

“Corrected Transcript: Corrections denoted within brackets [ ]”

UNITED STATES OF AMERICA  
U.S. NUCLEAR REGULATORY COMMISSION

WORK ORDER 96  
FORTHCOMING MEETING WITH THE PETITIONERS,  
BEYOND NUCLEAR ET AL., REQUESTING ACTION  
UNDER 10 CFR 2.206 REGARDING SUSPENSION OF  
THE OPERATING LICENSES FOR NORTH ANNA POWER  
STATION (NAPS) DUE TO CONCERNS ABOUT DAMAGE  
TO THE NAPS REACTORS FROM THE AUGUST 23, 2011  
EARTHQUAKE

FEBRUARY 2, 2012

10:00 A.M. [1:00 P.M.]

TRANSCRIPT OF PROCEEDINGS

Public Meeting

“Corrected Transcript: Corrections denoted within brackets [ ]”

## APPEARANCES

### NRC Staff:

Jon Thompson  
Petition Manager  
Office of Nuclear Reactor Regulation

Andrea Russell  
2.206 Coordinator  
Office of Nuclear Reactor Regulation

Patrick Hiland  
Office of Nuclear Reactor Regulation

Maria [Mauri] Lemoncelli  
Senior Attorney  
Office of the General Counsel

David Pstrak  
Branch Chief of the Structural Mechanics and Materials  
Branch in the Division of Spent Fuel Storage and  
Transportation  
[Office of Nuclear Materials Safety and Safeguards]

David Tang  
Senior Structure Engineer  
Office of Nuclear Materials Safety and Safeguards  
Division Spent Fuel Storage and Transportation, Structural  
Mechanics and Materials Branch

David Rahn  
Instrumentation and Controls Reviewer  
Office of Nuclear Reactor Regulation

Kamal Manoly  
Senior Technical Advisor,  
Division of Engineering, NRR.

Nancy Salgado  
Branch Chief  
Division of Operator and [Operating] Reactor Licensing,  
NRR

Kimyata Morgan Butler  
Acting Branch Chief of the Generic Communications Branch  
NRR

Shih-Liang Wu  
Nuclear Performance and Code Review Branch  
NRR.

Anthony McMurtray,  
Branch Chief of Component Performance and Testing  
NRR

Gurjendra Bedi  
Mechanical Engineer  
Region [Division] of Engineering and  
Component Integrity [Performance and Testing] Branch

Bob Tripathi[\*]  
Senior Structural Engineer  
NRC Spent Fuel Storage Transportation  
[Office of Nuclear Materials Safety and Safeguards  
Division Spent Fuel Storage and Transportation, Structural  
Mechanics and Materials Branch]

Gerald McCoy[\*]  
Branch Chief  
Division of Reactor Projects, Region II.

#### Licensee Representatives:

Page Kemp[\*]  
North Anna Power Station  
Dominion.

Ann Margaret Earle[Margaret Earle\*]  
Dominion.

Petitioners:

Paul Gunter  
Director of the Reactor Oversight Project,  
Beyond Nuclear

Kevin Kamps  
Radioactive Waste Specialist  
Beyond Nuclear

Thomas Saporito[\*]  
Senior Consultant, Saprodani Associates

Richard Ball[\*]  
Energy Issues Chair, Virginia Chapter of the Sierra Club.

Erica Gray[\*]  
Alliance for Progressive Value

[\*participated by telephone]

1 P R O C E E D I N G S

2 JON THOMPSON: Well, the appointed hour is here, so I guess  
3 we'll open the meeting. I'd like to thank everybody for attending this meeting.  
4 My name is Jon Thompson. I'm the petition manager for the petition submitted  
5 on October 20, 2011, and supplemented on November 2nd by Paul Gunter and a  
6 number of other petitioners who we'll list here in a moment regarding the restart  
7 of North Anna 1 and 2 after the earthquake of August 23, 2011.

8 We're here today to allow the petitioners to address the petition  
9 board for a second time regarding their 2.206 petition. The petition review board  
10 chairman is Patrick Hiland who you've had a chance to meet, at least here in  
11 person. As part of the petition review board, or PRB's review of this petition, the  
12 petitioners were offered an opportunity to address the PRB and to provide any

1 relevant additional information and support for the petition prior to the PRB's  
2 internal meetings to make the initial recommendation to accept or reject the  
3 petition for review. The petitioners were provided this opportunity during the  
4 public meeting held on December 12, 2011, at NRC headquarters. And the  
5 information provided at this meeting was considered by the PRB in developing its  
6 initial recommendation to partially accept this petition for review. As part of the  
7 NRC's process for reviewing 2.206 petitions, the NRC also offers the petitioners  
8 an opportunity to meet with the PRB after the initial recommendation on a petition  
9 has been made. The petitioners have made this request, and so we are meeting  
10 today. As before, Mr. Paul Gunter of Beyond Nuclear has agreed to coordinate  
11 the efforts of the petitioners in making their presentations, and we thank him for  
12 that.

13               This is a Category III public meeting where the public is normally  
14 invited to participate in the meeting by providing comments and asking questions  
15 throughout the meeting. In this public meeting, however, we've arranged for the  
16 petitioners to have one hour to make their presentations to the PRB and for other  
17 members of the public to have an opportunity near the end of the meeting, as  
18 time allows, to ask question pertaining only to the 10 CFT [CFR] 2.206 process.  
19 If a member of the public does not have an opportunity to ask their questions  
20 about the 2.206 process because of time limitations, then they can submit their  
21 questions in writing to me, the petition manager, Jon Thompson at J-O-N -- that's  
22 three letters -- .thompson -- T-H-O-M-P-S-O-N -- @NRC.gov.

23               The meeting is scheduled from 1:00 to 2:45 p.m. The meeting is  
24 being recorded by the NRC operations center and will be transcribed by a court  
25 reporter. The transcript will become a supplement to the petition. The transcript

1 will also be made publicly available through the NRC's agency-wide documents  
2 access and management system, otherwise known as ADAMS.

3 For those at the NRC headquarters, we have public meeting  
4 feedback forms. They're located near the door. And there might be one extra  
5 copy of the agenda there as well. And you're welcome to fill out these public  
6 meeting feedback forms. These forms are forwarded to our internal  
7 communications specialists. You may either leave them here following the  
8 meeting or mail them back. They're already post-paid. If you're participating by  
9 phone and would like to leave email feedback on this public meeting, please  
10 forward your comments to me, Jon Thompson, at the email address I provided.

11 I'd like to open this meeting with introductions of the NRC staff who  
12 are here in this room at NRC headquarters. I ask that all the NRC staff clearly  
13 state for the record your name, your position or occupation and your  
14 organization. For those here in the room, please speak up or approach the  
15 podium microphone, or I think what I'll do is I have a handheld mic, and as we go  
16 around, I'll walk over to the individuals outside this immediate table and I'll pass  
17 the handheld mic to them so that the persons on the phone can clearly hear them  
18 and so that the court reporter can accurately record your name.

19 I'll start with myself and the other NRC participants here in the  
20 room. My name is Jon Thompson. I'm in the Office of Nuclear Reactor  
21 Regulation, and I'm the petition manager.

22 ANDREA RUSSELL: Andrea Russell in the Office of Nuclear  
23 Reactor Regulation, the 2.206 coordinator.

24 PATRICK HILAND: I'm Pat Hiland. I'm in the Office of Nuclear  
25 Reactor Regulation, and I'm the chairman of this petition review board.

1                    MARIA [MAURI] LEMONCELLI: Good afternoon. I'm Maria [Mauri]  
2                    Lemoncelli, senior attorney in the Office of the General Counsel.

3                    DAVID PSTRAK: I'm David Pstrak and the branch chief of the  
4                    Structural Mechanics and Materials Branch in the Division of Spent Fuel Storage  
5                    and Transportation.

6                    DAVID TANG: I'm David Tang, senior structure [structural]  
7                    engineer in the Office of Nuclear Materials Safety and Safeguards Division of  
8                    Spent Fuel Storage and Transportation, Structural Mechanics and Materials  
9                    Branch. I'm a senior instructor [structural] reviewer.

10                  DAVID RAHN: I'm David Rahn. I'm with the Office of Nuclear  
11                  Reactor Regulation. I'm the instrumentation and controls reviewer.

12                  KAMAL MANOLY: I'm Kamal Manoly, senior technical advisor,  
13                  Division of Engineering at NRR.

