

March 17, 2008

LICENSEE: FirstEnergy Nuclear Operating Company
FACILITY: Beaver Valley Power Station
SUBJECT: SUMMARY OF SITE AUDIT RELATED TO THE REVIEW OF THE LICENSE RENEWAL APPLICATION FOR BEAVER VALLEY POWER STATION, UNITS 1 AND 2 (TAC NOS. MD6596 AND MD6595)

From November 13-16, 2007, a review team from the U.S. Nuclear Regulatory Commission (NRC) staff conducted a site audit at the Beaver Valley Power Station (BVPS) related to the environmental review of the BVPS license renewal application (LRA). The team consisted of 13 NRC staff members. The primary goals of the site audit were to review documentation; gather information to ensure that environmental requirements of license renewal as codified in Title 10 of the *Code of Federal Regulations* Part 51 (10 CF R Part 51) are met; and to interface with officials in Federal, State and local government agencies to obtain related information.

Enclosure 1 is a list of NRC, State of Pennsylvania, FirstEnergy Nuclear Operating Company (FENOC), industry, and peer representatives who participated in the site audit. Enclosure 2 is a table of documents provided at the audit by FENOC and formally requested by the NRC to assist the NRC staff in its review of the BVPS Environmental Report. Upon submission by FENOC, these documents were made publicly available and can be found at the Agencywide Documents Access and Management System (ADAMS). The accession numbers are listed in Enclosure 2. Some documents, as indicated in Enclosure 2, have not been made publicly available because of security-related information withheld under 10 CFR 2.390. ADAMS is accessible at <http://adamswebsearch.nrc.gov/dologin.htm> or through the NRC's Electronic Reading Room link at <http://www.nrc.gov>. Persons who do not have access to ADAMS, or who encounter problems in accessing the documents located in ADAMS, should contact the NRC's Public Document Room staff at 1-800-397-4209 or 301-415-4737, or by e-mail at pdr@nrc.gov. Enclosure 3 is the Environmental Site Audit Needs List provided to the applicant prior to the site audit.

On Tuesday, November 13, 2007, the NRC environmental review team participated in a general site tour of the BVPS site with FENOC staff. The general site tour focused on areas relevant to the environmental review, including the intake structure, discharge structure, cooling towers, meteorological towers, water sampling locations, site structures, transmission lines, waste storage facilities, and the site environs. During the rest of the site audit, the team members examined the data used by FENOC in preparation of the Environmental Report submitted as part of the BVPS LRA and also met in smaller groups with FENOC's corresponding environmental experts.

These groups participated in various activities, including tours of the radioactive waste processing areas, the meteorological tower and instruments, the transmission line rights of way, and the intake structure. During a boat tour, team members examined the intake structure, the intake bays, the discharge structure, the neighboring Bruce Mansfield Power Station, and Phyllis Island.

Team members met onsite with officials from the Pennsylvania Department of Environmental Protection. Representatives from Nuclear Management Company's (NMC) Prairie Island Nuclear Generating Plant, Exelon, Duquense Light, and FirstEnergy Forestry Corporation observed the audit. Information gathered during these meetings will assist the environmental review team in its evaluation. FENOC representatives provided a brief presentation on their process for identifying new and significant information. No new and significant information was identified by FENOC.

At the conclusion of the site audit, the NRC staff summarized the status of the review with FENOC representatives. NRC indicated that all tour requests were satisfied, and all interview questions were answered or properly recorded for official response. All other questions were cataloged in a database for tracking to ensure that all questions were closed out or identified as an action item. At the conclusion of the meeting there were three action items. First, there was an open request to provide an executive summary regarding groundwater monitoring. Second, there was an open question as to why the license renewal in-scope transmission lines were not in the Integrated Cultural Resource Management Plan. Finally, there was an open request to provide an electronic copy of the BVPS Environmental Report Construction Permit Phase. These action items are listed in Enclosure 4. Subsequent to the audit, these action items have been closed or remain open pending document submission. The status of each item is indicated in the enclosure.

The NRC staff indicated that, with the exception of items listed in Enclosure 4, the review team did not identify any significant issues during its site visit or during offsite visits with Federal, State, and local agencies. However, the NRC staff further indicated that the review was ongoing and that any additional information necessary to support the review would be formally requested.

