

1 ALASKA OIL AND GAS CONSERVATION COMMISSION

2

3 Before Commissioners: Cathy Foerster, Chair

4 Daniel T. Seamount

5 John K. Norman

6

7 In the Matter of the Amending of)

8 Regulations Regarding Hydraulic)

9 Fracturing Contained in 20 AAC 25.005,)

10 20 AAC 25.280 and 20 AAC 25.990 and)

11 the Proposed 20 AAC 25.283.)

12 _____)

13

14 ALASKA OIL and GAS CONSERVATION COMMISSION

15 Anchorage, Alaska

16

17 September 23, 2013

18 9:00 o'clock a.m.

19

20 VOLUME II

21 PUBLIC HEARING

22

23 BEFORE: Cathy Foerster, Chair

24 Daniel T. Seamount

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P R O C E E D I N G S

(On record)

CHAIR FOERSTER: Good morning. I'll call this hearing to order. This is a public hearing to consider proposed regulations pertaining to hydraulic fracturing. This hearing is being held on the morning of September 23rd, 2013 at 9:20 a.m. We're -- the location is the AOGCC offices at 333 West Seventh Avenue, Anchorage Alaska.

As most of you are aware this is the second hearing that has been conducted in this matter. If anyone would like a copy of the written comments that have been filed they are located on our website. You go to the AOGCC home page, then you find highlights, proposed hydraulic fracturing regulations and you'll find the comments there.

Before we begin I'll introduce the Commissioners. To my right is Commissioner Norman and to my left is Commissioner Dan Seamount and I'm Cathy Foerster, the Chair.

If anyone here has a need for special assistance to participate in the hearing, please ask Jody Colombie who's doing the float wave and she'll help you.

Computer Matrix will be recording this

1 proceeding and on completion and preparation of the
2 transcript they will have the hearing transcript and
3 anyone interested in it can get a copy from them.

4 Specifically the AOGCC proposes to adopt
5 changes in Title 20, Chapter 25 of the Alaska
6 Administrative Code. Specifically the Commission
7 proposes to repeal 20 AAC 25.283 and 20 AAC 25.990. Is
8 that true? No, I'm reading the wrong script, aren't I?
9 Specifically we proposed to modify our regulations
10 relating to hydraulic fracturing and add a section
11 entitled hydraulic fracturing.

12 This hearing is being held in accordance with
13 AS 44.62 and 20 AAC 25.540 of the Alaska Administrative
14 Code. The hearing will be recorded.

15 Now before we begin a little bit of
16 housekeeping. There'll be a time limit of 30 minutes
17 for oral testimony for each participant. If you have
18 submitted written comments you may, but there's no need
19 to, reiterate your testimony orally. Oral testimony
20 must have relevance to the topic of hydraulic
21 fracturing. The sign-in sheet will be used to help
22 format the hearing testimony so if you plan to testify
23 make sure that you have signed in and indicated that
24 you will be testifying. I'd like to remind those who

1 that persons in the back of the room can hear you and
2 so the court reporter can get an accurate and clear
3 recording. If you are testifying we'll expect you to
4 identify yourself and who you represent and then if you
5 desire to be recognized as an expert you need to tell
6 us what area of expertise you want to be recognized in
7 and then describe to us your credentials, your
8 background, your schooling, your experience so that we
9 can determine whether or not to recognize you as an
10 expert. The subject matter of this hearing will be
11 limited to items under the jurisdiction of the AOGCC.
12 In other words if you have problems with air emissions
13 that occur from trucks that are carrying hydraulic
14 fracturing fluids, not our jurisdiction. So and if you
15 have questions as to whether something's in our
16 jurisdiction or not we can help you with that.

17 We're having this hearing to review our
18 hydraulic -- the adequacy of our hydraulic fracturing
19 regulations. We periodically review all of our
20 regulations to make sure that they keep up with
21 technology, that they keep up with current operating
22 practices and that's basically what we're doing here
23 today with hydraulic fracturing. In addition due to
24 heightened public concerns about hydraulic fracturing
25 we're trying to take some of those considerations into

1 account as -- or all of those considerations into
2 account as well. Keep in mind that this is a hearing,
3 a public hearing, and not a debate. So if someone is
4 speaking and you disagree with what they have to say,
5 be courteous. If you have a question that you would
6 like asked of someone testifying we ask that you
7 provide your question in writing along with your name
8 and that of the witness to Jody Colombie who's again
9 doing the float wave. So before the end of the hearing
10 the Commission will review all questions submitted and
11 ask those that we believe will be helpful in eliciting
12 relevant information.

13 The notice of this hearing was published in the
14 Anchorage Daily News on August 9th, 2013, it was also
15 posted on the state of Alaska online services website
16 as well as the AOGCC's local website.

17 If you're calling in we request that you put it
18 on mute until such time as you are going to testify so
19 that the noises you make don't interrupt the hearing.

20 If you'd like a copy of the proposed
21 regulations please see the receptionist, we should have
22 copies out front.

23 As I said earlier this is the second hearing
24 regarding this matter. The first hearing was held on
25 April 4th, 2013 at the Anchorage Hilton. Since then we

1 have received 21 additional written comments. If you
2 would like to be assured that we have received your
3 written comments please see Ms. Colombie, we have a
4 complete list of all the comments received and that
5 list has been made available to all of you. So check
6 and make sure your comments were included and if they
7 weren't Ms. Colombie can help you.

8 As we conduct this hearing we will consider the
9 factual, substantive and other relevant matter and we
10 pay -- we do pay special attention to the cost to
11 private persons of any proposed regulatory action that
12 we make.

13 I think I've covered all the housekeeping so
14 I'm looking at the list of people who choose to testify
15 and we have Luann Cutler representing K&L Gates; we
16 have Keith Elliott representing Hilcorp; we have Kara
17 Moriarty representing AOGA; and we have Barrett
18 Ristroph representing the Wilderness Society. If no
19 one has a problem with this we'll start with Ms.
20 Moriarty.

21 Oh, and is anyone who's called in desiring to
22 testify? You can take your phone off mute and let
23 us know if you are interested in testifying if you
24 called in?

25 (No comments)

1 CHAIR FOERSTER: Okay. Hearing no one we'll
2 just proceed with Ms. Moriarty.

3 MS. MORIARTY: Thank you, Commissioners. For
4 the record my name is Kara Moriarty and I'm the
5 executive director of the Alaska Oil and Gas
6 Association, commonly referred to as AOGA.

7 Our 15 members of the -- of AOGA account for
8 the majority of oil and gas exploration, production,
9 transportation, refining and marketing activities in
10 the state. We appreciate this opportunity to provide
11 further comment on the second proposed set of
12 regulations related to hydraulic fracturing.

13 As we've stated before AOGA members are
14 supportive of hydraulic fracturing chemical disclosure
15 and the increased transparency it will provide to
16 Alaskans. We share the concerns submitted by the
17 Department of Natural Resources in August and AOGA has
18 provided additional comments that remain from our prior
19 written comments as Commissioner Foerster stated, dated
20 April 1st, April 18th and August 5th.

21 The regulations as written are problematic from
22 industry standpoint for several reasons. In our view
23 the proposed regulations attempt to address
24 misconceptions as opposed to actual issues important to
25 Alaska. The proposed regulations will result in

1 substantial increases and cost to industry that would
2 serve to merely address the misconceptions referenced
3 above, but would in reality fail to provide any
4 tangible benefits. Those increased costs could cause
5 some wells, especially those in Cook Inlet, to be
6 adversely affected and thus frustrating the development
7 of a resource that is important for overall production
8 and vital to providing necessary natural gas for the
9 residents of Southcentral Alaska. I recognize that
10 you as Commissioners understand the process of
11 hydraulic fracturing, but for those members of the
12 public that are here today and listening that may not
13 have such expertise I'd like to provide some background
14 to add context to our position. The first hydraulic
15 fracturing experience -- experiment occurred in 1947 in
16 a gasfield in Grant County, Kansas. In 1948 a man by
17 the name of J.D. Clark authored a research paper
18 capturing the results of those experiments and the
19 following year Halliburton Oil Well Cementing Company
20 obtained a patent and an exclusive license on the
21 process and subsequently performed the first two
22 commercial fracturing treatments. In the following 66
23 years approximately 1.2 million oil and gas wells in
24 the United States have utilized the hydraulic
25 fracturing process which have ultimately produced more

1 than 600 trillion cubic feet of natural gas and 7
2 billion barrels of oil. It is estimated that 50,000
3 wells across the United States will use this process in
4 2013 alone. The hydraulic fracturing process has
5 facilitated increased production which has provided
6 direct and indirect economic benefit to states and
7 their residents by safely allowing those within the
8 industry to prevent waste of petroleum resources that
9 would not otherwise been possible to recover.

10 Generally speaking hydraulic fracturing
11 describes a process of flowing a volume of base fluid,
12 usually water, containing proppant and a small chemical
13 load which is important to note that it's usually .5
14 percent to 1 percent mass per volume, down a cased
15 wellbore and into a target geological formation under
16 sufficient pressure to include fractures in the
17 formation to facilitate the flow of oil and gas into
18 the wellbore for production to the surface. The
19 proppant accumulates in the fractures and serves to
20 prop them open when the pressure is released and flow
21 back and production begins. Additionally the chemical
22 load alters the properties of the base fluid such as
23 viscosity to optimize fracture propagation and also
24 inhibits common downhole problems such as bacterial
25 contamination and corrosion.

