

Appendix A

Comments Received on the Environmental Review

Appendix A

Comments Received on the Environmental Review

Part I - Comments Received During Scoping

On September 24, 2001, the U.S. Nuclear Regulatory Commission (NRC) published a Notice of Intent in the Federal Register (66 FR 48892), to notify the public of the staff's intent to prepare a plant-specific supplement to the Generic Environmental Impact Statement for License Renewal of Nuclear Plants (GEIS), NUREG-1437, Volumes 1 and 2, to support the renewal application for the Peach Bottom operating licenses and to conduct scoping. This plant-specific supplement to the GEIS has been prepared in accordance with the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) guidelines, and 10 CFR Part 51. As outlined by NEPA, the NRC initiated the scoping process with the issuance of the Federal Register Notice. The NRC invited the applicant; Federal, State, and local government agencies; local organizations; and individuals to participate in the scoping process by providing oral comments at scheduled public meetings and/or submitting written suggestions and comments no later than November 26, 2001.

The scoping process included two public scoping meetings, which were held at the Peach Bottom Inn in Delta, Pennsylvania on November 7, 2001. Approximately 70 members of the public attended the meetings. Each session began with NRC staff members providing brief overviews of the license renewal process and the NEPA process. After the NRC's prepared statements, the meetings were opened for public comments. Twenty-one attendees provided either oral statements that were recorded and transcribed by a certified court reporter or written statements. The meeting transcripts are an attachment to the Peach Bottom Public Meeting Summary Report dated January 18, 2002. The Public Electronic Reading Room (ADAMS) accession number for the summary report is ML020180346. (This accession number is provided to facilitate access to the document through ADAMS at <http://www.nrc.gov/reading-rm.html>) In addition to the comments provided during the public meetings, six comment letters, six e-mail messages, and two documents were received by the NRC in response to the Notice of Intent.

At the conclusion of the scoping period, the NRC staff and its contractors reviewed the transcripts and all written material received to identify specific comments and issues. Each set of comments from an individual was given a unique identifier (Commenter ID), so that the comments could be traced back to the original transcript, letter, or e-mail containing the comment. Specific comments were numbered sequentially within each comment set. Several commenters submitted more than one set of comments (e.g., they made statements in both the afternoon and evening scoping meetings). In these cases, there is a unique Commenter ID for each set of comments.

Appendix A

Table A.1 identifies the individuals who provided comments applicable to the environmental review and gives the Commenter ID associated with each set of comments. Individuals who spoke at the scoping meetings are listed in the order in which they spoke at the public meeting, and individuals who provided comments by letter or e-mail are listed in alphabetical order. To maintain consistency with the scoping summary report, (Peach Bottom Environmental Scoping Summary Report, dated April 19, 2002), the unique identifier used in that report for each set of comments is retained in this appendix.

Table A.1. Individuals Providing Comments During Scoping Comment Period

Commenters ID	Commenter	Affiliation (If Stated)	Comment Source
PBS-A	Christopher Reilly	York County	Afternoon Scoping Meeting
PBS-B	Kay Carman	York County	Afternoon Scoping Meeting
PBS-C	Jay Doering	Exelon	Afternoon Scoping Meeting
PBS-D	Fred Polaski	Exelon	Afternoon Scoping Meeting
PBS-E	Salvatore Ferranti		Afternoon Scoping Meeting
PBS-F	Bill Doward	Sheetmetal Workers Union Local 19	Afternoon Scoping Meeting
PBS-G	John Tucker		Afternoon Scoping Meeting
PBS-H	Terry Peck	Plumbers and Pipefitters Union Local 520	Afternoon Scoping Meeting
PBS-I	William Faraly, Jr.	Sheetmetal Workers Union Local 19	Afternoon Scoping Meeting
PBS-J	Sam McConnell		Evening Scoping Meeting
PBS-K	Jay Doering	Exelon	Evening Scoping Meeting
PBS-L	Fred Polaski	Exelon	Evening Scoping Meeting
PBS-M	Mike Ewall		Evening Scoping Meeting
PBS-N	Tracy Confer		Evening Scoping Meeting
PBS-O	Kip Adams		Evening Scoping Meeting
PBS-P	Ernie Guyll		Evening Scoping Meeting
PBS-Q	Richard King		Evening Scoping Meeting
PBS-R	Laura Jacobson		Evening Scoping Meeting
PBS-S	Jane Lee		Evening Scoping Meeting
PBS-T	Mary Osborn		Evening Scoping Meeting
PBS-U	William Coble		Evening Scoping Meeting
PBS-V	Jeff Griffith		Evening Scoping Meeting
PBS-W	Amy Donohue		Evening Scoping Meeting
PBS-X	George Crocker	North American Water Office	Email - Letter ML020110480)
PBS-Y	Dr. Lewis Cuthbert	The Alliance for a Clean Environment	Faxed Letter (ML020020383)
PBS-Z	Amy Donohue		Letter (ML013460258)
PBS-AA	Mike Ewall	Energy Justice Network	Flyer (ML020170483)

Table A.1. (contd)

Commenters ID	Commenter	Affiliation (If Stated)	Comment Source
PBS-AB	Thomas H. Gehr		Email – Letter ML020230264
PBS-AC	Dr. Jay M. Gould	Radiation and Public Health Project	Email (ML020230268)
PBS-AD	David P. Harry		Email – Letter (ML020310096)
PBS-AE	Hugh Jackson	Public Citizen, Policy Analyst	Email – Letter (ML020310088)
PBS-AF	Hugh Jackson	Public Citizen, Policy Analyst	Email – Letter (ML020310088)
PBS-AG	Richard L. McLean	Maryland Department of Natural Resources	Letter (ML020230262)
PBS-AH	Christopher Reilly	York County	Letter (ML020170484)
PBS-AI	Ken Zieber		Email (ML020230260)
PBS-AJ	Thomas E. Donley	York County Chamber of Commerce	Letter (ML013650052)
PBS-AK	Daniel R. Griffith	Delaware State Historic Preservation Officer	Letter (ML013650064)

Specific comments were categorized and consolidated by topic. Comments with similar specific objectives were combined to capture the common essential issues raised by the commenters. The comments fall into one of several general groups. These groups include

- Specific comments that address environmental issues within the purview of the NRC environmental regulations related to license renewal. These comments address Category 1 or Category 2 issues or issues that were not addressed in the GEIS. They also address alternatives and related federal actions.
- General comments (1) in support of or opposed to nuclear power or license renewal or (2) on the license renewal process, the NRC's regulations, and the regulatory process. These comments may or may not be specifically related to the Peach Bottom license renewal application.
- Questions that do not provide new information.

- Specific comments that address issues that do not fall within or are specifically excluded from the purview of NRC environmental regulations. These comments typically address issues such as the need for power, emergency preparedness, current operational safety issues, and safety issues related to operation during the renewal period.

Each comment applicable to this environmental review and the NRC staff responses are summarized in this appendix. This information, was extracted from the Peach Bottom Environmental Scoping Summary Report, and is provided for the convenience of those interested in the scoping comments applicable to this environmental review. The comments that are general or outside the scope of the environmental review for Peach Bottom are not included here. More detail regarding the disposition of general or nonapplicable comments can be found in the Environmental Summary Report.

The following pages summarize the comments and suggestions received as part of the scoping process that are applicable to this environmental review, and discuss the disposition of the comments and suggestions. The parenthetical alpha-numeric identifier after each comment refers to the comment set (Commenter ID) and the comment number.

Comments in this section are grouped in the following categories:

- (1) Comments Concerning Category 1 Human Health Issues
- (2) Comments Concerning Category 2 Socioeconomic Issues
- (3) Comments Concerning Category 2 Aquatic Ecology Issues
- (4) Comments Concerning Alternatives
- (5) Comments Concerning Category 1 Postulated Accident Issues

Comments

1. Comments Concerning Category 1 Human Health Issues

As stated in 10 CFR Part 51, Table B-1, Category 1 human health issues include:

- Radiation exposure to the public during refurbishment
- Occupational radiation exposure during refurbishment
- Microbiological organisms (occupational health)
- Noise
- Radiation exposures to public (license renewal term)
- Occupational radiation exposures (license renewal term)

Comment: We are also finding higher incidents of thyroid and breast cancers in nuclear reactor communities, including in the tri-county area around here. (PBS-M-9)

Comment: I would submit that an environmental impact statement ought to include human population as part of the scope. (PBS-N-1)

Comment: I would also suggest that since Peach Bottom is so close to Limerick, Three Mile Island, and not terribly far from Salem, that the impacts of Peach Bottom should be considered in conjunction with the cumulative impacts of all those three reactors combined. I would even extend that as far as a 100-mile radius for my own comfort. (PBS-N-2)

Comment: Some of the numbers that they have compiled indicate that thyroid cancer increased considerably after Units 2 and 3 started operation. The number they came up with is that it increased 49 percent. (PBS-N-3)

Comment: In short, I would like to submit that the scope should include non-cancer health effects in the human population, that it should include cumulative impacts from other reactors over a 100-mile radius. (PBS-N-4)

Comment: My father died of cancer about 16 years ago and he lived a very healthy lifestyle, I believe. He had smoked but he stopped about 23 years before he died. The only unhealthy thing he might have done is, he spent a lot of time outside. (PBS-P-2)

Comment: And one thing I would like as far as the environmental study is to know the number of those radioactive releases and how much radiation was released. (PBS-P-4)

Comment: I would also like as part of the environmental study data on the cancer deaths, birth defects and stillbirths in a 10-mile radius of the Peach Bottom Power plant and how that compares with the national average. (PBS-P-5)

Comment: I would like to know the type of radioactive isotopes at the plant and the half-life of those isotopes. (PBS-P-7)

Comment: Something even more troubling is the release of tritium and tritium is a nuclide generated out of the process of nuclear power plants. Tritium is part water and it cannot be filtered and therefore, it goes into the river. Down river anybody who is drinking that water is drinking tritiated water. (PBS-S-1)

Comment: The steam that is released into the atmosphere is also tritiated so that when it drifts downwind from where you live, you are inhaling tritium. (PBS-S-2)

Comment: We have learned that cancer deaths near the Peach Bottom plant rose in Lancaster and York Counties after Units 2 and 3 began operations.

- Increases were noted in radiation-sensitive cancers, including leukemia, breast, thyroid, bone and joint, Hodgkin's disease, and multiple myeloma.
- The number of women diagnosed with breast cancer in Chester, Lancaster, and York Counties nearly doubled between 1985 and 1998.
- Thyroid cancer in the three counties jumped from 26 to 110 between 1985 and 1998. The current rate is 28% above the rate for the U.S. Thyroid cancer is considered one of the more radiation-sensitive cancers. (PBS-Y-1)

Comment: Peach Bottom is obviously an enormous health risk to over a million residents in that region. In fact, Pottstown, an area already hard-hit by high rates of diseases like cancer, is located about 45-50 miles northeast (downwind from Peach Bottom).

- Pottstown residents ingest airborne particles (either breathed or from the local municipal water) routinely escaping from Peach Bottom.
- The Pottstown area gets much of its milk from dairies located in Lancaster and York Counties, near Peach Bottom. Residents, both near Peach Bottom and elsewhere like Pottstown, ingest Peach Bottom fallout in milk. (PBS-Y-3)

Comment: The EIS on Peach Bottom should require a brutally honest look at radiation and its effects on everything around it -- air, water, soil, humans, and other animals, plants, insects -- over the millions of years for which it remains hazardous. (PBS-Z-8)

Comment: Plutonium is biologically and chemically attracted to bone. It clumps on the surface of the bone, delivering a concentrated dose of radiation to surrounding cells. Radioactive strontium lodges in bone and remains there for a lifetime, constantly irradiating the surrounding cells. (PBS-Z-9)

Appendix A

Comment: It's pretty common knowledge that radiation causes cancer and death. What isn't common knowledge is the other effects it can have on the human population, which we may already be experiencing without seeing the connection to radiation. R. M. Sievert, famous radiologist, told an international meeting in 1950, "There is no known tolerance for radiation." Death by slow poison is as unacceptable as death by catastrophic accident. There is no safe exposure to ionizing radiation. (PBS-Z-10)

Comment: Fission products may be called 'background radiation' when they do not emanate from the installation under consideration, or when they have been in the environment for a year or more. Thus, when two nuclear power plants on the same land are licensed separately (such as Peach Bottom), the pollution from one is considered 'background radiation' while contamination from the other is being considered. Plus, last year's pollution from the reactor becomes 'background' after persisting in the environment longer than a year. An individual's yearly radiation exposure estimate attributable to nuclear activities is an assessment of a fresh fission dose from a particular source -- not a realistic measure of total dose from all sources, whether external -- left over from last year's pollution or already incorporated into body tissue from previous ingested or inhaled radionuclides, continuing to give small doses of radiation all the time. It is also misleading to report pollution in terms of a percentage increase in 'background radiation' levels. Little or nothing is said about the steady increase in background radiation due to human activities. Hence, a percentage of 'background radiation' added may stay constant, masking the total accumulation. (PBS-Z-12)

Comment: Government regulations allow radioactive water to be released into the environment, containing "permissible" levels of contamination. "Permissible" does not mean safe. (PBS-Z-17)

Comment: Do operations of reactors, which routinely emit man-made chemicals into the air that are inhaled and ingested in diet, result in increased disease risk, including cancer? (PBS-AC-1)

Comment: Overall, the local cancer rate jumped from 3% below the U.S. rate to 2% above. This may appear to be a small increase, but in the 10-year period 1975-84, over 600 additional cancer deaths occurred in Lancaster and York Counties. Perhaps most telling about the NCI data is that rates for almost all cancers most sensitive to the damaging effects of radiation increased. For example, humans exposed to radiation from nuclear reactors have an increased risk of thyroid cancer, due to the presence of thyroid-damaging iodine in reactor emissions. Thyroid cancer deaths were 14% below the U.S. before 1975, but jumped to 28% above after the reactors opened. The same occurred for bone and joint cancer, and multiple myeloma (bone marrow cancer), sensitive to bone-seeking radioactive chemicals such as strontium and barium (see below). The local breast cancer death rate increased significantly. A final indicator that Peach Bottom releases contributed to unusually high cancer rates was the rise in cancer deaths among children under age 10 living in Lancaster and York counties. Children are most susceptible to diseases caused by environmental pollutants such as nuclear power plant emissions. (PBS-AC-11)

Comment: In 1985, the Pennsylvania Health Department began to collect cancer cases (as opposed to deaths) for the first time. Their files are complete throughout 1998. During that period, the total number of cancer cases rose 48%, from 4280 to 6313. During the same period, the number of new breast cancer cases diagnosed in women nearly doubled, from 609 to 1135. Over half of this increase took place in the most recent four years (1994-98), making the issue a current one (see below). The number of thyroid cancer cases jumped from 26 to 110 from 1985 to 1998 (see below). Again, the large increase from 1994 to 1998 (72 to 110) makes thyroid cancer a present concern. (PBS-AC-12)

Comment: Current (1998) local rates of all cancers, breast cancer, and thyroid cancer exceed the U.S. average, by 7.3%, 19.9%, and 28.3%, respectively. (PBS-AC-13)

Response: The comments are noted. To the extent that these comments question the radiological protection afforded by NRC regulations, radiation doses to the public during the license renewal term are a Category 1 issue as evaluated in the GEIS. Doses to members of the public from Peach Bottom Units 2 and 3 emissions were specifically evaluated in Section 4.6 of the GEIS, using data from monitored emissions and ambient monitoring, and were found to be well within regulatory limits. The evaluation of health effects of radiation, both natural and man-made, is an ongoing activity involving public, private, and international institutions. The assessment of health effects upon which the GEIS analysis is based was founded on the consensus of these sources. No changes in that consensus have occurred since the GEIS was completed. The comments will not be evaluated further.

Comment: Now, in human health aspects we need to include the current research on things like a strontium-90 disposition in baby teeth like the Tooth Fairy Project folks have been doing. (PBS-M-7)

Comment: I know the government stopped looking at that, on the strontium-90 impacts in the milk supply and in humans after many years. But the amount that is being found in this private research recently is as high as was found in the atmospheric bomb testing in the '40's and 50's. And so this is definitely something that needs to be included in the environmental impact statement as well as looking at other epidemiological studies on things like infant mortality where they are finding infant mortality dropping in communities around nuclear reactors after they have closed. (PBS-M-8)

Comment: Health Studies Are Lacking. There has been a dearth of scientific, peer-reviewed studies evaluating disease rates near U.S. nuclear power plants since the first reactor began operations in 1957. Only one national study has been done. In 1990, at the insistence of Senator Edward M. Kennedy, the National Cancer Institute published data on cancer near nuclear plants. While the study concluded that there was no connection between radioactive emissions and cancer deaths, rates near many reactors rose after reactor startup. Since 1990, no federal agency, including the Environmental Protection Agency and Nuclear Regulatory Commission, has undertaken any studies of disease rates near nuclear plants. (PBS-AC-5)

Appendix A

Comment: In-Body Measurements Are Lacking. The lack of health studies near American nuclear reactors is complemented by a lack of measurements of in-body levels of radioactivity for persons living near nuclear reactors. Government-supported programs to measure Strontium-90 in St. Louis baby teeth (4) and in New York City and San Francisco bones (5) were terminated in 1970 and 1982, respectively. Both measured the effects of bomb test fallout rather than nuclear power reactor emissions. (PBS-AC-6)

Comment: Of all man-made radioactive chemicals, Sr-90 was the one that caused the greatest health concern during the atmospheric bomb test years in the 1950s and 1960s. (PBS-AC-7)

Comment: Link Between Sr-90 in Teeth and Childhood Cancer -- Long Island. The largest number of teeth (563) have been measured for residents of Suffolk County New York, site of the Brookhaven National Lab and surrounded by nearby reactors. Results show that the average level of Sr-90 has steadily increased 40.0% from the early 1980s to the mid-1990s. Because U.S. above-ground bomb testing ceased in the early 1960s, and old bomb fallout is decaying steadily, this trend indicates that a current source of radioactive emissions is contributing to the buildup of Sr-90 in teeth. This source can only be nuclear reactors. During the same time period, the rate of cancer diagnosed in Suffolk County children less than 10 years old steadily rose a nearly identical 48.9% (10). The data support the theory that exposure to radioactivity increases the risk of cancer, especially in young persons. (PBS-AC-8)

Comment: Strontium-90 in Baby Teeth. While the majority of teeth have been received from California, Florida, New Jersey, and New York, 33 are from children born after 1979 in southeastern Pennsylvania or in Maryland. (After 1979, virtually all strontium-90 in baby teeth was generated from nuclear reactors, rather than atomic bomb test fallout left over from the early 1960s). The average Sr-90 concentration in these teeth is higher than any of the four states with large numbers of teeth (CA, FL, NJ, and NY), and more than 60% greater than the national average. Virtually all of these 33 teeth are from persons living within 55 miles of Peach Bottom. (PBS-AC-10)

Comment: These developments indicate that efforts to protect humans from the potentially harmful effects of exposure to radioactive emissions in the environment will be critical. (PBS-AC-15)

Response: The comments are noted. The staff considers the interest in Sr-90 in baby teeth to be within the scope of this license renewal environmental review, and will discuss the results of its assessment of the issue for the Peach Bottom license renewal in Chapter 4 of the SEIS.

2. Comments Concerning Category 2 Socioeconomic Issues

As stated in 10 CFR Part 51, Table B-1, Category 2 socioeconomic issues are:

- Housing
- Public services: public utilities
- Public services, education (refurbishment)
- Offsite land use (refurbishment)

- Offsite land use (license renewal term)
- Public services, transportation
- Historic and archaeological resources.

