September 3, 2009

Mr. Robert Kitchen
Manager - Nuclear Plant Licensing
Progress Energy Carolinas, Inc.
P.O. Box 1551
Raleigh, NC 27602

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALLS FOR THE MONTH OF JULY 2009 CONCERNING THE ENVIRONMENTAL REVIEW OF THE SHEARON HARRIS NUCLEAR POWER PLANT UNITS 2 AND 3 COMBINED LICENSE APPLICATION

Dear Mr. Kitchen:

The purpose of this letter is to provide a summary of teleconference discussions that occurred during July 2009 concerning the environmental review of the Shearon Harris Nuclear Power Plant, Units 2 and 3, combined license application. Additionally, the letter requests Progress Energy Carolinas, Inc. (PEC) to docket certain information provided during the teleconferences.

In letters dated June 5, 2009 and July 6, 2009, PEC submitted to the U.S. Nuclear Regulatory Commission (NRC) supplements to the response to requests for additional information (RAIs) regarding the environmental review of the Shearon Harris Nuclear Power Plant, Units 2 and 3, combined license application (Agencywide Documents Access and Management System [ADAMS] Accession No. ML091600148 and ML091950669). Based on NRC and Pacific Northwest National Laboratory (PNNL) staff review of the attachments to these letters, additional clarification was needed. Teleconferences were held with PEC on July 1, 2009, July 9, 2009, and July 16, 2009, for the staff to ask PEC for any necessary clarification.

A summary of each teleconference is provided as separate enclosures to this letter. Each enclosure contains a list of the participants, identifies the RAI or issue in question, and provides a summary of the discussion(s) and proposed action item(s). Enclosure 1 summarizes the teleconference held on July 1, 2009, involving the aquatic ecology of the fire pond. Enclosure 2 summarizes the teleconference held on July 9, 2009, involving clarification on the alternative site selection process. Enclosure 3 summarizes the teleconference held on July 16, 2009, involving airborne dispersion and air quality construction-related emission analyses.

As a result of these teleconferences, the NRC requests that PEC provide the following under oath or affirmation and consider the details for incorporation in the next revision of the Environmental Report:

1. An explanation of PEC's intentions regarding dewatering of the fire pond, that minimizes impacts to terrestrial and aquatic resources.
2. Clarification of the site selection process and the applied exclusionary criteria.
3. Corrections to Table 2.7-75 of the Environmental Report.

The NRC requests complete responses be provided within 30 days of receipt of this letter. For any requested information that cannot be answered in 30 days, it is expected that a date for receipt of this information will be provided to the staff within the 30-day period.

If you have any questions or need any additional clarification, please contact me at 301-415-3803 or by e-mail at Donald.Palmrose@nrc.gov.

Sincerely,

/RA/

Donald Palmrose, PhD
Senior Project Manager
Environmental Projects Branch 3
Division of Site and Environmental Reviews
Office of New Reactors

Docket Nos.: 52-022 and 52-023

Enclosures: As stated

cc w/enclosures: See next page

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If you have any questions or need any additional clarification, please contact me at 301-415-3803 or by e-mail at Donald.Palmrose@nrc.gov.

Sincerely,

/RA/

Donald Palmrose, PhD
Senior Project Manager
Environmental Projects Branch 3
Division of Site and Environmental Reviews
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Docket Nos.: 52-022 and 52-023

Enclosures: As stated

cc w/enclosures: See next page

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RMusser, RII	PLessard, RII	JAustin, RII
RDirkes, PNNL (rl.dirkes@nrc.gov)		TONeil, PNNL (tara.oneil@pnl.gov)

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OFFICE	PS:RAP3: DSER:NRO	LA:RAP3: DSER:NRO	OGC	BC:RAP3: DSER:NRO
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Harris Mailing List
cc:

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

Mr. Chad Barnhill
109 Shelter Haven Drive
Apex, NC 27502

Mr. Lionel Batty
Nuclear Business Team
Graftech
12300 Snow Road
Parma, OH 44130

Mr. Paul Bauer
607 Deer Mountain Road
Pittsboro, NC 27312

Ms. Michele Boyd, Legislative Director
Energy Program
Public Citizens Critical Mass Energy
and Environmental Program
215 Pennsylvania Avenue, SE
Washington, DC 20003

Mr. Joe Desormeaux
Wake City Public Schools
1429 Rock Quarry Road - Suite 116
Raleigh, NC 26710

Ms. Gina Clapp
Town of Holly Springs
Holly Springs, NC 27540

Mr. W. Craig Conklin, Director
Chemical and Nuclear Preparedness &
Protection Division (CNPPD)
Office of Infrastructure Protection
Department of Homeland Security
Washington, DC 20528