1 In 2010 hydraulic fracturing was responsible
2 for 49 percent of the United States' gas production.
3 In 2007 hydraulic fracturing revenues represented a
4 global market of \$13 billion up from approximately \$2.8
5 billion in 1999. The increase in the utilization of
6 hydraulic fracturing with proven and consistent success
7 has been met with increasing public scrutiny. That
8 controversy has been largely predicated in our view on
9 misinformation and flawed accusations primarily
10 relating to claims of fresh groundwater aquifer
11 contamination, however little evidence has been
12 produced to substantiate that hydraulic fracturing has
13 ever resulted in groundwater contamination. Frequently
14 the facts show that the groundwater problems claimed to
15 be associated with hydraulic fracturing were caused by
16 natural aquifer conditions, pollution sources unrelated
17 to oil and gas operations or as if often the case
18 simply did not exist. Nevertheless in an effort to
19 assure public fears and misconceptions several U.S. oil
20 and gas operators voluntarily began posting the
21 chemical constituents used in fracture treatments to a
22 public website referred to as FracFocus in 2011.
23 Essentially FracFocus utilizes a standard template
24 through which operators can provide a wide spectrum of
25 relevant data including the ingredients used,

1 percentage mass per volume of that ingredient in the
2 base fluid and total volume of fluid. That data in
3 turn allows for subsequent analysis of any aquifer
4 alleged to have contaminated or have been contaminated
5 through a hydraulic fracturing operation. Currently
6 approximately 52,000 well sites are registered through
7 FracFocus.

8 Hydraulic fracturing has been safely conducted
9 to increase and enhance production of Alaska's oil and
10 gas resources for decades as well. As your own report
11 reported in over 50 years of oil and gas production
12 Alaska has yet to suffer a single documented instance
13 of subsurface damage to an underground source of
14 drinking water. Through the AOGCC's efforts we will
15 have the opportunity to provide Alaska information
16 regarding hydraulic fracturing operations that will
17 help dispel any misconceptions or false impressions
18 regarding the safety and chemical makeup of materials
19 used in hydraulic fracturing. Many of our member
20 companies already voluntarily supply this information
21 on the chemical disclosure registry called FracFocus as
22 I mentioned and we support the utilization of FracFocus
23 as an effective method to address public concerns
24 regarding processes used for the benefit of all
25 Alaskans.

1 The Commission's proposed regulations are the
2 latest in a progression of various states' efforts to
3 address public concerns regarding hydraulic fracturing
4 within their borders. There are several significant
5 differences between the proposed regulations here in
6 Alaska and those of the states who have adopted
7 hydraulic fracturing chemical disclosure regulations to
8 date. AOGCC's proposed regulations differentiate from
9 these states in our view in four ways -- main ways.
10 One, Alaska would require preapproval before conducting
11 hydraulic fracturing activities; Alaska would require a
12 more substantial preliminary investigation into other
13 wells in the area and groundwater monitoring before and
14 after hydraulic fracturing operations; Alaska would
15 require direct notification to area landowners and well
16 operators including certification that notification had
17 been provided to owners and operators within a one-half
18 mile radius; and Alaska would provide no trade secret
19 protection for proprietary information. In our
20 comments that I will supply in addition to these we
21 have a chart that compares Alaska's proposed
22 regulations to other states as well as to those
23 regulations currently being considered by the U.S.
24 Bureau of Land Management or BLM for hydraulic
25 fracturing on public lands. The chart highlights that

1 if adopted as currently written Alaska's hydraulic
2 fracturing regulations would constitute some of the
3 most stringent in the country and even more stringent
4 than BLM. For example Alaska would be the only state
5 to require a one-half mile radius for water sampling
6 and notification to landowners; almost all the states
7 provide some level of trade secret protection while
8 Alaska would provide none; and Alaska would be the only
9 state that would require industry to disclose
10 information three different times versus one simple
11 source like FracFocus.

12 We feel there are specific areas in which
13 Alaska's proposed regulations can be improved to
14 address these and our other concerns. For example we
15 suggest that AOGCC consider requiring hydraulic
16 fracturing applications only for wells whose trajectory
17 is within 1,000 vertical feet of a freshwater aquifer
18 and to limit the scope of testing and notification to
19 one-quarter mile which is consistent with what other
20 states do versus the current one-half mile. Our
21 complete suggestions are detailed in the attachment
22 that we will provide called explanation of suggested
23 revisions which we have provided earlier which
24 corresponds to our other attachment of suggested
25 redline revisions.

1 It is important to reiterate that hydraulic
2 fracturing is a process that has been utilized
3 effectively and efficiently in Alaska for decades
4 without incident. This process has historically and
5 presently vital to a key component of AOGCC's mission,
6 and that is to ensure greater ultimate recovery of
7 Alaska's resources. Without the use of hydraulic
8 fracturing many wells, particularly those located in
9 Cook Inlet would no longer be able to produce at their
10 current rate.

11 We encourage the Commission to issue a third
12 set of proposed regulations taking into account our
13 reservations. It would be beneficial to all involved
14 if the state and industry could engage in a meaningful
15 dialogue, the ultimate goal would be to establish
16 regulations that address the state's concerns while
17 allowing industry to continue operating and utilizing
18 the practice of hydraulic fracturing without undue
19 burden or cost.

20 So again thank you for this opportunity to
21 provide comment. I'll provide you a copy of my written
22 comments which pretty much mirror what I just said as
23 well as the state by state comparison chart and other
24 attachments. And we look forward to continuing to work
25 with this agency.

1 CHAIR FOERSTER: Thank you, Ms. Moriarty.
2 Commissioner Norman, do you have any questions of this
3 witness?

4 COMMISSIONER NORMAN: Yes. Thank you, Chair
5 Foerster. Ms. Moriarty, thank you for coming, it's
6 always a pleasure to see you here. I just have a
7 couple of clarifying questions. On the proposal
8 regarding -- put forth by AOGA, counter-proposal if you
9 will, the plan for water sampling of up to four wells
10 within 1,000 vertical feet and one-quarter mile radius
11 of the proposed wellbore trajectory, would you think --
12 well, first of all the four wells, there's no mention
13 of what direction they would be within this radius.
14 Was there any discussion within the AOGA working group
15 that developed this proposal about possibly having some
16 kind of a directional pattern to these wells?

17 MS. MORIARTY: Commissioner Norman, to answer
18 your question we got the up to four wells as a
19 suggestion because that's how Colorado -- that's how
20 they do it in Colorado. And I could follow-up, we
21 didn't talk more specifically if Colorado requires a
22 direction or if there's any type of direction from the
23 well for -- within that one-quarter mile, but we were
24 trying to make suggestions to Alaska's proposed
25 regulations that would be consistent for our companies

1 that operate in other states. So we got up to four
2 wells from Colorado.

3 COMMISSIONER NORMAN: Sure. I mean, the
4 obvious point would be that four wells might be
5 selected all, for example, to the southeast when
6 perhaps the pattern of flow might be to the northwest
7 that -- and consequently you might want to bracket it
8 within all four cardinal directions, something like
9 that, if there were wells.

10 MS. MORIARTY: I appreciate that and we -- I
11 can provide you some further comment on that.

12 COMMISSIONER NORMAN: A second question. I
13 wanted to understand the plan for water sampling within
14 1,000 vertical feet of the proposed wellbore
15 trajectory. That would be within -- if the proposed
16 wellbore trajectory passes within 1,000 vertical feet
17 of a well and this is one of the four wells that you're
18 proposing, that well would be selected for sampling; is
19 that right?

20 MS. MORIARTY: Well, what we're suggesting,
21 it's both, both the sampling as well as the requirement
22 to apply for the approval of hydraulic fracturing
23 because right now the way the regulations read in our
24 mind it would apply to everything. And versus our
25 suggestion and I think we're referencing 20 AAC

1 25.283(a), and that is if there's no freshwater aquifer
2 present then we think there should be an exception for
3 those wells. It's really more about because on the
4 North Slope as you know it's -- the wells are several
5 -- they're a long ways away from freshwater or drinking
6 water. And so we just think there should be an
7 exception for those and that's what that suggestion is
8 referencing to.

9 COMMISSIONER NORMAN: Understand. So but
10 you're not talking about bottom hole location or
11 anything else, you're talking about then along the
12 entire -- any point along the entire trajectory of the
13 well?

14 MS. MORIARTY: Correct.

15 COMMISSIONER NORMAN: Okay. The second point I
16 don't have -- I don't expect you to have an answer to
17 this, but would appreciate it if you could just note it
18 and get back to us because it was raised in one
19 comment. And this relates to -- it's within -- it's
20 subsection (b)(5) sample parameters under the water --
21 plan for water sampling at subsection (5)(b) and it's a
22 very, very technical point, but it relates to the
23 definition of total petroleum hydrocarbons. And one
24 commentor suggested to us that this term as written
25 there is ambiguous and a more correct term would be

1 total petroleum hydrocarbons by silica, gel, HEM. And
2 I'm wondering if given the broad experience that AOGA
3 has to draw upon if you care to if you could give us
4 any feedback on that because we don't want to be --
5 have dueling definitions or be making definitions. And
6 so I point that out to you just so that you're aware of
7 it if we were to agree with the comment. The comment
8 did come from SGS North American, Inc. on that
9 definitional change.

10 MS. MORIARTY: Okay.

11 COMMISSIONER NORMAN: And again I don't expect
12 you to.....

13 MS. MORIARTY: I will check with the.....

14 COMMISSIONER NORMAN:respond to.....

15 MS. MORIARTY:I'll check with the work
16 group and get back to you on that.

17 COMMISSIONER NORMAN: Very good. Thank you
18 very much.

19 CHAIR FOERSTER: Commissioner Seamount, do you
20 have any questions for Ms. Moriarty?

21 COMMISSIONER SEAMOUNT: I have none. Thank
22 you, Ms. Moriarty.

23 CHAIR FOERSTER: I have none at this time, but
24 I may later.

25 All right. I think we'll hear from Keith

1 Elliott from Hilcorp next. And, Mr. Elliott, your
2 name, who you represent and if you'd like to be
3 recognized as an expert what the area of expertise is
4 and what your credentials are.