Comment: The plant provides hundreds of local and regional residents good-paying jobs. (PBS-A-1)

Comment: For example, the county-affiliated Delta Senior Center has received thousands of dollars in money and equipment from Exelon during my tenure as commissioner. (PBS-A-2)

Comment: The county, school district and host municipality also derive significant tax revenue from the plant. (PBS-A-3)

Comment: By extending Peach Bottom Atomic Power Station's operating license, the NRC will help ensure at least two more decades of growth, opportunity and prosperity in York County. (PBS-A-5)

Comment: It means jobs for approximately 1000 people over that period of time. (PBS-C-5)

Comment: It means a positive impact on the local economy, as covered by Chris: taxes and services, plant employees and their families living in the area. (PBS-C-6)

Comment: It means support of the community. We get very much involved in community activities around the plant. Mason-Dixon Business Association, the Delta Peach Bottom Elementary School. We have a program going there called School Buddies where employees from the power plant team up with the teachers at the school and visit the school on a regular basis to talk to the students -- a very successful program not only for the students but I would say for the employees also. It really builds morale. (PBS-C-7)

Comment: Thousands of dollars are contributed to the United Way by our employees at Peach Bottom. Hundreds of pints of blood go to the American Red Cross each year. There's little league coaches. There's PTA presidents. There's a lot of volunteer firemen. There's a lot of church leaders, all coming out of Peach Bottom. And that's an impact that we have on the plan. (PBS-C-8)

Comment: And one of the reasons that my business is so successful is because of the business that Exelon or PECO brings into our community. Throughout the years, PECO has created a significant growth for my business because we cater their seminars, their training classes, their meetings. (PBS-E-1)

Comment: And most of all, directly into this community PECO is creating an influx of people into the area from subcontractors, and there are even their own employees. And these people spend in the community. (PBS-E-2)

Appendix A

Comment: Just like my business, I'm sure that other businesses, from local supermarkets and gas stations and other businesses in the community live in a great deal because of PECO. (PBS-E-3)

Comment: We cannot afford a big company like PECO to leave our community. (PBS-E-4)

Comment: And third of all, PECO has also maintained great parks into our community. It donates to our fire department. It also donates to our local ambulance groups. (PBS-E-7)

Comment: I am proud of this community and I realize that PECO is probably one of the economic hearts of our community. It's an asset to our community. (PBS-E-9)

Comment: Most of the 371 members I have spoken about live in the York and Lancaster areas, more importantly depend on the safe and good-paying jobs that support their families and this community. (PBS-F-1)

Comment: The Peach Bottom Power Plant has been a good economic factor with regard to construction and maintenance. (PBS-H-2)

Comment: Wherever you go throughout this state or throughout the region, that this corporation has been -- they have always been based in the community, have helped the community, and they have always been support of the community and in essence part of the community. And although there are certain corporate profits that you go after because of being a business, you know, you can't take a side of those other aspects where they have been involved in the community. (PBS-I-4)

Comment: We have a good working relationship with Exelon PECO as far as them donating money to the community for the fire company. (PBS-V-1)

Comment: Just as critical, however, is the importance of Peach Bottom Atomic Power Station to York County. The plant provides hundreds of local and regional residents with good-paying jobs. But more importantly, Peach Bottom is an outstanding corporate citizen and neighbor. (PBS-AH-3)

Comment: The York County Chamber of Commerce represents 2200 members who have directly or indirectly benefited from having the Peach Bottom Nuclear Power Plant operating in our county. We have confidence that Exelon Corp. will continue to invest in the facility and operate it with the highest safety standards. (PBS-AJ-3)

Response: The comments are noted. Socioeconomic issues specific to the plant are Category 2 issues and will be addressed in Chapter 4 of the SEIS. The comments support license renewal at PBAPS.

Comment: It is our opinion the relicensing of this facility, without some mitigation measures being employed to preserve and protect this historic property, will result in the continued deterioration of the portion of the Feeder Canal which was bisected by the transmission line (36 CFR 800.(5)(b)(vi)). We suggest these mitigation measures should include: 1) the

restoration of the depth and width of the Feeder Canal across the transmission line; 2) the construction of a simple bridge to permit vehicular access across the Feeder Canal for routine transmission line Right-of-Way maintenance; and 3) monitoring of the transmission line Right-of-Way to prevent uncontrolled crossing of the Feeder Canal by dirt bikes and ATVs and the repair of damage resulting from such uncontrolled crossing, if they do occur. (PBS-AK-1)

Response: The comment is noted. Issues concerning historic and archeological resources are Category 2 issues and will be addressed in Chapter 4 of the SEIS.

Comment: Peach Bottom Nuclear Power Plant is located in a relatively low income, rural community without much political clout. This is environmental injustice. (PBS-Z-29)

Response: The comment is noted. Environmental Justice will be addressed in Section 4.4 of the SEIS.

3. Comments Concerning Category 2 Aquatic Ecology Issues

As stated in 10 CFR Part 51, Table B-1, Category 2 aquatic ecology issues are:

- Entrainment of fish and shellfish in early life stages
- Impingement of fish and shellfish
- Heat shock

Comment: We request that within the scope of the NRC's Environmental Assessment, as a Category 2 issue, the NRC conduct a thorough evaluation of the potential impact of license renewal for PBAPS on the restoration of migratory fishes to the Susquehanna River and Chesapeake Bay utilizing all relevant and current information. (PBS-AG-1)

Response: The comment is noted. The comment relates to aquatic ecology issues and will be discussed in Chapters 2 and 4 of the SEIS.

Comment: Have studies been conducted or will they be conducted to quantify the cumulative radioactive buildup in the Susquehanna River water, bed, or local area surface soil or aquifer? And additionally, if those studies have been made, have projections been made as to the extended plant life, what that will do to it, based on those studies? (PBS-J-1)

Comment: I think you said you do study the effect of the wildlife in the Susquehanna River. It would be nice to have a study before the plant was built so we could have some sort of benchmark for that. (PBS-P-6)

Response: The comments are noted. The comments relate to cumulative impact issues and will be discussed in Chapters 2 and 4 of the SEIS.

Appendix A

4. Comments Concerning Alternatives

Comment: I would much rather see Peach Bottom continue to operate rather than other viable alternatives for electric power generation which are more polluting and actually more difficult to control the pollution. (PBS-J-5)

Comment: Now, as for alternatives, I understand the EIS would be looking at alternatives to having nuclear generation in the first place. And I strongly encourage that. I think this needs to look at not only other forms of generation but other forms of demand management needs to look at conservation efficiency, needs to look at the studies and supply some written testimony. (PBS-M-14)

Comment: We also need to look at things like wind generation. (PBS-M-16)

Comment: We also need to look at solar generation where KPMG, which is an international -- it is a very well-known auditing firm -- has actually done a report looking at what it would take to make solar power affordable, what it would take to get to the point where we don't have this trouble where people aren't willing to pay so much for it and that's why it is not cheap enough because they don't make enough of it. (PBS-M-17)

Comment: And it should include alternative generation sources as in: What is the impact of keeping this reactor operational as opposed to, oh, say, building a bunch of wind turbines? (PBS-N-5)

Comment: And I also believe that we should use renewable resources for energy and if necessary replace the Peach Bottom Power Plant, to shut it down and implement a decommissioning process. (PBS-P-12)

Comment: There are alternative methods available to these companies that will produce power for the needs of our communities and for those outside of our area who also need power. (PBS-Q-4)

Comment: So there surely must be a better way to generate electricity without slowly killing not just the human population or not just the animal population. (PBS-S-5)

Comment: You certainly find another way generate electricity besides poisoning the population, destroying the land, destroying the animals, destroying the fish, destroying the drinking water. (PBS-S-7)

Comment: For these reasons, I think we need to begin to look for alternate ways to make electricity and take this weapon out of the hands of our enemies. (PBS-U-4)

Comment: If the real, honest reason for nuclear power is to create electricity, there are smarter, cleaner, safer and cheaper ways. (PBS-Z-33)

Comment: Just imagine if we spent the money we currently spend mining uranium, splitting the atoms to make plutonium to create heat, to boil water to turn turbines making electricity and then cleaning up and storing the resulting radioactive wastes for millions of years -- if we took this money and instead used it for conservation, solar and wind, we'd probably still have some left over and no nuclear waste to worry about. Any other decision seems just plain stupid. (PBS-Z-34)

Comment: Rather than further pillage our environment for more dirty power, we can start today with policies which promote conservation, efficiency and CLEAN renewables (like wind and solar) to replace our dirty and wasteful power system. (PBS-AA-1)

Comment: Conservation and efficiency have a large potential to reduce our electricity needs. (PBS-AA-2)

Comment: Solar power, if it were only affordable, has the power to fill the entire country's energy needs -- using existing rooftops and other already paved surfaces. (PBS-AA-3)

Comment: Wind power, according to the U.S. Department of Energy, can provide more power than the entire nation's electricity needs. (PBS-AA-4)

Comment: Alternative sources of energy need to be developed and the goal should be to strive to that end by 2014, and/or build more hydro-electric plants rather than renew a contract at an aging nuclear facility. (PBS-AB-2)

Comment: Specifically, in the Peach Bottom supplemental EIS, the NRC should conduct a comprehensive analysis addressing costs and environmental impacts of available conservation technologies. Further, the NRC should sincerely and honestly consider the potential of those technologies and energy efficiencies as the preferred alternative to license renewal. (PBS-AE-4)

Response: The comments are noted. Impacts from reasonable alternatives for the Peach Bottom license renewal will be evaluated in Section 8 of the SEIS.

5. Comments Concerning Category 1 Postulated Accident Issues

As stated in 10 CFR Part 51, Subpart A, Appendix B, Table B-1, design basis accidents is the only Category 1 issue associated with postulated accidents. For severe accidents (i.e., beyond design basis accidents), the staff concluded that the probability-weighted environmental consequences from severe accidents are small for all plants, but that alternatives to mitigate severe accidents must be considered for all plants that have not considered such alternatives. See 10 CFR 51.53(c)(3)(ii)(L).

Comment: There has been a lot of work done on these containments, but Mark 1 containments, especially being smaller with lower design pressure and in spite of the suppression pool, if you look at the WASH-1400 reg safety study you will find something like a 90-percent probability of that containment failing. (PBS-M-12)

Appendix A

Comment: Now, there have been some measures to address those concerns that NRC had. But we are still looking at the fact that the control room operators would have to make a decision in the case of an emergency core cooling system activation on whether or not to vent the containment in order to save it. And that is not something that should be seen as acceptable impact on the environment. (PBS-M-13)

Comment: Another concern I have with the Peach Bottom Power Plant is the possibility of an earthquake causing a problem. And I know a lot of people kind of think that might be funny. But there is a fault line called the Martick Fault Line that runs about, I would say, less than 10 miles north of here. And if there is a major earthquake along that line, that could cause a lot of problems. (PBS-P-3)

Comment: Martick Fault Line. [see comment PBS-P-3] (PBS-Q-3)

Comment: According to a report by Sandia National Laboratories on November 1, 1982, called Calculation of Reactor Accident Consequences (CRAC-2), the "peak early deaths" from an accident at Peach Bottom are estimated at 72,000, with "peak early injuries" estimated at 45,000. (PBS-Y-2)

Comment: Pottstown would also be strongly affected by escaping downwind radiation in case of an accident at Peach Bottom caused by operators. If prevailing winds blow at about 10 miles per hour, harmful radiation would arrive in Pottstown in as little as 5 hours after the accident. (PBS-Y-4)

Comment: Peach Bottom is a General Electric Boiling water reactor, an obsolete design that is no longer built or constructed, inferior to pressure water reactors. Peach Bottom's Mark I containment structure has been demonstrated by Sandia Laboratories to be likely to fail during a core melt accident (like Three Mile Island), allowing radiation to escape directly into the environment. This was corroborated by a February 1987 NRC study. Industry officials say the problem with Mark I is that it is too small and wasn't designed to withstand the pressure it is supposed to resist. In Feb. 1989, the NRC recommended plants using the Mark I shell to modify the structure to reduce the risk of failure during an accident. Clearly showing its arrogance and lack of concern for the safety and health of workers and citizens, PECO said it would only make the \$2-5 million changes if forced to do so. (PBS-Z-15)

Comment: Accidental releases from either the containment vessel or the waste storage area would be devastating to local health. High levels of radioactivity would quickly enter the atmosphere and be inhaled by local residents. These poisonous chemicals would later be brought to earth by precipitation, and enter the water and food supply for months and years to come, as some chemicals decay more slowly than others. Estimates of casualties after a nuclear accident were made by Sandia National Laboratories in New Mexico shortly after the partial core meltdown at Three Mile Island in 1979. These estimates were presented as the Calculation of Reactor Accident Consequences (CRAC-2) report presented to Congress on November 1, 1982. CRAC-2 estimates an accident at Peach Bottom would cause 72,000 "peak early deaths" and 45,000 "peak early injuries" soon after it occurs. These figures should be

seen as a minimal estimate of the health risk of such an accident. (PBS-AC-14)

Response: The comments are noted. Severe accidents, including events initiated by earthquakes, were evaluated in the GEIS and the impacts were determined to be small for all plants. A site-specific analysis of Severe Accident Mitigation Alternatives for Peach Bottom will be performed by the NRC staff within this environmental analysis. The comments provide no new information and will not be evaluated further in the context of the environmental review.

Part II - Comments Received on the Draft SEIS

Pursuant to 10 CFR Part 51, the staff transmitted the *Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Regarding Peach Bottom Atomic Power Station, Units 2 and 3, Draft Report for Comment* (NUREG-1437, Supplement 10, referred to as the draft SEIS) to Federal, State, and local government agencies; certain Indian tribes; and as well as interested members of the public. As part of the process to solicit public comments on the draft SEIS, the staff:

- placed a copy of the draft SEIS into the NRC's electronic Public Document Room, its license renewal website, at the Whiteford Library in Harford County, Maryland, the Collinsville Community Library in Brogue, Pennsylvania, and the Quarryville Library in Quarryville, Pennsylvania.
- sent copies of the draft SEIS to the applicant, members of the public who requested copies, representatives of certain Indian tribes, and certain Federal, State, and local agencies
- published a notice of availability of the draft SEIS in the Federal Register on July 1, 2002 (67 FR 44245)
- issued public announcements, such as advertisements in local newspapers and postings in public places, of the availability of the draft SEIS
- announced and held two public meetings in Delta, Pennsylvania on July 30, 2002, to describe the results of the environmental review and answer related questions
- issued public service announcements and press releases announcing the issuance of the draft SEIS, the public meetings, and instructions on how to comment on the draft SEIS
- established a website to receive comments on the draft SEIS through the Internet.

Appendix A

During the comment period, the staff received a total of 8 comment letters in addition to the comments received during the public meetings.

The staff has reviewed the public meeting transcripts and the 8 comment letters that are part of the docket file for the application, all of which are available in the NRC's electronic Public Document Room. Appendix A, Part II, Section A.1 contains a summary of the comments and the staff's responses. Related issues are grouped together. Appendix A, Part II, Section A.2 contains excerpts of the July 30, 2002, public meeting transcripts, the written statements provided at the public meetings, and comment letters.

Each comment identified by the staff was assigned a specific alpha-numeric identifier (marker). That identifier is typed in the margin of the transcript or letter at the beginning of the discussion of the comment. A cross-reference of the alpha-numeric identifiers, the speaker or author of the comment, the page where the comment can be found, and the section(s) of this report in which the comment is addressed is provided in Table A-2. The speakers at the meetings are listed in speaking order along with the page of the transcript excerpts in this report on which the comment appears. These comments are identified by the letters "PBD" followed by a number that identifies each comment in approximate chronological order in which the comments were made. The written statements (from the public meetings) and written comment letters are also identified by the letters "PBD."

The staff made a determination on each comment that it was one of the following:

- (1) a comment that was actually a request for information and introduced no new information.
- (2) a comment that was either related to support or opposition of license renewal in general (or specifically Peach Bottom Atomic Power Station, Units 2 and 3) or that made a general statement about the license renewal process. It may have made only a general statement regarding Category 1 and/or Category 2 issues. In addition, it provided no new information and does not pertain to 10 CFR Part 54.
- (3) comment about a Category 1 issue
 - (a) that provided new information that required evaluation during the review, or
 - (b) provided no new information
- (4) a comment about a Category 2 issue that
 - (a) provided information that required evaluation during the review, or
 - (b) provided no such information
- (5) a comment that raised an environmental issue that was not addressed in the GEIS or the DSEIS
- (6) a comment on safety issues pertaining to 10 CFR Part 54, or
- (7) a comment outside the scope of license renewal (not related to 10 CFR Parts 51 or 54).

There was no significant new information provided on Category 1 issues [(3)(a) above] or information that required further evaluation on Category 2 issues [(4)(a)]. Therefore, the GEIS and draft SEIS remained valid and bounding, and no further evaluation was performed.

Comments without a supporting technical basis or without any new information are discussed in this appendix, and not in other sections of this report. Relevant references that address the issues within the regulatory authority of the NRC are provided where appropriate. Many of these references can be obtained from the NRC Electronic Public Document Room.

Within each section of Part II of this appendix (A.1.1 through A.1.21), similar comments are grouped together for ease of reference, and a summary description of the comments is given, followed by the staff's response. Where the comment or question resulted in a change in the text of the draft report, the corresponding response refers the reader to the appropriate section of this report where the change was made. Revisions to the text in the draft report are designated by vertical lines beside the text.

Some numbers were initially assigned to portions of verbal or written statements that were later determined not to be comments. These items were removed from the table. As a result, not all numbers are sequential (see Table A-2).

Table A-2. Peach Bottom, Units 2 and 3 SEIS Comment Log

	Speaker or Author	Source	Page of Comment	Section(s) Where Addressed
PBD01-1	P. Gunter	Afternoon Meeting Transcript (07/30/02)	A-68	A.1.19
PBD01-2	P. Gunter	Afternoon Meeting Transcript (07/30/02)	A-39	A.1.10
PBD01-4	P. Gunter	Afternoon Meeting Transcript (07/30/02)	A-50	A.1.13
PBD01-5	P. Gunter	Afternoon Meeting Transcript (07/30/02)	A-50	A.1.13
PBD01-6	P. Gunter	Afternoon Meeting Transcript (07/30/02)	A-50	A.1.13
PBD01-7	P. Gunter	Afternoon Meeting Transcript (07/30/02)	A-68	A.1.19
PBD01-8	P. Gunter	Afternoon Meeting Transcript (07/30/02)	A-51	A.1.13
PBD01-9	P. Gunter	Afternoon Meeting Transcript (07/30/02)	A-51	A.1.13
PBD01-10	P. Gunter	Afternoon Meeting Transcript (07/30/02)	A-51	A.1.13
PBD01-11	P. Gunter	Afternoon Meeting Transcript (07/30/02)	A-51	A.1.13
PBD02-1	F. Berryhill	Afternoon Meeting Transcript (07/30/02)	A-69	A.1.19
PBD02-2	F. Berryhill	Afternoon Meeting Transcript (07/30/02)	A-27	A.1.1
PBD02-3	F. Berryhill	Afternoon Meeting Transcript (07/30/02)	A-28	A.1.3
PBD02-4	F. Berryhill	Afternoon Meeting Transcript (07/30/02)	A-69	A.1.19
PBD02-5	F. Berryhill	Afternoon Meeting Transcript (07/30/02)	A-69	A.1.19
PBD02-6	F. Berryhill	Afternoon Meeting Transcript (07/30/02)	A-69	A.1.19
PBD02-7	F. Berryhill	Afternoon Meeting Transcript (07/30/02)	A-27	A.1.1

Appendix A

Table A-2. (contd)

	Speaker or Author	Source	Page of Comment	Section(s) Where Addressed	
	PBD02-8	F. Berryhill	Afternoon Meeting Transcript (07/30/02)	A-28	A.1.3
	PBD03-1	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-32	A.1.7
	PBD03-2	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-63	A.1.18
	PBD03-3	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-69	A.1.19
	PBD03-4	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-70	A.1.19
	PBD03-5	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-70	A.1.19
	PBD03-6	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-70	A.1.19
	PBD03-7	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-41	A.1.10
	PBD03-8	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-41	A.1.10
	PBD03-9	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-29	A.1.5
	PBD03-10	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-47	A.1.12
	PBD03-11	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-41	A.1.10
	PBD03-12	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-70	A.1.19
	PBD03-13	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-68	A.1.19
	PBD03-14	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-70	A.1.19
	PBD03-16	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-51	A.1.13
	PBD03-17	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-47	A.1.1
	PBD03-18	S. Smith	Afternoon Meeting Transcript (07/30/02)	A-67	A.1.19
	PBD03-19	S. Smith	Evening Meeting Transcript (07/30/02)	A-50	A.1.13
	PBD03-20	S. Smith	Evening Meeting Transcript (07/30/02)	A-43	A.1.10
	PBD04-1	S.C. Washburn	Afternoon Meeting Transcript (07/30/02)	A-32	A.1.7
	PBD04-2	S.C. Washburn	Afternoon Meeting Transcript (07/30/02)	A-28	A.1.3
	PBD04-3	S.C. Washburn	Afternoon Meeting Transcript (07/30/02)	A-71	A.1.19
	PBD04-4	S.C. Washburn	Afternoon Meeting Transcript (07/30/02)	A-71	A.1.19
	PBD04-5	S.C. Washburn	Afternoon Meeting Transcript (07/30/02)	A-44	A.1.10
	PBD04-7	S.C. Washburn	Afternoon Meeting Transcript (07/30/02)	A-30	A.1.5
	PBD04-8	S.C. Washburn	Afternoon Meeting Transcript (07/30/02)	A-30	A.1.5
	PBD05-1	J. Johnsrud	Afternoon Meeting Transcript (07/30/02)	A-39	A.1.10
	PBD05-2	J. Johnsrud	Afternoon Meeting Transcript (07/30/02)	A-45	A.1.10
	PBD05-3	J. Johnsrud	Afternoon Meeting Transcript (07/30/02)	A-40	A.1.10
	PBD05-4	J. Johnsrud	Afternoon Meeting Transcript (07/30/02)	A-63	A.1.18
	PBD05-5	J. Johnsrud	Afternoon Meeting Transcript (07/30/02)	A-28	A.1.3
	PBD05-6	J. Johnsrud	Afternoon Meeting Transcript (07/30/02)	A-39	A.1.10