If you have questions concerning the NRC staff's environmental audit or the review of the BVPS LRA, please contact Mr. Kent Howard at 301-415-2989 or via e-mail at KLH1@nrc.gov.

\RA

Kent Howard, Project Manager
Projects Branch 2
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-334 and 50-412

Enclosures:
As stated

cc w/encls: See next page

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\RA

Kent Howard, Project Manager
 Projects Branch 2
 Division of License Renewal
 Office of Nuclear Reactor Regulation

Docket Nos. 50-334 and 50-412

Enclosures:
 As stated

cc w/encls: See next page

Adams Accession No.: **ML080290257**

OFFICE	LA:DLR	PM:DLR:RPB2	PM:DLR:RPB2	BC:DLR:RERB	BC:DLR:REBB
NAME	IKing	ESayoc	KHoward	EBenner	RFranovich
DATE	02/7/08	02/11/08	02/11/08	03/04/08	03/17/08

OFFICIAL RECORD COPY

Letter to FirstEnergy from K. Howard dated March 17, 2008

DISTRIBUTION:

SUBJECT: SUMMARY OF SITE AUDIT RELATED TO THE REVIEW OF THE LICENSE RENEWAL APPLICATION FOR BEAVER VALLEY POWER STATION, UNITS 1 AND 2 (TAC NOS. MD6596 AND MD6595)

HARD COPY:

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Beaver Valley Power Station

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Beaver Valley Power Station

-2-

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ENCLOSURE 1

**LIST OF PARTICIPANTS FOR
BEAVER VALLEY POWER STATION, UNITS 1 AND 2
ENVIRONMENTAL SITE AUDIT
NOVEMBER 13-16, 2007**

PARTICIPANT

AFFILIATION

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Eric Benner	NRC
Kent Howard	NRC
Emmanuel Sayoc	NRC
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Briana Balsam	NRC
Jeffrey Rikhoff	NRC
Richard Bulavinetz	NRC
David Workheiser	NRC
Jim Holthaus	Nuclear Management Company (NMC) Prairie Island
Raelynn Jones-Loss	NMC
Nancy Ranek	Exelon
Fred Polaski	Exelon
Jennifer Arkett	Duquesne Light
Chuck Olenik	FirstEnergy Environmental
Kathy Kunkel	FirstEnergy Environmental
Gail Twymon	FirstEnergy Environmental
Amy Stanford	TTNUS
Anne Lovell	TTNUS
Cameron Lange	Shaw Environmental & Infrastructures
Ronald Dinello	Environ., Incorporated
Larry Ryan	Pennsylvania Department of Environmental Protection, Bureau of Radiation Protection
Larry Hinkle	FirstEnergy Nuclear Operating Company (FENOC)
Colin Keller	FENOC
Bill Etzel	FENOC
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Michelle Babir	FENOC
Julie Firestone	FENOC
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Larry Freeland	FENOC
Rob Kurkienicz	FENOC
Donald Salera	FENOC
Wayne McIntire	FENOC
Breanne Allman	FENOC
Darlene Kopp	FENOC
John Saunders	FENOC
Tom Westbrook	FENOC
Bob Lubert	FENOC
Matt Daly	FENOC
Mark Manoleras	FENOC

ENCLOSURE 2

References Requested and Subsequently Submitted
by the Beaver Valley Power Station
Site Audit
November 13-16, 2007

	Reference Document	ADAMS Accession Number
	Land Use	
1.	Environmental Report (ER) Ref 2.1-6	ML080170531
2.	ER Ref 2.1-10	ML080170531
3.	ER Ref 2.1-16	ML080170531
4.	ER Ref 2.7-3	ML080170531
5.	ER Ref 2.7-4	ML080170531
6.	ER Ref 2.7-5	ML080170531
7.	ER Ref 2.7-6	ML080170531
8.	ER Ref 2.7-7	ML080170531
9.	ER Ref 2.8-3	ML080170531
10.	ER Ref 2.8-4	ML080170531
11.	ER Ref 2.8-5	ML080170531
12.	ER Ref 2.8-6	ML080170531
13.	ER Ref 2.8-7	ML080170531
14.	ER Ref 2.8-8	ML080170531
15.	ER Ref 2.9-1	ML080170531
16.	ER Ref 2.9-3	ML080170531
17.	*Response to Needs List Land Use – Environmental Justice Question 1	ML080170531