5 MR. ELLIOTT: Very good. Well, thank you.

6 CHAIR FOERSTER: Whoa, whoa, whoa. And I
7 didn't do that with Ms. Moriarty. Do I need to swear
8 them in for a public hearing like this?

9 COMMISSIONER NORMAN: No, I don't.....

10 CHAIR FOERSTER: I didn't think so. Okay. Go
11 ahead.

12 MR. ELLIOTT: Okay. Well, good morning. My
13 name is Keith Elliott and I'm a proud resident of
14 Alaska, a resident professional petroleum engineer and
15 an employee of Hilcorp Alaska. My background as an
16 engineer includes education at Texas A&M University
17 where I received a BS in petroleum engineering, see
18 smiles there.

19 CHAIR FOERSTER: No, I was -- I was saying I
20 won't hold it against you to myself, but.....

21 MR. ELLIOTT: To help along those lines I also
22 attended Stanford to get a master's degree in petroleum
23 engineering in 1999. I began my career in West Texas
24 with Anadarko Petroleum Corporation and I've worked for
25 Hilcorp most recently for 10 years where I've focused

1 on developing oil and gasfields in the Gulf Coast, Gulf
2 of Mexico and of course Alaska. I enjoy my craft and I
3 really am passionate about finding oil and gas.

4 Any questions further about my.....

5 CHAIR FOERSTER: Do you want to be recognized
6 as an expert?

7 MR. ELLIOTT: As a professional engineer, yes,
8 I am an expert as a petroleum engineer. Specifically
9 my focus is reservoir engineering.

10 CHAIR FOERSTER: Okay. So.....

11 COMMISSIONER NORMAN: Commissioner Foerster, I
12 would suggest then if the witness does want to testify
13 as an expert, has testified as to his credentials, it
14 would be advisable to swear the witness.....

15 CHAIR FOERSTER: Okay. All right. All right.
16 Then do you swear -- I need you to -- we're going to
17 swear you in then.

18 (Oath administered)

19 MR. ELLIOTT: Yes, ma'am.

20 CHAIR FOERSTER: Okay. Now, Commissioner
21 Seamount, do you have any questions about his
22 expertise?

23 COMMISSIONER SEAMOUNT: I have no questions and
24 since he went to the better school I.....

25 CHAIR FOERSTER: Stanford? Okay. Commissioner

1 Norman.

2 COMMISSIONER NORMAN: No questions.

3 CHAIR FOERSTER: Okay.

4 MR. ELLIOTT: Okay. Thank you.

5 CHAIR FOERSTER: We'll recognize you as an
6 expert and you may proceed.

7 MR. ELLIOTT: Thank you.

8 KEITH ELLIOTT

9 previously sworn, stated as follows on:

10 DIRECT EXAMINATION

11 MR. ELLIOTT: So my title at Hilcorp is asset
12 team leader. It is my job to ensure that we are
13 producing owned gas responsibly and economically. My
14 goal today is to express to you a reasonable and
15 respectful perspective from a local prudent operator.

16 So let me explain background on Hilcorp in
17 particular. Hilcorp established operations in Alaska
18 in January of 2012 and is now one of the largest
19 operators in the Cook Inlet Basin. We are also one of
20 the largest privately held oil and gas exploration gas
21 companies in the United States. Over the last year and
22 a half we have invested over \$400 million in our assets
23 here and we're committed to making the necessary
24 investments in the future to ensure maximum recovery
25 from the fields that we operate. We play a significant

1 role in providing natural gas to local utilities and
2 that is a role that we take very seriously. I lead
3 Hilcorp's South Kenai asset team, I oversee the natural
4 gasfields from the city of Kenai to the city of Anchor
5 Point. The fields in my team supply approximately 34
6 percent of the natural gas used annually in
7 Southcentral Alaska.

8 We are present here today to -- because the
9 proposed fracture regulations as currently written have
10 the potential to significantly impact the pace and cost
11 of ongoing natural gas development. I'm also here
12 today because we share a common challenge, the
13 Commission and the industry. The fact that there is
14 general public concern and perception of negative
15 consequences regarding fracking. We can work together
16 to address these concerns via education and prudent
17 regulation. Hence I'd like to make a few background
18 statements in an effort to help educate the public and
19 then offer feedback regarding the regulations.

20 So first of all I'd like -- I think it's
21 important to explain why we use fracturing. Hydraulic
22 -- hydraulic fracturing is a well-established
23 technology which results in higher production, more
24 reserves and extends the life of fields due to
25 increased recovery. Without it few significant oil and

1 gas natural resources will never be -- never achieve
2 economic development on a worldwide basis within Alaska
3 and notably within the Cook Inlet Basin.

4 Let me highlight some local historic examples.
5 Frack -- fracking has been a reliable and safely
6 executed tool used in Alaska's oil and gas -- by
7 Alaska's oil and gas producers over the last few
8 decades, in fact, 50 percent of the active wells of the
9 Kenai gasfield have been fracked. A successful frack
10 program was performed in the -- in the Kenai gasfield
11 from the years 2000 to 2008. During this time use of
12 the technology resulted in 30 million a day -- 30
13 million cubic feet per day increase in gas production
14 rate. The depth of the fractured rock layers range
15 from 6,000 to 8,000 feet in the ground. Note that this
16 depth is drastically different or deeper than the
17 typical freshwater drinking well depth which are rarely
18 more than 300 feet deep. The general public concern is
19 that groundwater will be polluted however note that the
20 Kenai gasfield program did not pollute any groundwater
21 primarily because of well integrity -- because the well
22 integrity is sound and the fractures are confined to a
23 limited area that is over a mile deep and they're --
24 the fractures simply do not extend into drinking water
25 aquifers. While Hilcorp has not yet performed

1 fracturing operations in our operated fields, we do
2 expect that this technology will be a cornerstone of
3 our future gas operations which will result in a stable
4 and reliable source of natural gas for use by local --
5 local utilities.

6 I also wanted to highlight the state of
7 Alaska's great track record of environmental
8 stewardship while developing world class oil and gas
9 fields even with fracking as a standard tool. I will
10 also note the paper published by the AOGCC in April of
11 2011 which states quote, in over 50 years of oil and
12 gas production Alaska has yet to suffer a single
13 documented instance of subsurface damage to an
14 underground source of drinking water. As long as each
15 well is properly constructed and its mechanically --
16 mechanical integrity is maintained, hydraulic
17 fracturing should have no potential to damage any fresh
18 groundwater, end quote. I will highlight that the
19 Commission's statement that hydraulic fracturing should
20 have no potential to damage groundwater, this is
21 because number 1, strict well construction as required
22 and enforced by the AOGCC protects groundwater; and
23 two, hydraulic fractures created by fracking in the
24 Cook Inlet Basin are deep, 6,000 to 8,000 feet deep and
25 the fracks are on the order of 200 feet tall, they're

1 simply buried by hundreds of layers of rock. Hydraulic
2 fractures clearly do not extend from the producing
3 reservoirs to the groundwater aquifers hence they do
4 not pose a contamination risk.

5 A critical part of the design and permitting of
6 wells and fracture stimulations is the modeling of the
7 frack valve being pumped based on sound engineering and
8 geoscience principles. This modeling is used to design
9 the job so that the fracture stays within the
10 reservoir. Subsequent well logging is used to verify
11 confinement of the frack within the target zone. A
12 review of the frack jobs pumped in the Kenai gasfield
13 as well estab -- established an industry track record
14 showing successful jobs which did not impact
15 groundwater. To be sure and to be clear not all fracks
16 are the same. A recent advance in fracture technology
17 is the ability to pump massive fracks to allow oil and
18 gas to produce from shale. There is no historic
19 sustained record of shale development in Alaska,
20 however nation-wide it is the massive new fracks which
21 have prompted public concern. We support the general
22 concept that AOGA works -- excuse me, that the
23 Commission needs to address the public concerns about
24 fracking. We support the disclosure of frack plans,
25 well design and post job results to the AOGCC and

1 therefore to the public.

2 The bulk of the pending regulations are
3 analogous to current regs, they're very stringent and
4 relevant to the operation. To provide a good example
5 of an existing regulation let me highlight the disposal
6 injection Order 34 which describes the disposal of
7 class II oilfield waste in a well in the Kenai
8 gasfield. The order describes sound analysis and
9 research and includes a review of fracture growth
10 modeling. It is one of the many examples that
11 establishes the Commission's track record of very sound
12 analysis. Hilcorp Alaska believes that the integration
13 of sound engineering and geologic information is
14 critical to the development of prudent regulations
15 especially as regard to frack regulations. Notably we
16 recommend that the fracture model analysis be a key
17 aspect in the approval process. Specifically with
18 respect to the pending regulations we find that the
19 water sampling section is problematic and does not
20 follow the sound precedent set by the Commission's
21 current regulations. Notably water -- the water
22 sampling section does not appear to consider vertical
23 depth of the hydraulic fractures and this needs to be
24 considered. As I noted previously not all fracks are
25 the same, if there is no scientific foundation that the

1 fractures will grow into groundwater aquifers then
2 there is no need to impose water well sampling. This
3 is because the fractures do not grow -- that do not
4 grow into the aquifers cannot pollute them.
5 Furthermore as the Commission's April, 2011 paper
6 states, freshwater aquifers are already protected by
7 sound wellbore construction as enforced by existing
8 Commission regulations.