Table A-2. (contd)

	Speaker or Author	Source	Page of Comment	Section(s) Where Addressed	
PBD05-7	J. Johnsrud	Afternoon Meeting Transcript (07/30/02)	A-39	A.1.10	
PBD05-8	J. Johnsrud	Afternoon Meeting Transcript (07/30/02)	A-44	A.1.10	
PBD05-9	J. Johnsrud	Afternoon Meeting Transcript (07/30/02)	A-39	A.1.10	
PBD05-10	J. Johnsrud	Afternoon Meeting Transcript (07/30/02)	A-30	A.1.5	
PBD05-11	J. Johnsrud	Afternoon Meeting Transcript (07/30/02)	A-31	A.1.5	
PBD06-1	J. Mangano	Afternoon Meeting Transcript (07/30/02)	A-44	A.1.10	
PBD06-2	J. Mangano	Afternoon Meeting Transcript (07/30/02)	A-69	A.1.19	
PBD06-3	J. Mangano	Afternoon Meeting Transcript (07/30/02)	A-69	A.1.19	
PBD06-4	J. Mangano	Afternoon Meeting Transcript (07/30/02)	A-47	A.1.12	
PBD06-5	J. Mangano	Afternoon Meeting Transcript (07/30/02)	A-38	A.1.10	
PBD06-6	J. Mangano	Afternoon Meeting Transcript (07/30/02)	A-39	A.1.10	
PBD06-7	J. Mangano	Afternoon Meeting Transcript (07/30/02)	A-39	A.1.10	
PBD06-8	J. Mangano	Afternoon Meeting Transcript (07/30/02)	A-39	A.1.10	
PBD06-9	J. Mangano	Afternoon Meeting Transcript (07/30/02)	A-43	A.1.10	
PBD06-11	J. Mangano	Afternoon Meeting Transcript (07/30/02)	A-30	A.1.5	
PBD06-12	J. Mangano	Afternoon Meeting Transcript (07/30/02)	A-52	A.1.13	
PBD07-1	A. Nelson	Afternoon Meeting Transcript (07/30/02)	A-28	A.1.2	
PBD07-2	A. Nelson	Afternoon Meeting Transcript (07/30/02)	A-34	A.1.8	
PBD07-3	A. Nelson	Afternoon Meeting Transcript (07/30/02)	A-34	A.1.8	
PBD07-4	A. Nelson	Afternoon Meeting Transcript (07/30/02)	A-46	A.1.11	
PBD07-5	A. Nelson	Afternoon Meeting Transcript (07/30/02)	A-71	A.1.19	
PBD08-1	M. Marks	Afternoon Meeting Transcript (07/30/02)	A-39	A.1.10	
PBD08-3	M. Marks	Afternoon Meeting Transcript (07/30/02)	A-43	A.1.10	
PBD08-4	M. Marks	Afternoon Meeting Transcript (07/30/02)	A-66	A.1.19	
PBD08-5	M. Marks	Afternoon Meeting Transcript (07/30/02)	A-30	A.1.5	
PBD08-6	M. Marks	Afternoon Meeting Transcript (07/30/02)	A-69	A.1.19	
PBD08-7	M. Marks	Afternoon Meeting Transcript (07/30/02)	A-45	A.1.10	
PBD08-8	M. Marks	Afternoon Meeting Transcript (07/30/02)	A-46	A.1.10	
PBD08-9	M. Marks	Afternoon Meeting Transcript (07/30/02)	A-30	A.1.5	
PBD09-1	D. Cuthbert	Afternoon Meeting Transcript (07/30/02)	A-30	A.1.5	
PBD09-2	D. Cuthbert	Afternoon Meeting Transcript (07/30/02)	A-30	A.1.5	
PBD09-3	D. Cuthbert	Afternoon Meeting Transcript (07/30/02)	A-51	A.1.13	
PBD09-4	D. Cuthbert	Afternoon Meeting Transcript (07/30/02)	A-70	A.1.19	

Appendix A

Table A-2. (contd)

	Speaker or Author	Source	Page of Comment	Section(s) Where Addressed	
	PBD09-5	D. Cuthbert	Afternoon Meeting Transcript (07/30/02)	A-70	A.1.19
	PBD09-6	D. Cuthbert	Afternoon Meeting Transcript (07/30/02)	A-47	A.1.1
	PBD09-7	D. Cuthbert	Afternoon Meeting Transcript (07/30/02)	A-47	A.1.1
	PBD09-8	D. Cuthbert	Afternoon Meeting Transcript (07/30/02)	A-48	A.1.12
	PBD09-9	D. Cuthbert	Afternoon Meeting Transcript (07/30/02)	A-47	A.1.12
	PBD09-10	D. Cuthbert	Afternoon Meeting Transcript (07/30/02)	A-38	A.1.10
	PBD09-11	D. Cuthbert	Afternoon Meeting Transcript (07/30/02)	A-38	A.1.5
	PBD09-12	D. Cuthbert	Afternoon Meeting Transcript (07/30/02)	A-45	A.1.10
	PBD09-13	D. Cuthbert	Afternoon Meeting Transcript (07/30/02)	A-30	A.1.5
	PBD10-1	S. McConnell	Afternoon Meeting Transcript (07/30/02)	A-29	A.1.4
	PBD10-2	S. McConnell	Afternoon Meeting Transcript (07/30/02)	A-66	A.1.18
	PBD10-3	S. McConnell	Afternoon Meeting Transcript (07/30/02)	A-29	A.1.4
	PBD10-4	S. McConnell	Afternoon Meeting Transcript (07/30/02)	A-29	A.1.4
	PBD10-5	S. McConnell	Afternoon Meeting Transcript (07/30/02)	A-29	A.1.4
	PBD11-1	L. Egbert	Afternoon Meeting Transcript (07/30/02)	A-49	A.1.12
	PBD11-2	L. Egbert	Afternoon Meeting Transcript (07/30/02)	A-49	A.1.12
	PBD11-3	L. Egbert	Afternoon Meeting Transcript (07/30/02)	A-49	A.1.12
	PBD11-4	L. Egbert	Afternoon Meeting Transcript (07/30/02)	A-49	A.1.5
	PBD12-1	B. August	Afternoon Meeting Transcript (07/30/02)	A-67	A.1.19
	PBD12-2	B. August	Afternoon Meeting Transcript (07/30/02)	A-68	A.1.19
	PBD12-3	B. August	Afternoon Meeting Transcript (07/30/02)	A-67	A.1.19
	PBD12-4	B. August	Afternoon Meeting Transcript (07/30/02)	A-67	A.1.19
	PBD12-5	B. August	Afternoon Meeting Transcript (07/30/02)	A-67	A.1.19
	PBD12-6	B. August	Afternoon Meeting Transcript (07/30/02)	A-67	A.1.19
	PBD12-7	B. August	Afternoon Meeting Transcript (07/30/02)	A-68	A.1.19
	PBD12-8	B. August	Afternoon Meeting Transcript (07/30/02)	A-28	A.1.3
	PBD12-9	B. August	Afternoon Meeting Transcript (07/30/02)	A-51	A.1.13
	PBD13-1	A. Donohue	Afternoon Meeting Transcript (07/30/02)	A-62	A.1.18
	PBD13-2	A. Donohue	Afternoon Meeting Transcript (07/30/02)	A-70	A.1.19
	PBD13-3	A. Donohue	Afternoon Meeting Transcript (07/30/02)	A-70	A.1.19
	PBD13-4	A. Donohue	Afternoon Meeting Transcript (07/30/02)	A-70	A.1.19
	PBD13-5	A. Donohue	Afternoon Meeting Transcript (07/30/02)	A-70	A.1.19
	PBD13-6	A. Donohue	Afternoon Meeting Transcript (07/30/02)	A-70	A.1.19

Table A-2. (contd)

	Speaker or Author	Source	Page of Comment	Section(s) Where Addressed
PBD13-7	A. Donohue	Afternoon Meeting Transcript (07/30/02)	A-67	A.1.19
PBD13-9	A. Donohue	Afternoon Meeting Transcript (07/30/02)	A-62	A.1.18
PBD13-10	A. Donohue	Afternoon Meeting Transcript (07/30/02)	A-62	A.1.18
PBD13-11	A. Donohue	Afternoon Meeting Transcript (07/30/02)	A-62	A.1.18
PBD13-12	A. Donohue	Afternoon Meeting Transcript (07/30/02)	A-40	A.1.10
PBD14-1	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-51	A.1.13
PBD14-2	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-52	A.1.13
PBD14-3	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-48	A.1.12
PBD14-4	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-47	A.1.12
PBD14-5	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-47	A.1.12
PBD14-6	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-48	A.1.12
PBD14-7	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-47	A.1.12
PBD14-8	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-52	A.1.13
PBD14-9	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-31	A.1.5
PBD14-10	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-71	A.1.19
PBD14-11	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-71	A.1.19
PBD14-12	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-72	A.1.19
PBD14-13	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-72	A.1.19
PBD14-14	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-72	A.1.19
PBD14-15	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-63	A.1.18
PBD14-16	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-64	A.1.18
PBD14-17	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-64	A.1.18
PBD14-18	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-64	A.1.18
PBD14-19	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-64	A.1.18
PBD14-20	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-65	A.1.18
PBD14-21	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-65	A.1.18
PBD14-22	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-65	A.1.18
PBD14-23	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-72	A.1.19
PBD14-24	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-66	A.1.18
PBD14-25	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-71	A.1.19
PBD14-26	M. Ewall	Afternoon Meeting Transcript (07/30/02)	A-71	A.1.19
PBD15-1	N. Wurzbach	Evening Meeting Transcript (07/30/02)	A-28	A.1.4
PBD15-2	N. Wurzbach	Evening Meeting Transcript (07/30/02)	A-28	A.1.4

Appendix A

Table A-2. (contd)

	Speaker or Author	Source	Page of Comment	Section(s) Where Addressed
PBD15-3	N. Wurzbach	Evening Meeting Transcript (07/30/02)	A-29	A.1.4
PBD16-1	E. Guyll	Evening Meeting Transcript (07/30/02)	A-67	A.1.19
PBD16-2	E. Guyll	Evening Meeting Transcript (07/30/02)	A-66	A.1.19
PBD16-3	E. Guyll	Evening Meeting Transcript (07/30/02)	A-47	A.1.12
PBD16-4	E. Guyll	Evening Meeting Transcript (07/30/02)	A-66	A.1.19
PBD16-5	E. Guyll	Evening Meeting Transcript (07/30/02)	A-66	A.1.19
PBD16-6	E. Guyll	Evening Meeting Transcript (07/30/02)	A-30	A.1.5
PBD16-7	E. Guyll	Evening Meeting Transcript (07/30/02)	A-50	A.1.13
PBD16-8	E. Guyll	Evening Meeting Transcript (07/30/02)	A-50	A.1.13
PBD16-9	E. Guyll	Evening Meeting Transcript (07/30/02)	A-50	A.1.13
PBD16-10	E. Guyll	Evening Meeting Transcript (07/30/02)	A-38	A.1.10
PBD16-11	E. Guyll	Evening Meeting Transcript (07/30/02)	A-43	A.1.10
PBD16-12	E. Guyll	Evening Meeting Transcript (07/30/02)	A-63	A.1.18
PBD16-13	E. Guyll	Evening Meeting Transcript (07/30/02)	A-30	A.1.5
PBD17-1	S. Liebman	Evening Meeting Transcript (07/30/02)	A-29	A.1.4
PBD17-2	S. Liebman	Evening Meeting Transcript (07/30/02)	A-29	A.1.4
PBD17-3	S. Liebman	Evening Meeting Transcript (07/30/02)	A-48	A.1.2
PBD17-4	S. Liebman	Evening Meeting Transcript (07/30/02)	A-29	A.1.4
PBD17-5	S. Liebman	July 13, 2002, Letter	A-48	A.1.2
PBD17-6	S. Liebman	July 13, 2002, Letter	A-75	A.1.20
PBD17-7	S. Liebman	July 13, 2002, Letter	A-29	A.1.4
PBD18-1	M. Gallagher	August 27, 2002, Letter	A-72	A.1.20
PBD18-2	M. Gallagher	August 27, 2002, Letter	A-72	A.1.20
PBD18-3	M. Gallagher	August 27, 2002, Letter	A-72	A.1.20
PBD18-4	M. Gallagher	August 27, 2002, Letter	A-72	A.1.20
PBD18-5	M. Gallagher	August 27, 2002, Letter	A-73	A.1.20
PBD18-6	M. Gallagher	August 27, 2002, Letter	A-73	A.1.20
PBD18-7	M. Gallagher	August 27, 2002, Letter	A-73	A.1.20
PBD18-8	M. Gallagher	August 27, 2002, Letter	A-73	A.1.20
PBD18-9	M. Gallagher	August 27, 2002, Letter	A-73	A.1.20
PBD18-10	M. Gallagher	August 27, 2002, Letter	A-73	A.1.20
PBD18-11	M. Gallagher	August 27, 2002, Letter	A-73	A.1.20
PBD18-12	M. Gallagher	August 27, 2002, Letter	A-73	A.1.20

Table A-2. (contd)

	Speaker or Author	Source	Page of Comment	Section(s) Where Addressed	
PBD18-13	M. Gallagher	August 27, 2002, Letter	A-73	A.1.20	
PBD18-14	M. Gallagher	August 27, 2002, Letter	A-73	A.1.20	
PBD18-15	M. Gallagher	August 27, 2002, Letter	A-73	A.1.20	
PBD18-16	M. Gallagher	August 27, 2002, Letter	A-57	A.1.16	
PBD18-17	M. Gallagher	August 27, 2002, Letter	A-74	A.1.20	
PBD18-18	M. Gallagher	August 27, 2002, Letter	A-74	A.1.20	
PBD18-19	M. Gallagher	August 27, 2002, Letter	A-74	A.1.20	
PBD18-20	M. Gallagher	August 27, 2002, Letter	A-74	A.1.20	
PBD18-21	M. Gallagher	August 27, 2002, Letter	A-74	A.1.20	
PBD18-22	M. Gallagher	August 27, 2002, Letter	A-74	A.1.20	
PBD18-23	M. Gallagher	August 27, 2002, Letter	A-74	A.1.20	
PBD18-24	M. Gallagher	August 27, 2002, Letter	A-74	A.1.20	
PBD18-25	M. Gallagher	August 27, 2002, Letter	A-74	A.1.20	
PBD18-26	M. Gallagher	August 27, 2002, Letter	A-74	A.1.20	
PBD18-27	M. Gallagher	August 27, 2002, Letter	A-74	A.1.20	
PBD18-28	M. Gallagher	August 27, 2002, Letter	A-74	A.1.20	
PBD18-29	M. Gallagher	August 27, 2002, Letter	A-74	A.1.20	
PBD18-30	M. Gallagher	August 27, 2002, Letter	A-74	A.1.20	
PBD18-31	M. Gallagher	August 27, 2002, Letter	A-74	A.1.20	
PBD19-1	D. Griffith	September 9, 2002, Letter	A-57	A.1.16	
PBD19-2	D. Griffith	September 9, 2002, Letter	A-58	A.1.16	
PBD19-3	D. Griffith	September 9, 2002, Letter	A-58	A.1.16	
PBD19-4	D. Griffith	September 9, 2002, Letter	A-58	A.1.16	
PBD19-5	D. Griffith	September 9, 2002, Letter	A-60	A.1.16	
PBD19-6	D. Griffith	September 9, 2002, Letter	A-61	A.1.16	
PBD20-1	R. McLean	September 13, 2002, Letter	A-53	A.1.14	
PBD20-2	R. McLean	September 13, 2002, Letter	A-53	A.1.14	
PBD21-1	M. Chezik	September 13, 2002, Letter	A-33	A.1.7	
PBD21-2	M. Chezik	September 13, 2002, Letter	A-54	A.1.14	
PBD21-3	M. Chezik	September 13, 2002, Letter	A-54	A.1.14	
PBD21-4	M. Chezik	September 13, 2002, Letter	A-54	A.1.14	
PBD21-5	M. Chezik	September 13, 2002, Letter	A-54	A.1.14	
PBD21-6	M. Chezik	September 13, 2002, Letter	A-61	A.1.17	

Appendix A

Table A-2. (contd)

	Speaker or Author	Source	Page of Comment	Section(s) Where Addressed	
	PBD21-7	M. Chezick	September 13, 2002, Letter	A-31	A.1.7
	PBD21-8	M. Chezick	September 13, 2002, Letter	A-36	A.1.9
	PBD21-9	M. Chezick	September 13, 2002, Letter	A-36	A.1.9
	PBD21-10	M. Chezick	September 13, 2002, Letter	A-37	A.1.9
	PBD21-11	M. Chezick	September 13, 2002, Letter	A-35	A.1.9
	PBD21-12	M. Chezick	September 13, 2002, Letter	A-37	A.1.9
	PBD21-13	M. Chezick	September 13, 2002, Letter	A-37	A.1.9
	PBD21-14	M. Chezick	September 13, 2002, Letter	A-37	A.1.9
	PBD21-15	M. Chezick	September 13, 2002, Letter	A-34	A.1.9
	PBD21-16	M. Chezick	September 13, 2002, Letter	A-33	A.1.7
	PBD21-17	M. Chezick	September 13, 2002, Letter	A-33	A.1.7
	PBD21-18	M. Chezick	September 13, 2002, Letter	A-35	A.1.9
	PBD21-19	M. Chezick	September 13, 2002, Letter	A-35	A.1.9
	PBD21-20	M. Chezick	September 13, 2002, Letter	A-53	A.1.14
	PBD21-21	M. Chezick	September 13, 2002, Letter	A-55	A.1.14
	PBD21-22	M. Chezick	September 13, 2002, Letter	A-55	A.1.14
	PBD21-23	M. Chezick	September 13, 2002, Letter	A-54	A.1.14
	PBD21-24	M. Chezick	September 13, 2002, Letter	A-61	A.1.17
	PBD21-25	M. Chezick	September 13, 2002, Letter	A-55	A.1.14
	PBD21-26	M. Chezick	September 13, 2002, Letter	A-38	A.1.9
	PBD21-27	M. Chezick	September 13, 2002, Letter	A-36	A.1.9
	PBD21-28	M. Chezick	September 13, 2002, Letter	A-37	A.1.9
	PBD21-29	M. Chezick	September 13, 2002, Letter	A-34	A.1.7
	PBD21-30	M. Chezick	September 13, 2002, Letter	A-35	A.1.9
	PBD21-31	M. Chezick	September 13, 2002, Letter	A-53	A.1.14
	PBD21-32	M. Chezick	September 13, 2002, Letter	A-56	A.1.14
	PBD22-1	W. Hoffman	September 17, 2002, Letter	A-75	A.1.20
	PBD22-2	W. Hoffman	September 17, 2002, Letter	A-67	A.1.19
	PBD22-3	W. Hoffman	September 17, 2002, Letter	A-75	A.1.20
	PBD22-4	W. Hoffman	September 17, 2002, Letter	A-31	A.1.6
	PBD22-5	W. Hoffman	September 17, 2002, Letter	A-46	A.1.10
	PBD22-6	W. Hoffman	September 17, 2002, Letter	A-31	A.1.6
	PBD22-7	W. Hoffman	September 17, 2002, Letter	A-53	A.1.14

Table A-2. (contd)

	Speaker or Author	Source	Page of Comment	Section(s) Where Addressed
PBD22-8	W. Hoffman	September 17, 2002, Letter	A-57	A.1.15
PBD23-1	Anonymous	August 8, 2002, Letter	A-27	A.1.1
PBD23-2	Anonymous	August 8, 2002, Letter	A-27	A.1.1
PBD23-3	Anonymous	August 8, 2002, Letter	A-27	A.1.1
PBD23-4	Anonymous	August 8, 2002, Letter	A-27	A.1.1
PBD23-5	Anonymous	August 8, 2002, Letter	A-31	A.1.5
PBD23-6	Anonymous	August 8, 2002, Letter	A-27	A.1.1
PBD23-8	Anonymous	August 8, 2002, Letter	A-27	A.1.1

A.1 Comments and Responses

A.1.1 General Comments in Opposition to Nuclear Power

Comment: As a matter of fact, having any new, having no nuclear power plants to work with, the NRC's willingness to keep their jobs going, with the same disregard for safety concerns, and concerns by opponents, is quite clear. (PBD02-2)

Comment: When will this country find its sanity? Its sanity. What are we doing to this planet? Plutonium is radioactive for 250,000 years, and some elements like iodine and technetium won't decay for millions of years. (PBD02-7)

Comment: When there's a disaster and millions die then will you stop the insanity of nuclear energy? (PBD23-1)

Comment: Only to build nuclear bombs with the old waste products do you use nuclear power? (PBD23-2)

Comment: Why not do something safe. You are accountable not me for that death trap. (PBD23-3)