14                  NANCY SALGADO: I'm Nancy Salgado. I'm a branch chief in the  
15                  Division of Operator and Reactor Licensing in the Office of NRR.

16                  KIMYATA MORGAN BUTLER: I'm Kimyata Morgan Butler, acting  
17                  branch chief of the Generic Communications Branch in NRR.

18                  SHIH-LIANG WU: Shih-Liang Wu, Nuclear Performance and Code  
19                  Review Branch of NRR.

20                  ANTHONY MCMURTRAY: Anthony McMurtray, branch chief of  
21                  Component Performance and Testing Branch in NRR.

22                  GURJENDRA BEDI: Gurjendra Bedi, mechanical engineer in the  
23                  region [Division] of Engineering and Component Integrity Branch.

24                  JON THOMPSON: That completes the introductions of the NRC  
25                  staff in this room. At that time -- at this time, are there any NRC participants from

1 headquarters who are participating on the phone?

2 BOB TRIPATHI: Yes. This is Bob Tripathi. I'm with the NRC  
3 Spent Fuel Storage Transportation. And I'm a senior structural engineer.

4 JON THOMPSON: Hearing no others, that completes the  
5 introductions of the NRC staff from headquarters. Are there any NRC  
6 participants from the regional offices on the phone?

7 GERALD MCCOY: Yes, this Gerald McCoy. I'm a branch chief in  
8 the Division of Reactor Projects in Region II.

9 JON THOMPSON: Are there any representatives for the licensee  
10 on the phone?

11 PAGE KEMP: Yes. This is Page Kemp at North Anna Power  
12 Station, Dominion.

13 MARGARET EARLE: Margaret Earle, Dominion.

14 JON THOMPSON: At this time, I would like to have the petitioners  
15 who are here at NRC headquarters introduce themselves. I ask that all  
16 petitioners please clearly state for the record your name, your position and your  
17 organization. Again, please speak up or use one of the microphones -- well, we  
18 don't have to deal with that logistical issue here.

19 PAUL GUNTER: Thank you. My name is Paul Gunter. I'm director  
20 of the Reactor Oversight Project at Beyond Nuclear in Takoma Park, Maryland.

21 KEVIN KAMPS: Thanks. My name is Kevin Kamps with Beyond  
22 Nuclear. I'm radioactive waste specialist.

23 JON THOMPSON: Thank you. At this time, I would to have any  
24 petitioners who are on the phone introduce themselves.

25 THOMAS SAPORITO: Yes, this is Thomas Saporito. I'm the



1 senior consultant at Saprodani Associates in Jupiter, Florida.

2 RICHARD BALL: Yes, this is Richard Ball. I'm energy issues chair  
3 for the Virginia Chapter of the Sierra Club.

4 ERICA GRAY: Yes, I'm Erica Gray, and I represent the Alliance for  
5 Progressive Values in Richmond, Virginia.

6 JON THOMPSON: I'm sorry, did Mr. Blundell [spelled phonetically]  
7 already introduce himself? He's not on the phone yet. Okay. Okay, very good.  
8 That'll be fine. Headquarters operation center, could you unmute the public 800  
9 or toll free number?

10 MALE SPEAKER: All right. It's unmuted. I did not believe that  
11 there was anybody on there. There wasn't when I checked awhile ago, but go  
12 ahead.

13 JON THOMPSON: Okay, just to double-check, it's not required for  
14 members of the public to introduce themselves for this meeting, but we would like  
15 a record of your participation, so if you could, just please send this record of your  
16 participation to my email at jon.thompson@nrc.gov. For the public question  
17 period at the end of the meeting, we will ask you to introduce yourself if you want  
18 to make any remarks and state your name and then ask your question.

19 Okay, so I don't believe we have any members of the public who  
20 are dialing into the meeting and are not petitioners. I would remind you that  
21 please have your lines on mute. And headquarters operations officer, if you  
22 could mute that toll free number now at this time.

23 MALE SPEAKER: All right, sir.

24 JON THOMPSON: And also, for those who are on the phone and if  
25 you're not speaking at the moment, if you could press \*6 to mute phone, and that

1 way there won't be any background noise impeding on the meeting. And I'd just  
2 like to reemphasize that we each need to speak clearly and loudly to make sure  
3 the court reporter can accurately transcribe this meeting. Also, if you do have  
4 something that you'd like to say, please state your name for the record first and  
5 then make your statement. At this time, I'll turn it over to the PRB chairman,  
6 Patrick Hiland.

7 PATRICK HILAND: Good afternoon. Welcome to this meeting  
8 concerning the 2.206 petition submitted by the petitioners regarding the restart of  
9 North Anna Units 1 and 2 after the earthquake of August 23, 2011. I'd like to first  
10 share some background on our process. Section 2.206 of the Code of Federal  
11 Regulations describes the petition process, the primary mechanism for the public  
12 to request enforcement action by the NRC in a public process. This process  
13 permits anyone to petition NRC to take enforcement-type action related to NRC  
14 licensees or licensed activities. Depending on the results of its evaluation, NRC  
15 could modify, suspend or revoke and [an] NRC-issued license, or take  
16 appropriate enforcement action to resolve a problem. The NRC staff's guidance  
17 for the disposition of 2.206 petition requests is in Management Directive 8.11,  
18 which is publicly available.

19 The purpose of today's meeting is to give the petitioners another  
20 opportunity to provide any additional explanation or support for the petition after  
21 the petition review board's initial consideration and recommendation. This  
22 meeting is not a hearing nor is it an opportunity for the petitioner to question or to  
23 examine the petition review board on the merits or the issues presented in the  
24 petition request. No decisions regarding the merits of this petition will be made at  
25 this meeting.

1           Following this meeting, the petition review board will conduct its  
2 internal deliberations and develop a proposed director's decision that will be  
3 provided to the petitioners and the licensee for comment. The petition review  
4 board typically consists of a chairman, usually a manager at the senior executive  
5 service level at the NRC. And that will be me. It has a petition manager and a  
6 petition review board coordinator. Other members of the board are determined  
7 by the NRC staff based on the content of the information in the petition request.

8           At this time, I'll introduce the board members. We do have several  
9 people in attendance from the NRC staff that are not on the board. As I said, I'm  
10 the petition review board chairman. Jon Thompson is the petition manger for the  
11 petition under discussion today. Andrea Russell, to my right, is the Office's  
12 petition review board coordinator; Kamal Manoly from the Office of Nuclear  
13 Reactor Regulations from the Division of Engineering; Gurjendra Bedi sitting  
14 behind you is from the Office of Nuclear Reactor Regulations Component  
15 Performance and Testing Branch; Shih-Liang Wu from the Office of Nuclear  
16 Reactor Regulations, Nuclear Performance and Code Review Branch is sitting  
17 behind you; David Rahn from the Office of Nuclear Reactor Regulation,  
18 Instrumentation and Controls; David Pstrak and David Tang from the Office of  
19 Nuclear Materials Safety and Safeguards Branch, Spent Fuel Storage and  
20 Transportation; and Gerald McCoy from NRC's Region II's Division of Reactor  
21 Projects Branch 5. We also obtain advice from our Office of General Counsel  
22 represented today by Maria [Mauri] Lemoncelli sitting to my left.

23           As described in our process, the NRC staff may ask clarifying  
24 questions in order to better understand the petitioners' presentation and to reach  
25 a reasoned decisions whether to accept or reject the petitioners' request for

1 review under the 2.206 process. Also, as described in our process, the licensees  
2 have been invited to participate in today's meeting to ensure that they  
3 understand the concerns about their facility or activities. While the licensees may  
4 also ask questions to clarify the issues raised by the petition, I want to stress that  
5 the licensees are not a part of the petition review board's decision making  
6 process.

7 I'd like to briefly summarize the scope of the petition under  
8 consideration and the NRC activities to date. October 20, 2011 and  
9 supplemented on November 2, 2011, Mr. Gunter and Mr. Kamps of Beyond  
10 Nuclear and Mr. Thomas Saporito of Saprohani Associates -- I'm sorry -- Mr.  
11 Paxus Calta of Not on Our Fault Line, Mr. Alex Jack of Planetary Health, Mr.  
12 Scott Price of Alliance for Progressive Values, and Mr. John Cruickshank of the  
13 Virginia Chapter of the Sierra Club, who will be referred to as the petitioners,  
14 submitted a petition under Title 10 of the Code of Federal Regulations, Part  
15 2.206, requesting suspension of the operating licenses for the North Anna Power  
16 Stations Unit 1 and Unit 2 until the completion of a set of activities described in  
17 the petition.