18.	*Response to Needs List Land Use - Socioeconomics Question 2, only summary information, please omit individual employee information	ML080170531
19.	News Paper Article and Court Proceedings Docs Involving the re-assessment of taxes for BVPS	ML080170531
	Hydrology	
21.	NPDES Permit No. PA0025615 and attachments	ML080170529
22.	NPDES Permit No. PA0025615 renewal application – June 2006	ML080170529
23.	NPDES Compliance Inspection Report – 9/13/07	ML080170529
24.	DEP ACT220 Water Withdrawal and Use	ML080170529
25.	Registration – 2004 – Alternate Intake Structure	ML080170529
26.	Registration – 2005 – Alternate Intake Structure	ML080170529
27.	Supplemental Registration – 2004– Main Intake Structure	ML080170529
28.	Registration – 2005 – Main Intake Structure	ML080170529
29.	Registration – 2006 – Main Intake Structure	ML080170529
30.	Registration – 2004 – Midland Municipal Authority	ML080170529
31.	Registration – 2005 – Midland Municipal Authority	ML080170529
32.	Registration – 2006 – Midland Municipal Authority	ML080170529
33.	US Army COE Permit 200100242 – dredging permit – April 4, 2001 and attachments	ML080170529
34.	Storage Tank Registration / Permit Certificates	ML080170529
35.	DEP letter March 18, 1996 – Cooling Tower Silt Removal to David Collier from David Eberle	ML080170529
36.	BVPS Groundwater Field Sampling Plan August 2007	ML080170529
37.	BVPS Groundwater Flow Characteristics Report – December 2006	Security-Related Information – Not for Public Disclosure
	Meteorology/Air	
38.	2006 Annual BV Meteorological Report by ABS Consulting OP-04-00086	ML080170539
39.	State Only Air Permit	ML080170539

40.	Application for open burning exception for fire fighting instruction #2664	ML080170539
	Terrestrial Biology	
41.	PA DEP Air Quality Inspection: April 26, 2004 and February 28, 2006.	ML080170539
42.	*Response to Needs List Terrestrial Biology Question #1, only first page	ML080170539
43.	*Response to Needs List Terrestrial Biology Question #2, only first page	ML080170539
44.	*Response to Needs List Terrestrial Biology Question #4	ML080170539
45.	*Response to Needs List Terrestrial Biology Question #9	ML080170539
	Archaeology	
46.	ER Ref 2.3-12	ML080170547, ML080170558
47.	*Response to Needs List Archaeology Question #1	ML080170547, ML080170558
48.	*Response to Needs List Archaeology Question #2	ML080170547, ML080170558
49.	*Response to Needs List Archaeology Question #3	ML080170547, ML080170558
50.	*Response to Needs List Archaeology Question #4	ML080170547, ML080170558
51.	*Response to Needs List Archaeology Question #5	ML080170547, ML080170558
52.	*Response to Needs List Archaeology Question #9	ML080170547, ML080170558
53.	*Response to Needs List Archaeology Question #10	ML080170547, ML080170558
54.	*Response to Needs List Archaeology Question #11	ML080170547, ML080170558
55.	*Response to Needs List Archaeology Question #12	ML080170547, ML080170558
56.	*Response to Needs List Archaeology Question #13	ML080170547, ML080170558