Comment: I will seek out safe alternatives. (PBD23-4)

Comment: Be forewarned. You are accountable for your device. I am stopping all nuclear energy plants now. (PBD23-6)

Comment: When will your nightmare end? (PBD23-8)

Response: *The comments are noted. They are in opposition to nuclear power and are general in nature. They provide no new information and will not be evaluated further.*

Appendix A

A.1.2 General Comments in Support of the License Renewal Process

Comment: Moreover there is a growing recognition among the public and policy makers, both in the United states, and internationally, that we must maintain the clean air and other environmental benefits of nuclear energy. (PBD07-1)

Response: *The comment is noted. The comment is supportive of license renewal and its processes, and are general in nature. The comment provides no new information and, therefore, will not be evaluated further.*

A.1.3 General Comments in Opposition of the License Renewal Process

Comment: The idea that technocrats, bureaucrats can sit down and degrade human liberty and freedom to an insurance risk assessment is totally bizarre. (PBD12-8)

Comment: I think it is time to stop, and maybe I will be here another 10 or 15 years. (PBD02-8)

Comment: Has anyone, from the inception of the nuclear reactors or bombs, given any thought to what would happen seven generations in the future. (PBD04-2)

Comment: There is not a word about protection of the public health and safety, or of the quality of the environment. You have to read down several sections and, even then, those factors which are surely the paramount objective in our society, are subordinated by being equated with national security and the free enterprise factor. (PBD05-5)

Comment: Most licenses do not expire for another 15 to 20 years. So I ask myself why now? The present license hasn't expired, and they have already applied. Don't you want to know why? To amortize the plant's debt further, further into the future. (PBD02-3)

Response: *The comments are noted. The comments oppose license renewal and its processes, and do not provide new information. These comments are not within the scope of 10 CFR Part 51 for the environmental review associated with the application for license renewal at Peach Bottom Atomic Power Station, Units 2 and 3. Therefore, these comments will not be evaluated further.*

A.1.4 General Comments in Support of License Renewal at Peach Bottom Atomic Power Station, Units 2 and 3

Comment: I have no problem with it, and I think it should be extended for another 20 years, because it is an attribute to the whole neighborhood, because a lot of people in the area do work at Peach Bottom, also. (PBD15-1)

Comment: As long as it keeps our electric rates down I think it is a good move, because it doesn't use fuel oil, it doesn't use gas. (PBD15-2)

Comment: So it keeps things cheaper, and we are importing too much oil right now, and that would be one of the alternatives, I think, and that is not good. (PBD15-3)

Comment: As of today I'm personally in favor of approval of the application, as a local, for the following reasons. Extending the license will be less of a local health, welfare, and safety impact than constructing a new plant, either nuclear, or fossil fuel. (PBD10-1)

Comment: The fourth reason is because Peach Bottom has been a good neighbor. I've heard questions about release of information. I have news for you, we knew about the operators sleeping, as soon as it happened. (PBD10-3)

Comment: In summary, because I live here, in the real world today, and know that another plant will fill the void less by Peach Bottom shutting down, I'm in favor of the licensing extension as more desirable than new construction of more nuclear reactors, or a fossil fuel facility, that would take their place in this void (PBD10-4)

Comment: I've done the DOE studies, and we generate 17 percent more power than we can use in Pennsylvania, and we are doing it for people who don't live here. So we are getting the emissions that would have to come from a fossil fuel plant, right here, with no benefits. (PBD10-5)

Comment: The draft report, that we've just heard about, and we are here to discuss, prepared for this renewal of the specific nuclear plant, addressed all required regulatory issues in a clear and comprehensive manner. (PBD17-1)

Comment: I believe that the stated plans given in the draft provide for the highest level of safety and efficiency that is reasonable, that reflect the concerns, and the expertise of those directly responsible for the management and operations of the Peach Bottom plant. (PBD17-2)

Comment: So as local residents, and concerned citizens, our family strongly supports the proposed NRC actions. (PBD17-4)

Comment: In summary, the draft document is a fully informative, clear outline of the intended license renewal of Units 2 & 3 at Peach Bottom. All regulatory and citizens' requirements for safe, efficient operation are presented to meet or exceed the needed levels. It is excellent an public documentation in support of a successful renewal process. (PBD17-7)

Response: *The comments are noted. The comments are supportive of license renewal at Peach Bottom Atomic Power Station, Units 2 and 3, and are general in nature. The comments provide no new information; therefore, the comments will not be evaluated further.*

A.1.5 General Comments in Opposition of License Renewal at Peach Bottom Atomic Power Station, Units 2 and 3

Comment: Pennsylvania also has, is the second highest number of nuclear reactors, and is the second highest amount of nuclear waste. Because of this Washington says we have to have a

Appendix A

| nuclear dumping site. Pennsylvania doesn't want a nuclear dumping site, so why do we have
| this reactor going off, why are we creating more nuclear waste. (PBD03-9)

| **Comment:** Please, please value the health and the environment. Please deny Exelon's
| application to extend Peach Bottom's license. (PBD09-13)

| **Comment:** Closing Peach Bottom is clearly in the best interest of the health and safety of all
| residents in this region, and the best economic interest of the public, in general. (PBD09-2)

| **Comment:** It is my opinion that the NRC had already decided to renew the license of the Peach
| Bottom power plant when they received the application. The only reason meetings are held is to
| meet a requirement. (PBD16-6)

| **Comment:** Since the Peach Bottom plant is located on the edge of the great east coast
| megalopolis, an accident could have a devastating effect on millions of people. We need to shut
| down and decommission the Peach Bottom atomic power plant before a horrible accident
| occurs. (PBD16-13)

| **Comment:** And I just beg you, I will tell you this, I will give you the shirt off my back, I will give
| you everything I own, to shut this plant down. I would stand here and allow you to take my life
| because I love all people so much. Shut it down. (PBD04-7)

| **Comment:** Please shut this place down, let us begin to bear this burden and figure a way out of
| it. (PBD04-8)

| **Comment:** So in conclusion I would highly recommend that no decision be made, by the NRC,
| to extend the license of this plant until a much more thorough assessment of environmental
| health threats are made. (PBD06-11)

| **Comment:** Based on Peach Bottom's threat to human health and safety, as well as long-lasting
| destruction of our environment, we urge the Nuclear Regulatory Commission to deny the license
| renewal for Peach Bottom. (PBD09-1)

| **Comment:** Is it true that the NRC called Peach Bottom one of the worse plants in the nation,
| and shut down Peach Bottom 1 in 1987? Do you think people are more efficient today?
| (PBD08-5)

| **Comment:** Until such time as the government can promise to protect present and future
| generations, Peach Bottom should not have its license renewed. (PBD08-9)

| **Comment:** I urge, really a total reworking of this EIS, of the environmental review necessary.
| (PBD05-10)

Comment: And I would strongly, strongly urge the NRC to set a precedent of denying a license extension. (PBD05-11)

Comment: The no-action alternative in here I think is the best alternative and ought to be adopted, of course. (PBD14-9)

Comment: You people are crazy to keep that kind of plant in operation. (PBD23-5)

Response: *The comments are noted. The comments oppose license renewal at Peach Bottom Atomic Power Station, Units 2 and 3, and do not provide new information. These comments are not within the scope of 10 CFR Part 51 for the environmental review associated with the application for license renewal at Peach Bottom Atomic Power Station, Units 2 and 3. Therefore, these comments will not be evaluated further in the SEIS.*

A.1.6 Comments Concerning Surface Water Quality, Hydrology, and Use Issues

Comment: Section 2.2.3 – Are there any storm water control measures or requirements that are considered in water quality or resource issues. (PBD22-4)

Response: *Section 2.2.3 of the SEIS includes requirements applicable to storm water outfalls. Part C of the Peach Bottom site's NPDES permit (PA0009733) referenced in Section 2.2.3 describes the prohibition of non-storm water discharges and spills; the requirement to prepare a Preparedness Prevention and Contingency (PPC) Plan; and requirements for storm water sampling and reporting. The current NPDES permit expires in 2005. Any additional requirements can be addressed when the permit is renewed. Because the information identified in the comment was already included in the analysis, there was no need to change the SEIS text.*

Comment: Section 4.1.1 – Water Use Conflicts – Are drought conditions incorporated into water use conflict planning. Minimum monthly average flows are discussed but not discrete significant events or worse case conditions. (PBD22-6)

Response: *Minimum monthly average flows are used in the analysis of water use conflicts because they are more representative of the overall environmental impacts of the Peach Bottom facility. The Susquehanna River Basin Commission (SRBC) is the governing body that regulates withdrawals and diversions from the Susquehanna River under Resolution Numbers 93-04, 91-02, and 83-04 referenced in Section 2.2.2. The SRBC would regulate discrete significant events or worse case conditions. Accordingly, there was no need to change the SEIS text.*

A.1.7 Comments Concerning Category 1 Aquatic Resources Issues

Comment: A thorough review should be made on the effects of various levels of radiation exposure on fish and wildlife resources and their habitats. Such exposure may result from

Appendix A

| leakage, accident (e.g., Three Mile Island, Chernobyl) or disposal. [We suspect that the risk of
| radiation exposure over time may increase, despite planned maintenance as plants age.]
| (PBD21-7)

| **Response:** *The NRC has not established radiation exposure standards for fish and wildlife
| because it is assumed that radiation guidelines which are protective of the public also provide
| adequate protection to plants and animals. The validity of this assumption has been upheld by
| national and international bodies that have examined the issue, including the National Council on
| Radiation Protection and Measurement (NCRP Report No. 109, Effects of Ionizing Radiation on
| Aquatic Organisms, 1991), the International Atomic Energy Agency (IAEA Technical Report
| Series No. 332, Effects of Ionizing Radiation on Plants and Animals at Levels Implied by Current
| Radiation Protection Standards, 1992), and the International Commission on Radiological
| Protection (ICRP Publication 26, 1977). In all of these cases, it has been emphasized that
| individuals of non-human species may be adversely affected by such radiation levels, but effects
| at the population level are not detectable. The comment contained no new information and will
| not be evaluated further. Accordingly, there was no need to change the SEIS text.*

| **Comment:** I'm concerned, I know some people that have lived here all their life, and they have
| fished here all their life. And starting in the '80s they've noticed carp in this area that are one-
| eyed, have strange fins, are different, they don't fight much to be caught. And I'm under the
| impression; I don't fish or anything but this is not common for carp. (PBD03-1)

| **Comment:** But ten years ago my family, we decided not to take any fish, or partake of any fish
| out of the lake, because we noticed ten years ago that sores and abnormalities on fish in the
| lake. (PBD04-1)

| **Response:** *The NRC staff contacted Dr. Dilip Mathur, Vice President and Technical Director for
| Normandeau Environmental Consultants at the Muddy Run Ecological Laboratory in Drumore,
| Pennsylvania. Normandeau Environmental Consultants started sampling in Conowingo Pond in
| 1966 and continued until about 1988. Normandeau conducted additional sampling from 1995 to
| 2000. Normandeau estimates that over a million fish (of 56 species) have been collected from
| Conowingo Pond and examined. In addition, they have observed over 20 million fish in the fish
| lifts. In the earlier sampling period, Normandeau staff was on the Pond nearly every day of each
| year. Most of this time was associated with the Peach Bottom Units 2 and 3 technical
| specifications. In addition, Normandeau staff were involved with examining impingement
| samples at the intake screens and would make observations of the condition of fish.*

| *Dr. Mathur stated that the type of abnormality described for carp has not been observed over the
| years of sampling by trawl, trap nets seines, and general observations of fish in Conowingo
| Pond. He further stated that this includes the most recent sampling in calendar year 2000. The
| Normandeau staff also monitors the fish lifts at the two upstream dams, Holtwood and Safe
| Harbor, and have not reported any occurrences of deformities in fish collected there. The only*

deformity noted by the fisheries staff is, on rare occasions, a channel catfish afflicted with scoliosis (bent back), a situation commonly seen in catfish farming and related to the environment of Conowingo Pond. A letter in response to this issue is included in Appendix C. In addition, losses from predation, parasitism, and disease among organisms exposed to sublethal stresses is a Category 1 issue in the GEIS. Absent significant information regarding this issue, the staff considers the conclusions in the GEIS to be appropriate for Peach Bottom Units 2 and 3. There was no change to the SEIS text.

Comment: We also recommend that ichthyoplankton be considered with aquatic resources. (PBD21-16)

Response: *In the GEIS, the staff concluded, "Entrainment of phytoplankton and zooplankton has not been found to be a problem at operating nuclear power plants and is not expected to be a problem during the license renewal term." Additionally, the staff has reviewed the available information and based on the results of entrainment studies and the operating history of the Peach Bottom Units 2 and 3 intake structure, concludes that the potential impacts of entrainment of fish and shellfish in the early life stages (ichthyoplankton) in the cooling water intake system are SMALL. See SEIS Section 4.1.2. During the course of the SEIS preparation, the staff considered mitigation measures for the continued operation of Peach Bottom Units 2 and 3. When continued operation for an additional 20 years is considered as a whole, all of the specific effects on the environment (whether or not "significant") were considered. Based on its assessment, the staff expects that the measures in place at Peach Bottom Units 2 and 3 (e.g., intake screens and the waste heat treatment facility) provide mitigation for all impacts related to entrainment and no new mitigation measures are warranted. The comment provides no new information and, therefore, will not be evaluated further. Accordingly, there was no need to change the SEIS text.*

Comment: We recommend the inclusion of "thermal release" in final Supplement 10 as a "source of potential or known impact." One of the reported negative effects of thermal discharges is increased incidence of disease and parasites in fish attracted to the plume. (PBD21-1)

Response: *Impacts resulting from the thermal release is considered in the assessment of potential impacts for continued operation of Peach Bottom. In addition, losses from predation, parasitism, and disease among organisms exposed to sublethal stress is a Category 1 issue in the GEIS. The comment provides no new information and, therefore, will not be evaluated further. Accordingly, there was no need to change the SEIS text.*

Comment: One question that should be evaluated is the cumulative impact of impingement and entrainment on finfish or other aquatic life in the Conowingo Pool area. To answer this question, NRC or Exelon would first need to know the losses from all water intakes in the water body; the finfish population size, dynamics, exploitation, structure, etc; and how the impingement/

Appendix A

entrainment losses are partitioned among the various intakes. This information is useful for determining where, when, and under what conditions entrainment and/or impingement losses cause an observable effect on fish populations or other aquatic life. This question will be difficult to answer without sufficient advanced preparation, however. (PBD21-17)

Comment: Require an assessment of cumulative impacts of all projects from all water intakes in the Conowingo Pool area, including finfish population size, dynamics, exploitation, and structure, and the partitioning of impingement/entrainment losses among the various intakes. (PBD21-29)

Response: *As set forth in the SEIS, the staff has evaluated the impacts on the environment which are likely to result from incremental impact of the continued operation of Peach Bottom Units 2 and 3 for an additional 20 years when added to other past, present and foreseeable future actions. The staff did not specifically note all the intakes on Conowingo Pond; however, the aquatic populations of the Pond are sufficiently stable such that the staff concluded that potential impacts are small and no further mitigation of Peach Bottom Units 2 and 3 operations are needed. The comments provide no new information and, therefore, will not be evaluated further. Accordingly, there was no need to change the SEIS text.*

A.1.8 Comments Concerning Category 1 Air Quality Issues

Comment: There are tremendous air quality advantages from nuclear energy, for both the health of Pennsylvania citizens, and from an economic view. (PBD07-2)

Comment: First, license renewal will maintain economic electric generation that does not produce green house gases, or other air pollutants, such as sulfur dioxide, nitrogen oxide, and particulates. (PBD07-3)

Response: *The comments are noted. They are general in nature and supportive of license renewal. The comments provide no new information and will not be evaluated further.*

A.1.9 Comments Concerning Category 1 Terrestrial Resources

Comment: We recommend that secondary and cumulative evaluations of this project be primarily quantitative, that nuclear plants be considered along with the "other sources" of cumulative impacts, and that cumulative impacts to avian and terrestrial resources be included along with aquatic resources. (PBD21-15)

Response: *The impacts on the environment which result from incremental impact of the continued operation of Peach Bottom Units 2 and 3 for an additional 20 years when added to other past, present and foreseeable future actions were considered in the staff's analysis set forth in the SEIS. The comment provides no new information and, therefore, will not be evaluated further. There was no change to the SEIS text.*

Comment: Multiple strata of vegetation would also create feeding and nesting cover for some migratory bird species, while perhaps reducing the effects of forest fragmentation on others. The Department is concerned that fragmentation of large forest blocks is reportedly contributing to the population decline of some area-sensitive migratory birds. Appropriate management of rights-of-way would make considerable land available for wildlife. (PBD21-11)

Comment: We also recommend that the cumulative effects of transmission line operation and maintenance be part of the evaluation. Topics such as forest fragmentation, electromagnetic field effects, bird collisions, and contaminants should be explored. (PBD21-18)

Comment: As implied elsewhere, Exelon should identify state-of-the art technology, design, operation and maintenance for cooling water systems, transmission lines and other operating features of nuclear plants. These features should be incorporated into the cumulative impact analyses and the existing projects when appropriate during the relicensing process. (PBD21-19)

Comment: Require an assessment of cumulative effects from transmission line operation and maintenance, including forest fragmentation, electromagnetic field effects, bird collisions, and contaminant issues. (PBD21-30)

Response: *The comments are noted. During the course of the assessment the impacts on the environment which result from incremental impact of the continued operation of Peach Bottom Units 2 and 3 for an additional 20 years when added to other past, present and foreseeable future actions were considered. The GEIS for license renewal (NUREG-1437) determined that the effects of electromagnetic fields on vegetation or wildlife and the effects of bird collisions with transmission lines were not likely to be significant at any site. Evaluation of the information provided by the applicant and inspection of the transmission corridor did not indicate the presence of any new and significant information with respect to this generic conclusion.*

The applicant has indicated that the Peach Bottom to Keeney transmission line is an integral part of the electrical transmission grid in southeast Pennsylvania, northern Maryland, and northern Delaware, and that the line will remain operational and in use even if the license for Peach Bottom Units 2 and 3 are not extended. In general, the right-of-way is maintained with a multi-layer vegetative community that reasonably minimizes the impacts of fragmentation. Accordingly, removal of the Peach Bottom to Keeney transmission line would, at best, have no effect on forest fragmentation and would likely exacerbate any problems because new corridors or tie-ins would need to be developed.