18 In addition, in the supplemental dated November 2, 2011, the  
19 petitioners asked for greater access to certain documents concerning North Anna  
20 1 and 2. Subsequently, Ms. Eleanor Amanden [spelled phonetically] [Amidon],  
21 Ms. Arika Crutsmer [spelled phonetically] [Erika Kretzmer], Mr. Lovell King, II, Mr.  
22 David Levy [spelled phonetically], and Ms. Hilary Boyd [spelled phonetically]  
23 requested to be added to the list of petitioners for the above-mentioned petition.

24 A summary of the actions that the petitioners sought prior to the  
25 restart of North Anna 1 and 2 includes the following: the submittal of a formal

1 license amendment by the licensee for North Anna 1 and 2, reanalyzing and  
2 reevaluating the design basis for the plant, additional deterministic inspections  
3 and safety analysis for critical reactor components, reanalysis of the Lake Anna  
4 Dam, reanalysis and reevaluation of the North Anna 1 and 2 independent spent  
5 fuel storage installation. Several related issues were raised and discussed in the  
6 letters by the petitioners dated October 20 and November 2, 2011 and also in the  
7 December 12, 2011 meeting between the petitioners and the petition review  
8 board. A copy of the full petition and supplement is publicly available in the  
9 NRC's electronic library, ADAMS. A copy of the December 12, 2011 meeting  
10 transcript is also available in ADAMS.

11           The following is a description of the NRC activities to date. On  
12 October 27, 2011, the petition manager contacted Mr. Gunter by email to discuss  
13 the petition process and offered him an opportunity to address the petition review  
14 board by phone or in person. In a telephone conversation on November 3, 2011,  
15 Mr. Gunter requested on behalf of the petitioners to address the petition review  
16 board in person prior to the petition review board's internal meeting to make the  
17 initial recommendation to accept or reject the petition for review.

18           On November 7, 2011, the petition review board met internally to  
19 discuss the request for immediate action in the petition. On November 10, 2011,  
20 Mr. Gunter was informed the petition review board denied their request for  
21 immediate action. The petition review board denied the request for immediate  
22 action because there was no immediate safety concern to the plant or to the  
23 health and safety of the public. In addition, the requirement to demonstrate that  
24 no functional damage has occurred to those features necessary for continued  
25 operation of the reactors without undue risk to the health and safety existed or

1 exists in 10 CFR 100 Appendix A.

2 With respect to the independent spent fuel storage installation at  
3 the North Anna Power Station, interactions between the licensee and the NRC  
4 staff had not identified any immediate safety concerns. Therefore, the petition  
5 review board denied the request for immediate action.

6 On December 12, 2011, the petition review board met with the  
7 petitioners to hear additional information regarding the petition. The petition  
8 review board met on January 9, 2012 to consider the petition and formulate its  
9 initial recommendation. On January 19, Mr. Gunter was informed that the  
10 petition review board partially accepted the petition for review. On January 31,  
11 2012, Mr. Gunter was provided additional information on which elements of the  
12 petition were accepted for review and which elements which were rejected.

13 As a reminder for the phone participants, please identify yourself if  
14 you make any remarks as this will help us in the preparation of the meeting  
15 transcripts that will be made publicly available.

16 Mr. Gunter, I'll turn it over to you in a moment to allow you to  
17 provide any additional information you believe the petition review board should  
18 consider as part of this petition. After your presentation concludes, I will allot the  
19 other petitioners additional time to address the petition review board. If any  
20 petitioner feels that they do not have an adequate opportunity to address the  
21 petition review board during this meeting because of time constraints, then we  
22 welcome any supplemental information that they can provide in writing for the  
23 petition review board's consideration. The supplemental information for the  
24 petition review board's consideration should be mailed to the executive director  
25 of operations by February 9. Mr. Gunter.

1                   PAUL GUNTER: Thank you. Again, my name is Paul Gunter. I'm  
2 director of the Reactor Oversight Project for Beyond Nuclear. And I want to start  
3 by opening that we thank you for this opportunity and the transparency that this  
4 process provides to interested members of the public and as part of also  
5 establishing a record for the North Anna Nuclear Power Plant and the impacts  
6 and significance of the August 23, 2011 earthquake.

7                   Let me start by saying that I'd like to just enter into the public record  
8 for those that may be watching that the petition review board has accepted a  
9 number of items that I would just like to acknowledge. Issue number one, the  
10 license amendment process is acknowledged as for further review by the board  
11 and the Commission. And we had requested that the applicant -- that the  
12 licensee make an application for a license amendment for any modifications and  
13 licensing changes as a result of the earthquake.

14                  Number two, inspections at Unit 1 need to be of the same rigor as  
15 Unit 2 inspections. We maintain that that is part of a necessary process given  
16 the unprecedented earthquake. The board has at this point decided not to  
17 consider the licensee should be required to reanalyze and re-qualify the  
18 adequacy and condition of the Lake Anna Dam. We are going to offer a rebuttal  
19 statement and a clarification on a further requested action with that regard.

20                  Number four, reanalyze and reevaluate the independent spent fuel  
21 storage installation to ensure that no threat is posed to the public health and  
22 safety by its operation. That's been accepted for further review. Reliability and  
23 accuracy of seismic instrumentation has been accepted for further review.  
24 Decisions should -- about the restart of North Anna 1 and 2 were hasty, and  
25 economic considerations were given priority in these decisions, and the long-

1 term action plan was not even complete before authorization to restart was given.  
2 This has been accepted for continued review.

3 Number seven, regulatory commitments are not an adequate  
4 regulatory tool for ensuring the critical long-term tasks identified in the NRC's  
5 confirmatory action letter of 11/11/11 are completed. This has been accepted for  
6 further review.

7 Number eight, the NRC should release records kept at the  
8 University of Virginia that are currently not publicly available. This has been  
9 recommended to be rejected. Number nine, concerns about the spent fuel pools  
10 at North Anna 1 and 2 due to the potential for both boil-down and rapid drain-  
11 down events has been accepted for further review. The long-term storage of  
12 spent fuel storage in both pools and dry storage facilities poses issues. This has  
13 been accepted for further review. Hardened onsite storage strategies should be  
14 used at North Anna 1 and 2. This has been accepted for further review.  
15 Concerns about age-related degradation has been recommended for rejection.  
16 Concerns about a prolonged station blackout has been accepted for further  
17 review. Current emergency evacuation plans need to be revised. This has been  
18 accepted for further review. Concerns about damage to the structural integrity of  
19 the spent fuel pool structure as represented on pages 41 and 42 of the NRC's  
20 technical evaluation dated 11/11/11 has been accepted for further review. And  
21 finally is concerns about lack of compliance with a public law requiring storage of  
22 potassium iodide in areas surrounding a nuclear reactor has been recommended  
23 to be rejected.

24 So, I think that it's -- you know, this board has really taken on quite  
25 a bit for review. We -- you know, we take note of that and recognize the task



1 before us. We wish at this point to supplement with written and oral comments.  
2 I've provided written comments of which I will now read into the record.

3 Beyond Nuclear submits the following comments on behalf of joint  
4 petitioners in the matter of the post-earthquake restart of the two-unit North Anna  
5 Nuclear Power Station owned and operated by Virginia Electric Power Company,  
6 VEPCO, also known as Dominion Virginia Power, Dominion.

7 The supplemental information and request for the emergency  
8 enforcement action provided by Beyond Nuclear comes in large part today by  
9 documents provided to us by Robert Alvarez of Takoma Park, Maryland. Mr.  
10 Alvarez is a senior scholar at the Institute of Policy Studies, Washington, D.C., on  
11 energy and environmental policies. Mr. Alvarez has also served as a senior  
12 policy advisor to the secretary and deputy assistant secretary for National Security  
13 and Environment as well as senior investigator for the U.S. Senate Committee on  
14 Government Affairs then chaired by Senator John Glenn.

15 The petitioners have asserted that the Nuclear Regulatory  
16 Commission approval for the restart in operation of the North Anna Nuclear  
17 Power Station was hasty and premature based in large part on financial  
18 considerations to the nuclear utility, particularly given many uncertainties arising  
19 and persisting from the unprecedented August 23, 2011 earthquake near the  
20 reactor site in Mineral, Virginia. The petitioners supplement the requested action  
21 for VEPCO to provide the NRC with the submission of a license amendment  
22 request for plant modifications and licensing changes related to the restart and  
23 continued operations of the nuclear power plant, including the adequacy,  
24 accuracy and reliability of the seismic monitoring equipment on site that provided  
25 data and the basis in part for NRC approval of restart.

