

March 28, 2005

MEMORANDUM TO: Laura A. Dudes, Section Chief
New Reactors Section
New, Research and Test Reactors Program
Division of Regulatory Improvement Programs, NRR

FROM: Belkys Sosa, Project Manager */RA/*
New Reactors Section
New, Research and Test Reactors Program
Division of Regulatory Improvement Programs, NRR

SUBJECT: SUMMARY OF FEBRUARY 7, 10, AND 16, 2005, TELEPHONE
CONFERENCE CALLS WITH DOMINION NUCLEAR NORTH ANNA,
LLC REGARDING OPEN ITEMS IN THE STAFF'S DRAFT SAFETY
EVALUATION REPORT FOR THE NORTH ANNA EARLY SITE PERMIT
APPLICATION

On Monday, February 7, Thursday, February 10, and Wednesday, February 16, 2005, telephone conference calls were held among representatives of Dominion Nuclear North Anna, LLC (Dominion) and the Nuclear Regulatory Commission (NRC) staff. A list of participants is attached. The purpose of the conferences, which were held at the request of Dominion, was to discuss certain open items in the staff's draft safety evaluation report (DSER) for Dominion's early site permit (ESP) application for the North Anna ESP site.

February 7, 2005, conference

The purpose of this conference was to discuss issues identified by Dominion regarding the DSER and to discuss the agenda for the February 23, 2005, public meeting.

Dominion stated it would like to discuss what criteria the staff used for identifying permit conditions and combined license (COL) action items. In addition, Dominion stated that various sections in the DSER describe site characteristics as "design-basis" site characteristics. The staff responded that permit conditions are included in the permit and should an ESP be issued for North Anna, the permit holder would be constrained by the permit conditions. The staff indicated that COL action items are reminders to the staff and the applicant of issues that would need to be addressed at the COL stage.

Dominion stated it needed clarification on issues it identified in the DSER and requested an opportunity to discuss its proposed response to open items with the staff. The staff agreed to hold a series of teleconferences with Dominion on the DSER open items to clarify issues and to allow Dominion an opportunity to present its proposed responses.

Dominion stated that its proposed resolution for Open Item 2.1-1, control of exclusion area, involved a legal issue that is being addressed by the Office of General Counsel (OGC).

The staff informed Dominion that the main objective of the public meeting scheduled for February 23, 2005, was to discuss the open items since issuance of the final safety evaluation report (FSER) by the scheduled date depended on Dominion's satisfactory response to the open items. The staff clarified that the inclusion of the COL action items and the permit conditions in the agenda for February 23 would depend on the time available and would be discussed in general terms only.

February 10, 2005, conference

On February 10, 2005, there were two separate conferences with Dominion. The first included a discussion on open items in the DSER sections on demography/geography and site hazards.

Dominion stated it agreed with COL Action Item 2.1-1.

Open item 2.1-1. Dominion stated this open item was a legal issue being discussed by counsel.

Dominion noted that the DSER wording in Section 2.1.3.3 is not consistent with Chapter 15 of the site safety analysis report (SSAR). The staff agreed to clarify the DSER wording to refer to representative design basis accidents.

In response to a request for clarification on COL Action Item 2.2-1, the staff stated that COL action items indicate an expectation by the staff that the COL applicant will provide the necessary documentation with their application.

Dominion stated it agreed with COL Action Item 2.2-2.

In response to a request for clarification on the staff's use of the wording "design-basis events," the staff clarified that the concept at the COL stage is to have a design that can fit the site characteristics approved in the ESP.

Dominion identified an inconsistency in DSER Section 3.5.1.6.3. In response, the staff agreed to clarify the DSER wording used in Section 3.5.1.6.3 by using words similar to those in the conclusion paragraph of DSER Section 3.5.1.6.4.

The purpose of the second telephone conference held on February 10, 2005, was to follow up on previous discussions with Dominion held on January 25 and 27, 2005, respectively, regarding open items in the DSER sections on meteorology and hydrology.

Open item 2.3-1. Dominion noted that the American National Standards Institute (ANSI) standard is the 3-second gust wind. Dominion stated that it is possible to derive the wind speed from the 3-second wind gust wind speed by converting back to a straight line wind velocity or fastest mile. They added that the COL application will likely use the 3-second gust wind. The staff responded that they would consider this information.

Open item 2.3-2. Dominion stated that their interpretation of Regulatory Guide 1.70 is to combine the 100-year snowpack and the winter probable maximum precipitation (PMP) in the form of rain fall. The staff responded that it would provide clarification for its position on winter precipitation loads at a subsequent teleconference.