Ms. June Cowles
Town of Apex
73 Hunter Street.
Apex, NC 27502

Dr. Lee A. Craig
Alumni Distinguished Professor
Department of Economics
NC State University
Campus Box 8110
Raleigh, NC 27695-8110

Ms. Liz Cullington
390 Rocky Hills Road
Pittsboro, NC 27312

Mr. Vinnie DeBenedetto
4445 lake Flower Drive
Holly Springs, NC 27540

Ms. Louise England
Progress Energy
4801 Durgancroft Place
Fuquay Varina, NC 27526

Mr. Jim Fain
NC Department of Commerce
1909 Reid Street
Raleigh, NC 27608

Mr. Marvin Fertel, Senior Vice President
And Chief Nuclear Officer
Nuclear Energy Institute
1776 I Street, NW
Washington, DC 2006-3708

Ms. Suzanne France
West Regional Library
4000 Louis Stephens Road
Cary, NC 27519

Mr. Bob Funderlic
107 Prince Albert Lane
O'Cary, NC 27511

General Atomics – Washington Operations
1899 Pennsylvania Avenue, NW
Suite 300
Washington, DC 20006

Mr. Bob Gilbert
P. O. Box 6443
Raleigh, NC 27628

Harris Mailing List
cc:

Mr. David L. Goodwin
401 Capital Blvd.
Raleigh, NC 27603

Mr. Ian M. Grant
Canadian Nuclear Safety Commission
280 Slater Street, Station B
P. O. Box 1046
Ottawa, Ontario K1P 5S9

Mr. Fred Gebarowski
6600 Louisburg Road
Raleigh, NC 27616

Mr. Eugene S. Grecheck, Vice President
Nuclear Support Services
Dominion Energy, Inc.
5000 Dominion Blvd.
Glen Allen, VA 23060

Mr. Eric Griffin
P. O. Box 1154
Sanford, NC 27331

Mr. Jay M. Gutierrez
Morgan, Lewis & Bockius, LLP
1111 Keystone State Ave, NW
Washington, DC 20004

Mr. R. B. Haemer
Winston & Strawn LLP
2300 N Street, NW
Washington, DC 20037

Mr. Bob Hents
1710 Lynwood Circle
Sanford, NC 27330

Mr. Gerald Holleman
5625 Easton Street
Holly Springs, NC 27540

Ms. Mary F. Howard
505 Skygrove Drive
Holly Springs, NC 27540

Ms. Shirley Hubert
10325 Holly Springs Road
Holly Springs, NC 27540-9039

Mr. William Hummel
CASE Energy Coalition
1110 Vermont Avenue, Suite 1200
Washington, DC 20005

Mr. John Lafountain
Progress Energy
2120 Tramway Road
Samford, NC 27332

Ms. Doreen Loska
513 Cardenna School Drive
Fuquay Varina, NC 27526

Mr. Pete MacDowell
604 Hatch Road
Chapel Hill, NC 27516

Mr. Monte Matthews, Project Manager
USACE – Wilmington District
Raleigh Regulatory Field Office
3331 Heritage Trade Dr. Suite 105
Wake Forest, NC 27587

Ms. Mary McNabb-Graham
Eva H. Perry Library
2100 Shepherd's Vineyard Drive
Apex, NC 27502

Ms. Elena Owens
Holly Springs Library
300 West Ballentine Street
Holly Springs, NC 27540

Mr. Laurence Parme, Manager
GT-MHR Safety & Licensing
General Atomics Company
P. O. Box 85608
San Diego, CA 92186-5608

Ms. Hilda Pinnix-Ragland
Progress Energy
1020 West Chathan Street
Cary, NC 27518

Harris Mailing List
cc:

Mr. Edward L. Quinn
Longenecker and Associates
Utility Operations Division
23292 Pompeii Drive
Dana Point, CA 92629

Ms. Vanessa E. Quinn, Acting Director
Technological Hazards Division
National Preparedness Directorate
Federal Emergency Management Agency
500 C Street, NW
Washington, DC 20472

Mr. Less Ragsdale
3400 Sumner Blvd.
Raleigh, NC 27616

Mr. David Repka
1700 K Street, NW
Washington, DC 20006-3817

Mr. Charles Rose, Jr.
1904 Vandor Springs Road
Garner, NC 27529

Mr. John Runkle
General Counsel
Conservation Council of NC
P. O. Box 3793
Chapel Hill, NC 27515

Mr. James Scarola, Senior Vice
President and Chief Nuclear Officer
Progress Energy, Inc.
P. O. Box 1551
Raleigh, NC 27602