1           Beyond Nuclear submits the account of the Bloomberg news article  
2 that documents an expert opinion presented to the NRC that North Anna Nuclear  
3 Power Station seismic equipment upon which NRC based its restart approval as,  
4 quote, "an older system from the 1970s and is not accurate within 10 percent and  
5 possibly as much as 20 percent, according to William Leith Earthquake Hazards  
6 Program coordinator for the U.S. Geological Survey said today at the Nuclear  
7 Regulatory Commission." This is dated by article September 19, 2011.

8           The news account goes on to state, quote, "the lack of modern  
9 instrumentation, quote, 'hinders a quick well-informed decision making,' unquote,  
10 by reactor owners and the NRC, Leith said. It also, quote, 'severely limits an  
11 engineer's ability to understand,' unquote how plant components react to ground  
12 movement, he said, citing Dominion's assessment of the nuclear waste storage  
13 casks at North Anna that moved during the earthquake," end quote. Dominion  
14 disputed this testimony.

15           There are seven known earthquake faults in the North Anna reactor  
16 site area. The board has accepted for further review the petitioners' requested  
17 action that VEPCO submit a formal license amendment request for earthquake-  
18 related modifications and licensing changes rather than how the plant was  
19 actually allowed to restart with only regulatory commitments, which the  
20 petitioners have asserted do not represent an adequate enforceable regulatory  
21 tool.

22           The petitioners identify further the Wall Street article entitled, "New  
23 Quake Risks Seen for Nuclear Plants," dated January 31, 2012, which states that  
24 "the NRC is acknowledging," quote, reactor -- "nuclear reactors in the Central  
25 and Eastern United States previously unrecognized threats from big

1 earthquakes, the Nuclear Regulatory Commission said Tuesday. Experts said  
2 upgrading the plants to withstand more substantial earth movements would be  
3 costly and could cause some to close,” unquote. The article goes on to identify  
4 that it will require nuclear power plant operators to conduct new seismic studies  
5 that all 96 reactors in Central and Eastern United States that are predicted by the  
6 government’s new seismic model. The petitioners submit that the article  
7 identifies that the nuclear industry lobbyists and the government are preparing to  
8 slow walk seismic upgrades over the next four-year period and perhaps even  
9 longer. The article provides the regulatory analysis of senior reactor safety  
10 director David Lochbaum with the Union of Concerned Scientists citing that,  
11 quote, “the NRC already has sufficient evidence to require immediate upgrades  
12 to dozens of plants,” he said, adding that further delay amounts to, quote, “a  
13 bureaucratic stall tactic,” end quote.

14               The petitioners further request that the petition review board of the  
15 United States Nuclear Regulatory Commission take enforcement action with  
16 regard to VEPCO to provide analysis and monitoring for the potential impacts of  
17 the Lake Anna Dam and the impoundment of water in Lake Anna upon seismic  
18 activity around the North Anna Nuclear Power Station in Mineral Virginia. The  
19 petitioners submit that the operators, as part of their original license condition,  
20 are required to analyze and monitor for the seismic impact for the impoundment  
21 of water created by Lake Anna Dam and its potential impacts on the North Anna  
22 Nuclear Power Plant. The petitioners present the case of North Anna  
23 Environmental -- the North Anna Environmental Coalition through petitioner June  
24 Allen [spelled phonetically] versus the United States Nuclear Regulatory  
25 Commission and the United States, respondents Commonwealth of Virginia,

1 Virginia Electric Power Company, interveners, which was in the United States  
2 Court of Appeals, District of Columbia Circuit, argued on November 20, 1975 and  
3 decided on March 3, 1976. Rehearing denied May 7, 1966 [1976]. We quote,  
4 “The coalition contends the creation and presence of Lake Anna creates an extra  
5 risk at the North Anna site. It is contended that it might induce reaction of the  
6 non-capable fault.” The licensing board and the appeal board concluded there  
7 was reasonable assurance that the lake will not reactivate the fault. The finding  
8 is based on substantial evidence in the record.

9           Two lines of investigation were followed in evaluating the effect of  
10 Lake Anna, first an empirical investigation was undertaken wherein the  
11 investigators studied every one of the 12 documented instances worldwide in  
12 which reservoirs induced earthquakes and related those empirical findings to the  
13 conditions of North Anna. Secondly, a more theoretical investigation was  
14 conducted, which analyzed the conditions under the lake-induced seismic activity  
15 might be anticipated. The empirical study established that thousands of  
16 reservoirs have been impounded without event, including 28,000 in the United  
17 States alone. When a reservoir has been filled to trigger an earthquake, it has  
18 done so shortly after filling. In 12 such instances monitored, mentioned earlier,  
19 seismic activity began within one year after filling the reservoir. At North Anna,  
20 three years have passed already without incident. The theoretical study  
21 produced the same result. According to the conditions at the site, the risk of  
22 Lake Anna reactivating the fault is, quote, “vanishingly small,” unquote.

23           However, even though the Commission argued with the results of  
24 the investigations, Virginia Electric Power Company has been required to install a  
25 microseismic monitoring network, which is expected to provide confirmatory

1 evidence or alert VEPCO to any possible change of conditions. VEPCO, through  
2 its early site permit application for North Anna Unit 3, Dominion Power provides  
3 statements to the USNRC which discusses the microseismic monitoring for the  
4 North Anna reactor site and the impact of the impoundment of Lake Anna's water  
5 influence on seismic activity in the region. VEPCO identifies that it has  
6 suspended the required seismic monitoring for the impact of the impoundment of  
7 Lake Anna water. They say at 2.5.3.3 correlation of earthquakes with capably  
8 tectonic sources, no reported historical earthquake epicenters have been  
9 associated with bedrock faults within the 25-mile radius of the early site permit  
10 site vicinity. Microearthquake monitoring for North Anna Power Station was  
11 initially conducted over a 2.5 year period, from January 21, 1974 to August 1,  
12 1976 and was subsequently extended an additional year to August 1, 1977. The  
13 purpose of the monitoring program was to determine if seismic activity could be  
14 associated with faults in the site area or if Lake Anna was producing reservoir-  
15 induced seismicity.

16           Microearthquakes detected in the 3.5 years of monitoring could not  
17 be associated either with a fault in the site area or with the impoundment of Lake  
18 Anna. Quote, "Four stations of the original 17-station network were incorporated  
19 into Virginia Polytechnic Institute in the State University Central Virginia  
20 Monitoring Network for the specific purpose of monitoring any changes in  
21 seismicity in the region of the North Anna Power Station." Today, no changes in  
22 local earthquake occurrence have been observed that would alter the  
23 conclusions reached in 1977 regarding the lack of association of micro-  
24 earthquakes with the presence of Lake Anna or with faults in the site area.  
25 Microearthquakes observed in some area appear to be of or are occurring at a

1 level no greater than the spatial varying background activity found in the CVSSZ.

2           A webpage from the Virginia Division of Geology and Mineral  
3 Resources states, quote, “The Virginia Technical Seismological Observatory is  
4 one of the primary sources for data on seismic activity in the central east coast.  
5 In 1963, as part of the worldwide program, seismographs were installed at  
6 Blacksburg. And in 1977, several more seismographs were stationed in the  
7 Commonwealth and operated by the Virginia Division of Geology and Mineral  
8 Resources. Some of these instruments were stations around the North Anna  
9 Nuclear Power Plant, but in the 1990s, due to budget cuts, most of the North  
10 Anna sensors were taken offline.” The petitioners submit that seismic monitoring  
11 at and around the North Anna Nuclear Power Plant is therefore unreasonably  
12 degraded and unduly inadequate.

13           The petitioners submit that according to the various news accounts  
14 following the January 30, 2012 3.1 magnitude earthquake with an epicenter six  
15 miles southeast of Mineral, Virginia, according to USGS, there have been as  
16 many as 100 earthquake aftershocks recorded by the U.S. Geological Survey  
17 following the 5.8 magnitude earthquake on August 23, 2011.