Open item 2.3-3. Dominion requested that the staff clarify the method used to evaluate the potential for water freezing in the ultimate heat sink (UHS) water storage facility. The staff responded that the method used was on a day-by-day basis rather than a monthly average degree day.

Open item 2.3-4. Dominion stated that a quantitative analysis is not feasible at the ESP stage absent a specific design and suggested a COL action item to perform the detailed analysis for Unit 4. The staff indicated that Dominion's approach would be acceptable.

Open item 2.4-1. Dominion agreed to provide a cross-reference to the Virginia State Coordinate System. The staff responded that this approach was acceptable to address the open item, as long as the coordinate system and units of measure are provided.

Open item 2.4-2. Dominion stated that its response to this open item will discuss the feasibility of using the existing discharge structure for cancelled North Anna Units 3 and 4 for the new units. The staff stated that a safe distance between the units should be identified. Dominion and the staff agreed to consider this question further.

Open item 2.4-3. Dominion stated that the Lake Anna low water level for Units 1 and 2 will be used for the new units. The staff accepted the proposed response.

Open item 2.4-4. This open item was resolved during a previous conference call on January 27, 2005.

Open item 2.4-5. Dominion proposed to respond to this open item with the same resolution as that proposed for Open Item 2.4-4. The staff stated degree-days do not apply to minimum temperature frazil ice and requested that Dominion consider discussing the feasibility of dealing with frazil ice conditions.

Open item 2.4-6. Dominion stated it can show the feasibility of design measures to deal with the pressure head of groundwater and that it intends to demonstrate stability of underground UHS reservoirs through engineering evaluations.

Open item 2.4-7. Dominion responded that it plans to obtain additional data and will assess the impact of the lack of correlation. The staff agreed with the proposed approach.

Open item 2.4-8. Dominion stated that it will provide a more conservative method. The staff indicated this approach was acceptable.

Open item 2.4-9. Dominion stated that it would compare the horizontal to vertical hydraulic gradients. The staff noted this was an acceptable approach.

Open item 2.4-10. Dominion stated that it had nothing new to discuss at this time on this item.

Open item 2.4-11. Dominion proposed a testing program to provide measure values for locations on the site. Dominion noted the value of obtaining the information is simply for site characteristics. Since the test program will take five months or longer, Dominion suggested a confirmatory action item after the FSER.

February 16, 2005, conference

During this conference, Dominion and the staff followed up on the discussion of the open items in DSER Section 2.3 regarding meteorology.

The staff provided additional clarification for the use of the phrase “design-basis site characteristics” throughout the DSER. In accordance with General Design Criteria (GDC) 2, the applicant should identify the site characteristics in the site safety analysis report (SSAR) as representing “minimum design-basis values” and should include sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated.

Open item 2.3-1. The staff noted that GDC 2 states that the design bases for systems, structures, and components (SSCs) shall reflect appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area, with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated. The staff added that the use of the International Building Code (2000) Table 1609.3.1 to convert 3-second gust wind speeds to fastest-mile wind speeds is acceptable. In addition, the identification of the 100-year return period 3-second gust wind speed as a site characteristic in lieu of fastest-mile wind speed is acceptable.

Open item 2.3-2. Dominion stated that it plans to provide the 100-year snowpack, the 48-hour maximum snowfall, and the 48-hour winter probable maximum precipitation (PMP). The staff indicated that there is no objection to identifying a winter PMP value of 20.75 inches of rain as a site characteristic for North Anna. The staff believes that the applicant needs to identify a ground snow load site characteristic for designing the roofs of safety-related structures. Consistent with the staff’s March 24, 1975, Branch Technical Position (BTP) on winter precipitation loads, the staff stated that the normal winter precipitation load should be the weight of the 100-year snowpack and the extreme winter precipitation load should be the weight of the 100-year snowpack plus the 48-hour probable maximum winter precipitation (PMWP).

Open item 2.3-3. Dominion noted that its SSAR of 200 degree-days (F) is already in the application, and it proposed that it would be appropriate as a site characteristic related to the potential for freezing in the UHS. The staff noted that it obtained 321.8 °F using data from the Piedmont weather station. The difference between the staff’s and applicants’ data may be due in part to the maximum accumulated degree-days method used by the staff versus the total degree-days method used by Dominion to compile the data and the use of the Piedmont data versus Richmond data. The staff agreed to consider whether the method used by Dominion is appropriate.

Open item 2.3-4. Dominion intends to provide a semi-quantitative evaluation in response to this open item. The staff finds this approach acceptable.