There is no indication that there are significant contaminant issues associated with continued operation and maintenance of the Peach Bottom to Keeney transmission right-of-way. With respect to cooling water systems, the staff did identify the technology used for the design, operation and maintenance for cooling. The potential impacts of cooling are addressed and the

Appendix A

| *staff concluded that no further mitigation was needed. The comments provide no new information and, therefore, will not be evaluated further. Accordingly, there was no need to change the SEIS text.*

| **Comment:** Transmission towers frequently leach zinc, which is toxic to vegetation and creates bare soil areas. PCBs often leak from old transformers. Remediation is possible and should be a condition of relicensing. Herbicide use should be minimized. (PBD21-8)

| **Response:** *Although it is acknowledged that zinc can leach from galvanized steel structures such as transmission towers, the scientific literature indicates that detectable levels of soil contamination are not normally found more than a couple of meters from the towers. In those cases in which detectable levels are found in the soil, it rarely appears to be at levels that are detrimental to plants. No bare areas or other obvious signs of contamination were observed during the on-site inspection of the transmission right-of-way. There are no transformers on the Peach Bottom to Keeney transmission line. Herbicides are used in accordance with applicable regulations and has maintenance procedures that help to minimize the use of herbicides. The comment provides no new information and, therefore, will not be evaluated further. Accordingly, there was no need to change the SEIS text.*

| **Comment:** Transmission lines are frequently kept in early stages of succession, grassed or farmed. Soil erosion from these areas contributes to the degradation of streams, rivers, and bays by adding nutrients, sediment, and pollutants of concern in the Chesapeake and Delaware Bay drainages. We recommend that rights-of-way be maintained to avoid erosion of sediments into surface waters. One measure to control erosion would be to maintain multiple vegetative strata to reduce splash, sheet and gully erosion. (PBD21-9)

| **Comment:** Require applicant to maintain multiple layers of vegetative cover in transmission line rights-of-way to reduce or control splash, sheet and gully erosion. (PBD21-27)

| **Response:** *The rights-of-way maintenance practices used by the applicant were evaluated during the preparation of this SEIS, and the rights-of-way associated with this relicensing action were inspected. No signs of significant erosion were observed during the field inspection. The lines are maintained with the goal of keeping a self-perpetuating, mixed vegetative stand within the rights-of-way that are not used for agriculture. The applicant has supported research on this topic (e.g. Green Lane Research Project). The applicant believes, and the Staff agrees, that such a vegetation maintenance program is not only the most environmentally benign, but also can significantly reduce right-of-way maintenance costs. Portions of the rights-of-way are currently farmed, but these areas constitute well under 1% of the agricultural land in the area, and removing these areas from agricultural production would have an undetectable effect on the regional water bodies. The comments provide no new information and, therefore, will not be evaluated further. Accordingly, there was no need to change the SEIS text.*

Comment: We suspect that many transmission line corridors expand opportunities for various forms of recreation. Some of these (i.e., off-road vehicle use) may result in alteration, degradation or destruction of fish and wildlife habitats, particularly streams and wetlands, as well as the harassment and disturbance of wildlife. We recommend that controlled public use of rights-of-way (type and season) to avoid such degradation be a condition of relicensing. (PBD21-10)

Comment: Require controlled public use of transmission line rights-of-way (type and season) to avoid erosion and sedimentation. (PBD21-28)

Comment: Transmission lines kept in early successional stages prevent nesting by birds requiring tree cavities. Excellent management opportunities exist to enhance some rights-of-way by providing and maintaining nest boxes for cavity-nesting species like bluebirds, great crested flycatchers, wrens, and chickadees, displaced from areas where forest has been cleared. (PBD21-12)

Response: *In the GEIS, the staff concluded that the impacts of power line right-of-way management (cutting and herbicide application) on wildlife are expected to be of small significance at all sites. No new and significant information regarding the Peach Bottom Atomic Power Station was identified that would change this generic conclusion. The lines are maintained with the goal of keeping a self-perpetuating, mixed vegetative stand within the portions of their rights-of-way that are not used for agriculture. The comments provide no new information and, therefore, will not be evaluated further. Accordingly, there was no need to change the SEIS text.*

Comment: We recommend that plans for routing existing lines to avoid wetlands be developed in consultation with the USFWS as part of the relicensing process. (PBD21-13)

Response: *The Peach Bottom-to-Keeney transmission line does not cross any wetlands that would be used by waterfowl or herons, except for the required crossing of the Susquehanna River at the plant site. The comment provides no new information and, therefore, will not be evaluated further. Accordingly, there was no need to change the SEIS text.*

Comment: To avoid and minimize taking migratory birds, active nests, and their eggs, we recommend that time-of-year restrictions on vegetation clearing and maintenance on rights-of-way be part of any license or amendment. In the Northeast, such restrictions would include the primary migratory bird nesting season from April 1 to July 15 (for raptors, it is February 1 to July 15). Buffers around active raptor nests of at least 100 meters may be sufficient. In addition, activity within a 100-meter radius of raptor nests should be avoided from February 1 through July 13. (PBD21-14)

Appendix A

Response: *The contractors who perform the majority of the transmission right-of-way maintenance for the applicant have a nation-wide policy concerning Migratory Bird Treaty Act compliance which stipulates that field crews must look for signs of birds and wildlife, and they must not disturb any birds, nests, or other wildlife. These restrictions are sufficient to address the concern identified in the comment. The comment provides no new information and, therefore, will not be evaluated further. Accordingly, there was no need to change the SEIS text.*

Comment: Require maintenance of transmission line right-of-ways for wildlife feeding cover and nesting activities, while minimizing habitat degradation and encouraging habitat enhancements. (PBD21-26)

Response: *The applicant's right-of-way maintenance procedures were evaluated and the rights-of-way associated with the proposed license renewals were inspected by the staff. The rights-of-way were found to support a mixture of shrubs, forbs and grasses that would be supportive of a diverse wildlife community and there was minimal indication of erosion or other forms of habitat degradation. The applicant strives to maintain a self-perpetuating, mixed vegetative stand within the rights-of-way that are not used for agriculture. The staff has concluded that these procedures adequately provide for wildlife habitat while minimizing adverse impacts. The comment provides no new information and, therefore, will not be evaluated further. Accordingly, there was no need to change the SEIS text.*

A.1.10 Comments Concerning Category 1 Human Health Issues

Comment: Realistically there is no safe level of radiation. Why do we play these safe level radiation games? Why do we do that? (PBD09-10)

Comment: So why would we continue a process when we know it does this kind of harm to human health? I believe Peach Bottom has the potential to be an enormous, enormous health risk. (PBD09-11)

Comment: I would like to have data on cancer cases, birth defects, and stillbirths in a ten mile radius of the plant, and compare this information to the national average. (PBD16-10)

Comment: The Trade Center was attacked, and numerous chemicals, such as silicon, and asbestos, were put into the atmosphere at higher levels. Well the EPA went in, did a study and said, yes, the levels are higher, but they are within safe limits, therefore they are harmless. At the same time this is happening about a quarter of the workers were suffering from some sort of respiratory ailment. Three percent of them so badly that they are on the verge of having to retire. So we think the same should occur here in terms of nuclear reactors. And to do that you need two items. (PBD06-5)

Comment: You must look at the disease rates and particularly at the cancer rates in the local area. (PBD06-6)

Comment: Since 1987 the rate is 31 percent above the U.S. average, okay? Something happened that turned a low childhood cancer area into a high childhood cancer area. Is it radioactive, is it some sort of other factor that must be looked at? (PBD06-7)

Comment: Again, these are questions that remain unanswered. Whether or not radioactive plays a role, or not has to be determined. (PBD06-8)

Comment: A geneticist has asked me, repeatedly, how the NRC, in determining dose impacts, deals with not only the child, and not only the fetus, and not only the embryo, but cumulative impact upon the ova that a woman carries through her life, and that are the basis of, of course, the ultimate embryo, fetus, and child? (PBD05-1)

Comment: I am appalled at the unwillingness of the Nuclear Regulatory Commission, and EPA, and DOE, to consider the information that is now becoming available concerning the impacts of ionizing radiation on the well being of living creatures, organisms of all kinds. (PBD05-6)

Comment: Because those standards that were mentioned to us by Dr. — those standards were, in fact, developed based upon standard man, using weighting factors for organs, divorced from the reality of the variabilities in human susceptibilities to diseases, to exposures, to the synergies between and among the sources of contamination that are with us, throughout our environment. (PBD05-7)

Comment: But the situation with regard to the health impact of the uses of ionizing radiation that increase within our society, within our environment, those today are being looked at in a very different way. And that way is through molecular and cellular radiation biology, that is really beginning to get us an understanding of the mechanisms of the damage. And I don't see that is being factored into this study, anymore than the totalities, the systemic approaches that are necessary in order to have a valid environmental impact statement. (PBD05-9)

Comment: What is meant by small risks? Does that mean if my family and I get sick, that is just a small amount? What happens as the environmental impact statement said, that in 45 years the increase in population will be 62 percent, does small then become medium risks? (PBD08-1)

Comment: In considering a 20-year license extension, and 20 years additional operation, in our view the critical population that would determine that operation is the children. And that the cumulative effect, that there is a cumulative effect of 20 years a additional operation, with ongoing routine releases that build up in the environment, that bio-magnify. The focus of our

Appendix A

| concern, and it should be your concern, is the bio-magnification to the children in this area.
| (PBD01-2)

| **Comment:** So there are, suddenly, a great many additive sources for exposures. And it is not
| clear how those are incorporated in your analyses (PBD05-3)

| **Response:** *Section 2.2.7 presents the radiological impacts of effluents from Peach Bottom
| Units 2 and 3 operations. This section presents information about the amount of radioactive
| material released in effluents by the plant and assessed the radiation doses to the general
| public. Based on this data, the staff concludes that the impact to the environment from
| radioactive releases from Peach Bottom Units 2 and 3 is SMALL.*

| *Information on public health issues is readily available from the Commonwealth of Pennsylvania
| Department of Health. The Pennsylvania Department of Health provided a review of the
| information submitted by the Radiation and Public Health Project (RPHP) on increased cancer
| rates (letter from Joel H. Hersh, Pennsylvania Department of Health to the U.S. NRC dated
| November 12, 2002). This correspondence is included in Appendix A of this SEIS. The review
| states that the conclusions of increased cancer rates in the area of the Peach Bottom site by
| RPHP cannot be supported. The review by the Pennsylvania Department of Health also points out
| that "radiation exposures from nuclear power plants are extremely low" with a range of 0.00001
| millirem to 0.05 millirem per year. The staff observes that these doses are at least three orders
| of magnitude less than the average dose to a person in the United States from natural radiation
| sources.*

| *Health effects from radiation are a well-studied environmental hazard according to the General
| Accounting Office. Over 86,000 studies have been performed on the biological effects of
| radiation, and none of the scientifically valid studies show any radiation effects at doses less
| than 10,000 millirem. For example, in 1990, the U.S. Congress requested the National Cancer
| Institute to study cancer rates in the areas surrounding nuclear power plants to determine if
| there were detrimental effects on the population. This extensive report found no evidence of a
| link between operating nuclear power plants and any increase in cancers. In addition, there are
| no indications in any of the scientific studies that low-level radiation exposure is harmful to
| children or a contributory factor to infant mortality. There are new studies examining molecular
| effects of radiation. However, the implications of these studies are not clear at this time. The
| NRC is always interested in new information and will continue to evaluate such information in
| terms of public health and safety.*

| *The comments provide no new information and, therefore, will not be evaluated further.
| Accordingly, there was no need to change the SEIS text.*

| **Comment:** If somebody came into this room with a gun and killed 24 people in this room,
| promised not to kill anybody else for the next 20 years, would we allow them to walk out? Would

we allow them not to be held responsible for those 24 lives in this room? That is what the Nuclear Regulatory Commission is saying, that they are going to give a license to Peach Bottom to continue to do, 24 deaths. (PBD13-12)

Comment: According to the Federal Register Notice, each re-licensing is expected to be responsible for the release of 14,800 person rem of radiation during its 20 year life extension. (PBD03-7)

Comment: The NRC calculates that this level of radiation release, spread over the population, will cause 12 cancer deaths per unit. (PBD03-8)

Comment: The NRC acknowledges that the allowable limit, 100 millirem a year, for radiation exposure, via air, from any reactor to the general public, will cause a fatal cancer in 1 out of 286 people exposed. This is very high when compared to the standard of 1 in a million considered an acceptable level of human sacrifice for industrial activities. (PBD03-11)

Response: *This calculated value of 12 additional deaths from fatal cancer over the 20 years of additional operation of a nuclear power plant is the result of several conservative assumptions. This value is, in fact, a calculated upper bound value. It does not mean that 12 people will die from cancer as a direct result from an additional 20 years of continued routine operation of any nuclear power plant.*

These calculations use the concept of collective dose. Collective dose estimates effects across a very large population, assuming that a small amount of radiation dose spread out among a large population would yield similar effects to a larger amount of radiation dose to a much smaller population. This is a very conservative assumption. The Health Physics Society, www.hps.org, states "[b]elow the dose of ten rem, estimations of adverse health effect is [sic] speculative. Collective dose remains a useful index for quantifying dose in large populations and in comparing the magnitude of exposure from different radiation sources. However, for a population in which all individuals receive lifetime doses of less than 10 rem above background collective dose is a highly speculative and uncertain measure of risk and should not be quantified for the purposes of estimating population health risks."

The cancer risk factors used in this calculation are also quite conservative. They are from the BEIR-V report, "Health Effects of Exposure to Low Levels of Ionizing Radiation." In this report it is estimated that "if 100,000 persons of all ages received a whole body dose of 0.1 Gy (10 rad) [roughly equivalent to 10 rem] of gamma radiation in a single brief exposure, about 800 extra cancer deaths would be expected to occur during their remaining lifetimes in addition to the nearly 20,000 cancer deaths that would occur in the absence of radiation. Because the extra cancer deaths would be indistinguishable from those that occurred naturally, even to obtain a measure of how many extra deaths occurred is a difficult statistical estimation problem."

Appendix A

The radiation dose contribution to the population from current nuclear power plants is estimated to be 4.8 person-rem per year, whereas the dose contribution to the population from the complete uranium fuel cycle is 136 person-rem per year. The dose to an individual is only a very small fraction of these population doses. The contribution to the average dose received by an individual from fuel cycle-related radiation and other sources is listed in the following table. The nuclear fuel-cycle contribution to an individual's average radiation dose as shown in the table is extremely small (less than 0.001 rem per year).

At the request of Congress, the National Cancer Institute (NCI) conducted a study in 1990, "Cancer in Populations Living Near Nuclear Facilities," to look at cancer mortality rates around 52 nuclear power plants, including Peach Bottom Units 2 and 3, nine Department of Energy facilities, and one former commercial fuel reprocessing facility. The NCI study concluded, "from the evidence available, this study has found no suggestion that nuclear facilities may be linked causally with excess deaths from leukemia or from other cancers in populations living nearby." In addition, the American Cancer Society has concluded that although reports about cancer case clusters in such communities have raised public concern, studies show that clusters do not occur more often near nuclear plants than they do by chance elsewhere in the population.

Source	Dose (mrem/yr)	Percent of Total
Natural		
Radon	200	55
Cosmic	27	8
Terrestrial	28	8
Internal (body)	39	11
Total Natural	300	82
Artificial		
Medical x-ray	39	11
Nuclear medicine	14	4
Consumer products	10	3
Total Artificial	63	18
Other		
Occupational	0.9	<0.30
Nuclear Fuel Cycle	<1	<0.03
Fallout	<1	<0.03
Miscellaneous	<1	<0.03

Source: NCRP Report 93, "Public Radiation Exposure from Nuclear Power Generation in the United States" as abstracted by the University of Michigan (<http://www.umich.edu/~radinfo/>).

The GEIS identified radiation exposures to the public during the license renewal term as a Category 1 issue. This comment provides no new information and, therefore, will not be evaluated further in the SEIS.

Comment: I would like to know the type of radioactive isotopes at the plant, and the half life of these isotopes. Are strontium 90 and strontium 89 the only radioactive isotopes at the plant? (PBD16-11)

Comment: And very interesting that here in Lancaster, York, and Chester County it [strontium-90?] is very high, it is 26 percent higher with the children. (PBD03-20)

Comment: Why has the government stopped taking in body measurements of strontium 90 in bones and teeth? The U.S. Agency for Toxic Substances and Disease Registry, is starting to measure toxic chemicals to determine human exposure. This is the best proof of toxins in the environment. The same needs to be done for radionuclides, particularly Sr-90 in the bones and teeth. Why hasn't the government done this since 1963? (PBD08-3)

Comment: And the other thing we found, so far, in southeast Pennsylvania and elsewhere, the children born in the 1990s have higher levels of strontium 90 than do those born in the '80s, they are going up slightly in Pennsylvania up 12 percent. This cannot be due to the old bomb test fallout just decaying, it has to be due to a current source of strontium 90 which is, can only be nuclear reactors. (PBD06-9)

Response: *Section 4.7 of this SEIS evaluated the studies related to strontium-90 radiation levels in deciduous (baby) teeth and the use of these studies as "in-body" measurements of radioactive materials. The staff concluded from this evaluation that the claims of elevated levels of childhood cancer in the vicinity of the plant caused by the release of strontium-90 during routine operations is without scientific merit. The staff also concluded that these comments do not provide any new and significant information. As part of its Radiological Environmental Monitoring Program, Exelon conducts monitoring of a wide range of fission and activation products (including strontium-89 and strontium-90) in and around the Peach Bottom site. Monitoring of liquid and gaseous effluents is discussed in Section 2.2.7 of this SEIS. This section concluded that the impact to the environment from radioactive releases is SMALL. Sampling and analysis of the environment, which includes fish samples, is also conducted. All fission and activation product concentrations were below the specified limits of detection for the instruments used to measure them.*

The Federal government stopped the analyses of strontium-90 in bones and teeth after atmospheric testing of nuclear weapons was discontinued by the Soviet Union and the United States because there were no significant additional sources of strontium-90. However, the Environmental Protection Agency maintains a sampling program across the United States, including the Philadelphia and Washington, DC areas. The results of these studies are reported

Appendix A

| quarterly and can be located on the EPA website. All sampling results for the latest reporting
| period, April-June 2000, were below the non-detected levels. The comments provide no new
| information and, therefore, will not be evaluated further. Accordingly, there was no need to
| change the SEIS text.

| **Comment:** And not, since we are all here, and I accept your, I'm not angry with anyone, but now
| they are going to give all of us their toxicological waste. And no provision or thought was given
| to this at the inception of these plans, none. I hope you are thinking about it, gentlemen.
| (PBD04-5)

| **Response:** Nonradioactive Waste Systems are described in Section 2.1.5 of this SEIS. Section
| 2.1.5 states that Peach Bottom Units 2 and 3 are small quantity hazardous materials generators,
| with the principal non-radioactive effluents consisting of hazardous (chemical) wastes, lubrication
| oil wastes, and sanitary waste. This section also provides data on yearly generation amounts.
| All of the hazardous materials waste is shipped to licensed facilities for proper storage and
| disposal. No other significant toxicological waste is generated from the plant. The comment
| provides no new information and, therefore, will not be evaluated further. Accordingly, there was
| no need to change the SEIS text.

| **Comment:** Twenty years ago the federal government did a study and showed that if either one
| of the cores of the Peach Bottom reactors had a full meltdown, 72,000 people would die, 45,000
| would suffer acute radiation poisonings, and 37,000 others would develop cancers. Now,
| remember, this is minimum estimate, because if both reactors had meltdowns you could double
| that. This was done 20 years ago, the population has grown since, it only considers the area
| within 30 miles of the plants, and it ignores the stored fuel, the radioactive waste, which consists
| of much, much more radiation than is in the core in fact, there is hundreds of Hiroshima bombs
| worth of radiation in there. The EIS ignores this. (PBD06-1)

| **Response:** The CRAC-2 study evaluated siting criteria and was not designed or intended to be
| used as a study on health effects from nuclear power stations. These numbers are not
| representative of actual or projected deaths. The uranium in nuclear reactors is not fissile grade
| material and therefore will not explode like a nuclear weapon.

| **Comment:** But whenever a community has requested a health study, and the health study has
| shown that, indeed, there are excesses of certain cancers, or leukemia, the response has been,
| but that is too small a sample to have statistical significance. And I think we are at the point
| where we need to think about how many such insignificant studies add up to very substantial
| significance to be taken seriously. (PBD05-8)

| **Response:** The American Cancer Society, on its web site, has stated "Ionizing radiation
| emissions from nuclear facilities are closely controlled and involve negligible levels of exposure
| for communities near such plants. Although reports about cancer case clusters in such

communities have raised public concern, studies show that clusters do not occur more often near nuclear plants than they do by chance elsewhere in the population." The comment provides no new information and, therefore, will not be evaluated further. Accordingly, there was no need to change the SEIS text.

Comment: And related to it is the issue of how the NRC will incorporate the additive doses received from deregulated released, recycled, and reused radioactive materials, not only those generated at the plant, and then subsequently released, either as materials or waste, for recycle, but also essentially the other doses, each of them presumably small, that would be received from other sources of recycled radioactive. (PBD05-2)

Response: *Any radioactive materials that are released will be within regulatory limits. In determining the release limits for recycled materials, several scenarios were developed. These scenarios were worst case scenarios where the individuals would receive maximum exposures from all types of background radiation as well as from recycled materials. The limits therefore account for such impacts from radiation dose. The comment provides no new information and, therefore, will not be evaluated further. Accordingly, there was no need to change the SEIS text.*

Comment: The Pottstown area gets much of its milk from dairies located in Lancaster and York counties, near Peach Bottom. And people ingest Peach Bottom milk. (PBD09-12)

Response: *As part of its Radiological Environmental Monitoring Program, Exelon conducts sampling and analysis of the terrestrial environment, including analyzing milk samples for concentrations of iodine-131 and gamma emitters. No fission or activation products have been found. Sampling locations, collection methods, frequencies, and results are reported in the yearly Annual Radiological Operating Report.*

Additionally, the EPA Office of Radiation and Indoor Air, National Air and Radiation Environmental Laboratory (NAREL) provides data from the Environmental Radiation Ambient Monitoring System (ERAMS). The environmental radiation data (ERD) is compiled and published quarterly, and the reports are available online at www.epa.gov/narel. Sampling for radioactivity (including iodine-131 concentrations) in milk is done quarterly at 55 sampling sites in the U.S. The latest published data for April - June 2000 shows that iodine-131 concentrations were below the "not detected" levels for all 55 sampling sites (including Philadelphia and Washington DC). The comment provides no new information and, therefore, will not be evaluated further. Accordingly, there was no need to change the SEIS text.

