitted 7:12	pollution	17	23:8
pertain 14:15	27:23 28:6	<pre>projects 6:5 7:8</pre>	_
pertains 24:19	poses 26:25		5:1,6,15 21:4 23:11
Pfeister 13:24	position 12:11	proposal 25:4	32:21
23 29:25	<pre>potential 4:21 6:2 19:12,17</pre>	proposals 24:20	<pre>purpose 3:2,24 5:19</pre>
30:17 32:16, 22,25 33:1	24:14 31:19	<pre>propose 17:9, 13,15</pre>	purposes 32:20
Ph.d. 25:21	<pre>potentially 12:14 20:16</pre>	proposed 7:22	
physical 9:13	preference	9:17 20:15	-
pick 12:11	5:11	proposing	10:16,23 11:4,6 14:25
pinniped 16:7	Preservation	15:14	16:15 20:2,
place 17:17	20:4	protect 28:11	24 22:5
18:13,23	pressure 31:15	protected 20:6	24:20 32:12
	<pre>pretty 4:10 6:16 9:8</pre>	<pre>protection 2:20 20:9,12</pre>	<pre>putting 32:1</pre>
places 27:6,8,	problem 23:19	protections	Q
20 28:4	process 5:16	13:9	question 14:18
planning 7:25	19:18	protective	29:1,19,24
8:1	produce 8:18	12:15 14:13	questioning
plans 7:7		<pre>protocol 16:1, 3,12 17:22</pre>	
pleased 4:12	<pre>program 7:10 8:7,8</pre>	•	questions 2:25
pockets 13:13	·	protocols 18:25	3:14 23:7 29:20
point 5:2 6:24 14:5,6 21:20	<pre>programmatic 2:3,22 4:25</pre>	proven 27:17	quo 12:17,23
22:13 24:16	programmatically	<pre>provide 5:13</pre>	15:25
28:25 29:23	6:11	6:21 9:20	
33:5,14	programs 25:10	21:6 22:24 24:2 26:15	

Index: permits..quo

		on session on o 1/20/2012	maex. ramp apsigmireant
	reorganization	Robin 3:11	sense 19:6
R	2:16	room 24:10	separation
ramp-up 16:13	reporter 28:21	routine 9:7,25	11:15 18:14, 17
range 19:7	reproduction 28:3	Rowe 25:18,19, 20 26:21	serve 25:25
real 19:3	request 7:2		Service 13:7
reason 30:11	require 11:20, 22 18:12,16	Safety 2:6	19:24 20:10 shallow 8:15
reasons 26:7	resource 10:7, 11 29:8,10,	sand 6:5 7:9,	share 4:19
received 5:23 10:17 21:3, 12 22:21	11,17 32:3, 10 33:9	11 8:9 12:22 14:21 17:14, 22	<pre>sheets 22:18 shelf 2:20 3:9 6:1 26:6</pre>
receiving 4:14		Schuricht 3:11	28:14 32:8, 12
reception 2:10 3:11	26:22 27:6, 7,8,14	science 9:19 scientific	Shelves 28:2
recognize	respect 31:18	27:24	ship 13:17
12:12	respond 21:10	sea 11:13	ships 13:17
record 21:24 22:6 31:4	30:7 32:17, 19	16:7 27:10	shipwrecks 20:6
reduced 13:15	response 21:11 responsibility	28:5 seal, 16:8	show 11:7 15:20
regard 30:21	20:8	section 21:11	shows 22:19
reinforce 15:12 remind 33:22	responsible 2:17,18	seismic 7:5 8:21 10:3	shut 12:3 16:9 31:16,19,21
renewable 8:8 17:2,9 24:18	restrooms 2:9 reviewed 26:2	11:2 14:7, 20,23 16:1,3 17:22 24:9	Sierra 25:24 26:1,4 28:10
26:14 27:6 29:3,5	rise 19:11 27:10	26:5 27:19 28:4,13	signed 23:13 28:17,18
renewables 12:21 14:15, 18,20 17:3, 23	risk 26:10,25 27:9,20 28:6 risks 27:17,21	<pre>select 10:11 self-police 23:17</pre>	significant 6:13 27:25 29:2