18           Given the significant increase in seismic activity in the area of the  
19 North Anna Nuclear Power Plant and the recognition of potential seismic impact  
20 from the Lake Anna impoundment and given that NRC is calling for upgrades  
21 and seismic evaluations at nuclear power plants, the petitioners therefore  
22 supplement their emergency enforcement petition to request that as part of  
23 upgraded seismic reevaluation, modifications and monitoring for North Anna  
24 Nuclear Power Station that the operators be required to reinstall and resume the  
25 microseismic monitoring network as originally in the licensing agreement to

1 provide confirmatory evidence or alert VEPCO to changes in the seismic activity  
2 induced by the impoundment of water behind the Lake Anna Dam. This  
3 concludes my remarks.

4 PATRICK HILAND: Thank you, Mr. Gunter. Mr. Kamps?

5 KEVIN KAMPS: Thank you. I'd like to wish everyone a happy  
6 Groundhog Day. And that will be a part of my theme, is déjà vu and lessons  
7 learned or lessons that should have been learned. Just regarding, you know,  
8 Groundhog Day, déjà vu and earthquakes, I mean, we're coming up on the first  
9 anniversary of the Fukushima nuclear disaster, at least the beginning of it. It's an  
10 ongoing disaster/catastrophe. And certainly, we should take earthquakes risks  
11 seriously here in the United States at nuclear power plants, including on high-  
12 level radioactive waste storage, which is what I'm going to talk about. And the  
13 déjà vu theme also applies to high-level radioactive waste risks.

14 I first got involved in these issues nearly 20 years ago now in  
15 Southwest Michigan at the Palisades Nuclear Power Plant. And the reason for  
16 my involvement was concern about dry cask storage on the beach, 100 yards  
17 from the water of Lake Michigan at Palisades. And in 1994, shortly into my  
18 involvement in these issues, we learned from an NRC regional dry cask storage  
19 inspector, Dr. Ross Landsman, in a letter to the chairman at the time, Ivan Selin,  
20 that there were earthquake risks with this facility at Palisades. And he  
21 specifically alleged and has never backed down on his allegations that the dry  
22 cask storage nearest the lake at Palisades, which has been in place for nearly 20  
23 years now, is in violation of NRC earthquake regulations. So, these issues of  
24 seismic risk to dry cask storage, I've been involved with for nearly two decades at  
25 this point. And certainly, the occurrence at North Anna with this earthquake on

1 August 23, 2011 just reemphasized the significance of these risks.

2 I'd like to point out on the record that the company took over a  
3 week to announce to the public that there was damage to the dry cask storage  
4 and, in fact, on the day of the earthquake, the day after the earthquake, the  
5 company, in response to questions -- direct questions from members of the  
6 media who were onsite at North Anna -- said that there was no damage to the  
7 dry cask storage. So, they provided false information the day of, the day after  
8 the earthquake to members of the news media who asked directed questions.  
9 And they took eight days to reveal the situation to the public.

10 So, the photos that we have been able to see showed visible  
11 damage to the dry casks at North Anna, the dry casks in the horizontal  
12 orientation. And, again, the company and even the NRC downplayed the  
13 significance of this damage, calling it cosmetic. And that was an odd way to  
14 describe it because I don't think there's too much cosmetics involved in dry cask  
15 storage. I think that structure and radiation shielding are pretty much what it's all  
16 about. There's not a whole lot of cosmetics involved in dry cask storage. And  
17 so, we expressed throughout not only this 2.206 process but even before when  
18 there was a public meeting at the North Anna Plant we were concerned about the  
19 structural integrity of these containers. We're concerned about the radiation  
20 shielding properties. And, again, as Paul said, we're thankful that you've agreed  
21 to further review many of these issues, including on dry cask storage. But this  
22 should not be done in a slow manner. And as I indicated, we've been concerned  
23 about earthquake risks at Palisades for 20 years now. So, these issues need to  
24 be addressed in the short term as quickly as possible. We're two months beyond  
25 the last time we sat down and met with you in this process, and every day the



1 reactors operate at North Anna. Every day the dry cask storage and pool  
2 storage continues. These risks are present, and it's serious. It needs to be  
3 addressed.

4               So, in terms of the pool risks, I would like to emphasize one of our  
5 demands is that the gauges and the monitors on the pools be significantly  
6 upgraded. So, these would include water level gauges, temperature gauges,  
7 radiation monitors of various sorts so that various sorts of radiation can be  
8 monitored, as well as seismic monitors directly on the pools. And the  
9 significance of this is that North Anna Nuclear Power Plant, as with pools across  
10 the country, are filled with many decades' worth of high-level radioactive waste,  
11 irradiated nuclear fuel. And the NRC itself has documented and reported upon  
12 the risks with the pool storage.

13              So, for example, a February 2001 report by NRC -- I believe it's  
14 NUREG-1738 -- it was about decommissioning reactors and the pools there, but  
15 it applies to North Anna. They looked at things like the drop of a heavy load  
16 causing a rapid drain-down in a pool. And the casualty figures possible were  
17 quite alarming. A ballpark figure of around 25,000 latent cancer fatalities  
18 downwind could result from a fire resulting from a rapid drain-down of a pool.

19              So, in addition to the monitors and the gauges to know exactly  
20 what's happening in a pool, we would also call for mitigation to be put in place,  
21 mitigation strategies, backup power to keep the cooling system working on the  
22 pool, makeup water on the pool. And, of course, the Fukushima Daiichi nuclear  
23 catastrophe just underlines these risks. I know there's a debate still about where  
24 there was even a fire in the Unit 4 pool at Fukushima Daiichi, but recent  
25 academic studies have shown that on March 19th, the radioactive cesium-137

1 emissions from that plant dramatically lowered by orders of magnitude at the  
2 exact same time that water was sprayed into the pool at Unit 4. Pretty strong  
3 evidence that there was a radioactive waste fire in the Unit 4 pool.

4               So, we need to be prepared for refilling the pools and, most  
5 importantly of all, preventing the boiling in the first place, because once the  
6 boiling begins and there's lot of steam in the pool area, that can short-circuit  
7 electrical circuitry that can be safety-significant in that area.

8               So, moving on, I would like to conclude my remarks just by  
9 emphasizing the importance of something that you've agreed to further review.  
10 And, again, I thank you for that, but, again, this needs to be done on a quick  
11 pace, and that is hardened onsite storage. Hardened onsite storage would not  
12 only improve the safety and the security and the environmental protection of dry  
13 cask storage in regards to accidents perhaps resulting from an earthquake, but it  
14 would also do so in regards to attacks, intentional attacks. And, just as  
15 importantly, given NRC's current study on perhaps leaving dry cask storage in  
16 place at reactor sites for at least 120 years, if not 200 years, if not 300 years, for  
17 environmental protection over time. So, the elements of hardened onsite storage  
18 -- and at our last meeting in December, I handed in a copy of the principles for  
19 safeguarding nuclear waste at reactors signed by nearly 200 environmental  
20 groups across the country. Those principles include the thinning of the pools.  
21 And actually, we would call for the emptying of the pools, but the thinning would  
22 refer to a low-density, open frame configuration, the original design of the pools  
23 in the first place. They were never intended, when they were designed, to be  
24 packed to the gills like they are. So, with that low-density, open frame  
25 configuration, if there is a drain-down of the water, air cooling may be sufficient to

1 prevent the fire from taking place. And this was comprehensively described in a  
2 study by Alvarez and other in 2003, January 2003. So, that's important.

3 But the casks that the waste would be moved to need to be quality  
4 casks, again, because they're going to have to be onsite for at least decades if  
5 not centuries. And those high-quality casks must be fortified against accidents,  
6 attacks and leaks. And, just as with pool storage, there needs to be monitors on  
7 the dry cask storage directly. There needs to be temperature monitoring. There  
8 needs to be pressure monitoring to make sure that the inert gases are still  
9 present and haven't leaked out. And also, given what's happened at North Anna,  
10 there needs to be seismic monitors.

11 And one last detail I'd like to discuss about the horizontally oriented  
12 dry casks at North Anna, we have had information for several years from a  
13 whistleblower in Florida who is concerned about corrosion in horizontally-oriented  
14 dry casks. We have concerns about the cradle that actually holds the very heavy  
15 inner canister in these horizontally designed dry casks. So, we're worried about  
16 the structural integrity of these cradles to begin with, let alone after a seismic  
17 event. And so I would call upon the NRC to carefully investigate the integrity of  
18 the cradles. And with that, I will conclude my remarks. Thank you.