57.	*Response to Needs List Archaeology Question #14	ML080170547, ML080170558
58.	*Response to Needs List Archaeology Question #15	ML080170547, ML080170558
59.	Final Integrated Cultural Resources Management Plan for BVPS (non-public version)	To be Submitted when Final Version is Issued
	Aquatic	
60.	*Response to Needs List Aquatic Question #1 Tab 1a. 316(a) and 316(b), the following references <i>only</i> : No. 2 BVPS-2 316(b) Study 1073 No. 3 NPDES Permit No. PA 0025615 Impingement/Entrainment Monitoring Report	ML080170515
61.	*Response to Needs List Aquatic Question #1 Tab 1b. Proposed changes to Plant's Cooling System Intake	ML080170515
62.	*Response to Needs List Aquatic Question #1 Tab 1c. Entrainment Sampling, Methods, and Results	ML080170515
63.	*Response to Needs List Aquatic Question #1 Tab 1e. Map and Description of New Cumberland Pool, the following references <i>only</i> : No. 1 ORSANCO, "A Biological Study of the New Cumberland Pool of the Ohio River," Biological Programs 2004 No. 2 U.S. Army Corps of Engineers Ohio River Charts No. 208 thru 215	ML080170515
64.	*Response to Needs List Aquatic Question #1 Tab 1f. Fish Impingement and Sampling	ML080170515
65.	*Response to Needs List Aquatic Question #1 Tab 1g. Selected ER References, the following references <i>only</i> : No. 1 Tolin No. 3 Lorson and Miko PA No. 4 Banko Review of Aquatic Ecological Monitoring/Plankton Entrainment Review No. 5 Beak Consultants No. 6 Lange, C. (Shaw) No. 7 Sanders	ML080170515
66.	*Response to Needs List Aquatic Question #1 Tab 18. BVPS-1 EPA-NPDES Impingement/Entrainment Semi-Annual Monitoring Report, Jan-Jun 1976	ML080170518
67.	*Response to Needs List Aquatic Question #1 Tab 19. BVPS-1 EPA NPDES Impingement/Entrainment Semi-Annual Monitoring Report with EPA Response 1976	ML080170518
68.	*Response to Needs List Aquatic Question #2 Tab 2b. Release notifications, NOVs, etc.	ML080170518

69.	*Response to Needs List Aquatic Question #2 Tab 2c. Chemicals and Biocides	ML080170518
70.	*Response to Needs List Aquatic Question #2 Tab 2e. ER Reference 3.1-16, 8700-RM-0027F	ML080170518
71.	*Response to Needs List Aquatic Question #2 Tab 2f. PADEP Act 220 Water Withdrawal and Use, the following references <i>only</i> : No. 1 2003 No. 3 2004 submitted by BVPS staff No. 5 2005 submitted by BVPS staff No. 7 2006 submitted by BVPS staff	ML080170518
72.	*Response to Needs List Aquatic Question #2 Tab 2g. Verification of Water Usage (<i>BVPS response only – i.e. first 2 pages of tab</i>)	ML080170518
73.	*Response to Needs List Aquatic Question #2 Tab 2h. Local Agencies	ML080170518
74.	*Response to Needs List Aquatic Question #2 Tab 2i. USACE Maintenance Dredging and Specifics	ML080170518
75.	*Response to Needs List Aquatic Question #2 Tab 2j. BVPS Spill Prevention, Control and Countermeasures	ML080170518
76.	*Response to Needs List Aquatic Question #3 Tab 3a. 1/2-ENV-06.01, “Regulated Waste Management”	ML080170518
77.	*Response to Needs List Aquatic Question #3 Tab 3b. BVPS/FENOC Chemical Control Programs (2)	ML080170518
78.	*Response to Needs List Aquatic Question #3 Tab 3c. Non-Radiological Waste BVPS produced in each of the past 5 years	ML080170518
79.	*Response to Needs List Aquatic Question #3 Tab 3d. Steam Generator 2001 Cleaning (<i>BVPS one-page response only</i>)	ML080170518
80.	*Response to Needs List Aquatic Question #3 Tab 3e. Past 5 Years Mixed Waste, the following reference <i>only</i> : No. 1 2005 Hazardous Waste Shipping Summary	ML080170518

81.	*Response to Needs List Aquatic Question #3 Aquatic 3d Steam Generator Chemical Cleaning Binder Copy of the first 2 response pages No. 1 ATG Certificates of Treatment/Destruction for EDTA	ML080170518
82.	*Response to Needs List Aquatic Question #4 Tab 4a. Occupational Health, the following references <i>only</i> : No. 4 Legionellosis Prevention No. 7 B. Prinkey e-mail	ML080170518
83.	*Response to Needs List Aquatic Question #4 Tab 4b. ER Reference 4-13-3 Hersh letter	ML080170518
84.	Drawings 8700-DSK-0150 and 8700-DSK-0151	Security-Related Information – Not for Public Disclosure
85.	GAI Letter Report dated March 28, 2007, GAI Project No. C060450	Security-Related Information – Not for Public Disclosure
86.	GAI Letter Report dated May 15, 2007, GAI Project No. C070472.00	Security-Related Information – Not for Public Disclosure
87.	List-National Register Listed, Eligible, and NHL properties, Pennsylvania Historical and Museum Commission (PHMC), Bureau of Historic Preservation	Available on public domain website: DisplayText cannot, FENOC cannot submit due to non-disclosure agreement
88.	PHMC maps and Information: <ul style="list-style-type: none"> • Shippingport Atomic Power Station • Midland High School • Midland Carnegie Library • Merrill Lock No. 6 • Lockkeepers House • J.R. Mitrovich Property • David Littell House 	Available on public domain website: DisplayText cannot, FENOC cannot submit due to non-disclosure agreement