	Fublic Hearing Afterno	on Session on 04/26/2012	index: simultaneousterms
simultaneous	sounds 8:24	state 25:11	summer 31:5,8
18:15	12:8	26:8 27:7,8,	support 24:9
	source 11:25 16:14 17:16 25:13 29:6	15 28:11,20 31:2,4,9 statement 2:3	supportive 32:9
sites 6:4	sources 8:24	3:18 23:25	survey 8:22
siting 25:10	19:8,13	25:23	16:1,3,10,11 17:22 18:4
size 9:4 31:9	26:14	States 31:4	19:2 20:15
slide 7:13 10:6,8 15:20	south 2:5 8:3,	33:11 status 12:17,	30:4
slowly 16:14	sparker 9:1	23	<pre>surveys 6:21 7:1,5,11</pre>
small 11:13	speak 23:22	statutes 19:21	
14:24 15:10	28:18, 30:19	step 22:11	12:21 14:9, 11 18:9,15,
smaller 12:20	33:2,10	steps 21:1	25 19:14
snail 34:1	SPEAKER 26:19	strikes 13:17	22:19
	<u>-</u>	18:21	systems 31:16
9:14 solar 25:2	25 20:2 28:5,7	studies 24:9, 21 25:16	т
sole 33:14	<pre>specifically 31:1 33:12</pre>	study 24:12,19	takes 11:10
solicit 5:8	speed 13:15	studying 25:6	taking 4:3
solutions 24:14	spill 10:3	<pre>subject 9:9 19:4</pre>	29:20,21
sort 3:24 8:5,	27:12,16 stairs 2:8	submit 5:5	talk 3:15 5:22 23:9 30:8,16
13,15 12:22 13:10,19	stakeholders	subsidies 25:9	talking 8:2
15:7,25	5:17	subsidize	11:8
16:16 18:18	standards	25:13	talks 11:15
19:7 29:24	24:17	subsidized	task 26:23
sorts 4:13,22	stands 18:2	25:7	taxpayer 24:25
sound 11:25	start 16:11	substantially 32:11	technology 6:7
16:14 17:16 19:13	18:4,9 24:5	suite 5:20 9:9	terms 8:12
12.13	started 12:3	14:24	29:11,12

	O	011 Session on 04/20/2012	muex. testzone
test 8:14,15,	triangulate 12:10	18:4,21	24:23 25:2, 4,7,11,16
	turbines 25:5 29:13 31:17	vessels 11:19, 24 13:16 18:19	27:7 28:24 29:2,6,7,8, 10,18 30:4,
Texas 31:3,9,	turn 3:19 16:14 23:3	<pre>visual 11:23 12:6 16:4,9</pre>	24 31:3,7,9, 13,16,19,23
things 4:20	13	visually 11:8 volume 23:20	32:2,5,8 33:1,2,3,4, 6,7,9,12,15
18:22 20:6	turtle 15:9,19 16:7	<pre>vulnerable 27:3</pre>	work 3:8 23:13 30:5
thinking 4:20, 22 5:18	12:1 19:10 28:6	w	writing 5:5
thought 18:17 threatens 28:7	type 8:16,21 9:3 17:13,15	<pre>wanted 6:10 28:24 29:1,</pre>	written 9:20 21:4
time 7:21 11:4,12,13,	19:1 24:12	25 30:6 waste 25:17	Y
17 12:24 13:22 14:6,	types 7:14	31:13,14,23 32:3	year 2:16 13:13 15:16
15,18 17:6, 7,10,16 18:20 23:22	U.s. 2:17 11:3	water 10:23 15:1	22:7 32:5 years 7:4
timeline 21:21	UNIDENTIFIED 26:19	web 34:1	27:12 31:2
times 13:13 15:16 18:13	unit 32:10	website 22:16, 17	Z
25:8 today 4:8 5:12	United 31:4 33:11	13:1,4 15:23	zone 18:3,10 zones 13:15
22:24 25:23 tomorrow 4:9	v	16:6 whales 11:5	
tools 14:24	variety 19:21	13:18 28:5 wildlife 19:23	
transmission 32:4	verbally 33:24 versus 14:24	27:20 28:2	
tremendous	vessel 10:4 11:25 16:5	Wilmingtons 4:8 wind 6:3 7:8	