May 6, 2004

MEMORANDUM TO: John R. Tappert, Section Chief
Environmental Section
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

FROM: Andrew J. Kugler, Senior Project Manager **/RA/**
Environmental Section
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

SUBJECT: TRIP REPORT - VISITS TO THE SAVANNAH RIVER AND PORTSMOUTH SITES, ALTERNATIVES TO THE NORTH ANNA ESP SITE, FEBRUARY 24 TO FEBRUARY 27, 2004

I visited the Savannah River and Portsmouth sites on February 25, 2004, and February 27, 2004, respectively. The staff at both sites was very helpful, discussing the environmental issues associated with the site and in providing tours of the sites. I was accompanied by three members of my team from the Pacific Northwest National Laboratory (PNNL), Mary Ann Parkhurst (PNNL Team Leader), Duane Neitzel (Aquatic Ecology), and Lance Vail (Water Use and Quality). The purpose of these visits was to gather information that the team will use in evaluating these alternative sites versus the proposed North Anna site. Note that members of my team and I had previously visited the other alternative site, Surry Power Station, in December 2003.

Key points from the visits are summarized in Attachment 1. Attachment 2 contains a list of documents provided by the staffs at the alternate sites.

Docket No. 52-008

Attachments: As stated

May 6, 2004

MEMORANDUM TO: John R. Tappert, Section Chief
Environmental Section
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

FROM: Andrew J. Kugler, Senior Project Manager **/RA/**
Environmental Section
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

SUBJECT: TRIP REPORT - VISITS TO THE SAVANNAH RIVER AND PORTSMOUTH SITES, ALTERNATIVES TO THE NORTH ANNA ESP SITE, FEBRUARY 24 TO FEBRUARY 27, 2004

I visited the Savannah River and Portsmouth sites on February 25, 2004, and February 27, 2004, respectively. The staff at both sites was very helpful, discussing the environmental issues associated with the site and in providing tours of the sites. I was accompanied by three members of my team from the Pacific Northwest National Laboratory (PNNL), Mary Ann Parkhurst (PNNL Team Leader), Duane Neitzel (Aquatic Ecology), and Lance Vail (Water Use and Quality). The purpose of these visits was to gather information that the team will use in evaluating these alternative sites versus the proposed North Anna site. Note that members of my team and I had previously visited the other alternative site, Surry Power Station, in December 2003.

Key points from the visits are summarized in Attachment 1. Attachment 2 contains a list of documents provided by the staffs at the alternate sites.

Docket No. 52-008

Attachments: As stated

DISTRIBUTION:

PTKuo	Environmental R/F
JTappert	RLEP R/F
JCushing	JHWilson
SImboden	TKenyon
MLScott	MParkhurst (PNNL)

ADAMS Accession no.**: ML041270548**

DOCUMENT NAME: C:\ORPCheckout\FileNET\ML041270548.wpd

OFFICE	PM:RLEP	LA:RLEP	OGC	SC:RLEP
NAME	JCushing	MJenkins	RWeisman	JTappert **(BZ for)**
DATE	4/19/04	4/16/04	5/4/04	5/6/04

OFFICIAL RECORD COPY

Trip Report - Visits to the Savannah River and Portsmouth Sites
Alternatives to the North Anna ESP Site
February 24 to February 27, 2004

Savannah River Site

We met with representatives from the U.S. Department of Energy (DOE) and the Westinghouse Savannah River Company (under contract to DOE). They provided an orientation for the site and then discussed specific environmental issues related to the site. After those discussions, we toured the Savannah River Site (SRS), viewing major features (water, land use, existing and planned facilities) and continuing discussions with site experts. Some key points are as follows:

1. The environmental database maintained for the site dates back to pre-construction studies.

2. The location proposed at SRS by Dominion had been selected for another potential project by SRS in 1997 using their internal site selection process.

3. The site selection process includes consideration of a substantial portion of the site that has been set aside to protect environmental resources.

4. There are currently two significant projects already coming to SRS; the Mixed-Oxide Fuel Fabrication Facility and the Pit Disassembly and Conversion Facility.

5. There are two significant water bodies on the site, Par Pond and L Lake. Both are contaminated to some extent. For reference, Par Pond is about 1/3 the size of Lake Anna and L Lake is about 1/3 the size of Par Pond. Par Pond is self-sustaining (i.e., natural in-flows are sufficient to maintain levels) except during severe drought.

6. When Par Pond was used to cool reactors, it received a thermal load of about 2000 MWth with a through-flow of 160,000 gpm.

7. The current NPDES permit and section 316(a) and (b) studies of record were based on the flows that were needed when the now-retired reactors were operating. There are two pumphouses at the river, each capable of supplying about 250,000 gpm flow.

8. There are two public water systems that use the Savannah River downstream of SRS. SRS has an extensive program for monitoring site releases to the river and, when necessary, communicating the results to downstream users.

9. The site has an extensive radiological environmental monitoring program - similar to that required at nuclear plants.

10. The red-cockaded woodpecker is on site. There is an ongoing effort to keep the nesting and foraging areas for this species towards the outer edges of the site where the impacts from man are less.