Comment: How often are measurements done on the milk, and milk products that enter our communities? (PBD08-7)

Appendix A

Response: *The Environmental Protection Agency maintains a sampling program across the United States. The result of these studies are reported quarterly and can be located on the EPA website.*

Comment: How often are these products tested for strontium 90 and cesium 137, the longer acting isotopes? What about measurements in fish? (PBD08-8)

Response: *As reported in the Peach Bottom Units 2 and 3, Annual Radiological Operating Report, milk samples are collected biweekly from several farms at varying distances from the plant. Typically, two gallon grab samples are collected from a bulk tank at each farm twice a week while cows are on pasture, and monthly during other times. Analysis is done on iodine-131 on biweekly and monthly samples, and gamma spectrometry is conducted quarterly. The sampling for gamma emitters includes potassium-40 and cesium-137, among others. During the sampling period, January 1 through December 31, 2000, naturally occurring potassium-40 was found in all samples with values ranging from 1,360 to 1,700 pCi/L. These values are consistent with natural potassium-40 found in milk (typically 2,000 pCi/L). All other nuclides analyzed for were less than the minimum detectable concentrations.*

Fish samples (bottom feeders and predators) are collected from two locations semi-annually. Sampling for gamma emitters includes cobalt-60 and cesium-137, among others. During the sampling period January 1 through December 31, 2000, all fission or activation products were below the non-detectable levels. The comment provides no new information and, therefore, will not be evaluated further. There was no change to the SEIS text.

Comment: Section 4.1 – Accumulation of contaminants in Sediment Page 4-6. Is there routine monitoring of sediments to assess changes in conditions. (PBD22-5)

Response: *Section 2.7 of this SEIS briefly describes the radiological environmental monitoring program (REMP) conducted by the licensee at the Peach Bottom site since 1974. The program requires sampling and analysis for surface waters, aquatic environment (fish and sediment), atmospheric environment (airborne and terrestrial), milk, and ambient gamma radiation levels, among others. The sediment sampling program includes several locations downstream of the Peach Bottom site. The sampling results are summarized in an "Annual Radiological Environmental Operating Report." The results from the activities of contaminants in the samples represents a dose which is 0.005% of the annual limits. These results were found to be consistent with those from previous years. The comment provides no new information, therefore the comment will not be evaluated further. Accordingly, there was no need to change the SEIS text.*

A.1.11 Comments Concerning Category 1 Socioeconomic Issues

Comment: Second, license renewal will preserve good jobs for this area, and communities like Delta and Peach Bottom Township, where these plants are located, will benefit from the plant's continued operation. (PBD07-4)

Response: *The comment is noted. The comment is consistent with the findings of the SEIS. Public services were evaluated in the GEIS and determined to be a Category 1 issue. The comment provides no new information and, therefore, will not be evaluated further.*

A.1.12 Comments Concerning Category 1 Uranium Fuel Cycle and Waste Management

Comment: The entire nuclear fuel chain, the uranium, primary mines on the lands remaining to the indigenous people, uranium conversion, enrichment, fuel fabrication, each step possesses workers, exposes workers and communities to radioactivity, and each step generates radioactive waste. (PBD03-10)

Comment: Almost 30 years later the fuel pools here at Peach Bottom are almost full. In fact they are putting some into dry cask storage, and the issue of Yucca Mountain, Nevada, being a permanent site, is moving along but it is still up in the air. It will be at least eight years before any transfers are to be made from there. That goes un-addressed here, as well. And the existence of this fuel, again, presents a threat to the public's health. (PBD06-4)

Comment: Why would the NRC renew the license for any nuclear plant when there is no safe way to dispose of the radioactive waste these facilities produce? (PBD09-6)

Comment: When spent fuel rods can't be disposed of safely, why would the NRC allow the process to continue, which produces more of them? (PBD09-7)

Comment: We must assess the nuclear age very carefully. There are more than 450 reactors in operation on the planet today. Each generates radioactive waste that will be a threat to human life for hundreds of thousands of years. (PBD03-17)

Comment: But even if that happens Yucca Mountain is not going to have room for the waste that would be created in these extra 20 years. So you need to be talking about this in this report. Where is that waste going to go? (PBD14-4)

Comment: Now, why are we possibly allowing more of the spent fuel to be created when we can't fit it in this reactor? We are not going to have any place to throw it away, like Yucca Mountain. (PBD14-7)

Comment: Leaving the nuclear waste on site presents additional risks to the surrounding populations. We face far, far too much risk from nuclear waste already. Common sense tells us that the older the nuclear plants get, the more chance there will be for accidental disasters. Why would the NRC allow this increased risk? (PBD09-9)

Comment: There was no mention of my concern of the danger of spent radioactive fuel being stored on site. (PBD16-3)

Comment: Actually Frieda already made mention of it, in Northeast Pennsylvania, where they filled the dry casks with the wrong gases, argon and helium instead of just helium. Now the

Appendix A

NRC report from that stated that they don't know what impacts that might have, but it might degrade the effectiveness of these containers. (PBD14-5)

Comment: And in Point Beach, Michigan, and Palisades, you have the same kind of – not the same kind, but you have other dry cask storage incidents with hydrogen bubble explosions, and wind several times blowing several feet off of the surface, near defective wells with dry casks. (PBD14-6)

Comment: Indeed, it is imperative that we are supposed to be continuing in all our nuclear plant facilities, and the waste transportation actions, to improve in this new era of our homeland security concerns. (PBD17-3)

Comment: Furthermore, I suggest updated commentary be made from NRC persons to address highlighted security measures, both for on-site facilities and for nuclear waste transport off-site. It should be made clear that we all share responsibility as active citizens in Homeland Defense efforts to support continuing safe, efficient operation of our nation's nuclear power plants. (PBD17-5)

Response: *The comments are noted. Onsite storage of spent nuclear fuel is a Category 1 issue. The safety and environmental effects of long-term storage of spent fuel on site has been evaluated by the NRC, as set forth in the Waste Confidence Rule (10 CFR 51.23). In the Waste Confidence Rule, the Commission generically determined that spent fuel generated by any reactor can be safely stored on site for at least 30 years beyond the licensed operating life of the reactor, which may include the term of a renewed license. In the rule, the Commission also generically determined that such storage could be accomplished without significant environmental impact. In addition, the Commission stated in the rule its belief that there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for any reactor to dispose of the spent fuel generated in such reactor up to that time. The "Generic Environmental Impact Statement for License Renewal of Nuclear Plants (GEIS)," NUREG-1437 is based upon the assumption that storage of the spent fuel onsite is not permanent. This plant-specific supplement to the GEIS regarding license renewal for the Peach Bottom Atomic Power Station Units 2 and 3, is based on the same assumption. Likewise, the matter of processing and storage of low level waste is considered a Category 1 issue. The conclusion regarding this issue in the GEIS included consideration of the long-term storage of low level waste on site during the license renewal term. The comments provide no new information; therefore, the comments will not be evaluated further. Accordingly, there was no need to change the SEIS text.*

Comment: Transporting spent fuel rods from nuclear plants such as Peach Bottom in Pennsylvania, across the nation to Yucca Mountain, opens the door for all kinds of natural and terrorist catastrophes all along the way. (PBD09-8)

Comment: One of the things that I think need to be addressed in here, though, that I just looked through this and noticed, is that there is nothing addressing the spent fuel, and where that would go. And even if Yucca Mountain is built, and even if it manages to ship all the waste there with

no accidents, and all these things that we are all hoping, some people are hoping would happen, I don't want to see Yucca Mountain at all. (PBD14-3)

Comment: If you have an accident with one of these trucks carrying the waste, do not expect us to be capable of good care. So I'm sorry about that. As far as I know, at the present time, it is still in the state of lack of preparedness. (PBD11-1)

Comment: Baltimore had a little accident last summer, in one of our tunnels a train carrying chemicals, so that we are a little sensitive about the possibility that any waste materials that might come from here, might come down interstate 95 and maybe go through some of our tunnels. (PBD11-2)

Comment: We would, therefore, come to the conclusion, especially in Baltimore, and our steering committee has authorized me to tell you, keep your waste here, don't bring it through Baltimore, which is essentially saying close the plant down, and don't make any more waste. (PBD11-4)

Comment: And not just for the reasons that I'm telling you, we are not prepared to take care of the casualties if there is accidents, but because of the general idea of terrorists, and also the idea that the waste, if you are going to carry the waste, if you are going to create the waste, then it is best to have it stored at the most local site that there is, in terms of general hazard. (PBD11-3)

Response: *The comments are noted. The radiological and nonradiological environmental impacts from the transportation of fuel and waste attributable to license renewal of a power reactor were evaluated in Section 6.3 of the GEIS and the Addendum and are considered Category 1 issues. The Addendum to the GEIS specifically addressed whether the environmental impacts of the transportation of spent nuclear fuel are consistent with the values of 10 CFR 51.52, Table S-4 "Environmental Impact of Transportation of Fuel and Waste to and from One Light-Water-Cooled Nuclear Power Reactor" as applicable to license renewal, given that it is likely that spent fuel will be shipped to a single destination, such as the proposed repository at Yucca Mountain in Nye County, Nevada. The values in Table S-4 were found to be bounding when accounting for spent fuel shipments to a single destination.*

NRC and other Federal agencies have heightened vigilance and implemented initiatives to evaluate and respond to possible threats posed by terrorists, including threats against transporters of nuclear fuel and waste. Malevolent acts remain speculative and beyond the scope of a NEPA review. NRC routinely assesses threats and other information provided to them by other Federal agencies and sources. The NRC also ensures that licensees meet appropriate security levels. The NRC will continue to focus on prevention of terrorist acts for all nuclear facilities and will not focus on site-specific evaluations of speculative environmental impacts. While these are legitimate matters of concern, they should continue to be addressed through the ongoing regulatory process as a current and generic regulatory issue that affects all nuclear facilities and many activities conducted at nuclear facilities. The NRC has taken a number of actions to respond to the events of September 11, 2001, and plans to take additional measures. However, the issue of security and risk from malevolent acts against nuclear fuel and

Appendix A

waste transporters is not unique to facilities that have requested a renewal to their license and, therefore, is not within the scope of this Supplement. The comments do not provide new information and, therefore, they will not be evaluated further. Accordingly, there was no need to change the SEIS text.

A.1.13 Comments Concerning Category 1 Postulated Accident Issues

Comment: By 1985 the Mark 1 boiling water reactor, or BWR, was again singled out by the NRC for special attention, because of strong indications of a high probability that its containment would not survive several accident scenarios. (PBD01-4)

Comment: NRC director of nuclear reactor regulation, Harold Denton, told an industry conference that the Mark 1 has a high probability, as high as 90 percent for some accident sequences, such as an over pressurization accident. (PBD01-5)

Comment: And as one NRC staffer described, the containment's effectiveness, in an over temperature accident, core melt, as "like a hot knife through butter." (PBD01-6)

Comment: Well, on the risk assessment, I don't think any – the risk is always, it is a risk. And we shouldn't be, I don't think you would have a risk with how many people are going to die from windmills. (PBD03-19)

Comment: I continue to be concerned about an earthquake, given the proximity of the martic fault line (PBD16-7)

Comment: According to a Lancaster New Era article, on July 1st, 1994, corrosive cracks found inside a Peach Bottom reactor "could cause a meltdown during an accident or earthquake, the Nuclear Regulatory Commission said today. Cracks in the York County nuclear reactor are expected to grow, and will have to be monitored, the NRC said. NRC officials also warned that the cracks could lead to a meltdown if they shift during an accident, or a natural disaster? (PBD16-8)

Response: *The comments are noted. Design Basis Accidents, including events initiated by earthquakes, were evaluated in the GEIS and the impacts were determined to be small for all plants. As such, Design Basis Accidents are considered a Category 1 issue. The comments provide no new information and, therefore, will not be evaluated further.*

Comment: I would still like to know how many accidental releases of radiation have occurred at Peach Bottom since it began operations. I would like to know the type of radiation, the amount of each release. (PBD16-9)

Response: *Abnormal releases from Peach Bottom Units 2 and 3 are reported to the NRC as part the yearly Radioactive Effluent Release Report. If the abnormal event involves releases of radioactive materials, their isotope quantities and dose contribution is added to yearly totals being reported. A review of the past several years of the Radioactive Effluent Release Report*

shows that the yearly doses from all releases are well within the annual limits. There was no change to the SEIS text.

Comment: But as the technology has proven, with its people who are in pursuit of nuclear weapons, and the security structures that are required for nuclear technology can't, and will never be there, for the total protection of the population at large. (PBD12-9)

Comment: Why would the NRC renew the license for such a major target for terrorism? The potential to destroy so much, and harm or kill so many people must be ended, not renewed. Even people in the greater Pottstown area could have their health adversely impacted by a terrorist attack, or accidental disaster at Peach Bottom. (PBD09-3)

Comment: The environmental impact statement does not address security concerns regarding the structure vulnerabilities of Peach Bottom's elevated irradiated fuel storage ponds. (PBD01-8)

Comment: It is NIRS stated concern that these elevated storage ponds are extremely vulnerable to a variety of acts of sabotage, radiological terrorism. The environmental impact statement does not adequately address the increased risk by significantly extending the Peach Bottom operating license, and the adverse environmental impact associated with a successful terrorist attack on this vulnerable target. (PBD01-9)

Comment: The NRC report goes on to state; "it is further estimated that one of two [aircraft] crashes damage the spent fuel pool enough to uncover the stored fuel. For example, 50 percent of the time the location of the damage is above the height of the stored fuel." (PBD01-10)

Comment: This raises the questions for NIRS what is the blow-in-rating for such, for this particular section of Peach Bottom? Where has NRC structurally analyzed this section of the reactor building and evaluated the degree of risk associated with extending the time at which we are vulnerable to the consequences of off-site radiation releases from an act of radiological sabotage at Peach Bottom? NIRS contends that the identified vulnerability is an unacceptable risk, with unacceptable consequences, in the clear and present danger of a post September 11th world. A re-licensing proceeding that turns a blind eye on this glaring vulnerability is a sham on the public health and safety, and the environment. (PBD01-11)

Comment: Much to the discussion since the September 11th. Attacks has focused on the resistance of reactor contaminant structures to aircraft strikes. I wonder about Peach Bottom. We all know it was built way too long ago, it won't hold up. (PBD03-16)

Comment: And while that is admirable that you have that, I think it would also be appropriate to have site specific terrorism impact information in here. (PBD14-1)

Appendix A

| **Comment:** But there is nothing about severe, like deliberate damage being done to this reactor.
| And as Paul Gunter gave, on some very clear testimony on the vulnerability site specifically to
| this reactor, I think that needs to be addressed. (PBD14-2)

| **Comment:** And the dry cask storage facilities don't even work, and they are glaring terrorist
| targets, and we know this, and I talked about this the last time, it was after September 11th, then
| too. (PBD14-8)

| **Comment:** It does not ignore two new threats that we have here, beyond when the plant was
| opened. First of all, September 11th., changed everything. We now have this very new, and
| very clear, and very serious threat of a terrorist attack towards a nuclear plant, which certainly
| calls out for a new study, and consideration of safety factors. Number two, we are not talking
| about a plant that is just about to open, we are talking about a nuclear plant that is going to be
| operating from age 40 to 60. (PBD06-12)

| **Response:** *In a recent decision in another license renewal proceeding, the Commission
| discussed the terrorism and sabotage issues raised in the comments. See Duke Energy Corp.
| (McGuire Nuclear Station, Units 1 & 2, and Catawba Nuclear Station, Units 1 & 2), CLI-02-26, 56
| NRC ____, slip op. at 6-7 (Dec. 18, 2002). In that decision, the Commission found that NEPA
| imposes no legal duty on the NRC to consider intentional malevolent acts on a case-by-case
| basis in conjunction with commercial power reactor license renewal applications. The
| Commission concluded that the "environmental" effect caused by third-party miscreants is simply
| too far removed from the natural or expected consequences of agency action to require a study
| under NEPA.*

| *The Commission has also indicated that terrorism differs from matters ordinarily considered in
| an EIS. An EIS may discuss, for example, such matters as likely effects on local water, air
| quality, vegetation, wildlife, culture, and socioeconomic concerns. These effects are reasonably
| certain; an EIS can quantify them to a fair degree of precision. Terrorism, by contrast, comes in
| innumerable forms and at unexpected times and places. It is decidedly not predictable, and it is
| not a natural or inevitable byproduct of the granting of an application. For these reasons, the
| Commission has stated that an EIS is not an appropriate format in which to address the
| challenges of terrorism.*

| *In its recent license renewal decision, the Commission also noted that, particularly in the case of
| a license renewal application, where reactor operation will continue for many years regardless of
| the Commission's ultimate decision, it is sensible not to devote resources to the likely impact of
| terrorism during the license renewal period, but instead to concentrate on how to prevent a
| terrorist attack in the near term at the already licensed facilities. Finally, the Commission
| determined that there appears to be little practical benefit in conducting a license renewal
| terrorism review.*

Nevertheless, the Commission did indicate that its decision not to use NEPA as a vehicle for a terrorism review does not mean that it is ignoring the issue. Rather, the Commission is closely examining the current security and protective framework and already has ordered interim improvements at licensed nuclear facilities, including reactors. We expect further improvements as the internal comprehensive review moves forward.

A.1.14 Comments Concerning Category 2 Aquatic Resource Issues

Comment: Section 4.1.2 – A 1977 NPDES permit is referenced and the best technology available for the intake structure for minimizing adverse environmental impacts. Although subsequent permit reviews have required no further entrainment studies is this still the best technology available? (PBD22-7)

Comment: This text is somewhat confusing in that it can be interpreted as meaning that only 23 samples were taken at the plant and that the numbers impinged should be extrapolated to determine the total annual impingement. However, we are aware that each of the samples represents a cumulative sample – since the prior sample – such that the numbers of fish reported from the 23 samples represents the total number impinged over the study period. We suggest that clarification is necessary to substantiate the conclusion that impingement is not regarded as significant. (PBD20-1)

Comment: In the same section, on page 4-16, the statement is made that the losses of shad and river herring due to impingement are a very small percentage of the total number of out migrating fish and that fish losses are not sufficiently high to pose a threat to the fish restoration effort. While the numbers are small at the present time, the Anadromous Fish Restoration Cooperative 2002 for the Susquehanna River anticipates much larger run sizes in the future. With significant population increases, the numbers impinged may increase and could begin to assume significance. Because current EPA regulations require that PBAPS renew its NPDES permit every five years, we recognize and accept that this issue can be addressed and, if necessary, mitigated through the NPDES process at the time of each renewal. We suggest here, however, that this document in its final version should note that an expected increase in abundance of migratory fishes as a result of restoration efforts could result in an increase in impingement, but that such impingement impacts will be captured and addressed by the NPDES permitting process. (PBD20-2)

Comment: Require development and implementation of an appropriate year-round assessment method for evaluating Susquehanna River fish losses and a mitigation plan for losses of Susquehanna River fish (resident and anadromous) caused by intake impingement. (PBD21-31)

Comment: Currently, there are no provisions for mitigating impacts to Susquehanna River fish caused by impingement by the intakes at the Peach Bottom facility. The current fish collection practices conducted by the licensee's consultant, Normandeau, while useful for monitoring shad

Appendix A

| mortality, cannot be considered an acceptable form of mitigation. As a long-term (for the life of
| the license) mitigation practice we find this practice inappropriate. Although the current level of
| mortality of American shad, by itself, is not considered detrimental to the Shad Restoration
| Program, the loss must be considered within the context that fish mortality numbers are
| expected to increase as the number of American shad restored to the river also increases.
| Additionally, the losses of resident fishes are not accounted for. In this context, we strongly
| recommend that NRC and Exelon determine the impact on all finfish, not only American shad,
| and other aquatic life due to impingement in the Peach Bottom water intake in the Conowingo
| Pool, and that appropriate long-term mitigation measures be developed and implemented by the
| licensee to mitigate for riverine and anadromous fish losses. (PBD21-20)

| **Comment:** The number of impinged juvenile shad found has ranged from a high of 341 fish
| (October 14 - December 10) to a low of 3 fish in 1989 (August 22 through November 22). This
| level of mortality, by itself, is not considered detrimental to the Service's restoration program, but
| the loss must be considered within the context of other sources of loss. These numbers are
| expected to increase as the number of American shad restored to the Susquehanna River also
| increases. (PBD21-3)

| **Comment:** At a minimum, the applicant should establish a year-round screen sampling protocol
| to account for year-round fish losses. (PBD21-4)

| **Response:** *The NRC staff concludes that no further mitigation is needed for impingement. The
| comments provide no new information and, therefore, will not be evaluated further. Accordingly,
| there was no need to change the SEIS text.*

| **Comment:** As a means to avoid adverse impacts to aquatic life, the Department recommends
| that NRC require upgrading of this project to include a closed cooling system instead of the
| existing open cooling system. (PBD21-2)

| **Comment:** Require system upgrading at this project to include a closed cooling system instead
| of the existing open cooling system. (PBD21-23)

| **Response:** *As set forth in Sections 4.1.1 - 4.1.4 of the SEIS, the staff reviewed the Clean Water
| Act 316(a) and (b) demonstrations for Peach Bottom, Units 2 and 3 (PBAPS) and the ER relative
| to potential effects of the cooling system due to operation of PBAPS on the aquatic and other
| resources in the area. Based on this review, the staff has concluded that the potential impacts
| are SMALL, and further mitigation is not warranted. The comments provide no new information
| and, therefore, will not be evaluated further. Accordingly, there was no need to change the SEIS
| text.*

| **Comment:** Exelon uses traveling mesh screens and a spray wash system together to reduce or
| minimize impacts of fish. To further minimize the impacts, in the process of replacing worn or
| damaged screens, the screens should be replaced with mesh size less than or equal to one

millimeter. Additionally, entrance velocities should be less than or equal to 0.5 feet per second (Gowan and Garman 1999). Impinged biota should be removed from the traveling screens and returned to the river. (PBD21-5)