9 Another challenge with the water sampling
10 section is that the requirements to sample are not
11 practical to implement. And I ask that you please do
12 not underestimate the uncertainty and cost that water
13 sampling requirements could bring and when costs go up
14 reserves and ultimate recovery will certainly decline.
15 To note a couple questions on our minds with respect to
16 the practicality of water sampling let me make a few
17 points or note a couple questions. One, how do you
18 access the land if the owner is not there, specifically
19 maybe the owner's a snowbird or it's a vacation home;
20 what if the landowner refuses sampling; what if we
21 cannot locate the landowner; what if the well's not
22 registered in the Alaska's DNR data base; what about
23 naturally occurring variations in groundwater that may
24 occur seasonally, how do we accommodate for these in
25 the pre and post frack analysis. And final point, oil

1 and gas development is subject to uncertainty and plans
2 often change based on recent drilling or well
3 performance. Would the regulations hinder the required
4 flexibility that is often necessary to succeed in the
5 oil and gas field. Also note that the cost of sampling
6 is significant. For instance in our Cannery Loop unit
7 which is part of the Kenai field complex and contains
8 fractured wells, we estimate that it would cost
9 \$259,000 to perform water sampling on a well that was
10 previously fracked. This is based on our estimate that
11 each analysis will cost \$7,000 per well, considering
12 the sampling, the time, the land access, the data
13 storage. And that we count 37 wells in the proximity
14 of the well given a half mile radius around the
15 trajectory.

16 In response to the stated challenges Hilcorp
17 respectfully requests the following changes to the
18 water sampling section. Number 1, add a vertical
19 height component to the definition of the sampling
20 area. If a hydraulic fracture will not grow to a
21 height that is near a freshwater aquifer then simply do
22 not require water sampling. We propose that hydraulic
23 fractures that are within 1,000 feet -- vertical feet
24 of a freshwater aquifer require water well sampling.
25 In contrast fractures that are greater than 1,000

1 vertical feet away from groundwater aquifers would not
2 require water sampling. This appropriately helps make
3 the relatively small frack jobs that characterize Cook
4 Inlet development more efficient. This also
5 appropriately will put more stringent requirements on
6 bigger or shallow frack jobs. And when water sampling
7 is required we request that the regs define a minimum
8 number of samples be collected within a project rather
9 than all the wells in the radius of a well and we
10 propose four wells as a reasonable minimum number. We
11 also ask for the regs to define a process for
12 unresponsive landowners. Some landowners may not
13 communicate with operators promptly enough to satisfy
14 the 90 and 120 day sampling timelines. Please clarify
15 the amount of time required to give landowners. We
16 propose stating in the regulations that landowners have
17 30 days to reply to a water well sampling request. And
18 finally we request that permit exemptions to the
19 sampling timeline or field rules exist for routine --
20 for projects in series. For example operators often
21 batch drilling and/or fracturing programs in series to
22 gain more efficiency. In such cases we ask that you
23 allow the creation of field rules that govern sampling
24 programs and projects such as this.

25 And I will wrap up now and I also want to

1 highlight a very simple model that I have in my hands.
2 It's a dowel, it's flexible and it vertically is to
3 scale so the -- this could represent a well that's
4 9,000 feet deep. And the top of it is blue
5 representing 300 feet or the typical maximum depth of a
6 water well. And it also represents just for reference
7 about the height of the Conoco tower downtown. And in
8 the well at a depth of seven to 8,000 feet I have a
9 flag which notes a frack which may be a couple hundred
10 feet high and it's a couple hundred feet in horizontal
11 distance. Note the scale and size of the frack and the
12 distance vertically in the hole with respect to the
13 groundwater. And also to clarify our suggestion that
14 1,000 vertical feet be included in determining if
15 vertical -- if water well sampling is defined or
16 required. To be clear and, Commissioner Norman, as you
17 asked Ms. Moriarty about, you know, our request is that
18 if the fracture -- the modeled fracture is more than
19 1,000 feet away, so in this scale 1,000 feet's usually
20 about this distance. If this, 1,000 feet above the top
21 of the model fracture is below known aquifers then we
22 ask that you not require water sampling. In contrast
23 if it was a very shallow frack within 1,000 feet of
24 known aquifers then yes, we fully support aggressive or
25 stringent water sampling.

1 And as I wrap up my comments I highlight that
2 Hilcorp's testimony focuses on water sampling and I
3 also note that we generally support AOGA's comments on
4 the pending regs and ask that you please consider their
5 testimony. Additionally there's been significant
6 dialogue regarding chemical disclosures and we
7 generally support the prudent and efficient disclosure
8 of chemicals to help resolve public concerns.

9 In closing I sincerely thank you for your time
10 and consideration and I appreciate your role in
11 maintaining a viable oil and gas industry in Alaska. I
12 have three copies of my oral comments and I'm happy to
13 answer any questions that you have.

14 CHAIR FOERSTER: Thank you, Mr. Elliott.
15 Commissioner Norman, do you have any questions for Mr.
16 Elliott.

17 COMMISSIONER NORMAN: Thank you, Mr. Elliott,
18 for actually following up a little more on -- you can
19 anticipate my question to Ms. Moriarty which she
20 responded to and you've added a little bit of detail.
21 I appreciate the bit of demonstrative evidence. Can
22 you hold that up again?

23 MR. ELLIOTT: Sure.

24 COMMISSIONER NORMAN: I've been trying to
25 understand the vertical. The well that we're talking

1 about would -- the surface location would be at the top
2 of the stick, right?

3 MR. ELLIOTT: That is correct.

4 COMMISSIONER NORMAN: Okay. And it would pass
5 through the aquifer there where your finger is?

6 MR. ELLIOTT: That is correct.

7 COMMISSIONER NORMAN: So and then it would
8 proceed down to where the red flag is, to where the
9 fracturing -- hydraulic fracturing would take place?

10 MR. ELLIOTT: That is correct.

11 COMMISSIONER NORMAN: So in order to be
12 entirely comfortable that we could be assured of a
13 safety zone of 1,000 foot distance from that freshwater
14 aquifer we would also have to be pretty much 100
15 percent satisfied with the well integrity, would we
16 not?

17 MR. ELLIOTT: That is correct, absolutely.

18 COMMISSIONER NORMAN: And can we always be 100
19 percent satisfied with well integrity?

20 MR. ELLIOTT: You know, I equate the oil and
21 gas business to aviation, you know, the consequences of
22 failure are severe as is the case in the oil and gas
23 business. And so there are always risk -- is the risk
24 of a catastrophic failure, but like in aviation we hop
25 on planes every day and we drill oil and gasfields

1 every day because the current regulations and practices
2 minimize that risk to a level that is socially
3 acceptable. And as the Commission has previously noted
4 in 50 years of oil and gas exploration activities there
5 has not been a proven case of groundwater
6 contamination.

7 COMMISSIONER NORMAN: Yes. And I don't quarrel
8 with that at all. We have received some comments from
9 the University of Texas regulatory oversight group,
10 also a good university would you not agree?

11 MR. ELLIOTT: Oh, I absolutely agree.

12 CHAIR FOERSTER: Wise. Wise.

13 COMMISSIONER NORMAN: A wise man. But they
14 make a point there that there is the possibility of
15 always vertical migrations through a fracturing.....

16 MR. ELLIOTT: That is correct.

17 COMMISSIONER NORMAN:operation.

18 MR. ELLIOTT: And I -- in addition to the
19 current regs which I've marked up and I know pretty
20 well at this point, require additional pressure testing
21 which we agree with which help resolve that concern at
22 a time that's immediately prior to the frack. And
23 obviously if the well would not pass the pressure test
24 then you would not pump the job to help further
25 mitigate the risk that the original well design which

1 would have passed your standards and inspections is
2 still within code so to speak.

3 COMMISSIONER NORMAN: Okay. Well, I do
4 appreciate the suggestion and at our last hearing at
5 the Hilton I know several of the persons testifying did
6 talk about the absence of freshwater aquifers at depth
7 and I think I posed a rather simplistic question that
8 what if we cutoff at 3,000 feet, for example, which I
9 know of none at that depth here in Alaska. That's
10 certainly more than adequate, but what you're proposing
11 here is 1,000 feet. So I think your explanation is
12 helpful and it gives us something to think about.

13 MR. ELLIOTT: Thank you, sir.

14 COMMISSIONER NORMAN: I have nothing further,
15 Commissioner Foerster.

16 CHAIR FOERSTER: Commissioner Seamount, do you
17 have any questions?

18 COMMISSIONER SEAMOUNT: I have a few. First
19 bullet, are you.....

20 CHAIR FOERSTER: Go for it.

21 COMMISSIONER SEAMOUNT:going to enter the
22 dowel wellbore into the record?

23 MR. ELLIOTT: You can have it.

24 COMMISSIONER SEAMOUNT: How are we going to
25 file it.

1 CHAIR FOERSTER: Well, we've got enough iPhones
2 in the room, we could just get a picture of it.

3 COMMISSIONER SEAMOUNT: Oh, that's a good idea.

4 CHAIR FOERSTER: Thank you very much.

5 COMMISSIONER SEAMOUNT: Okay.

6 CHAIR FOERSTER: We learned that at University
7 of Texas. And for the record this year we're going to
8 have to rest on our academic laurels since our football
9 team is so bad. Go ahead.

10 COMMISSIONER SEAMOUNT: We didn't have iPhones
11 when I went to school.

12 CHAIR FOERSTER: We didn't have hand held
13 calculators when I started.

14 COMMISSIONER SEAMOUNT: We weren't allowed to
15 have them.

16 CHAIR FOERSTER: Well, we did, but I couldn't
17 afford them. All right. Back to work. Sorry.

18 COMMISSIONER SEAMOUNT: Okay. Mr. Elliott,
19 which formations do you frack at Kenai?

20 MR. ELLIOTT: The beluga formation.

21 COMMISSIONER SEAMOUNT: The beluga. You don't
22 frack the sterling?

23 MR. ELLIOTT: No, sir.

24 COMMISSIONER SEAMOUNT: And you do -- do you
25 frack the tyonek?

1 MR. ELLIOTT: The tyonek which is below the
2 beluga typically is not fracked, but it -- we think
3 that it may benefit from hydraulic fracturing, yes.