The teleconference continued with a general discussion on the COL action items regarding meteorology. Dominion stated that COL Action Items 2.3-1 and 2.3-2 seem unnecessary considering the requirements of GDC 19 and 10 CFR 52.79 and 52.89 respectively. The staff clarified that COL action items in general are intended to serve as a place holder and tracking tool to remind both the applicant and the staff that these issues need to be addressed at the COL stage.

Before concluding the conference, Dominion stated that the DSER wording in Section 2.3.4.4 was not consistent with 10 CFR 100.21(c)(2). The staff indicated that the final SER would refer to postulated accidents to clarify that the accident atmospheric dispersion estimates presented in DSER section 2.3.4 do not include severe accidents.

Docket No. 52-008

Attachment: As stated

cc w/att: See next page

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Before concluding the conference, Dominion stated that the DSER wording in section 2.3.4.4 was not consistent with 10 CFR 100.21(c)(2). The staff indicated that the final SER would refer to postulated accidents to clarify that the accident atmospheric dispersion estimates presented in DSER section 2.3.4 do not include severe accidents.

Docket No. 52-008

Attachment: As stated

cc w/att: See next page

*See previous concurrence

ACCESSION NUMBER: ML050730300

OFFICE	RNRP/PM	SPSB/SC*	EMEB/SC*	OGC/NLOw/comments*	RNRP/SC
NAME	BSosa	RDennig	KManoly	RWeisman	LDudes
DATE	03/24/05	3/15/05	03/16/05	3/23/05	03/25/05

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RAnand
RHarvey
JLee
RDennig
MTschiltz
KCampe
CAraguas

FEBRUARY 7, 10, AND 16, 2005
TELEPHONE CONFERENCE CALL SUMMARY
LIST OF PARTICIPANTS

Nuclear Regulatory Commission

Applicant

February 7, 2005

B. Sosa
M. Scott
G. Bagchi
R. Harvey
C. Araguas
R. Prasad (PNNL)
L. Vail (PNNL)

J. Hegner
T. Banks
M. Smith
D. Batalo
D. Patton (Bechtel)
R. Baker (Bechtel)
S. Routh (Bechtel)
B. Prunty (Bechtel)
J. Davie (Bechtel)

February 10, 2005 (First Conference)

B. Sosa
M. Scott
J. Lee
K. Campe
C. Araguas

J. Hegner
M. Smith
D. Batalo
B. Prunty (Bechtel)
S. Routh (Bechtel)

February 10, 2005 (Second Conference)

B. Sosa
M. Scott
G. Bagchi
R. Harvey
L. Vail (PNNL)
C. Cook (PNNL)
R. Prasad (PNNL)

J. Hegner
M. Smith
D. Batalo
S. Routh (Bechtel)
S. Taylor (Bechtel)
K. Jha (Bechtel)
B. Prunty (Bechtel)

February 16, 2005

B. Sosa
R. Harvey
C. Araguas

J. Hegner
M. Smith
D. Batalo
S. Routh (Bechtel)
R. Baker (Bechtel)

NORTH ANNA EARLY SITE PERMIT
SERVICE LIST

Mr. David A. Christian
Senior Vice President and Chief Nuclear
Officer
Dominion Resources Services, Inc.
Innsbrook Technical Center
5000 Dominion Blvd.
Glen Allen, VA 23060-6711

Ms. Lillian M. Cuoco, Esq.
Senior Counsel
Dominion Resources Services, Inc.
Rope Ferry Road
Building 475, 5th Floor
Waterford, CT 06385

Mr. C. Lee Lintecum
County Administrator
Louisa County
P.O. Box 160
Louisa, Virginia 23093

Mr. David R. Lewis
Shaw Pittman
2300 N Street, N.W.
Washington, D.C. 20037

Dr. W. T. Lough
Virginia State Corporation Commission
Division of Energy Regulation
P. O. Box 1197
Richmond, Virginia 23209

Office of the Attorney General
Commonwealth of Virginia
900 East Main Street
Richmond, Virginia 23219

Senior Resident Inspector
North Anna Power Station
U. S. Nuclear Regulatory Commission
1024 Haley Drive
Mineral, Virginia 23117

Mr. Robert B. Strobe, M.D., M.P.H.
State Health Commissioner
Office of the Commissioner
Virginia Department of Health
P. O. Box 2448
Richmond, Virginia 23218

Mr. David Lochbaum
Union of Concerned Scientists
1707 H Street, NW
Suite 600
Washington, DC 20006-3919

Mr. Paul Gunter
Director of the Reactor Watchdog Project
Nuclear Information & Resource Service
1424 16th Street, NW, Suite 404
Washington, DC 20036