Mr. Stephen Scott
9101 Fayetville Road
Raleigh, NC 27603

Dr. Arkal Shenoy, Director
Modular Helium Reactors Programs
General Atomics Company
P. O. Box 85608
San Diego, CA 92186-5608

Dr. Walter A. Simon, Senior Vice
President for Reactor Programs
General Atomics Company
P. O. Box 85608
San Diego, CA 92186-5608

Mr. Paul Snead
P. O. Box 1551, TPP15
Raleigh, NC 27602
Mr. R. Southerland
1315 Slatestone Road
Raleigh, NC 27615

Mr. Alan Summerville
ICF International
9300 Lee Highway
Fairfax, VA 22031-1207
Mr. Robert E. Sweeney
IBEX ESI
4641 Montgomery Avenue, Suite 350
Bethesda, MD 20814

Mr. Jeff White
1909 Horton Road
New Hill, NC 27562

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

Harris Email List

aph@nei.org (Adrian Heymer)
awc@nei.org (Anne W. Cottingham)
bennettS2@bv.com (Steve A. Bennett)
brian.mccabe@pgnmail.com (Brian McCabe)
BrinkmanCB@westinghouse.com (Charles Brinkman)
chris.burton@pgnmail.com (Chris Burton)
chris.maslak@ge.com (Chris Maslak)
cristina.lonescu@pgnmail.com (Christina Ionescu)
CumminWE@Westinghouse.com (Edward W. Cummins)
cwaltman@roe.com (C. Waltman)
david.hinds@ge.com (David Hinds)
david.lewis@pillsburylaw.com (David Lewis)
dlochbaum@UCSUSA.org. (David Lochbaum)
ecullington@earthlink.net (E. Cullington)
erg-x@cox.net (Eddie R. Grant)
frankq@hursttech.com (Frank Quinn)
garry.miller@pgnmail.com (Garry D. Miller)
gcesare@enercon.com (Guy Cesare)
greshaja@westinghouse.com (James Gresham)
gzinke@entergy.com (George Alan Zinke)
iqutierrez@morganlewis.com (Jay M. Gutierrez)
jim.riccio@wdc.greenpeace.org (James Riccio)
jim@ncwarn.org. (Jim Warren)
JJNestrsta@cpsenergy.com (James J. Nesrsta)
joe.w.donahue@pgnmail.com (Joe Donahue)
John.O'Neill@pillsburylaw.com (John O'Neill)
Joseph_Hegner@dom.com (Joseph Hegner)
Ksutton@morganlewis.com (Kathryn M. Sutton)
kwaugh@impact-net.org (Kenneth O. Waugh)
maria.webb@pillsburylaw.com (Maria Webb)
marilyn.kray@exeloncorp.com
mark.beaumont@wsms.com (Mark Beaumont)
matias.travieso-diaz@pillsburylaw.com (Matias Travieso-Diaz)
media@nei.org (Scott Peterson)
mike_moran@fpl.com (Mike Moran)
murawski@newsobserver.com (John Murawski)
mwetterhahn@winston.com (M. Wetterhahn)
nirsnet@nirs.org (Michael Mariotte)
patriciaL.campbell@ge.com (Patricia L. Campbell)
paul.gaukler@pillsburylaw.com (Paul Gaukler)
Paul@beyondnuclear.org (Paul Gunter)
phinner@entergy.com (Paul Hinnenkamp)
pshastings@duke-energy.com (Peter Hastings)
RJB@NEI.org (Russell Bell)
RKTemple@cpsenergy.com (R.K. Temple)
robert.kitchen@pgnmail.com (Robert H. Kitchen)
roberta.swan@ge.com (Roberta Swain)
sandra.sloan@areva.com (Sandra Sloan)
sfrantz@morganlewis.com (Stephen P. Frantz)
steven.hucik@ge.com (Steven Hucik
Tansel.Selekler@nuclear.energy.gov (Tansel Selekler)
tjh2@nrc.gov (Thomas Herrity)
VictorB@bv.com (Bill Victor)
Wanda.K.Marshall@dom.com (Wanda K. Marshall)

Harris Email List

waraksre@westinghouse.com (Rosemarie E. Waraks)
whorin@winston.com (W. Horin)
lchandler@morganlewis.com (Lawrence J. Chandler)

ENCLOSURE 1

July 1, 2009 Teleconference to Discuss Aquatic Ecology of the Fire Pond
Aquatic Ecology RAI 4.3.2-2

Participants:

Paul Snead (PEC)
Arun Kapur (PEC)
Joseph Pavletich (PEC)
Linda Hickok (PEC)
Scott Freeman (CH2M Hill)
George Howroyd (CH2M Hill)
Elizabeth Calvit (CH2M Hill)
Don Palmrose (NRC)
Peyton Doub (NRC)
Rich Emch (NRC)
Monte Matthews (USACE)
Roger Dirkes (PNNL)
Tara O'Neil (PNNL)

The purpose of the teleconference was to discuss with Progress Energy Carolinas, Inc. (PEC), the expected practices PEC could apply for dewatering of the fire pond to mitigate environmental impacts if the proposed Unit 3 is built.