4 COMMISSIONER SEAMOUNT: Okay. And you
5 mentioned that there is no shale oil or shale gas
6 production in the state, do you see a future potential
7 for shale oil and gas?

8 MR. ELLIOTT: I do, yes.

9 COMMISSIONER SEAMOUNT: Okay. Now as far as
10 water sampling you mentioned over \$200,000. When I
11 worked for your predecessor we formed a unit in the
12 Matanuska Valley, it was the Pioneer unit, and we went
13 out -- just to protect ourselves we went out and we
14 sampled a whole bunch of water wells and I would
15 recommend that you look back through the records and
16 see what that cost because -- I guess costs may have
17 skyrocketed since 1998, but I don't remember -- I --
18 that would have shocked me if I would have seen that
19 kind of number, but we sampled I don't know, maybe 50
20 wells, 100 wells. Now do you have a problem with
21 predrill, prefrack water sampling?

22 MR. ELLIOTT: In general, no. Where
23 applicable, no, we don't have a problem.

24 COMMISSIONER SEAMOUNT: Okay. I guess -- oh,
25 Yeah, I guess that's all I have. Thank you, Mr.

1 Elliott.

2 CHAIR FOERSTER: I just had one question. You
3 -- when you were doing your math you said there were 37
4 wells, is that the number of water wells you're aware
5 of in the area?

6 MR. ELLIOTT: That is correct.

7 CHAIR FOERSTER: Okay.

8 MR. ELLIOTT: And the DNR data base in that
9 area shows 12, but there are wells that are not
10 registered and it's not on a -- it's not on the
11 municipal power supply so we assume that each home has
12 a water well.

13 CHAIR FOERSTER: Okay. Well, I have no other
14 questions then. I appreciate your comments. Thank
15 you, Mr. Elliott.

16 MR. ELLIOTT: Thank you, Commissioners.

17 CHAIR FOERSTER: At this point Ms. Cutler, who
18 is K&L Gates representing today?

19 MS. CUTLER: I'm representing Halliburton.

20 CHAIR FOERSTER: Halliburton. All right.

21 Well, let's hear from you then.

22 MS. CUTLER: All right.

23 CHAIR FOERSTER: Introduce yourself, who you
24 represent and if you want to be recognized as an expert
25 what that area of expertise is and what your

1 credentials are.

2 MS. CUTLER: All right. Good morning,
3 Commissioners, thank you for letting me comment today.
4 I'm sorry if I didn't fill out your form right and put
5 down K&L Gates instead of Halliburton. As you know my
6 name is Luann Cutler, I'm an attorney with K&L Gates,
7 LLP and we represent Halliburton in this particular
8 matter before you today.

9 I'm only going to take up about 10 minutes of
10 your time and I would though like to focus you in on a
11 particular example that we provided in our written
12 comments. If you don't have those comments may I
13 approach and provide them to you.....

14 CHAIR FOERSTER: Please.

15 MS. CUTLER:at this time?

16 CHAIR FOERSTER: Please.

17 MS. CUTLER: Thank you.

18 (Pause)

19 MS. CUTLER: So that's a very thick package and
20 I promise I'm not going to make you go through the
21 whole thing.

22 CHAIR FOERSTER: Well, by submitting it to us
23 you have made us go through the whole thing, but you're
24 just not going to do so again today?

25 MS. CUTLER: That is correct.

1 CHAIR FOERSTER: Okay. And we appreciate it,
2 we appreciate all the comments we get.

3 MS. CUTLER: As you know Halliburton does
4 support disclosure and we request one of two approaches
5 to disclosure. I'm going to spend most of my time
6 today talking about our preferred approach which would
7 be mandatory disclosure of additives used in hydraulic
8 fracturing with the exception of information that
9 Halliburton and others who provide these chemicals and
10 these additives -- with the exception of information
11 that we consider to be our trade secrets. And as you
12 also know from our comments we realize and endorse that
13 there is always going to be an exception to what we've
14 requested and that would obviously be in the case of a
15 health care or other emergency as well as if you all
16 are doing a waste investigation or if a spill needs to
17 be investigated in the state. And again I'm not going
18 to focus my comments on that, but I did want to make it
19 clear for the record that of course we would support
20 disclosure under those circumstances.

21 So Exhibit C to our current set of comments
22 which is what you have in front of you, that is where
23 we provide you the language that we suggest that you
24 adopt to achieve our preferred approach. So if our
25 preferred approach is something that you ultimately

1 decide to adopt what would actually be withheld from
2 disclosure, I think that's kind of the heart of what
3 we're all struggling with with respect to this
4 proposal. And I would submit that very little will
5 actually be withheld and to demonstrate that to you if
6 you wouldn't mind just turning to the last four pages
7 of the packet that I provided to you so beginning with
8 our Exhibit D, pages 5 through 8.

9 As you know we try to provide you in this round
10 of comments an actual example of what disclosure would
11 look like if indeed your adopted our proposal. And so
12 even though this is a theoretical example, we took the
13 information here from an actual well that has been
14 fracked in Alaska. So this is in point of fact
15 something that would be disclosed with respect to a
16 well that was drilled in Alaska I believe in 2013. It
17 might have actually been the winter of 2012, but I
18 think it was 2013. So if I could just spend a couple
19 minutes walking through this with you. So obviously at
20 the top would be, you know, the sort of basic
21 information about the well. Beginning with the blue
22 line sort of two-thirds of the way down page 5, you see
23 various headings. And so the first three headings I
24 want to talk about first. So there you have the trade
25 name, the supplier and the purpose. And as you can see

1 if you turn from page 5 to page 6 most of the
2 information provided there concerns additives that, in
3 fact, Halliburton provided to the operator.

4 So then, and this is the hard part of this
5 chart and if I had this to do over again believe me I
6 would have redone it, but now turning back to the blue,
7 the next three columns are ingredients, chemical
8 abstract service number and maximum ingredient
9 concentration. And had I been smarter I would have
10 repeated that on the next page. So if you just try to
11 turn to page 6 and page 7 and count in to the fourth,
12 fifth and sixth columns you will see we are talking
13 about ingredients again, CAS numbers again and maximum
14 concentrations. And if you look at page 6, page 7 and
15 page 8 in those three columns you'll see that very
16 little information has been withheld. So what
17 Halliburton is proposing again so we understand what
18 we're looking at here is A, that we be able to disclose
19 in an aggregated list the intentional added additives,
20 that's extremely important to Halliburton. And what
21 we've disclosed here is everything but the proppant and
22 the water. So we've disclosed here everything that was
23 intentionally added. And as you can see no ingredients
24 were withheld, what was withheld are some CAS numbers
25 and I counted them, there's 46 CAS numbers here for

1 purposes of things that were actually provided by
2 Halliburton, not something where it says N/A in that
3 second column because it was supplied by the operator.
4 So of all the things provided by Halliburton 12 of the
5 46 were withheld, just the chemical CAS number. With
6 respect to maximum concentrations however, we were able
7 to disclose everything, nothing is withheld.

8 So what is the take away from this. The take
9 away is that we can disclose and I think if you go to
10 the FracFocus website, I understand you guys have moved
11 beyond FracFocus and we're going to have some form of
12 disclosure in Alaska, but if you go look at the
13 FracFocus website I think you'll see that this is a
14 really typical example, and so we can disclose most
15 chemical ingredients, we just can't disclose all of
16 them. And we -- although we cannot disclose actual
17 concentrations of some of the ingredients, in virtually
18 all cases, especially if it's an aggregated list, we
19 can disclose the maximum concentration that was ever
20 used which again provides the information to the public
21 which we believe people desire which is to understand,
22 you know, the possibilities here, what could
23 potentially happen if the worst occurred.

24 So this is our preferred approach and again
25 just to make sure everyone understands, the reason for

1 this is because this is an incredibly competitive
2 business I have learned from representing this client.
3 It is actually if you know how to make additives you
4 can reverse engineer them and that's the concern here,
5 the concern obviously is that folks have spent, you
6 know, lots of time, lots of effort and lots of money
7 developing these chemicals and what we really don't
8 want is for our competitors to be able to reverse
9 engineer these formula and of course our competitors
10 don't want us to be able to do it either. And so
11 that's why as far as I know there's pretty unanimity
12 with respect to this issue by the service providers.

13 So that's our preferred approach. As I said
14 though we've requested one of two approaches. The
15 other approach is if the Commission feels strongly that
16 it does need to get all chemicals including those that
17 the companies consider to be trade secrets we also
18 respectfully suggest to you that we can't live with the
19 current language of the regulations, we've got to have
20 explicit trade secret protection which does not exist
21 in this current set of regulation. And Exhibit A to
22 this big, fat package is actually the comments we made
23 the first time and on page 13 at note 8 is where we
24 provide you a little road map to take that approach if
25 indeed that's the approach that you ultimately want to

1 take. It's a little out of date now because your
2 regulations have changed, but I know you have great
3 lawyers and you are all extremely capable and if that's
4 the route you decide to take that might be a proposed
5 road map to get us to where we would be more
6 comfortable. We acknowledge that you have the waiver
7 language and the variance language in this current set
8 of regulations. We think that that might be a possible
9 avenue not to have to release trade secrets, but with
10 all due respect it's just not going to provide my
11 client the comfort that they need. You know, the
12 waiver process is expensive, it's time consuming, it's
13 one by one, it's uncertain and we fear that if waivers
14 are actually provided that then there could be
15 litigation. It's just with all due respect not
16 something that we are at the end of the day comfortable
17 with.