19 PATRICK HILAND: Thank you. Mr. Saporito.

20 THOMAS SAPORITO: Yes, this is Thomas Saporito with  
21 SaproDani Associates in Jupiter, Florida. I have three quick issues to address --  
22 the license amendment needed. The second one would be inspections at Unit 1  
23 needing the same rigor as Unit 2. And the third item would be decisions about  
24 the hasty restart of Units 1 and 2. First of all, the license amendment request by  
25 the licensee is needed. A license amendment is needed because significant

1 changes and modifications were made since the [unintelligible] physical plant and  
2 specifically to the type of seismic monitor instrumentation and the physical  
3 placement of that seismic monitoring instrumentation.

4 In addition to the seismic instrumentation, other plant equipment,  
5 and/or equipment supports and the structure hasn't been modified or changed by  
6 the licensee. All the aforementioned changes were made outside the existing  
7 NRC license that was issued to the licensee were licensed activities that Unit 1  
8 and Unit 2 of the North Anna Nuclear Plant and thus requires the licensee to  
9 submit a license amendment request. Therefore, petitioners request that the  
10 NRC require the licensee to submit a license amendment request for Unit 1 and  
11 Unit 2 to provide the public the right to intervene at a hearing before the NRC  
12 Atomic Safety and Licensing Board.

13 Issue number two, inspections at Unit 1 need the same rigor as  
14 Unit 2 inspections. The licensee failed to inspect the nuclear reactor internal to  
15 Unit 1 prior to the restart of the nuclear reactor and falsely relied on inspection  
16 activities at Unit 2 to support restart of Unit 1 without inspection or examination of  
17 Unit 1's nuclear reactor internal. This approach, which was subsequently  
18 authorized and accepted by the NRC significantly jeopardized public health and  
19 safety. Notably, at the onset of the earthquake event last year, both Unit 1 and  
20 Unit 2 nuclear reactors automatically tripped offline due to a negative reactor flux  
21 trip signal, which was apparently caused when the effect of the earthquake  
22 resulted in a significant movement of the nuclear fuel assemblies within the  
23 nuclear reactor vessel in Unit 1 and 2. Although the license [licensee] conducted  
24 extensive pre-start testing and surveillance testing with safety-related systems  
25 such as control [unintelligible] [rod] drop tests, such testing is not an acceptable

1 replacement to the physical and visible inspection of the nuclear fuel assembly  
2 support, instrumentation, et cetera, within the Unit 1 reactor vessel. The  
3 petitioners once again request that the NRC require the licensee to immediately  
4 shut down Unit 1 and require the licensee to inspect the nuclear reactor internal  
5 in a similar fashion and manner as the licensee inspected Unit 2's nuclear reactor  
6 internal.

7               Finally, this third item, decisions about the restart of North Anna  
8 Unit 1 and 2 were hasty. Economic considerations were given a priority in this  
9 decision [these decisions], and the long-term action plan was not even complete  
10 before authorization to restart was given. The licensee's initial response to the  
11 NRC to restart Unit 1 and Unit 2 was based on an email opinion received from an  
12 alleged licensee expert. The licensee's initial restart plan was to restart Units 1  
13 and 2 even prior to the completion of the NRC's preliminary inspection team's  
14 inspection activities at the North Anna Nuclear Power Plant. And there's  
15 evidence of the NRC deal [zeal] to restart the -- both nuclear reactors without  
16 thorough inspection activities being completed.

17               And finally, on this point, NRC employee Eric Leeds is, in my  
18 opinion, to have too much authority in deciding when and if nuclear power plants  
19 can be restarted after a significant earthquake event. Such a significant event, in  
20 my opinion, requires thought processes of a panel of NRC experts, one of which  
21 should be a seismologist expert and not allow the public's health and safety to be  
22 pinged on the opinion of one individual. And with that, I conclude my remarks.  
23 Thank you.

24               PATRICK HILAND: Thank you. Ms. Gray.

25               ERICA GRAY: Thank you. This is Erica Gray. I represent the

1 Alliance for Progressive Values in Richmond, Virginia. We're a volunteer  
2 educational organization. I wanted to start off first by saying that it's good that  
3 the regulators are now focusing on the seismic research on the Central and the  
4 Eastern U.S., an area once seen as less active geologically than the West.  
5 Besides the recent Wall Street Journal article dated January the 31st, I wanted to  
6 bring to light that there was an article by the MSNBC dated 03/17 of 2011 by Bill  
7 Dedman. And the article was, "What are the Odds? U.S. Nuke Plants Ranked by  
8 Quake Risk. So much for San Andreas: Reactors in East, Midwest, South have  
9 highest chance of damage." And I quote, "The odds take into consideration two  
10 main factors: the chance of a serious quake, and the strength of design of the  
11 plant." And Virginia is on that list. So it's been almost a year and we're finally  
12 hearing confirmation from the Nuclear Regulatory Commission that indeed it's a  
13 fact.

14               APV wants to reiterate the state capitol in downtown Richmond with  
15 a population of 2.1 [1.2] million is 40 miles downwind from North Anna. We have  
16 been told by the city of Richmond Emergency Management coordinator, Mr.  
17 McLean, there is no evacuation plan because we are outside the official 10-mile  
18 circle surrounding North Anna. It has almost been six months since our 5.8  
19 earthquake that exceeded North Anna's plant design followed by almost 80 or  
20 more aftershocks. APV is asking the NRC to promptly issue rules requiring the  
21 appropriate local, state and federal agencies develop comprehensive emergency  
22 evacuation plans for areas up to 50 miles from all 104 existing commercial  
23 nuclear power sites, including North Anna facility, and these plans to be made  
24 available to the public.

25               Ultimately, the NRC should recognize by now that North Anna

1 Nuclear Power Plant poses a real and serious threat to the people and the  
2 environment here in Virginia. Thank you.

3 PATRICK HILAND: Thank you. Mr. Blundell, did you have an  
4 opportunity to join us?

5 PAUL GUNTER: We've been communicating by email.

6 PATRICK HILAND: Okay. Well, you -- you're welcome to  
7 summarize his thoughts and, you know, have him review the transcripts to  
8 confirm if you have spoken to him or have emails from him in your concluding  
9 remarks there.

10 PAUL GUNTER: I don't think I can actually represent Mr. Blundell  
11 directly, but I can comment that there are concerns with regard to the -- if I could  
12 reference back here to the -- what you have accepted. My understanding -- and  
13 Mr. Blundell can present his remarks in writing to directly reflect his concerns, but  
14 you have accepted for further review the issue of current emergency evacuation  
15 plans need to be revised. And I would note that these have also been part of the  
16 near-term task force evaluation of the post-Fukushima accident, but it remains  
17 our concern that the potential for -- and any kind of external/internal event at the  
18 nuclear power plant, we now have in this post-Fukushima world recognized that  
19 the consequences can be far more reaching than the current plan provides. And  
20 the public is -- has a significant confidence problem with the agency and the  
21 industry basically holding what we believe to be a political line at 10 miles for  
22 evacuation and sheltering when in fact we've seen real life, real time events that  
23 dwarfed that plan with a light water reactor, you know, severe accidents at the  
24 light water reactors at the Fukushima Daiichi complex.

25 So, for many communities, as Richmond for example, if -- certainly

1 when they saw the State Department issue an advisory to evacuate U.S.  
2 nationals out to 50 miles around the Fukushima Daiichi plant, people took note  
3 here in the United States that our plans, even though our reactors are of similar  
4 design, and this certainly was not a fly-by-night operation under the ownership of  
5 Tokyo Electric Power Company and Japanese oversight, so this was a significant  
6 development. And, you know, we have now viewed this as a -- sort of the large  
7 elephant in the room for this agency's responsibility and its mandate to public  
8 health and safety where there seems to be a double standard for the same  
9 technology, depending on where you live.

10 But you know, I'm sure that the petitioners in view of the recognition  
11 by the agency that you're going to further review the adequacy of current  
12 emergency evacuation plans, that we would rebut the agency's refusal to -- with  
13 regard to not considering the potassium iodide issue, issue number 16, which  
14 you currently have recommended that it be rejected. So, clearly we've seen  
15 actions taken under the advice and the advisement of the NRC chairman through  
16 the U.S. State Department to U.S. nationals around nuclear facilities in Japan  
17 that we think would greatly be benefitted by the distribution and storage for  
18 handy, timely distribution of potassium iodide to populations out to 50 miles. I  
19 think these are reasonable. They are more than reasonable; they're now  
20 practical given the demonstration in reality of the hazard that all these reactor  
21 communities face, whether they're in Japan or in the United States.