11. The shortnose sturgeon is known to be in the Savannah River and there are possible spawning locations upstream from SRS. The sturgeon is addressed in the section 316(b) study for the intake.

12. Some archaeological survey work was done at the proposed site. However, further study would be needed before construction of a facility could be planned.

13. Details of a lease of land for a reactor site to a commercial company would have to be resolved.

14. The proposed location is towards the center of SRS, placing it 5 or more miles from the site boundary. One of the onsite transmission lines runs along one side of the proposed location.

Portsmouth Site

We met with representatives from DOE and the Bechtel Jacobs Company LLC (under contract to DOE). They provided an orientation for the site and then discussed specific environmental issues related to the site. After those discussions, we toured the Portsmouth Site and surrounding areas, viewing major features (water, land use, existing and planned facilities) and continuing discussions with site experts. Some key points are as follows:

1. The past commercial enrichment operations at the site ceased in 1991.

2. There are current plans to build a gas centrifuge at Portsmouth. In addition, the site will be one of two involved in dispositioning cylinders of spent uranium hexafluoride.

3. The site uses well water pumped from well fields near the Scioto River. The wells provide a capacity of up to 61.3 million gallons per day (MGD), although current usage is only around 5.7 MGD.

4. Site personnel implement an extensive environmental monitoring program. There is a significant amount of clean-up work under way, both to mitigate some existing problems and to remove some facilities.

5. There is potential habitat for the Indiana bat, an endangered species, on the site. However, this species has never been observed on the site.

6. A Phase I archaeological survey has been done on the entire site. There are two known cemeteries on the Portsmouth Site, including one towards the eastern end of the proposed location that could be used for a nuclear reactor.

7. Because of the need for a significant amount of reliable power when the gaseous diffusion process was running, the site has a number of connections to the electrical grid in the area.

8. Because the proposed location is at the site boundary, the land could either be leased to the owner of a new plant or sold outright.

Documents Provided During Visits to the
Savannah River and Portsmouth Sites
Alternatives to the North Anna ESP Site
February 24 to February 27, 2004

These documents have been placed in the NRC's document management system (ADAMS). The ADAMS accession numbers for the documents are provided below.

Documents from Savannah River Site

Document	ADAMS Accession No.
Slides, "An Overview of SRS's Environmental Monitoring Program," presented to the NRC on February 25, 2004	ML040840164
"Natural Phenomena Hazards (NPH) Design Criteria and Other Characterization Information for the Mixed Oxide (MOX) Fuel Fabrication Facility at Savannah River Site," WSRC-TR-2000-00454, Rev. 0, November 2000	ML040850035
Draft Environmental Impact Statement: "Accelerator Production of Tritium at the Savannah River Site," DOE/EIS-0270D, December 1997	ML040890675
"Savannah River Site Environmental Report for 2000," WSRC-TR-2000-00328	ML040850625
"Savannah River Site Environmental Data for 2000," WSRC-TR-2000-00329	ML040850628
NRC Agenda for Savannah River Site Tour	ML040830546
Savannah River Site Fact Sheet, dated April 2002	ML040840152
Savannah River Site Ecology Environmental Information Document, WSRC-TR-97-0223, 1997	ML040910462

Documents from Portsmouth Site

Document	ADAMS Accession No.
Slides, "Environmental Management at the Portsmouth Gaseous Diffusion Plant, Portsmouth Overview," presented to the NRC on February 27, 2004	ML040840167
"Portsmouth Annual Environmental Report for 2001," DOE/OR/11-3106&D1	ML040850524

Document	ADAMS Accession No.
"Portsmouth Annual Environmental Data for 2001," DOE/OR/11-3107&D1	ML040850578
"Portsmouth Annual Environmental Report for 2002," DOE/OR/11-3132&D1	ML040850054
"Portsmouth Annual Environmental Data for 2002," DOE/OR/11-3133&D1	ML040850049
"Environmental Assessment: Reindustrialization Program at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio," Draft, DOE/EA-1346, May 2001	ML040850520
"Evaluation of Site Conditions for 340 Acres of Department of Energy Land, Northeast Portion of the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio," DOE/OR/11-3082&D3, January 2002	ML040850516
Diagram, "Raw Water System," for the Portsmouth Gaseous Diffusion Plant	ML040830549
Portsmouth Gaseous Diffusion Plant Water Treatment System Description	ML040830555
Portsmouth Gaseous Diffusion Plant Sewage Treatment Plant Description and Diagram	ML040830567
"One Line Diagram of O.V.E.C. [Ohio Valley Electric Corporation] System and Interconnections"	ML040830569
Ohio Department of Natural Resources, Division of Water Fact Sheet, "Community Water Supply Planning in Ohio," Fact Sheet 93-22	ML040840158
Ohio Department of Natural Resources, Division of Water, "Regional Water Plans & Community Water Supply Analyses," http:/www.dnr.state.oh.us/water/planing/watsupas/regonpln.htm, accessed February 27, 2004	ML040840160
Ohio Department of Natural Resources, Division of Water, "Water Withdrawal Rights," http:/www.dnr.state.oh.us/water/planing/watsupas/water_rights.htm, accessed February 27, 2004	ML040840162