Comment: Require the intake screen replacements to have a mesh size of one millimeter or less, intake water velocities less than 0.5 feet per second, and return biota collected by the traveling screens returned to the river. (PBD21-25)

Response: *The staff has reviewed the available information and based on the results of entrainment studies and the operating history of Peach Bottom Units 2 and 3 intake structure, concludes that the potential impacts of entrainment of fish and shellfish in the early life stages in the cooling water intake system are SMALL. Additionally, the staff has reviewed the available information and based on the results of impingement studies and the operating history of Peach Bottom Units 2 and 3 intake structure, concludes that the potential impacts of impingement of fish and shellfish the on debris screens of the cooling water intake system are SMALL. During the course of the SEIS preparation, the staff considered mitigation measures for the continued operation of Peach Bottom Units 2 and 3. When continued operation for an additional 20 years is considered as a whole, all of the specific effects on the environment (whether or not "significant") were considered. Based on its assessment, the staff concludes that the measures in place at Peach Bottom Units 2 and 3 (e.g., intake screens and the waste heat treatment facility) provide mitigation for all impacts related to entrainment and no new mitigation measures are warranted. The comments provide no new information and, therefore, will not be evaluated further. Accordingly, there was no need to change the SEIS text.*

Comment: Relicensing has the same consultation requirements as original licensing under the Fish and Wildlife Coordination Act (FWCA). Consultation under NEPA does not supplant the need for consultation under FWCA; although these laws are similar, they do not have the same requirements with respect to fish and wildlife, and reporting by the USFWS. As Exelon develops an application for relicense, the USFWS should be consulted during scoping of issues, study needs, and interpretation of results. Draft applications should be made available by the applicant for review and comment. The USFWS comments (i.e, FWCA report) will be provided to the applicant and should be part of their application submitted to the NRC. That report should be considered by NRC when preparing the EIS for the plant. There may be a need for further consultation under the FWCA on NRC's preferred alternative if the "Federal Action" will be significantly different than that proposed by the applicant. (PBD21-21)

Comment: The Department appreciates NRC's request for comments on the draft Supplement 10 and is willing to cooperate further to the extent that we can. At the same time, the USFWS requests that the NRC initiate consultation under the FWCA for relicensing nuclear power plants. The Service does not believe that either the equal consideration or mitigation planning provisions of the FWCA are satisfied by the NEPA process alone. To fully consider the protection of fish and wildlife resources and their habitats affected by each plant, NRC should request that the

Appendix A

| Service provide NRC with reports in accordance with the FWCA which should be part of NRC's
| decision document. (PBD21-22)

| **Comment:** Initiate and continue consultation with the USFWS under the FWCA for the
| relicensing of the Peach Bottom Nuclear Power Plant. (PBD21-32)

| **Response:** *The FWCA requires federal agencies to coordinate their activities to minimize
| adverse effects on fish and wildlife. Regarding the environmental review for the Peach Bottom
| license renewal, the NRC staff interaction with Fish and Wildlife Service consisted of the
| following correspondence as described below.*

| *On October 11, 2001, the staff sent a letter to Mr. John Wolflin, USFWS, informing them of
| receipt of the Exelon application for license renewal at Peach Bottom, and our intent to prepare
| an EIS for this proposed action. The staff requested any information USFWS could provide us
| which would be pertinent to our review of the license renewal application, including any listed,
| proposed, or candidate species that may occur within or near the project area, and any critical
| habitats that may occur near the project area. A map was enclosed indicating the location of the
| power plant site and the transmission line.*

| *By letter dated November 19, 2001, USFWS replied to the staff request. The letter provided
| information on the presence of species which are federally listed, or proposed for listing, as
| endangered or threatened within the project area in accordance with Section 7 of the
| Endangered Species Act. The bog turtle was identified in the letter as a species of interest.*

| *By letter to Ms. Bonnie Crosby, USFWS, dated January 17, 2002, the NRC staff requested FWS
| concurrence with staff conclusions which had been developed during the preparation of the
| environmental impact statement. The conclusions pertained to threatened and endangered
| species in the project area for the proposed license renewal of the Peach Bottom Atomic Power
| Station and included "no effect" and "not likely to adversely affect" determinations for threatened
| and endangered species. Three species were identified: the bog turtle, the bald eagle and the
| swamp pink (a flower).*

| *On April 17, 2002, USFWS replied to the staff's January 17, 2002, letter. FWS concurred with
| the staff conclusions concerning the bog turtle and bald eagle. The swamp pink was not
| mentioned in the FWS response. The FWS also included the statement that this
| correspondence was not to be construed as addressing potential FWS concerns under the
| FWCA.*

| *As summarized above, the NRC staff was in communication with the USFWS as part of the
| agency's environmental review of this license renewal application. In addition, the Department
| of Interior was provided with a copy of the draft EIS and had the opportunity to comment on the
| license renewal. The Department's comments have been carefully considered by the NRC
| during the preparation of and included in the final EIS. Our examination of judicial precedent*

concerning implementation of the FWCA indicates that an agency's satisfaction of its NEPA obligations automatically satisfies the requirements of the FWCA. We believe that our activities have met our NEPA obligations and, thus, have satisfied the FWCA.

A.1.15 Comments Concerning Category 2 Transmission Line Issues

Comment: Section 4.2.1 – Electromagnetic fields, acute effects. – Are there any considerations for anticipating what would trigger a concern for future effects during the license renewal term? For example, if additional transmission lines are added in the area will it change the conclusion of this section. (PBD22-8)

Response: *Section 4.2.1 of the GEIS concluded that acute effects from electromagnetic fields from the power lines at the Peach Bottom site are small. This conclusion was reached after calculation results showed the induced effects were below the standards established by the National Electric Safety Code (NESC). The conclusion is consistent with the current scientific data and studies on effects from power line electromagnetic fields. If additional power lines were to be constructed during the license renewal period, consideration would be given to engineering designs such that the collective induced effects from the power lines would still remain below the NESC standards. There was no change in the SEIS text.*

A.1.16 Comments Concerning Category 2 Socioeconomic Issues: Historic Resources

Comment: Pg. 4-36/24-25 “The applicant should reflect the aforementioned in its licensing basis commitments and...” comment not applicable to issue. (PBD18-16)

Response: *The text has been changed to remove the reference to licensing basis commitments.*

Comment: A letter dated September 9, 2002, from the Delaware State Historic Preservation Officer (DE SHPO) is included in this appendix. In this letter, the DE SHPO made several comments.

Comment: The Atomic Energy Commission might not have met National Historic Preservation Act Section 106 responsibilities when it made its early 1970s decisions to grant operating licenses for Units 2 and 3 at Peach Bottom. (PBD19-1)

Response: *The NRC staff carefully reviewed the records and found that the Atomic Energy Commission (AEC) met the compliance standard for historic preservation consideration when the AEC made its decisions to issue the initial operating licenses for Peach Bottom Atomic Power Station, Units 2 and 3 (PBAPS).*

Appendix A

The original regulations, implementing Section 106 of the Act (36 CFR 800), were promulgated in 1979, five years after the NRC granted the original licenses for operation of Units 2 and 3 at Peach Bottom Atomic Power Station. The Advisory Council on Historic Preservation had no prescribed regulatory process for Federal agencies to demonstrate compliance with National Historic Preservation Act Section 106 responsibilities until 1979.

As required by Section 106, in 1972 the AEC provided information on the proposed action for PBAPS, including information on historic and archeological resources and determinations, to the Advisory Council on Historic Preservation with a request for comment. There is no record to indicate that the Advisory Council on Historic Preservation objected to the AEC's determinations.

The feeder canal, now identified as a historic property by the DE SHPO, was documented in September 1974, after the AEC issued the operating licenses. The NRC was not aware of the feeder canal until informed by the DE SHPO's office in 2001.

Comment: The proposed license renewal is a Federal undertaking with the potential to affect historic properties. (PBD19-2)

Response: The NRC staff agrees.

Comment: The feeder canal is a historic resource that meets standards for listing on the National Register of Historic Places. (PBD19-3)

Response: Without taking a position in agreement or disagreement with the DE SHPO, the NRC staff considered the canal as though it were a historic resource potentially eligible for listing on the National Register for the limited purpose of addressing the DE SHPO's interests.

Comment: Operation of the PBAPS under the current license has caused adverse effects on the feeder canal at the transmission line crossing. (PDB19-4)

Response: Operation and maintenance of the Peach Bottom-to-Keeney transmission line was not the cause of past adverse effects on the feeder canal at the transmission line crossing. The utility corridor at the intersection with the feeder canal is approximately 400-foot wide; it is the same width as it was in 1968, well before the Peach Bottom line was added to the corridor. Three other overhead transmission line easements, and at least one underground utility easement share the corridor at the crossing. An NRC decision to either approve or deny the license renewal applications for PBAPS would not alter maintenance practices along the Delaware portion of the Peach Bottom-to-Keeney transmission line; maintenance would continue the same with or without the use of an easement on the corridor for the Peach Bottom-to-Keeney transmission line. The licensee does not own the land at the corridor crossing of the feeder canal nor does it have maintenance responsibility for the corridor at the crossing. The corridor is clear of trees, but is grass and brush covered, and has been in a similar condition since before the Peach Bottom-to-Keeney transmission line was constructed. A gravel-surfaced

utility road meanders through the corridor and crosses the remnant trench for the feeder canal underneath the Peach Bottom line, but is not exclusively for maintenance of the Peach Bottom-to-Keeney transmission line. The access road that crosses the feeder canal replaced previous fords in the area of the corridor dating back to as early as 1937.

The old feeder canal alignment remains a visible and well-defined feature along much of its original route through present-day woodlands. It displays less definition and more in-filling as it passes under the transmission corridor. The changes under the transmission corridor are cumulative effects from a range of human and natural activities that extend back in time to a period well before the addition of the Peach Bottom-to-Keeney transmission line to the utility corridor.

NRC team review of aerial photographs indicates the feeder canal remained relatively intact until after 1968. At that time, and before 1977, small noticeable changes began to occur and continue today. First, a utility road crossed the feeder canal at a new place in the transmission corridor and below the present-day Peach Bottom-to-Keeney transmission line. Second, a series of cumulative changes began then, and continue to the present. These include gradual loss of vegetation along the alignment of the canal and a progressive loss of sharpness in the features of the canal as viewed from the air.

The license renewal process for Peach Bottom Units 2 and 3 is an undertaking and is subject to the regulations of the Advisory Council on Historic Preservation. The Chesapeake and Delaware Feeder Canal (Feeder Canal, which the transmission line connecting Peach Bottom Units 2 and 3 with the Keeney substation bisects, is not beyond the area of potential effects of the license renewal. Ownership or control of the lines does not limit the consideration of whether to include the property within the area of potential effects because such a limitation would hamper identification and consideration of the type and degree of undertaking effects on historic properties. Also, when there is a disagreement between a federal agency and a State Historic Preservation officer with regard to the eligibility of a particular property as historic, it is the federal agency's responsibility to seek a formal determination of eligibility from the Secretary of Interior. The DE SHPO contends this has not been done. And, the Feeder Canal, which may be eligible for listing on the National Register of Historic Places has and is subject to future damage or destruction due to lack of adequate maintenance of the transmission line. The loss of physical features, and the in-fill of the Feeder Canal where it is crossed by the transmission line, constitutes adverse effects due to destruction and neglect. (PBD19-5)

Response: *The NRC staff has determined that the Delaware portion of the Peach Bottom-to-Keeney transmission corridor is outside of the Area of Potential Effects (APE). Notwithstanding any representations made by NRC applicants, the Agency official (the Director, Office of Nuclear Reactor Regulation) has determined that the APE for a license renewal action is the area at the power plant site and its immediate environs which may be impacted by post-license renewal land disturbing operation or projected refurbishment activities associated with the proposed action. The APE may extend beyond the immediate environs in those instances where post-license*

Appendix A

renewal land disturbing operations or projected refurbishment activities specifically related to license renewal of the nuclear power plant potentially have an effect on known or proposed historic sites. This determination is made irrespective of ownership or control of the lands of interest.

For the proposed PBAPS license renewal, the licensee has stated, and our review has shown, that there will be no major structural modifications, that maintenance activities will be confined to previously disturbed areas, and that there will be no additional land disturbance. Further, the NRC staff has determined that the decision to approve or deny the requested license renewals would not affect maintenance practices or land disturbances beyond the substations at the PBAPS site where the generating units are connected to the distribution system. Therefore, the APE for the proposed PBAPS license renewal is the plant site, which is wholly within the Commonwealth of Pennsylvania. The PBAPS APE does not extend into Maryland or Delaware. In its letter of December 14, 2000, the Pennsylvania Historical and Museum Commission, Bureau for Historic Preservation (the State Historic Preservation Office), determined that National Register-listed, eligible, historic, and archeological resources are present in the general vicinity of the PBAPS site, and stated an opinion that the proposed license renewal will not affect any of those resources. The NRC staff agreed with this determination and opinion. Therefore, consultation was not required.

Regarding the degraded portion of the feeder canal, where it crosses the transmission line corridor in Delaware, the NRC staff included this site in its review of environmental resources of interest as the staff prepared its environmental impact statement (EIS) to comply with the National Environmental Policy Act (NEPA). The NRC staff review included a visit to the canal during the staff's PBAPS site audit in November 2001. The staff disclosed its NEPA findings in its Draft Supplemental Environmental Impact Statement (SEIS) issued for public comment on July 5, 2002.

The NRC staff has determined that, even if the APE were to be extended through Maryland to the Delaware portion of the Keeney transmission line corridor, the proposed renewal of the PBAPS operating licenses would have no effect on the feeder canal where it crosses the Peach Bottom-to-Keeney transmission line corridor.

Comment: In correspondence received during the scoping period, The DE SHPO also stated that the NRC staff should consider three specific actions to take into account the effects of the undertaking to grant the license renewals for PBAPS. (PDB19-6)

Response: *The DE SHPO requests fall into two categories: (1) an action suggested with the intent to correct the perceived negative result of past operations, and (2) specific actions to prevent future deterioration of the feeder canal. The NRC staff forwarded the recommendations to the applicant in correspondence dated November 26, 2001, even though the recommended actions have no direct bearing on the undertaking.*

For the license renewal period, the applicant indicated that it plans (1) no major structural modifications, (2) to limit maintenance activities to previously disturbed areas, and (3) no additional land disturbance. Consistent with the NRC's "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (NUREG-1437), under such conditions, the NRC staff believes continued operation of PBAPS would have no effect on any known or on potential unknown or undiscovered historic or archaeological resources located in areas of potential effect.

As part of its consideration of the DE SHPO correspondence, the NRC staff completed a supplementary analysis based on a scenario which postulated the inclusion of the Delaware portion of the Peach Bottom-to-Keeney transmission line corridor in the National Historic Preservation Act Area of Potential Effect. In that supplemental analysis, the NRC staff applied the criteria of adverse effect pursuant to 36 CFR § 800.5(a)(1) and found that the proposed undertaking to extend the PBAPS licenses would not alter the characteristics of the potentially historic property known as the Chesapeake and Delaware feeder canal. This conclusion followed consideration of DE SHPO views concerning such effects and incorporated analyses of past, present, and potential future conditions.

A.1.17 Comments Concerning Decommissioning Issues

Comment: The draft Supplement 10 contains an evaluation of partial or total decommissioning of existing facilities as the alternative to relicensing. Such analysis should answer at least the following additional questions: How would contaminated facilities and unused or spent fuel be disposed? How would the project sites be reclaimed? What would be the consequences for fish and wildlife resources and their habitat at both the former project sites and disposal area? (PBD21-6)

Comment: Evaluate the potential consequences of decommissioning (contaminated facilities and unused or spent fuel disposal, reclaiming project site, consequences for fish and wildlife resources and their habitats at former project sites and disposal areas) in the alternatives analysis for relicensing. (PBD21-24)

Response: *As described in Section 7 of the SEIS, environmental issues associated with decommissioning which result from plant operation during the renewal term are discussed in the GEIS. Decommissioning issues applicable to Peach Bottom Units 2 and 3 include radiation doses, waste management, air quality, water quality, ecological resources, and socioeconomic impacts. During its review of the license renewal application, the staff did not identify any new and significant information beyond that which is in the GEIS. For all of the applicable issues related to decommissioning, the staff concluded in the GEIS that the environmental impacts are SMALL, and additional plant-specific mitigation measures are not likely to be sufficiently beneficial to be warranted. The comments provided no new and significant information. Accordingly, there was no need to change the SEIS text.*

Appendix A

A.1.18 Comments Concerning Alternatives to License Renewal

Comment: But to replace nuclear power with solar power, you are telling me has a large environmental impact. Quite amazing. How can you say this and get away with it? (PBD13-1)

Response: *The LARGE environmental impact has to do with the potentially large scale of land and other resources required for the amount of solar panels necessary to replace 2186 MW(e) at Peach Bottom. NUREG-1437 reports that 14,000 ha of solar panels are required to generate 1000 MW at 7% conversion efficiency, so to replace Peach Bottom's capacity would require 30,000 ha, or about 3.3 billion square feet. That is 306 km² (118 mi²), if placed on the ground, resulting in the loss of the land for other uses. Rooftop applications could reduce the impact but, would require the equivalent of 80% of all commercial building rooftops in the Mid-Atlantic Census Division (all of Pennsylvania, New York, and New Jersey).*

Staff inquiries to the National Renewable Energy Laboratory yielded a current average commercially available conversion efficiency of perhaps 10% today, 25% availability, and a lower overall requirement for land (approximately 8,000 ha per 1000 MW), which reduces the figures to 175 km² and 1.9 billion square feet of rooftop by about one-half. However, even if efficiency of solar panels increases substantially from today's levels, a large amount of land or rooftop space still would be required for the necessary solar arrays. If the panels were mounted on greenfield sites rather than rooftops, the impact on ecological resources could also be substantial.

Minor changes were made to the SEIS to clarify the staff's conclusions.

Comment: The amount of solar energy striking Pennsylvania each year is 140 times greater than all the electrical and fossil fuel energy consumed in the state annually. Even if the conversion efficiency of sunlight to energy is only 5 percent, solar energy could still supply 7 times more energy than is consumed. (PBD13-9)

Response: *The overall supply of solar irradiance on Pennsylvania is not in dispute. Chapter 8 deals with the question of environmental and cost requirements to exploit this solar energy for electricity. No changes were made to the SEIS as a result of this comment.*

Comment: So when I read that the environmental impact of replacing nuclear energy with solar power was large, and the impact of continuing Peach Bottom for 20 more years was small, I was totally blown away. (PBD13-10)

Comment: I wonder where you got all your information from? The numbers that are cited have NRC in parentheses. Since when is the Nuclear Regulatory Commission experts on solar energy? (PBD13-11)

Response: *The NRC document is NUREG 1437, the Generic Environmental Impact Statement for License Renewal of Nuclear Plants. Chapter 8 of that document reports the results of an extensive exercise by staff at the Oak Ridge National Laboratory to characterize the technical performance and environmental impacts of a large number of energy generation technologies, including solar. Recent contacts with the staff of the National Renewable Energy Laboratory*

solar energy program lower the amount of land necessary to replace the Peach Bottom plant with solar photovoltaic panels but do not invalidate the LARGE land impacts stated in Section 8.2.5.3.

Comment: The draft report notes the socioeconomic problems associated with the shutdown and decommissioning of Peach Bottom. However, if a power plant were to operate around the same area, using renewable resources, such a plant would need a large number of employees who would probably be just as involved in the community as the current Peach Bottom employees. (PBD16-12)

Response: *Chapter 8 discusses the socioeconomic impacts of replacement power plants. Generally speaking, replacement plants would require fewer long-term employees than Peach Bottom. In addition, the local community would experience the impacts associated with constructing the replacement plant or plants. No changes in the SEIS text were made as a result of this comment.*

Comment: You said there were places that would be good for wind, but it would be inaccessible. I can't imagine any place being inaccessible, when you think of where all the high tension utility wires are going through right now. It almost looks like it would be inaccessible and yet they are there. What place in Pennsylvania would be inaccessible for wind? (PBD03-2)

Comment: Now, in this report, under wind, it mentioned that ridge lines are unsuitable for wind resources. Now, that is the most ridiculous thing I have ever heard. (PBD14-15)

Response: *The best wind resources in Pennsylvania are along ridge tops in the steeper parts of the Allegheny and Appalachian Mountains (see, for example, the Pennsylvania Wind Map available from the Pennsylvania Department of Environmental Protection (<http://www.dep.state.pa.us/dep/deputate/pollprev/energy/wind/windmap.htm>). The largest wind generators are likely to be 1 MW to 1.5 MW units, so about 1500 to 2200 wind towers would have to be installed to replace Peach Bottom capacity. Since wind is an intermittent resource (perhaps 30percent to 35percent availability), three to four times this number would be needed to replace the kWh generated by Peach Bottom.*

Accessing many of the best wind energy ridgelines would require extensive road building, as well as land clearing (for tower and blades) and leveling (for the tower bases and associated facilities) in very steep terrain. While not impossible, this is expected to be very costly, so many of the ridgelines with good wind resources may be inaccessible from a practical standpoint. Also, some of these areas are not already developed as farmland. They are in state parkland or not near transmission lines or would require clearing forested land. No changes were made to the SEIS as a result of these comments.