The U.S. Army Corps of Engineers (USACE) has experience with the dewatering of ponds within the Wilmington District in a manner that minimizes impact to the land and aquatic resources (erosion, water quality, fish kills, etc.). Prior to this teleconference, Mr. Monte Matthews of the Wilmington District of the USACE discussed this topic with representatives of the State of North Carolina Wildlife Resources Commission (WRC) and Department of Environment and Natural Resources, Division of Water Quality (DWQ). The WRC would be concerned about the potential of a fish kill without some procedure to adequately dispose of the fish as the dewatering progresses. The concern of the DWQ involves how the dewatering would be accomplished including the breaching of the berms that form the fire pond so that a slug of sediment from the bottom of the pond or the rapid erosion of the berm could be avoided. Methods for dewatering of ponds were discussed that would address WRC's and DWQ's concerns such as controlled pumping with the use of portable pumps, not breaching the berms until the ponds are pumped down and the appropriate disposition of fish from the dewatering process. PEC also said these processes could be part of its soil and erosion control plan and there is some control over the fire pond with existing gate valves and piping.

Two other topics were briefly discussed. First, the NRC and PNNL had a question concerning Table 4.6-2 in Revision 1 of PEC's Environmental Report (ER) on whether the values provided for ER Subsection 4.1.3.3 were for cultural resources. PEC confirmed this to be the case. Second, USACE and NRC briefly discussed their review of PEC's 404(b)(1) Alternatives Analysis and the need for a subsequent discussion to resolve USACE's review comments. It was agreed that Mr. Monte Matthews would coordinate with all of the parties involved for a later meeting/conference call at the USACE's Raleigh Regulatory Field Office.

The NRC requests PEC provide a written description of how it intends to minimize the impacts to terrestrial and aquatic resources that could occur from dewatering of the fire pond.

ENCLOSURE 2

July 9, 2009 Teleconference to Discuss Site Selection Process
Alternative Site Selection RAI 9.4-1

Participants:

Paul Snead (PEC)
Jim Nevill (PEC)
Arun Kapur (PEC)
Joe Pavletich (PEC)
Charlie Uhlarik (PEC)
Loren Young (CH2M Hill)
Scott Freeman (CH2M Hill)
Don Palmrose (NRC)
Jim Cabe (PNNL)
Roger Dirkes (PNNL)

The following information was exchanged during a conference call on July 9, 2009, with Progress Energy Carolinas, NRC, and PNNL to address remaining questions regarding HAR ER RAI 9.4-1 Attachment A: Alternative Site Selection Process (ADAMS accession number ML091600148).

After reviewing the supplemental response to HAR ER RAI 9.4-1, it remained unclear how the candidate areas were screened consistently to provide the 11 potential sites. Clarification was also needed that potential sites considered previously through siting studies, such as sites 7, 8, 10 and 11, were updated to reflect known current conditions.

Screening of the Candidate Areas to Provide Potential Sites

The participants discussed Potential Sites 5 through 11 on how the four exclusionary criteria (list provided below) were used to evaluate the candidate areas. The goal of the discussion was to verify that their inclusion on the potential site list was not in conflict with information as provided via the 2006 PEC Siting Study (redacted version), PEC Environmental Report (all versions), and RAI responses.

The four exclusionary criteria for the candidate areas included:

1. Proximity to major population centers (that is, not located in an area with greater than or equal to 300 persons per square mile [ppsm] or 300 persons per 2.6 km2).
2. Proximity of adequate transmission lines (that is, within 30 miles [mi.] or 48.3 kilometers (km) of 345-kilovolt [kV] or 500-kV transmission lines). The 345-kV or 500-kV transmission lines are needed for the standard grid connection design. Areas with proximity to 230-kV lines that could potentially be upgraded were also considered.
3. Lack of a suitable cooling water source (that is, within 15 mi [24.1 km] of an adequate cooling water source).
4. Dedicated land (that is, not located within national parks, state parks, historic sites, or tribal lands).