18 Just in closing I want to say that like all the
19 other speakers today and I'm sure everybody in this
20 room, I mean, everyone understands your role in this
21 process is to protect a continued history of, you know,
22 oil and gas operations in the state with hydraulic
23 fracturing with no incidents and we respect that and we
24 understand that is why you are looking into this. And
25 you're going to do what you think is best for Alaska

1 and we're going to live with that, but we do hope that
2 the Commission understands that if we don't get the
3 protection that we need there are going to be business
4 decisions that the companies are going to have to make
5 and if trade secret protection is not adequately
6 protected it's my belief that Halliburton will no
7 longer be providing the best hydraulic fracturing
8 treatments in Alaska. And by the best I mean not just
9 the ones that get the most oil out of the ground, but
10 the ones that are the best for the environment. I'm
11 sure you've read our comments, I've read quite a few of
12 the comments of other people. The things that people
13 consider to be the crown jewels are obviously the most
14 recently developed formulas and those are the ones that
15 are the ones that use the chemicals that have the least
16 impact on the environment, but that also get the most
17 oil out of the ground. That's what we're in the
18 business of doing, that's what makes us stand out from
19 our competitors and it is those crown jewels that the
20 company will not be comfortable telling -- providing a
21 road map to competitors as to what the trade secrets
22 will be.

23 With that I will be quiet and thank you very
24 much for listening to me.

25 CHAIR FOERSTER: Commissioner Norman, do you

1 have any questions for this witness?

2 COMMISSIONER NORMAN: Just a few. Thank you,
3 Ms. Cutler. The information you provided on Exhibit D
4 and helped focus us on, how does that differ, if it
5 does, from what would normally be reported on
6 FracFocus. I understood that it's pretty much the same
7 as what would be reported on FracFocus, is there any
8 difference in this exhibit and what you would report on
9 FracFocus?

10 MS. CUTLER: Through the Chair to Commissioner
11 Norman. Honestly I cannot answer that completely
12 directly. I would be happy to get back with you say
13 within 24 hours. I believe it to be very similar, but
14 I could not tell you sitting here today if it is
15 exactly the same or not. But I -- may I get back to
16 you on that?

17 COMMISSIONER NORMAN: Sure. That.....

18 MS. CUTLER: Okay.

19 COMMISSIONER NORMAN:that would be an
20 important question because obviously one of our
21 requirements is that there be reporting on FracFocus
22 and if this is -- what's proposed here is less than
23 that we have a further difference of opinion with
24 Halliburton. So if you could get back to us with a yes
25 or no. I've compared it briefly and it does compare to

1 me that it's pretty much the same.

2 I have read your written materials and thank
3 you for that. And I note the citations to the Alaska
4 Uniform Trade Secrets Act. That Act focuses on
5 misappropriation of trade secrets. The thing I've
6 always thought might be relevant here is there is a
7 definition of a trade secret, but let me return to the
8 word misappropriation because that's used in your
9 brief. Were we to adopt a regulation requiring
10 disclosure would you consider that to be a
11 misappropriation of Halliburton's trade secret?

12 MS. CUTLER: Through the Chair to Commissioner
13 Norman. No, that is why we have explicit really
14 requested that you take the definition of trade secret
15 which has been used in the case law and also in other
16 states which I don't imagine you want a whole analysis
17 of that, but that's why we've specifically requested
18 number 74 as far as the trade secret definition goes
19 because we want to see that in your regulations. Maybe
20 there's a more creative lawyer in the world than I am,
21 but I have never known of any lawsuit ever brought that
22 suggested that an agency that had the power to regulate
23 an industry was misappropriating a trade secret under
24 that Act. And as you know that's the uniform act from
25 your days in private practice.

1 COMMISSIONER NORMAN: Well, I know you by
2 reputation to be a very creative lawyer, I will add
3 that. My final question is we've received a number of
4 suggestions on how to deal if we decide to with the
5 question of extending some protection to confidential
6 information that is disclosed. Have you looked at the
7 other suggestions, AOGA for example has put forth a
8 thoughtful suggestion, have you looked at any of those
9 others, that's a task the Commission's going to have to
10 undertake is look through those and then perhaps we'll
11 adopt some of them or perhaps we won't, but it would
12 help if I knew whether you had -- because Halliburton
13 has taken a fairly rigid position and I'll be very
14 candid with you, I view this as do it our way or we
15 won't play ball here. I'll be frank with you, I read
16 it that way and that's all right. But our objective
17 here is not to make life difficult for anyone and I
18 think to be fair you characterized our role simply as
19 to do our very best to protect the public and discharge
20 our responsibilities to protect the environment and so
21 forth and that's what we're trying to do. And if we
22 could find the best of a number of these proposals and
23 the simplest way that things could work that would
24 certainly I think serve everyone well. So if you were
25 able to look through some of these other proposals and

1 see something that you could find alignment with that
2 would be good to know because I can tell you've put a
3 lot of thought into it, Baker Hughes has, a number of
4 other companies have and I'm not suggesting that you
5 have to, but the more we can get some alignment on
6 these it would certainly make our job easier rather
7 than coming out with something that might please one
8 operator, but not another or come out with something
9 that pleases no one.

10 MS. CUTLER: May I respond, Commissioner
11 Foerster?

12 CHAIR FOERSTER: Oh, and you don't have to go
13 through the Chair.

14 MS. CUTLER: Oh, okay. Thank you very much for
15 your frank comments, Commissioner. We have worked very
16 closely with AOGA and with Baker Hughes and I think if
17 you look at the first set of comments the proposal for
18 this particular issue was exactly the same or it was
19 really, really similar. There is no parting of the
20 ways here. We could easily live with just FracFocus
21 disclosure which I believe is what folks are at this
22 point proposing other than us. I guess to be candid
23 about it I think we just felt that that wasn't the
24 route you were taking and if the route that you're
25 taking is not just FracFocus disclosure, but you want

1 to get your own disclosure then we wanted to work with
2 you. And so that's why our comments attempt to address
3 your second set of regulations and the disclosure
4 requirements that we could live with in the conjunction
5 of your second set of regulations, but I don't think
6 they're very different, they're certainly not intended
7 to be from what we put out there to begin with. The
8 one difference would be that with respect to the waiver
9 provision which wasn't in the first set of comments --
10 sorry, of regulations. Again to try to address your
11 concerns we proposed language for the waiver provision
12 which I don't think AOGA has done although to be
13 perfectly frank with you I've not seen what Ms.
14 Moriarty gave you this morning so I apologize if that
15 is in there, but I don't think it is in there. And I
16 did look at Baker Hughes' comments and my recollection
17 is that again they were just suggesting that we use
18 FracFocus. So we were just trying to go beyond that,
19 but again if you decide ultimately that FracFocus is
20 going to meet your needs, I mean, that would be
21 completely acceptable to Halliburton.

22 And let me make sure I respond to -- if you
23 don't mind I'd like to respond to your point about that
24 we won't play ball. I guess I really want to be clear
25 about what I'm saying. What I'm saying is that it will

1 be the crown jewels that Halliburton will have a hard
2 time providing in Alaska if indeed there isn't what
3 they consider to be adequate trade secret protection in
4 the final set of regulations. It does not mean that
5 there will not be fracturing fluids provided here, it
6 just means that what we consider to be the best of our
7 suite of fracturing fluids that are actually being
8 used, you know, in Alaska now as well as -- I mean,
9 again I'm no expert on this stuff so I'm speaking
10 completely as a lawyer, but, you know, you probably
11 know better than me that -- you know, that what the
12 actual fluids that are used depend completely on the
13 circumstances of the particular well and the objective
14 of, you know, that, et cetera. But with respect to
15 what the company considers to be the crown jewels I
16 think is really all I'm talking about. I hope that
17 clarifies what I said earlier.

18 COMMISSIONER NORMAN: Yes. And, in fact, I
19 believe the first time that's what you said is that if
20 there wasn't opportunity for protections Alaska might
21 not have the opportunity to realize the benefits of the
22 crown jewels. So that came across clear.

23 MS. CUTLER: Okay. Thank you.

24 COMMISSIONER NORMAN: Thank you. I have
25 nothing further.

1 CHAIR FOERSTER: Commissioner Seamount, do you
2 have questions?

3 COMMISSIONER SEAMOUNT: I have nothing. Thank
4 you, Ms. Cutler.

5 MS. CUTLER: Thank you.

6 CHAIR FOERSTER: I have a few.

7 MS. CUTLER: Okay.

8 CHAIR FOERSTER: Your very first statement was
9 that you said that Halliburton supports disclosure.
10 Why?

11 MS. CUTLER: Because the company has always
12 been ever since the sort of movement started for
13 disclosure the company has always supported the notion
14 that the public needs to understand what is going on.
15 My understanding is -- and again I only work for them
16 in Alaska, but my understanding is they have been a
17 leader in this endeavor, you know, kind of around the
18 country.

19 CHAIR FOERSTER: Okay. So if -- and if you
20 feel that the public has a need to understand and I
21 think that is the reason for FracFocus is to give the
22 public an understanding of what's happening and if I'm
23 the public I'm not going to have a chemistry degree and
24 I'm not going to be working for a frack company so when
25 I read acrylic polymer can't tell you what it is; amine

1 salts, can't tell you what they are; ammonium salts,
2 can't tell you what they are; borate salts, can't tell
3 you what they are; cured acrylic resin, can't tell you
4 what they are; oxyalkylated, I can't even pronounce
5 that one, phenolic resin, can't tell you what they are;
6 ordinary amine, can't tell you what they are; and
7 surfactant mixture, can't tell you what they are, I'm
8 not sure I feel informed. So I guess my question is
9 how do you feel that FracFocus fulfills that need with
10 that kind of input, fulfills the need of the public
11 feeling like they understand?