22 So, and I would also remind you that we've made remarks as  
23 petitioners that the agency is under obligations of U.S. law through legislation  
24 that was provided and promulgated by Congress with regard to requiring the  
25 agency and the Federal Emergency Management Agency and the Homeland



1 Security to put in place through anti-terrorism and biological preparations that  
2 potassium iodide be stockpiled, I believe, to 20 miles around the nuclear facility.  
3 So, I think that what we're seeing right now is, again, a concern that harbors an  
4 inadequate plan and a -- in a time where we've been -- where we're seeing  
5 demonstrations, not theoretical applications that, you know, the agency should  
6 be making some timely action as per its mandate to protect the public health and  
7 safety.

8 PATRICK HILAND: Is that your closing remarks, Mr. Gunter or --  
9 okay. Do we have any clarifying questions from the NRC staff present in the  
10 room here? Just clarifying questions.

11 DAVID RAHN: I have a question concerning the understanding the  
12 basis for your request, the new petition on installation of a microseismic  
13 monitoring network around the station. I think according to your testimony, there  
14 were two periods of monitoring done in which there was a network limited or so  
15 be it installed network of equipment that was there to specifically monitor for the  
16 impact of the Lake Anna impoundment around the vicinity of the plant. And the  
17 results of the installed equipment was that there was limited or no indication that  
18 there was a correlation of the impact of the impoundment on the microseismic  
19 events that were occurring. They were limited and found to be of a generic  
20 nature. And what I'm trying to do is understand the basis for the request to install  
21 a microseismic monitoring system.

22 PAUL GUNTER: Thank you. Again, Paul Gunter. Well, I think it's  
23 self evident with the increased microseismic activity that is underway around the  
24 North Anna Nuclear Power Station. It's -- you know, we're still looking to further  
25 clarify for the record how Virginia Electric Power Company exited its requirement

1 under the license condition to have and maintain the microseismic network as  
2 was part of the licensing edition and then was suspended. I think there were a  
3 number of assumptions with regard to timeline that now need to be reevaluated,  
4 frankly, because of the increased activity. And given the -- you know, that we're  
5 talking about assessing activity over geological spans of time, I think that it's a  
6 very, very short window geologically to say that the monitoring as required, you  
7 can now close this to, you know, based on a three-year, three-and-a-half-year  
8 monitoring period. I think in the overall scope of what we're dealing with in terms  
9 of geological seismic activity, that is not a reasonable assurance to monitor for  
10 three-and-a-half years.

11 So, I think that it's now a -- given and what we've introduced is that,  
12 you know, we've presented a snapshot in time where we now have, according to  
13 the USGS, more than 100 aftershocks following the August 23rd earthquake.

14 So, I think that this is a reset button that we're asking the agency -- we're  
15 requesting the agency to take action for a license condition on a plant that we  
16 believe was not fairly licensed, cited [sited] to begin with. In fact, at our last  
17 presentation, we presented evidence that the agency and the industry did not  
18 adequately, fairly and perhaps even legally, according to the U.S. Department of  
19 Justice, license this plant according to the requirements for citing [siting] a plant  
20 and the seismological evaluation.

21 So, I think that, again, the agency has said that you're going to look  
22 at the upgrading, the requirements for the Eastern United States and Central  
23 United States. I think that part of that upgrade and what we submit to you today  
24 is to reset the button on the monitoring, analysis and reporting of this site as it  
25 has -- it is now demonstrating an ongoing issue, which is a part and central to our

1 petition. So, I want to make clear though that we're not presenting a new  
2 petition, that what we're presenting is a supplement to the current petition and  
3 that, more specifically, it's part of our interpretation of an assessment of the  
4 impact of the Lake Anna Dam but more particularly and with -- to update our  
5 request that it's about the impact of impoundment of the water in Lake Anna and  
6 the ongoing seismic activity that we're seeing following the earthquake of August  
7 23rd.

8 I think that we've also raised some questions, and these are all, you  
9 know, I think ongoing in terms of how to answer, but it's interesting that all  
10 hundred whatever -- earthquakes, and there have probably been more, but you  
11 know, I think that there's a threshold that has been brought to our attention that  
12 doesn't get counted. You know, when somebody strikes a hammer on the  
13 ground, that doesn't necessarily constitute as a seismic event, but nevertheless,  
14 there's a measure. And what's being demonstrated around North Anna is that  
15 we need to hit the reset button on what was there at the original licensing.

16 PATRICK HILAND: Other questions from the room here, clarifying  
17 questions? Region II, do you have a clarifying question?

18 BOB TRIPATHI: Yeah, Jon, this is Bob Tripathi. As a NRC  
19 headquarters staff member, I have a clarification question for Mr. Kamps. During  
20 the earlier presentation, Mr. Kamps referred to some couple of items related to  
21 the ISFSIs. One was that he was concerned about corrosion within the new  
22 homes [NUHOMS], the horizontal storage module. And the second was that he  
23 was concerned about the structural integrity of the cradle. And my question is  
24 can you elaborate a little bit further on those two issues. What exactly are you  
25 concerned about corrosion of what structural material besides the rail, the

1 supporting rails? And what exactly do you mean by the cradle?

2 KEVIN KAMPS: Sure, yeah. What I was referring to is by calling it  
3 a cradle is the structure that actually holds the very heavy inner canister up off of  
4 the ground inside. And, as I mentioned, the reason I mentioned corrosion was  
5 that the whistleblower in Florida who brought this concern to our attention in the  
6 first place, was concerned about the environment in Florida being especially  
7 conducive to corrosion of these particular cask designs. But, of course, I think  
8 that issue should be investigated at North Anna as well, even though it's not as  
9 close to the ocean.

10 But in addition to those concerns of that particular whistleblower  
11 from Florida about quality assurance issues I guess you could say, we've had  
12 long experience with other cask designs that show that NRC has a real problem  
13 in the big picture on quality assurance when it comes to dry casks. So, I refer  
14 again back to Palisades, Point Beach, Wisconsin, Arkansas Nuclear One, which  
15 use -- still use a cask design called the VSC-24, ventilated storage cask. And  
16 back in the 1990s, we had a crash course on how bad the quality assurance on  
17 those containers is, was, and it was so bad actually and there were so many  
18 problems with these particular casks that their use in the future was discontinued,  
19 although there's dozens that are still deployed and fully loaded, as I mentioned,  
20 at those three nuclear power plants. And then more recently with the Holtec  
21 casks, another industry whistleblower, Oscar Shirani, who worked for  
22 Commonwealth Edison/Exelon, again, it was revealed that NRC has real  
23 problems enforcing quality assurance regulations. And those problems have not  
24 been fixed to the best of our knowledge. So, our concerns about quality  
25 assurance certainly apply to both the vertical and the horizontal casks at North

1 Anna.

2 BOB TRIPATHI: Just like you, Mr. Kamps, I was also involved with  
3 the Palisades. And I fail to see the parallel between the concern that the  
4 Palisades and North Anna, but we can get into the details later on.

5 KEVIN KAMPS: Well, could I just respond to that?

6 BOB TRIPATHI: I think both of your concerns can be wrapped up  
7 as a quality assurance concern. Am I right?

8 KEVIN KAMPS: Well, certainly, quality assurance is at the heart of  
9 these issues. If the casks were built with good enough quality assurance against  
10 seismic risks, then that would be a good thing. And they're not at this point. And  
11 that's the point I wanted to respond to your point about Palisades and North  
12 Anna. I think the lesson from Palisades is that NRC is not taking earthquake  
13 safety regulations seriously. And just to give folks, if you're not familiar with the  
14 Palisades situation, more information on what I mean, Dr. Landman's warning to  
15 Chairman Selin in 1994, February of 1994, was that if there is a strong enough  
16 earthquake at that location, a hundred yards from the water of Lake Michigan,  
17 you need to look at that situation in detail. The dry cask pad, this 3-foot-thick  
18 concrete pad is not anchored to anything. It is resting on top of 55 feet of loose  
19 sand. And if there's a strong enough earthquake, the sand could part, the lake  
20 could flow in, these containers could fall into the lake, and there's concerns not  
21 only about radioactive releases directly into the lake, there's even concerns  
22 about water infiltration causing a chain reaction in the uranium-235 and  
23 plutonium-239 that's in this material inside these containers. So, these are very  
24 serious seismic risks at Palisades that the NRC has brushed off for 20 years at  
25 this point. And we have taken every opportunity to address that at the NRC and

1 even in the courts, and we have found no relief. And those risks continue to the  
2 present day. And I think the lesson I'm trying to get across is that seismic risks  
3 with dry cask storage, with pools, with reactors are very serious matters that  
4 need to be taken seriously, and NRC needs to enforce its regulations.