The overall conclusion was the candidate areas were correctly screened using four exclusionary criteria as outlined in the latest response to RAI 9.4-1 and included below to determine the list of 11 potential sites. This included the screening of all previously considered sites. The 11 potential sites all met the appropriate application of exclusionary criteria used to screen the candidate areas.

Screening of the 11 Potential Sites to the 4 Candidate Sites

The participants next discussed Potential Sites 5 through 11 on how the exclusionary criteria for

evaluating the potential sites (list provided below) to obtain the candidate sites were applied. Again, the goal of this discussion was to verify their exclusion from further consideration was not in conflict with information as provided via the 2006 PEC Siting Study (redacted version), PEC Environmental Report (all versions), and RAI responses.

The criteria were refined from those obtained in the latest response to RAI 9.4-1 (see HAR ER RAI 9.4.1 Attachment A page 10 of ADAMS accession number ML091600148) to provide more description (see the underlined text below) and met with approval as discussed on the conference call. The criteria included:

1. Seismic considerations: Sites needed to meet seismic requirements for existing and planned certified reactor designs.
2. Available Land/Land Acquisition, of approximately 400 acres (ac.) (162 hectares [ha]): This is an exclusionary criterion based on the availability of the identified site and adjoining available area to support an AP1000 footprint of approximately 240 ac. (97 ha) plus approximately 180 ac. (73 ha) of additional land needed for ancillary structures, construction buildings, construction lay-down areas, and parking areas rounded to 400 acres.
3. Cooling Water: Sites needed to be in proximity to an adequate cooling water resource containing a sufficient quantity of water to support a two-unit AP-1000 plant without requiring supplemental water supply resources such as a new reservoir to maintain plant availability during low water conditions.
4. Geotechnical Considerations: Sites needed to meet geologic requirements for existing and planned certified reactor designs.
5. Environmental Considerations: proximity of a site to floodplains, proximity of a site to low population areas; and sites were evaluated based on the presence and location of wetlands at or surrounding the site.
6. Transmission: Sites were evaluated based on the need for transmission system upgrades.
7. Power: Sites needed to have access to sufficient off-site power voltage for transmission and grid stability to support a nuclear unit trip or unexpected outage.
8. An ownership criterion was based on the site's ownership status.

Based on the discussion, the 11 potential sites were correctly screened using the eight exclusionary criteria as outlined above. The four candidate sites all met the appropriate application of exclusionary criteria used to screen the potential site list.

The NRC requests PEC provide in a letter under oath or affirmation that PEC agrees with the above clarification of the site selection process and the applied exclusionary criteria and requests PEC to consider making appropriate changes (i.e., to incorporate the above clarifications) in the next revision of the ER.

ENCLOSURE 3

July 16, 2009 Teleconference to Discuss Airborne Dispersion and Air Quality Emissions Air Quality RAI 2.7-2

Participants:

Paul Snead (PEC)
Arun Kapur (PEC)
Joseph Pavletich (PEC)
Linda Hickok (PEC)
Loren Young (CH2M Hill)
George Howroyd (CH2M Hill)
John Subacz (CH2M Hill)
Ron Vaughn (CH2M Hill)
Don Palmrose (NRC)
Stacey Imboden (NRC)
Mike Mazaika (NRC)
Monte Matthews (USACE)
Roger Dirkes (PNNL)
Jeremy Rishel (PNNL)

The first topic of discussion concerned the finding that the χ/Q values were not the same in Table 2.7-75 and Table 7.1-3 of Revision 1 of the Environmental Report. Progress Energy Carolinas, Inc. (PEC) did confirm the Table 7.1-3 χ/Q values were correct and PEC did commit to the correction of Table 2.7-75 in the next revision of the Environmental Report. The NRC would continue with the development of a draft environmental impact statement based on Table 7.1.3 as having the correct χ/Q values.

The discussion then continued to the construction-related emission analysis provided by PEC on July 6, 2009. This analysis was submitted to the NRC as Supplement 3 to the response on Air Quality RAI 2.7-2 [PGNRAI ID #: H-478]. PNNL and NRC personnel discussed their initial review results and requested clarification from PEC and their CH2M Hill contractors on certain assumptions and inputs to the analysis. The clarifications concerned the air temperatures applied at different times of the year and whether certain equipment emissions were included or excluded from the analysis. The conclusions reached at the end of the discussion was the temperature inputs were based on the values used by DENR-DAQ in the development of the State Implementation Plan, therefore they were the proper values, and emissions from the expected concrete batch plant were excluded because PEC plans on using electrical motors, thus emissions-free, as the motive force for this plant.

The NRC requests PEC provide in a letter under oath or affirmation the correction to Table 2.7-75 and requests PEC to consider making appropriate changes in the next revision of the Environmental Report.