12 MS. CUTLER: Well, I guess I read what the
13 Commission is requesting is the chemical ingredients or
14 the chemical abstract service numbers which I believe
15 be the information that you just read. So I'm not sure
16 -- I mean, I would obviously need to talk to my client,
17 I never talked to my client about this issue, but if
18 your suggestion is that somehow that isn't enough
19 information I'd have to get their answer to that. But
20 I'm not -- it's not clear to me that the Commission is
21 requesting us to disclose more than this.

22 CHAIR FOERSTER: Well, I'm just trying to see
23 the issue from the eyes of somebody who's a stay at
24 home mom or the construction worker or -- you know, we
25 got a lot of these in this state and when they read

1 these -- this kind of a document they might have a lot
2 of questions and feel uncomfortable with them. And,
3 you know, I too feel that FracFocus' primary objective
4 is so that the public can understand what's happening
5 and I'm just wondering if by putting in words that
6 somebody who's fairly well educated can't even
7 pronounce we're doing that. So that is something maybe
8 that your client can make us feel better about.

9 And I did have one other question. I hear
10 repeated use of the term crown jewels and specifically
11 in the area of environmental protection. If
12 Halliburton truly does have the best recipe on the
13 planet for protecting the planet I would suggest that
14 Halliburton should be sharing it with others as a
15 responsible citizen and maybe even just -- not just
16 giving it away, but selling it would be a way of making
17 it available to others. But that was more of a comment
18 than a question so I apologize for that.

19 Any other questions, comments?

20 COMMISSIONER SEAMOUNT: No.

21 CHAIR FOERSTER: Okay. Commissioner Norman.

22 COMMISSIONER NORMAN: Ms. Cutler, I wanted to
23 return to -- just a quick follow-up on one question
24 that Commissioner Foerster asked going down the same
25 column. I understood your response to say that you

1 weren't sure what the Commission was asking for. She
2 read the list of ingredients from the perspective of an
3 average citizen looking at FracFocus and then she read
4 the next column of -- let me look.....

5 CHAIR FOERSTER: The chemical.....

6 COMMISSIONER NORMAN:here at the heading,
7 is that additives or ingredients. Let me see from the
8 heading. In any event the next column indicates
9 confidential business information. I'm looking at page
10 6 of Exhibit D. And that was where she said how could
11 someone know what that is. And when I had looked at
12 that I had understood -- I had interpreted this as a
13 request or indication or assertion of confidentiality
14 by Halliburton rather than uncertainty about our
15 proposed regulations. I -- our reg -- our proposed
16 regulation at -- I'm looking at page 2, 14(c), requires
17 disclosure of the chemical ingredient name, chemical
18 abstract service registry number for each fluid, each
19 additive used, actual max concentration, et cetera, et
20 cetera, you could read it, but is that -- am I
21 misreading that because I thought that was -- I thought
22 this was an assertion here that this is confidential
23 and we can't disclose what you're requesting in your
24 regulation?

25 MS. CUTLER: Commissioner Norman, this is again

1 my fault for not transferring that blue to page 6,
2 okay, but the column that has confidential business
3 information in it is the CAS numbers, the ingredients
4 are all disclosed.

5 COMMISSIONER NORMAN: Let me get back to that.

6

7 MS. CUTLER: So the ingredients and the maximum
8 concentration amounts are disclosed.

9 COMMISSIONER NORMAN: The assertion of
10 confidentiality falls under the column.....

11 CHAIR FOERSTER: CAS number.

12 COMMISSIONER NORMAN: And I'll share
13 responsibility with you, I should be able to figure
14 that out too.

15 MS. CUTLER: And so -- and so if I.....

16 COMMISSIONER NORMAN: That falls under which
17 column then, the max?

18 MS. CUTLER: I'm sorry, the chemical abstract
19 service number column.

20 COMMISSIONER NORMAN: Yeah. So when I'm
21 reading confidential business information that falls
22 under chemical abstract number?

23 MS. CUTLER: Correct.

24 COMMISSIONER NORMAN: Okay.

25 MS. CUTLER: And so there's no

1 misunderstanding, yes, we're not -- we're not saying
2 we're confused about what the Commission is asking for,
3 we are -- in fact, you are correct, that would be an
4 example say for this acrylic polymer and next to it it
5 says confidential business information.....

6 COMMISSIONER NORMAN: Uh-huh.

7 MS. CUTLER:the CAS number for that
8 particular ingredient we would view as a trade secret
9 that would not be -- that we would prefer not.....

10 COMMISSIONER NORMAN: Okay.

11 MS. CUTLER:to have to disclose.

12 COMMISSIONER NORMAN: Okay. That's my very
13 question then. We are clear in our regulation what we
14 want.....

15 MS. CUTLER: Yes.

16 COMMISSIONER NORMAN:and you're being
17 clear here saying we won't provide it?

18 MS. CUTLER: With respect to this particular
19 well?

20 COMMISSIONER NORMAN: As an example.

21 MS. CUTLER: Yes. Most of the CAS numbers
22 were, in fact, provided for this particular well.

23 COMMISSIONER NORMAN: But in the -- just in the
24 one examp -- I'm only using this as an example.....

25 MS. CUTLER: Yes.

1 COMMISSIONER NORMAN: confidential
2 business information, we would ask for it here again as
3 an example and you would say in confidential business
4 information say no, this is confidential, we can't
5 provide it?

6 MS. CUTLER: Yes, if our -- if our preferred
7 approach was adopted, that's correct.

8 COMMISSIONER NORMAN: Okay.

9 MS. CUTLER: This is supposed to be an exhibit
10 that would show you what would be disclosed and what
11 wouldn't be disclosed if our preferred.....

12 COMMISSIONER NORMAN: So there's no
13 misunderstanding we would ask for something and you
14 don't believe it should be provided so that's the gap
15 that has to be closed?

16 MS. CUTLER: Yes, I believe so. We would love
17 the opportunity to work with you guys to try to close
18 that gap, you bet.

19 COMMISSIONER NORMAN: Okay. Thank you very
20 much.

21 CHAIR FOERSTER: Thank you very much, Ms.
22 Cutler.

23 MS. CUTLER: Thank you.

24 CHAIR FOERSTER: All right. So I see Barrett
25 Ristroph from the Wilderness Society is next to

1 testify. And we're -- and I also see that we're not
2 going to have the pleasure of receiving testimony from
3 Lois Epstein from the Wilderness Society.

4 (Pause)

5 CHAIR FOERSTER: So for the record your name,
6 who you represent and if you desire to be recognized as
7 an expert what that area of expertise is and what are
8 your qualifications.

9 MS. RISTROPH: Well, good morning,
10 Commissioners. As Ms. Foerster correctly pronounced my
11 name is Barrett Ristroph and I'm with the Wilderness
12 Society. And I'm not seeking recognition as an expert.

13 But first before I start I just want to thank
14 you all for holding this public hearing and thank you
15 just for considering our previous comments and these
16 comments and caring enough about this issue to want to
17 have some of the best hydraulic fracturing regulations
18 in the country. I'm going to echo Mr. Elliott's
19 comments on Alaskan stewardship, it does mean something
20 and it means something for Alaska to be a leader. I'm
21 from Louisiana and we haven't always been a leader or
22 done it the best and I think these regulations are
23 really a chance for Alaska to show the rest of the
24 country how it can be done and to meaningfully allay
25 the public's concerns. Yes, it may cost more, but this

1 is the way to do it right and to be a leader. So with
2 that I'll just launch in my presentation.

3 The copy of the regulations I handed or the
4 comments that I handed to you are submitted on behalf
5 of a number of organizations with offices or a base in
6 Alaska. I won't read them out, here they are, and most
7 of these groups also submitted comments back in April,
8 2013 on the Commission's original proposal. And I just
9 want to go over some highlights from that, some of the
10 topics that we raised in our April, 2013 comments
11 dealing with the original proposal. So and those areas
12 that are starred are issues that the Commission
13 addressed in its revised proposal.

14 One thing we were concerned about is the full
15 disclosure of fracturing chemicals and concentrations
16 and we asked the Commission to ensure that components
17 of fracturing chemicals and the base or primary fluid
18 are disclosed in terms of percent by mass in the
19 fracturing fluid and we appreciated the prior
20 disclosure prior to fracturing operations. And we
21 asked to avoid the exclusive reliance on FracFocus and
22 I'll get into that more later. We appreciate the
23 notification of landowners and residents and local
24 governments or actually we asked for notification to
25 local governments and for notification to owners and

1 residents to be expanded to half a mile within -- from
2 the well.

3 As far as testing of water goes I think this is
4 a big issue and I know that there is some
5 misinformation out there about how long the fracture --
6 the fractures can be and whether they can approach the
7 aquifer, but there are fractures that have measured up
8 to 600 meters. And I can provide more information on
9 that, but there is a chance that fractures are long and
10 so we do need to think carefully before we say that
11 1,000 feet away from an aquifer is okay. And I think
12 the water sampling is important, it is one of the best
13 ways to allay the public concern. So in our previous
14 comments we had asked to clarify the timing of the
15 water sampling and ensure there's enough time before
16 fracturing operations for interesting -- interested
17 parties to do their own testing if they choose to and to
18 ensure that the operator testing is -- takes place not
19 too long before fracturing. We ask the Commission to
20 require the use of nontoxic fluids and muds and avoid
21 diesel based chemicals.

22 Regarding well integrity we wanted to make sure
23 that the casing and cement are properly installed and
24 maintained in accordance with best practices. We ask
25 the Commission to ensure that testing of the shale

1 formation and the well's ability to withstand
2 fracturing pressures takes place prior to fracturing.
3 We ask the Commission to set standards for calculating
4 measured depth and true vertical depth including a
5 requirement for 3D reservoir modeling.

6 Flaring is another big issue because it is an
7 area where there can be huge waste and inefficiency as
8 far as the gas being flared so we ask the Commission to
9 limit flaring and venting to the smallest amount needed
10 for safety and require operators to implement
11 technically feasible and cost effective gas control
12 practices during hydraulic fracturing operations.