Mr. Adrian Heymer
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

Mr. Russell Bell
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

Mr. Thomas P. Miller
U.S. Department of Energy
Headquarters - Germantown
19901 Germantown Road
Germantown, MD 20874-1290

Mr. James Riccio
Greenpeace
702 H Street, NW, Suite 300
Washington, DC 20001

Ms. Patricia Campbell
Morgan Lewis
1111 Pennsylvania Avenue
Washington, DC 20004

Mr. Ernie H. Kennedy
Vice President New Plants
Nuclear Plant Projects
Westinghouse Electric Company
2000 Day Hill Road
Windsor, CT 06095-0500

NORTH ANNA EARLY SITE PERMIT
SERVICE LIST

-2-

Dr. Regis A. Matzie
Senior Vice President and
Chief Technology Officer
Westinghouse Electric Company
2000 Day Hill Road
Windsor, CT 06095-0500

Mr. Gary Wright, Manager
Division of Nuclear Safety
Illinois Emergency Management Agency
1035 Outer Park Drive
Springfield, IL 62704

Mr. Glenn H. Archinoff
AECL Technologies
481 North Frederick Avenue
Suite 405
Gaithersburg, MD. 20877

Mr. Ed Wallace, General Manager
Projects
PBMR Pty LTD
PO Box 9396
Centurion 0046
Republic of South Africa

Mr. Brendan Hoffman
Research Associate on Nuclear Energy
Public Citizens Critical Mass Energy
and Environmental Program
215 Pennsylvania Avenue, SE
Washington, DC 20003

Mr. Tom Clements
6703 Guide Avenue
Takoma Park, MD 20912

Mr. Paul Leventhal
Nuclear Control Institute
1000 Connecticut Avenue, NW
Suite 410
Washington, DC 20036

Dr. Jack W. Roe
Vice President
Advanced Technologies & Laboratories
International, Inc.
20010 Century Boulevard, Suite 500
Germantown, MD 20874

Mr. Charles Brinkman
Westinghouse Electric Co.
Washington Operations
12300 Twinbrook Pkwy., Suite 330
Rockville, MD 20852

Mr. Marvin Fertel
Senior Vice President
and Chief Nuclear Officer
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

Dr. Glenn R. George
PA Consulting Group
130 Potter Street
Haddonfield, NJ 08033

Mr. Arthur R. Woods
Enercon Services, Inc.
500 TownPark Lane
Kennesaw, GA 30144

Ms. Vanessa E. Quinn, Chief
Radiological Emergency Preparedness
Section
Department of Homeland Security/FEMA
500 C Street, SW
Washington, DC 20472

Mr. Michael M. Cline, State Coordinator
Virginia Department of Emergency
Management
10501 Trade Court
Richmond, Virginia 23236-3713

Mr. Jim Debiec
Director - Power Production
Old Dominion Electric Cooperative
4201 Dominion Blvd
Glen Allen, VA 23060

Mr. Thomas Mundy
Director, Project Development
Exelon Generation
200 Exelon Way, KSA3-N
Kennett Square, PA 19348

NORTH ANNA EARLY SITE PERMIT
SERVICE LIST

-3-

Ms. Joanne Tetrault
Librarian
Louisa County Public Library
881 Davis Highway
Mineral, VA 23117

whorin@winston.com
mwetterhahn@winston.com
whorin@winston.com
gcesare@enercon.com
eddie.grant@exeloncorp.com

Ms. Abhaya Thiele
406 Key West Drive
Charlottesville, VA 22911

Mr. J. Randall Wheeler
Spotsylvania County Administrator
P.O. Box 99
Spotsylvania Courthouse
Spotsylvania, VA 22553

Mr. Ted Coberly
Orange County Administrator
P.O. Box 111
Orange, VA 22690

Mr. Jerald S. Holm
Framatome ANP, Inc.
3315 Old Forest Road
P.O. Box 10935
Lynchburg, VA 24506-0935

Ms. Kathryn Sutton, Esq.
Morgan, Lewis & Bocklus, LLP
1111 Pennsylvania Avenue, NW
Washington, DC 20004

External E-mail

David_Christian@dom.com
Eugene_Grecheck@dom.com
Jack_Davis@dom.com
Marvin_Smith@dom.com
Joseph_Hegner@dom.com
Lillian_Cuoco@dom.com
David_Sommers@dom.com
Vicki_Hull@dom.com
Margaret_Bennett@dom.com
david.lewis@shawpittman.com
gzinke@entergy.com
jerald.holm@framatome-anp.com
mwetterhahn@winston.com