* Reference to Needs List in Enclosure 3.

ENCLOSURE 3

Original Needs List for the Environmental Site Audit for the Beaver Valley Power Station November 13-16, 2007

The NRC staff has reviewed Appendix E, Environmental Report, of the Beaver Valley Power Station, Units 1 and 2 (BVPS) license renewal application and have found that it meets the requirements of 10 CFR 51.45. However, in order to develop the Supplemental Environmental Impact Statement for license renewal, a number of informational needs have been identified and are outlined below. The NRC staff would appreciate if you could make the following documents available during the environmental site audit at BVPS to be conducted the week of November 13, 2007.

LAND USE

Jeffrey Rikhoff

Needed Information:

1. Environmental Justice
 - a. Since limited hunting is permitted on Phyllis Island (ER page 2.1-9), NRC needs information about current or past wildlife sampling and testing of game animals such as deer, squirrel, turkey, pheasant, duck, and other game birds and animals that may have been conducted in the vicinity of BVPS (50-80km) by FENOC or the Pennsylvania Department of Agriculture and Department of Environmental Protection (DEP), Bureau of Radiation Protection (BRP). Wildlife sampling and testing may have been conducted at BVPS before, during, and after plant construction in the early days of plant operation, but was discontinued after determining that tissue samples were consistently showing no significant or measurable radiological impact on the environment from plant operations. If this was indeed the case then we need to state this in our analysis.

The purpose for this information is to demonstrate that people who may consume meat from wildlife in the vicinity of the plant are not at risk from nuclear power plant operations.

2. Socioeconomics
 - a. Table 3.4-1 in the ER (page 3.4-1) provides counties of residence for permanent workforce in percentage of workforce. NRC needs to see the actual number of FENOC employees in each county in order to conduct an analysis to verify that 82 percent of the BVPS workforce resides in Allegheny and Beaver counties. The relative significance of approximately 6 percent of the BVPS workforce residing in Columbiana County, OH and 4% in Butler County, PA also needs to be determined.

3. Land Use

- a. NRC needs additional information about the undeveloped portions of land within FENOC's BVPS site boundary and/or property with acreage and percentage by land use category beyond what was discussed in ER Section 2.1.3 (page 2.1-8). Onsite land use can be divided into 3 basic categories consisting of (1) the amount of developable unused open portions of the site including fields and forest uplands and (2) the amount of non-developable wetlands and open water bodies (i.e., stream and river). The third category, as indicated in the ER (approximately 230 acres), consists of developed portions of the BVPS site including facilities, structures, parking areas, and the former Shippingport Atomic Power Station areas.

Tours:

1. General Site Tour

HYDROLOGY

Dennis Beissel

Needed Information:

1. National Pollutant Discharge Elimination System (NPDES) Permit, any NOV's, water use records, and any other state and local permits relating to water use.
2. Copies of the existing permits listed on Table 9.1-1 in the ER, except construction permits for water encroachment that are completed.

Original construction permits and those that pertain to completed construction projects do not need to be provided. Include water permits before conversion to the NPDES type permits.

Tours:

1. General Site Tour
2. Same as Aquatic Tour

TERRESTRIAL BIOLOGY

Briana Balsam

Needed Information:

1. Have any invasive species been seen/documented on the site? Are any invasive species populations being managed?
2. How long (in miles) are the in-scope portions of the BV-Hanna, BV-Mansfield 1, and BV-Mansfield 2 transmission lines?
3. What pesticides and/or herbicides are used in transmission line ROWS? What protocol do workers follow when applying chemicals near streams and wetlands for both FENOC and Duquesne Light?
4. Please provide the transmission line ROW maintenance plans and protocol for both FENOC and Duquesne Light.
5. Please provide any wildlife management plans that are used on site.