13 We asked if the Commission could work with the
14 Departments of Environmental Conservation and Natural
15 Resources on storage, handling and disposal issues
16 because as Commissioner Foerster recognized earlier
17 that is outside of the Commission's immediate scope.

18 And finally we wanted to make sure that the
19 Commission has adequate staff to maintain oversight
20 once these regulations are implemented.

21 A number of things we're glad to see in the
22 revised proposal, the disclosure of fracturing
23 chemicals would now be in terms of percent by mass
24 within the overall fracturing fluid rather than just
25 within the ingredients and there would be reporting on

1 the base fluids. And this is not a change, but we
2 appreciate the Commission standing firm on the need for
3 full disclosure without exceptions for trade secrets.
4 We appreciate the expanded notification of landowners
5 from a fourth of a mile to a half a mile, but we did
6 notice that the requirement to provide a copy of the
7 application to these stakeholders is no longer there
8 and we encourage that provision to be retained. And
9 then finally the requirement that baseline water
10 monitoring takes place not more than 90 days before
11 fracturing is helpful so that an accurate baseline can
12 be achieved.

13 Some things that we are concerned about. One
14 is that broad scope of variance or waiver which could
15 allow for trade secrets or anything else, we're
16 concerned that this kind of waiver could allow any and
17 all of the regulations to be waived and kind of defeat
18 the purpose of the regulations. Another concern is
19 regarding freeze protect fluids. There's a new section
20 that would allow operators to avoid disclosure of
21 freeze protect fluids used before or after fracturing.
22 So we're concerned that this could allow potentially
23 toxic chemicals akin to antifreeze to be pumped in the
24 ground without any disclosure. We're concerned that
25 the revised definition for chemical ingredient may be

1 too limited. The new definition appears to limit the
2 term to just the chemicals in the additive rather than
3 the base fluids. That seemed like it would exclude
4 revealing chemicals that are in the base fluid. And
5 then references to 20 AAC 25.005. It looks like the
6 proposed revision would remove references to this
7 section which deal with the permit to drill so it
8 wasn't clear to us whether this means that operators
9 would no longer have to disclose their intent to use a
10 well for hydraulic fracturing when they're applying for
11 that permit to drill. We think that this should be
12 required and should be maintained. And there were some
13 unaddressed concerns from our previous comments
14 including FracFocus and flaring and the need for 3D
15 modeling.

16 And I don't have a slide on this, but I will
17 just harp a little bit more on FracFocus. And as you
18 know the entities responsible for that website are the
19 Groundwater Protection Council and the Interstate Oil
20 and Gas Compact Commission. And I know these entities
21 were working to make the site more user friendly and
22 more able to meet the requirements of state regulations
23 and I think it's still not ready for prime time yet.
24 One question I had in my mind is how prior disclosure
25 would work because the site isn't really setup for

1 that. I suppose an operator could submit the
2 information, there might be some confusion when the
3 public's looking at the record, what's the prior
4 disclosure and what's the post disclosure. Also when I
5 go to search FracFocus what I get when I click on an
6 operator or a well, I get a PDF. It's not possible for
7 me as a member of the public to aggregate the different
8 records so I can't see for example how many wells are
9 being fractured in one area by one operator. And I
10 know FracFocus was reformatting this so the regulators
11 could aggregate, but me as a member of the public I
12 wouldn't be able to do that. Another concern is that
13 compliance with the reporting requirements may be
14 reduced unless the Commission reviews all of the
15 information that is submitted to FracFocus just as
16 rigorously as it would review the information submitted
17 directly to the Commission. Right now there's not
18 really any requirements on these entities that run
19 FracFocus, they're not required to retain data, there's
20 not really any quality control assurance and there's
21 actually mistakes on the website. There was a recent
22 study by Harvard Law School and it found that of all
23 the chemicals disclosed on FracFocus for one month for
24 Texas wells, 29 percent of the chemical abstract
25 service numbers did not exist. That's a pretty big

1 mistake. And finally FracFocus has some bugs.
2 FracFocus recently shutdown on researchers from Earth
3 Works who were attempting to download a large amount of
4 data at one time.

5 So that completes my comments here and again I
6 appreciate the Commission taking the time to look into
7 this and improve the regulations and listen to me today
8 and I'll take any questions.

9 CHAIR FOERSTER: Thank you, Ms. Ristroph.
10 Commissioner Norman, do you have any questions?

11 COMMISSIONER NORMAN: Thank you, Commissioner
12 Foerster. You heard the proposal put forth by several
13 of the persons testifying that there be a -- an
14 exemption for 1,000 foot zone from a freshwater
15 aquifer. Have you had time to formulate an opinion on
16 that and if so it would be helpful to hear it.

17 MS. RISTROPH: Sure. Thank you, Commissioner
18 Norman. I have reservations about that. As I said
19 sometimes fractures -- it's not common, but it is
20 possible for a fracture to exceed 1,000 feet. And also
21 I think you kind of hinted at this earlier when you
22 were talking about yes, we assume and we hope that the
23 wells are -- have complete integrity, that the cement
24 is holding up and the casing is sound and secure, but
25 it doesn't always happen and over time these things

1 degenerate. And why not, why not assure the public
2 that we're doing it safely and testing the water. If
3 we're sure that our wells are intact and sound and
4 we're sure that this is not contaminating the water
5 then why not do the baseline testing and after testing
6 and ensure the public that fracking is safe.

7 COMMISSIONER NORMAN: Nothing further.

8 CHAIR FOERSTER: Commissioner Seamount, do you
9 have any questions?

10 COMMISSIONER SEAMOUNT: Yes. Ms. Ristroph?

11 MS. RISTROPH: You got it.

12 COMMISSIONER SEAMOUNT: Okay. I just have a
13 couple of questions. Where was this example of 600
14 meter frack growth, do you know?

15 MS. RISTROPH: This was a study and I can send
16 you the study and I might have it right here. There's
17 an article in the Guardian Newspaper and it cites a
18 couple of studies, one is by Richard Davis, Hydraulic
19 Fractures, How Far Can They Go in Marine and Petroleum
20 Geology. And this study said that of the 1,170 natural
21 hydraulic fracture pipe imaged with three dimensional
22 seismic data offshore of West Africa and mid Norway,
23 maximum reported fracture height was 1,106 meters. So
24 that is quite high. The Guardian reported 600 meters
25 maximum and this is going far beyond that and, you

1 know, a meter is close to a yard so that would be way
2 more than what the normal fracture is which I assume is
3 just a few hundred feet.

4 COMMISSIONER SEAMOUNT: Okay. Could you
5 provide the Commission with those citations?

6 MS. RISTROPH: I could.

7 COMMISSIONER SEAMOUNT: Oh, okay. Thank you.
8 Finally you mentioned strengthening our well integrity
9 regulations. Do you have any ideas how they could be
10 strengthened any more than they are?

11 MS. RISTROPH: I think they are fairly robust
12 especially compared to other states. In our original
13 comments that we submitted in April we talked about
14 having a cement and casing corrosion control program
15 and we had more specific measures that are beyond my
16 expertise, I'm not a petroleum engineer, these were
17 provided by our consultant. So if you would want to go
18 back to those April comments that has more specific
19 regulation requirement or suggestions.

20 COMMISSIONER SEAMOUNT: Okay. Thank you, Ms.
21 Ristroph.

22 CHAIR FOERSTER: I have no question for you so
23 thank you very much for your testimony.

24 We've had a couple people come into the room
25 since I got the list of people who wanted to testify.

1 Is there anyone else or is there anyone I've missed who
2 wished to testify?

3 (No comments)

4 CHAIR FOERSTER: Okay. Seeing no one,
5 Commissioner Norman has requested that we take a five
6 minute recess so let's do that and we'll reconvene at
7 about 11:00 o'clock. We're recessed.

8 (Off record)

9 (On record)

10 CHAIR FOERSTER: We'll go back on the record.
11 Is -- during the brief recess did anyone feel compelled
12 to change their mind and decide they need to testify?

13 (No comments)

14 CHAIR FOERSTER: Okay. Well, we don't have any
15 more questions for any of the people who testified
16 today. I did want to apologize, I failed at the start
17 of the hearing to acknowledge that Senator Cathy
18 Giessel is in the room and we really appreciate that
19 she is here and the interest and concern she has for
20 the important issue. Thank you so much. And she's
21 mine, she's my senator.

22 COMMISSIONER SEAMOUNT: She used to be mine.

23 CHAIR FOERSTER: Yeah, but she wised up and
24 chose me over you.

25 We will leave the record open for three weeks

1 from today. We have made some requests for some
2 additional information from some of the people
3 testifying so we'll leave the record open for three
4 weeks to allow time to provide that additional
5 information. And should anyone feel the need to
6 provide anything else, three weeks. And if as a result
7 of information that we've gathered in this process we
8 make what we consider to be substantial changes to what
9 has been shown as our proposed regulations then we will
10 renotice and we will give everyone one more bite at the
11 apple should we make substantial changes.

12 Commissioner Seamount, do you have anything
13 you'd like to add?

14 COMMISSIONER SEAMOUNT: No.

15 CHAIR FOERSTER: Commissioner Norman?

16 COMMISSIONER NORMAN: Nothing.

17 CHAIR FOERSTER: All right. Adjourned.

18 (Hearing adjourned - 11:09 a.m.)

19 (END OF PROCEEDINGS)

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TRANSCRIBER'S CERTIFICATE

I, Salena A. Hile, hereby certify that the foregoing pages numbered 152 through 223 are a true, accurate, and complete transcript of proceedings of public hearing of September 23, 2013 public hearing, transcribed under my direction from a copy of an electronic sound recording to the best of our knowledge and ability.

Salena A. Hile, Transcriber