5 BOB TRIPATHI: Thank you. That's all I have.

6 PATRICK HILAND: And as previously stated, the licensees are not  
7 part of the petition review board's decision making process. However, does the  
8 licensee have any clarifying questions for the petitioners or the petition review  
9 board?

10 MALE SPEAKER [PAGE KEMP]: No questions.

11 FEMALE SPEAKER [MARGARET EARLE]: No questions from me  
12 either.

13 PATRICK HILAND: I'll turn it over to you, Jon, for the...

14 JON THOMPSON: Sure. Thank you. I guess as a point of order,  
15 it's been indicated that if we have a time spot where the public's supposed to  
16 present that we're not able to conclude until we reach that time, which, per the  
17 agenda that we sent out, was 2:30 p.m. Headquarters operations officer, can  
18 you unmute the toll free line?

19 MALE SPEAKER: Yes, sir. It is unmuted.

20 JON THOMPSON: Are there any members of the public on the  
21 phone? Okay, so I'm not hearing any members of the public. There weren't any  
22 at the beginning of the meeting. I'm wondering whether.

23 PATRICK HILAND: We can take a 10-minute break.

24 PAUL GUNTER: Could I --

25 PATRICK HILAND: Or you can --

1               PAUL GUNTER: I don't plan to filibuster here, but I would just like  
2 to invite Mr. Richard Ball with the Virginia Sierra Club. He was a petitioner --

3               AUTOMATED VOICE: Please pardon the interruption. Your  
4 conference contains less than three participants at this time. If you would like to  
5 continue, press \*1 now, or the conference will be terminated.

6               PAUL GUNTER: That sort of answers that question. I just wanted  
7 to give Mr. Ball an opportunity.

8               RICHARD BALL: I have no questions or further comments to  
9 make.

10              JON THOMPSON: Okay, so that was Mr. Ball. And my  
11 understanding was Mr. Ball said that he didn't have any more questions at this  
12 time -- or statements at this time.

13              PATRICK HILAND: Can we ask the headquarters ops officer to hit  
14 \*1, extend the conference. We'll take a 10-minute break --

15              JON THOMPSON: Yeah, headquarters operation officer, if you  
16 haven't hit \*1 already, if you could just hit \*1 and we will take a 10-minute recess  
17 to 2:30 to meet our obligations or you know, I guess go the extra mile and make  
18 sure we meet them.

19              PATRICK HILAND: I'll make my closing remarks at 2:30. Is that  
20 acceptable?

21              PAUL GUNTER: That's fine.

22              JON THOMPSON: Okay, thank you.

23              [break]

24              JON THOMPSON: All right. We'll offer a brief opportunity for Mr.  
25 Kamps to supplement his remarks on the potassium iodide issue at this time.

1 KEVIN KAMPS: Thank you. For the record, Kevin Kamps with  
2 Beyond Nuclear. I just wanted to add to our rebuttal at your decision, your  
3 preliminary decision to reject the call for potassium iodide distribution. And what  
4 I'd like to share mostly has to do with the Chernobyl catastrophe. One of the,  
5 you know, first news items that really hit home hard after Fukushima began on  
6 March 11th, just in the first days, was that radioactive iodine-131 had appeared in  
7 the drinking water supply of Tokyo because of fallout onto reservoirs which were  
8 nearer to Fukushima Daiichi, but that water supply reaching people through their  
9 taps 150 miles away was contaminated significantly so. Infants were -- there  
10 were warnings given by the federal government of Japan to parents with young  
11 children and infants that they should not use that water for baby formula and it  
12 should not be given to young children. So, this is a serious issue. It extends to a  
13 long distance.

14 And I mentioned the Chernobyl catastrophe because there hasn't  
15 been time for the dust settle at Fukushima to know what impacts the radioactive  
16 iodine-131 is going to have on human thyroid glands, especially for young  
17 children, but at Chernobyl the evidence is very clear that an epidemic of thyroid  
18 pathology developed over time after that catastrophe. And the contrast between  
19 Poland and the former Soviet Union was very marked. In Poland, as soon as  
20 they knew about the Chernobyl nuclear accident, which was some days after it  
21 began because of the cover-up, they immediate [immediately] distributed  
22 potassium iodide to their population and prevented an epidemic of thyroid  
23 disease, especially in children. But in the Soviet Union, not only did they cover  
24 up the accident at first until it was announced to the world by Sweden, but they  
25 continued to keep their population in the dark. There was very little, if any,



1 potassium iodide distributed. And the consequences have been horrendous  
2 actually. So, a disease that perhaps there were a few cases in the country of  
3 Belarus among the entire population of childhood thyroid cancer before  
4 Chernobyl, afterwards now, there have been many thousands of cases of thyroid  
5 disease.

6           And I've heard the Nuclear Energy Institute spokespeople talk  
7 about thyroid cancer as not a big deal. It's treatable. Well, in a place like -- in  
8 the Chernobyl region, it is a big deal. The standard treatment is a scar that is  
9 from one side of the neck to the other. It's a terrible stigma for people to have  
10 that because it's evidence of their exposure to radioactivity. They're probably  
11 going to have trouble finding marriage partners. They're going to have trouble  
12 finding a job because employers are worried about their health, marriage  
13 partners about their perhaps genetic damage, their health.

14           So, it's a very serious issue, and I just remind everyone of the work  
15 of Peter Crane, an NRC staffer who, for many years on end, petitioned for  
16 rulemaking at the NRC that potassium iodide distribution be taken seriously here,  
17 be undertaken. And it's bewildering to many of our colleagues and our members  
18 across the country that even though there's a federal law requiring NRC to have  
19 potassium iodide distributed out to a distance of 20 miles, which may be  
20 inadequate given the lessons of Fukushima, that it hasn't happened. And this is  
21 several years, many years after the law was enacted. Congressman Markey, a  
22 Democrat from Massachusetts, back in May of 2011, a ranking Democrat on  
23 committees and subcommittees of jurisdiction over the NRC, has demanded to  
24 know why this law has not been enforced by this agency. And another personal  
25 experience of ours was a meeting actually held by the Federal Emergency

1 Management Agency at citizen request near the Calvert Cliffs Nuclear Power  
2 Plant several years ago where this law was already on the books. We asked  
3 FEMA what the situation was. FEMA did not even know what the situation was  
4 in terms of potassium iodide supply in that area. And we were just some miles  
5 from Calvert Cliffs at that particular moment. So, it's incredible that this issue is  
6 being slow-walked by the agencies responsible for its implementation.

7                   And I'll close with this story from the thyroid hospital near Minsk,  
8 Belarus, that I visited in 1996. And I spoke to a young physician there and asked  
9 her, so, if potassium iodide had been distributed to the population of Belarus,  
10 then this epidemic would not have happened. And, very emotionally, she said,  
11 "Of course, that's the situation." And it was dangerous for her to do that,  
12 because I was an American, she was a Belarussian. Belarus is a dictatorship.  
13 And yet, she felt it important enough to communicate the truth that the  
14 government there had majorly screwed up for very bad reasons and now,  
15 especially children, are paying the price.

16                   So, thank you for letting me make those remarks.

17                   JON THOMPSON: Yes, are there any members of the public on  
18 the line? If not, then I conclude that there's not any reason to go through that  
19 step in the process, and I'll turn it over to the PRB chair for closing remarks.

20                   PATRICK HILAND: Well, Mr. Gunter and Mr. Kamps, thank you  
21 very much for appearing in person.

22                   JON THOMPSON: I'm sorry, Pat. I -- headquarters operations  
23 officer, is the toll free line unmated?

24                   MALE SPEAKER: Yes, it is still.

25                   JON THOMPSON: Okay, so it's still unmated. And there's still

1 nobody on the line. Okay, I just wanted to verify that so we didn't have this poor  
2 person shouting into the telephone and it was muted, so --

3 PATRICK HILAND: Yeah, we learn from our experiences, right,  
4 Jon? Thank you very much for your personal attendance today. I know it take a  
5 lot of effort to come down here, especially on the Metro. So, we appreciate it.

6 With that, this meeting is closed. Thank you very much.

7 [Whereupon, the proceedings were concluded]