6. Please provide any best management practices followed for ground-disturbing activities.
7. The 1993 Natural Heritage Areas Survey mentioned on page 2.3-16 does not match up with the given reference (Ref. 2.1-6). Is a copy of this survey available for review?
8. Table 2.3-2 lists a number of species as “previously” threatened or endangered. What is the source from which the information regarding the delisting of these species was gathered?
9. Please provide a copy of Ref. 2.3-12 *Plant Community Characterization Study for the Beaver Valley Power Station Site, Shippingport, Pennsylvania (2002)*.
10. Please provide a topographic map of site and in-scope transmission line segments, which includes any significant natural heritage areas, stream crossings, historical sitings of endangered species, and migratory bird rookeries, if available.

Tours:

1. General Site Tour
2. Transmission lines close to BVPS.

ALTERNATIVES

Andrew Stuyvenberg

Tours:

1. General Site Tour

Interview:

1. Contractor who wrote alternative section.

METEOROLOGY/AIR

Ekaterina Lenning

Needed Information:

1. Description of the onsite meteorological system/tower with the discussion of sensor failure situation,
2. Description of the onsite air sampling systems (non-radiological),
3. Copies of Air permits and Compliance history for air quality (the past 5 years at minimum),
4. Description of the local meteorology for the plant (annual and seasonal predominant wind speed and direction),
5. Burned diesel oil and lube oil disposal and/or re-use, incinerators,
6. List of all emission sources and emitters.

Tours:

1. General Site Tour
2. Tour of meteorological tower(s).
3. Would like to speak to knowledgeable personnel regarding the plant’s air quality monitoring program (non-radiological).

RADIOLOGICAL

Steve Klementowicz

Needed Information:

1. Offsite Dose Calculation Manual,
2. Occupational Exposure Summary Report for 2006,
3. Reports of any abnormal, unusual spills or leaks and reports contained in the 10 CFR 50.75(g) file for decommissioning, also, information and data on the recent tritium ground water event,
4. Program information regarding radiological groundwater protection program,
5. Documentation on current and future (license renewal period) compliance with Federal and any applicable State electromagnetic fields - acute effects standards,
6. Projected plan for low level radioactive waste if the Barnwell disposal site closes.

Tours:

1. General Site Tour,
2. Gaseous, liquid, and solid radioactive waste processing systems,
3. Storage of low level radioactive waste,
4. Radioactive effluent monitoring systems,
5. Radiological environmental monitoring stations (including any co-located State monitoring stations).

Interviews:

1. Knowledgeable personnel regarding the plant's radiological gaseous and liquid effluent monitoring program, radiological environmental monitoring program, radioactive waste program (gaseous, liquid, and solid), and electromagnetic fields - acute effects.

AQUATIC

Sarah Lopas

Needed Information:

1. Aquatic
 - a. Please provide a copy of the 316(a) and 316(b) Clean Water Act permits or equivalent state documentation.
 - b. Please provide a description of any proposed changes to the plant's cooling system intake over the life of the renewal period.
 - c. Has FENOC completed any entrainment sampling at either Unit 1 or Unit 2 during the lifetime of the plant's operation? If so, NRC staff would like a copy of the most recent results, including a discussion of the sampling method and results.
 - d. In FENOC's letter consultation with the Pennsylvania Fish and Boat Commission, they referenced annual fish population monitoring in the vicinity of BVPS, the results of which are reported to the FBC on a voluntary basis as part of FENOC's

environmental stewardship efforts. Is this information contained in the annual non-radiological environmental reports? If not, NRC staff would like copies of the monitoring results from the five most recent years.

- e. Please provide a map and description detailing the extent of the New Cumberland Pool of the Ohio River in Chapter 2.
- f. Please provide the fish impingement and sampling studies and data discussed from 1980 through 1995 in Section 2.3.1.6.
- g. Please provide copies of the following Environmental Report references, if available:
 - 2.3-65: Lange, C. (Shaw Environmental, Inc.). Professional opinion on 316(a) & (b) Clean Water Act requirements. Personal communication (letter) to M. Banko (FENOC). No date.
 - 2.3-4: Tolin, W.A. *A Physical and Biological Survey of the Ohio River Islands (Pittsburgh District)*. Department of the Interior, U.S. Fish and Wildlife Service, Elkins, West Virginia. May 1988.
 - 2.3-14: Ecological Specialists, Inc. *Final Report: Freshwater Mussels (Bivalvia: Unionidae) of the Upper Ohio River*. ESI Project #98-004. Prepared for the Mussel Mitigation Trust Fund Committee, Cincinnati, Ohio, and U.S. Fish and Wildlife Service, Cookeville, Tennessee. April 2000.
 - 2.3-18: Lorson, Rick and Dave Miko. *Ohio River (820D, F, G) Management Report, Sections 01, 02, 03, 04*. Pennsylvania Fish and Boat Commission, Bureau of Fisheries, Fisheries Management Division. June 1994.
 - 2.3-23: Banko, M.D. *Review of BVPS Aquatic Ecological Monitoring WBS 12.3.8*. FirstEnergy Nuclear Operating Company. June 10, 2002.
 - 2.3-31: Beak Consultants, Inc. *Results of the Three Year Aquatic Stream Survey of Peggs Run*. Conducted for the Duquesne Light Company.
 - Reference 24 from letter to John A. Arway, Pennsylvania Fish and Boat Commission, dated September 8, 2003 (contained in Appendix B of the environmental report): Sanders, Randall E. *Ohio's Near-Shore Fishes of the Ohio River: 1991 to 2000*. Ohio Environmental Protection Agency for the Ohio Department of Natural Resources. Columbus, Ohio. June 15, 1994.

2. Hydrology/Water Quality

- a. Please provide a complete copy (including fact sheets and amendments if applicable) of the current BVPS NPDES Permit No. PA0025615, and the accompanying application to the state.
- b. Please detail or provide documentation of any release notifications, notices of violation, or remediation documentation associated with surface water discharges, septic or sewer systems, or groundwater or soil contamination

- (including spills, leaks, and other releases of tritium, fuels, solvents, or other chemicals).
- c. Please detail the chemicals and biocides used to control the pH in the coolant, control corrosion, and clean and defoul the condenser, and wastes produced from these processes (as discharged with the cooling water according to the station's NPDES permit.
 - d. Please provide a copy of Environmental Report reference 2.2-4: *Hydrology Analysis for BVPS, Rev. 0*, October 21, 2002.
 - e. Please provide a copy of Environmental Report reference 3.1-16: Duquesne Light Company. "Beaver Valley Power Station No. 1 & 2, Waste Water Flow Diagram." 8700-RM-0027F, Rev. 13, Addendum 1. January 14, 2003.
 - f. Please provide a copy of the PADEP Act 220 Water Withdrawal and Use Registrations issued 3/16/04, and accompanying application.
 - g. To verify water usage, please provide (summary) records of surface water withdrawal and consumptive use for BVPS.
 - h. Please provide contact information for local agencies responsible for all water or environmental-related permits.
 - i. Please provide a copy of the USACE maintenance dredging permit, and detail specifics of maintenance dredging of the Ohio River – including frequency, amount of material dredged, and testing and disposal of dredged material.
 - j. Please provide BVPS Spill Prevention, Control and Countermeasures/Pollution Incident Prevention Plan (or related).
 - k. Please provide documentation on any groundwater monitoring programs, whether site-wide or targeting a particular facility or remedial action.

3. Non-Radiological Waste/Pollution Prevention

- a. Please detail BVPS and FENOC procedures to collect and manage non-radioactive waste (classified as hazardous, universal, or residual) in accordance with federal (40 CFR) and state (25 PA Code) rules.
- b. Please detail the BVPS and FECOC Chemical Control Program (as referenced on page 3.1-18 of the Environmental Report).
- c. Please identify the type of non-radiological wastes that the BVPS site has produced for each of the past five years. Please provide an accounting of waste quantities by year and waste stream.
- d. Please identify the type and quantities of hazardous waste generated during the September 2001 steam generator chemical cleaning, and how these wastes were collected, stored, and disposed of in accordance with the *Pollution Prevention Act* of 1990.
- e. Please provide the amounts (by weight) of mixed wastes at the BVPS site generated over the past five years.
- f. If available, please provide a copy of the storage tank registrations and permits for both Unit 1 and Unit 2.

4. Microbiological Organisms

- a. Please detail the occupational health procedures in place at BVPS to protect workers who must enter or work around the cooling towers.
- b. Please provide a copy of Environmental Report reference 4.3-13: Hersh, J. (Pennsylvania Department of Health). "Environmental Review for Beaver Valley Power Station." Personal communication (letter) to J. Hovey (Constellation Nuclear Services). July 15, 2002.

Tours:

1. General Site Tour
2. Boat tour on the Ohio River in the immediate vicinity of the BVPS site (to include the areas of the intake structure, discharge structure, the alternate intake structure, and any pertinent or interesting ecological features of the area), as well as a tour of the primary Auxiliary building (i.e. pump house).
3. Tour of the primary auxiliary building.
4. Tour of BVPS waste management areas for non-radiological wastes.

Interviews:

1. Pump house workers (pump house operators)
2. Mike Banko
3. Plant personnel with knowledge of the plant's wastewater system, storm drain system and the cooling-tower-based heat dissipation system.
4. Plant personnel who are knowledgeable about non-radiological waste management and compliance issues.

ARCHAEOLOGY

Jennifer Davis

Needed Information:

1. Please provide any info regarding history of the site - none is provided in ER.
2. Were any surveys (archaeological investigations) completed prior to construction? If so, please provide the reports.
3. Please provide a copy of the Phase 1A review (December 2006) report for the construction of sewage conveyance system from BVPS to Shippingport.
4. Please provide copies of any Phase 1A evaluations and reports being conducted for groundwater monitoring wells/drilling activities.
5. The ER mentions that FENOC is developing procedures or is modifying their "Environmental Evaluations" procedures. What is the status of this update? When will it be implemented? Please provide a copy of procedures provided at the audit.
6. Have procedures been developed in consultation with PA SHPO or has PA SHPO reviewed onsite procedures re: cultural resources?
7. Do procedures have a stop work order in the event of an inadvertent discovery?
8. What training does the Environmental Coordinator have in relation to Section 106 guidelines?
9. Please provide any archaeological sites or historic structures on or adjacent to transmission lines?

10. Please provide for review maintenance procedures for t-lines. Do they take into account the protection of cultural resources?
11. Please provide for review any photos that show the plant site pre - during - and post construction.
12. Please provide any old maps of the site prior to plant construction.
13. Please provide copies of any correspondence with the PA SHPO that is not included in the ER. Please provide information regarding land use history of the site prior to power plants (BVPS and Shippingport).
15. Please verify that Shippingport has been determined not eligible for nomination to the National Register of Historic Places or HAER. Has PA SHPO concurred with this? Please provide documentation relating to this, and any additional letters to those provided in appendix.
16. Are there any portions of the site that remain undisturbed? Has the applicant prepared a ground disturbance map of the BVPS site?
17. Are there any portions of the site that remain undisturbed? Has the applicant prepared a ground disturbance map of the BVPS site?

Tours:

1. General Site Tour
2. Tour historic sites, such as grave yards, old Shippingport Atomic facility remains, and other archaeological sites on the property. Additional sites may be added based on a file search at the PA SHPO office.

MISCELLANEOUS REQUESTS

1. In the essence of time the radiological tours, and the meteorological tours can be combined. However please separate the radiological and meteorological tours from the Aquatic Tours as the aquatic reviewers would like to attend meteorological and radiological tours.
2. Contractor(s) who helped support the development of the ER are requested to be there at least one day during the audit (maybe Thursday as most of the Tours are complete).

SUMMARY OF TOURS

1. General Site
2. Hydrology and Aquatic
3. Terrestrial Biology
4. Meteorological
5. Radiological
6. Archaeology

ENCLOSURE 4

**ACTION ITEMS
BEAVER VALLEY POWER STATION
ENVIRONMENTAL SITE AUDIT
NOVEMBER 13-16, 2007**

1. Provide an executive summary or data from an annual report regarding groundwater monitoring. *Status – closed*
2. Question on why the license renewal in-scope transmission lines were not in the Integrated Cultural Resource Management Plan (ICRMP). *Status – to be incorporated and submitted in ICRMP*
3. Provide an electronic copy of the BVPS Environmental Report Construction Permit Phase. *Status – closed*