Comment: When, indeed, there are available other much cleaner, much cheaper, much more durable sources to generate the electricity, the energy that we need. (PBD05-4)

Response: *The other alternatives are considered in Chapter 8.0 and in NUREG 1437, Chapter 8. Although relative cost is an issue for the applicant, state energy regulators, and the marketplace to resolve, the environmental impacts of the various alternatives to relicensing are*

Appendix A

not obviously less than those of the routine operation of the Peach Bottom Plant, and in most cases are considerably greater. While the durability of wind, solar, and water resources is theoretically greater than that of fossil and nuclear fuels, the durability of facilities to convert these resources to electricity is not. Need for energy is outside the scope of the relicensing EIS, since the renewed license only preserves the option to operate the plant.

No changes were made to the SEIS as a result of this comment.

Comment: There is plenty of wind along the ridge lines, and Exelon knows this, because community energy is going ahead and building large wind farms in Pennsylvania, some of them on ridge lines. Yes, they are deforesting some of them, and there are impacts. (PBD14-16)

Comment: There is a 60 megawatt wind farm going on line in Northeast Pennsylvania. Exelon is underwriting that. There are already two in Southwest Pennsylvania, Exelon underwrote those as well. There is another one going in, in West Virginia, in the Backbone mountain, another 60 megawatts. (PBD14-17)

Response: *The wind farms discussed are relatively small scale. Somerset is 9 MW, Mill Run is 15 MW, Pocono is 60 MW, Moosic Mountain is 50 MW. Backbone (in West Virginia) is 65 MW. Mountaineer (in West Virginia—due to open in the spring of 2003) is 66 MW. These are considered among the best sites in the Eastern United States. The replacement of Peach Bottom power would require an additional 36 wind farms of the size stated for the West Virginia site or replicating the entire existing Exelon wind resource 12 times to produce the necessary generating capacity, and 40-45 times to generate the replacement kWh because of the 30-35 percent capacity factor for wind energy. Wind energy cannot be used as base load power since capacity factors are in the mid-30-35 percent range. Based on figures available in the NUREG-1437, Chapter 8, the amount of land dedicated to wind facilities would be about 61 ha (134 ac) per MW based on the Altamont Pass, California facility.*

Based on the latest Storm Mountain proposal in West Virginia, the land needed might be only 18 ha (40 ac) per MW. Even this lower figure results in a need for 153 square miles of land to replace Peach Bottom capacity. Assuming a capacity factor of 30-35 percent yields 450-500 square miles dedicated to wind farms to replace Peach Bottom, clearly a large potential impact on land use and ecological resources.

Comment: And so the wind part of this report is woefully inadequate, it is scientifically inaccurate, it is just wrong, you need to do your homework. (PBD14-18)

Response: *Wind figures were double-checked (see answers to comments) and land requirements appear reasonable. See answers to PBD03-2 and PBD14-17.*

Comment: The head of the Department of Environmental Protection in Pennsylvania, David Hess, was actually quoted at the Energy Conference where that natural gas presentation was given, saying that using just the decent wind speed sites in Pennsylvania, we can supply 30 percent of our electricity needs in this state. Now, what he is quoting is from the American Wind Energy Association, which is using Department of Energy data, which is working on being

revised, it is not really that optimistic. However, 30 percent is pretty high. And even if it turns out to be 10 percent, that is very significant, and that needs to be addressed in this report. (PBD14-19)

Response: *The American Wind Energy Association report addresses wind potential in very general terms. While there are several wind farms in various stages of development by Exelon and others in Pennsylvania and nearby states to address increases in future demand (not replacement of currently operating plants) it would be necessary to increase in wind generating facilities by a factor of between 15 and 45 times current capacity in difficult terrain to replace Peach Bottom. Approximately 450 to 500 square miles of the best wind sites would be committed for this purpose, with accompanying land and environmental impacts. No changes were made in the text of the SEIS.*

Comment: And also, a lot of this is addressing section E, on A-48 you mention over 50 competitive suppliers in Pennsylvania. This report, again, needs to be updated. There were close to 50 when deregulation first hit Pennsylvania, that is before we had PPL doing the Enron-like games here. Since then competitors have fled as quickly as they can, we have very few suppliers that are left in this state right now, especially for the residential sector. For the business sector we have some, but it is still not looking that good. (PBD14-20)

Response: *According to the Pennsylvania Public Utility Commission website on September 30, 2002, there were 63 companies licensed to be competitive electricity suppliers in Pennsylvania (http://puc.paonline.com/electric/elect_comp.asp). No changes were made in the text of the SEIS.*

Comment: And also on that same page, on page 8-48, there is basically no incentive for Exelon to be pushing conservation in a competitive market. Well, yes, that is a problem, that is a problem with the whole system of having a competitive market for things, when the logic in this report is saying, Exelon is not going to do it, that is not going to happen. (PBD14-21)

Response: *The commenter appears to agree with the staff position that demand side programs are less likely in a competitive environment than in a regulated monopoly environment. No changes were made to the draft SEIS as a result of this comment.*

Comment: And that is, basically, the assumption that I saw in here because, otherwise, we can easily talk about methods of conserving enough electricity, and without just looking back at their failed attempts as a utility to work as against their own economic interest. (PBD14-22)

Response: *Despite indications in section 8.2.5.11 that the environment for demand reduction would be difficult under competitive electricity supply regimes, staff assume in Section 8.2.6 that some additional electricity (half of the amount supplied by Peach Bottom), can be conserved, with the rest supplied by natural gas combined cycle generation. The amount conserved in this scenario is 8.2 GWh, the equivalent of 20 percent of all Pennsylvania households' annual electricity consumption or 37 percent of all PECO electricity sales in Pennsylvania in the same year. No changes were made to the draft SEIS as a result of this comment.*

Appendix A

Comment: So the whole no-action alternative, the wind, the solar estimates, the conservation efficiency estimates completely need to be rewritten. (PBD14-24)

Response: *Minor changes to text have been made to elaborate on Staff conclusions regarding the alternatives to relicensing Peach Bottom Units 2 and 3.*

Comment: The findings, the second reason is the findings of ongoing studies that show that fossil fuel plants emissions are considerably more damaging to the local health and welfare than previously thought. (PBD10-2)

Response: *While the SEIS presents information on the impact of relicensing and its alternatives, it is unclear from the comment what was "previously thought" concerning the effects of alternatives on local health and welfare. No changes were made as a result of this comment.*

A.1.19 Comments Concerning Out of Scope Issues: Operational Safety, Emergency Preparedness, Aging Management, Cost of Power, and Need for Power

Operational Safety and Emergency Preparedness

Comment: I found no mention of my request that past performance of the plant be taken into account, including control room operators sleeping on the job. (PBD16-2)

Comment: There was no mention of my comments about the problems with the emergency warning sirens. (PBD16-4)

Comment: "Two former contract technicians deliberately falsified siren testing maintenance records, and performed inadequate siren tests while professing that all activities on siren records were properly done. And, two, one of these technicians knowingly installed jumper wires to bypass failure detection circuitry on at least 10 siren boxes, which would demonstrate that the sirens were working properly, even if they were not." (PBD16-5)

Comment: Shouldn't the public be made aware of why Peach Bottom 1 was closed in 1987? It is true that the cause was operators were sleeping on the jobs, and taking drugs? Where are the records published about the plant violations, such as those in 1982, '83, and the death of an employee in 1985? (PBD08-4)

Response: *The comments are noted. The NRC's environmental review is confined to environmental matters relevant to the extended period of operation requested by the applicant. Operational safety is outside the scope of this review. An NRC safety review for the license renewal period is conducted separately. Although a topic may not be within the scope of review for license renewal, the NRC is always concerned with protecting health and safety. Any matter potentially affecting safety can be addressed under processes currently available for existing operating licenses absent a license renewal application. The comments provide no new information, and do not pertain to the scope of license renewal as set in 10 CFR Part 51 and Part 54. Therefore they will not be evaluated further.*

Comment: This idea that people will evacuate under some sort of system is completely baseless and irrelevant. There has been reports that come from the accident at Three Mile Island, whereas earlier the doctor mentioned about not having adequate physicians, and people to use in the evacuation. Will they be around? (PBD12-3)

Comment: This has been determined that nuclear accidents are not the same as natural disasters. People who are responsible, who want to be, the system relies for their jobs to show up, will not show up. (PBD12-4)

Comment: And what is going to happen if a nuclear evacuation is called? There is going to be spontaneous evacuation outside the ten mile EPZ, further jamming up the highways, and making it impossible for anybody to get out. (PBD12-5)

Comment: So as I always say at these hearings, when I go to them, is that the least you can do is to tell the people to stay put in their houses. (PBD12-6)

Comment: Somebody else is talking about how we will evacuate. I live next door to an amish family, lots of buggies here, lots of buggies. Very dangerous, normally, on route 74 with those buggies. I can't imagine evacuating all the people from this area. (PBD13-7)

Comment: There is no way that anybody escapes out of a ten mile EPZ safely, within a certain amount of time. (PBD12-1)

Comment: If nukes are so safe why do our phone books have an evacuation route, why is the industry trying to figure out where to dump their deadly waste, and why is 46,000 dollars of your country's budget, our money, going yearly to radiation emergency response? (PBD03-18)

Comment: I've never seen any evacuation plant for the Amish. (PBD16-1)

Response: *The comments are noted. The NRC's environmental review is confined to environmental matters relevant to the extended period of operation requested by the applicant. Emergency preparedness is outside the scope of this review. An NRC safety review for the license renewal period is conducted separately. Although a topic may not be within the scope of review for license renewal, the NRC is always concerned with protecting health and safety. Any matter potentially affecting safety can be addressed under processes currently available for existing operating licenses absent a license renewal application. The comments provide no new information, and do not pertain to the scope of license renewal as set in 10 CFR Part 51 and Part 54. Therefore they will not be evaluated further.*

Comment: Are Emergency Planning and Community Right to Know (EPCRA) 313 reporting requirements considered or are any of the EPCRA requirements applicable to this supplement. (PBD22-2)

Appendix A

Response: *The supplemental environmental impact statement (SEIS) considers the environmental impacts associated with renewing an operating license for up to 20 years beyond the current operating license expiration date. Renewal of the Peach Bottom Units 2 and 3 operating licenses does not, by itself, alter the applicability of EPCRA reporting requirements already in effect prior to the time the license renewal is issued. Therefore, EPCRA reporting requirements are not applicable to this SEIS.*

Comment: KI must be given to all the populations within at least 50 miles of the plant. (PBD12-7)

Comment: The social consequences of a nuclear evacuation has been underplayed and on the side line for the last 30 years. It really has come to fore because of 9/11, and now the redistribution of potassium iodide tablets. (PBD12-2)

Comment: The NRC would also have to stockpile iodine pills in schools, day care centers, places of work, and so forth. Soaring rates of thyroid cancer are still appearing in children from the former Soviet Union, who were exposed to Chernobyl nuclear accident, and who received too little potassium iodine, and too late. (PBD03-13)

Response: *The NRC has made potassium iodide available to States that wish to include thyroid prophylaxis in their range of public protective actions to be implemented in the event of a serious accident at a nuclear power plant that would be accompanied by a release of radioactive iodine. The Commission issued a Final Rule on potassium iodide in the Federal Register on January 19, 2001 (66 FR 5427), which includes the Rule, a statement of considerations, and responses to public comments received during the rule-making process.*

Aging Management

Comment: We have been following the issue of there are a whole host of issues, particularly with regard to age related deterioration of the reactors. And the vulnerability of some of the materials that make up the reactor are being evaluated 10, 12 years in advance of the issuance of the license. And what we are seeing is that by and large there are more uncertainties with regard to how cracks grow, how they initiate, how quickly they can grown up to failure. (PBD01-1)

Comment: Vent containment to save it. A botched design, a proposed ban by its own safety officials. Its primary containment system later verified to have an irreversible design flaw. A principal safety boundary jury rigged, and Peach Bottom was given its first new lease on life with significant reduction of its often touted defense in depth hardware and philosophy. Today these badly designed and deteriorating reactors are being re-licensed for an additional 20 years only if increased risk of adverse environmental impact to our safety, and the economy, and the water, and the land resources. (PBD01-7)

Comment: My name is Frieda Berryhill, and I'm concerned with this aging management program because we had a lot of problems with the cracks and embrittlement in the nozzles, particularly. (PBD02-1)

Comment: To make my point, cracks and leaks, and embrittlement of the material of the materials in aging plants is well known by the NRC. (PBD02-4)

Comment: And, again, after extension the nozzle cracks were discovered. And earlier this year Quartz City in Illinois reported a problem with those. And that is a dangerous problem with those. And that is a dangerous problem. (PBD02-5)

Comment: Although I'm angered that this old nuclear plant is even up for the license renewal, the NRC's own standards stated Peach Bottom was supposed to close 30 plus years ago. What has changed? Has anyone from the NRC personally inspected every piece of rusty metal, worn parts, fractured cement? There is no way Peach Bottom can operate safely, or economically, and should be shut down, according to the Nuclear Regulatory Commission's own figures. (PBD03-3)

Comment: We don't know what a 40 or 50, or 60 year nuclear plant will be like; will the plants wear out mechanically? (PBD06-2)

Comment: So it is clear here that we need to see more in terms of what would happen in terms of an aging plant, and in terms of a possible accident. (PBD06-3)

Comment: It is – maintenance is a continual problem. (PBD08-6)

Response: *The comments are noted. The NRC's environmental review is confined to environmental matters relevant to the extended period of operation requested by the applicant. Safety matters related to aging are outside the scope of this environmental review. To the extent that these comments pertain to managing the effects of aging on components and structures specified in 10 CFR 54.21 during the period of extended operation to ensure functionality, they will be addressed in the parallel safety review. The comments provide no new information and will not be evaluated further in the context of the environmental review. However, the comments will be forwarded to the project manager for the license renewal safety review for consideration.*

Cost of Power

Comment: The production of nuclear power is extremely energy intensive. The energy consumed by future needs, such as shipping 77,000 tons of nuclear waste all over the country, much more being produced, this doesn't even figure into the calculations. (PBD02-6)

Appendix A

| **Comment:** Everything from the insurance that Peach Bottom has that all nuclear power plants have is paid for by me, the taxpayer, through the federal government. (PBD13-2)

| **Comment:** The other thing is we fund the nuclear regulatory industry through our taxes. I don't know how much you all make, but I bet it can buy a lot of solar panels. (PBD13-3)

| **Comment:** Let's see, Yucca Mountain. If you decide to put that waste at Yucca Mountain how much are you planning on spending to do that? How much do you spend in regulation and cleanup from the mining of uranium? I mean, you put all that money together, it can buy a hell of a lot of solar panels. (PBD13-4)

| **Comment:** It is estimated that over 50 billion dollars per year is spent by the Federal Government in directly subsidizing the costs associated with fossil and nuclear fuels. (PBD13-5)

| **Comment:** These costs do not show up in the price we pay for energy, but we pay for them just the same. We pay for them in our tax dollars, we pay for them with our lives, in cancer. If these hidden costs, often referred to as externalities, were included in the price we pay for energy, then solar energy would be in a far better position to compete with conventional fuels. (PBD13-6)

| **Comment:** Why would the NRC renew the license of any nuclear plant, when it costs the public so much money to protect these facilities from terrorism? How long can we afford to absorb that kind of cost? (PBD09-4)

| **Comment:** What kind of debt would we be planning to leave for our children, and their children, just for the constant surveillance of nuclear plants? (PBD09-5)

| **Comment:** Why do our tax dollars have to pay for Peach Bottom, a private company, hazardous operation? (PBD03-14)

| **Comment:** Is Peach Bottom required to put up a bond and for how much? Is there any insurance for an accident, and what amount of insurance? (PBD03-4)

| **Comment:** What will happen if and when the plant becomes so unsafe that our land values go down and we can no longer live here? (PBD03-5)

| **Comment:** Will the owners of Peach Bottom go into bankruptcy, like Enron? What will happen, who will pay for all this? (PBD03-6)

| **Comment:** How much disaster insurance does Peach Bottom carry for York County? We have a right to know. Are you going to pay for our land when it becomes useless? What will happen? (PBD03-12)

Comment: But the big concern that I have here is the future generations. We are talking 250,000 years of financial indentured servitude. Because the Exelon Corporation is not going to pay for the maintenance and the overhead costs of this facility for 500 years, 1,000 years, and so on. Who is going to do it? It is our children, and our grandchildren, and or great-grandchildren, and countless future generations. (PBD04-3)

Comment: I don't know if they are in bed with Enron, but I tell you what, Exelon, when they are done with it, probably already has secret plans to simply go bankrupt. And when they do, who pays the bill? (PBD04-4)

Comment: Third, renewal of Peach Bottom's license is far more economical than building a new power plant. (PBD07-5)

Comment: Well, building on the economy of scale that would be less than a billion dollars, 6 to 700 million dollars, will bring the cost of solar panel production down by four to five times, so that is cost effective with other forms of electricity generation. (PBD14-25)

Comment: And when I say cost effective I'm talking about cost effective with the subsidized, and not real cost that nuclear reactors are currently getting because nuclear reactors are currently getting, because nuclear reactors aren't cost competitive either, that is why they are so heavily subsidized. (PBD14-26)

Response: *The comments are noted. The economic costs and benefits of renewing an operating license are specifically directed to be outside the scope of license renewal in 10 CFR 51.95(c)(2). The comments provide no new information and, therefore, will not be evaluated further. There were no changes made to the SEIS.*

Need for Power

Comment: We export so much electricity, I know it is not done on a state by state basis, but how much is generated versus used in each state? Pennsylvania is the largest exporter. (PBD14-10)

Comment: Now, on top of that excess capacity, Pennsylvania has been faced with 50 to 70 new natural gas power plants. One of them right here in the Peach Bottom area. Now, these power plants, first of all, just the one here at Peach Bottom would be at least half as large as the reactors that are already here. So half the capacity could, theoretically, if they build this plant, be shut down. (PBD14-11)

Appendix A

| **Comment:** But even the ones that are likely to go through is more than 10,000 megawatts.
| Meaning we can not only shut down Peach Bottom, both units, we can shut down all the nukes in
| Pennsylvania, and no one's lights are going to go out, no one is even going to notice.
| (PBD14-12)
|

| **Comment:** The mid-Atlantic region generating capacity in 2001 through '3, you have
| approximately 20,000 megawatts, maybe a little less than that, being added, according to this.
| Now, PJM has a lot more than that. But even in the lower end of these two estimates you have
| twice as much of all the nuclear capacity in Pennsylvania being filled, mostly by natural gas, in
| the next few years. So the no-action alternative already says that this power is getting replaced,
| whether you like it or not. (PBD14-13)
|

| **Comment:** Earlier in the presentation today it was explained that the reason that is being done
| twelve years in advance is to give Exelon time for replacement power. Now, that is ridiculous
| because it is already getting replaced, so that is not a legitimate argument. The replacement
| power time frame that is needed, even if there was a need for replacing this specific reactors
| power, could be done within two to three years, because that is the time frame for establishing
| wind, and/or natural gas, both power plant technologies take only a few years. (PBD14-14)
|

| **Comment:** And, finally, page 8-49, the very first few lines it says, therefore it is not clear
| whether Exelon or another competitor supplier will construct new generating units to replace
| Peach Bottom units 2 and 3 if the license were not renewed. Again, you are getting at this idea
| that you have no idea what is going on currently, or if you do, you are not writing it into this
| report. This power is already being replaced. (PBD14-23)
|

| **Response:** *The comments are noted. The need for power is specifically directed to be outside
| the scope of license renewal in 10 CFR 51.95(c)(2). The comments provide no new information
| and, therefore, will not be evaluated further. There were no changes made to the SEIS.*
|

| **A.1.20 Editorial Comments**

| **Comment:** Pg. 1-11 / 4,7 "Excelon" typo – correction "Exelon" (PBD18-1)
|

| **Comment:** Pg. 2-7 / 18 "The operation is infrequent" should say "This dredging operation is"
| (PBD18-2)
|

| **Comment:** Pg. 2-7 / 29, 32, 34 "rocket" correction required "This term should be deleted"
| (PBD18-3)
|

| **Comment:** Pg. 2-6 / 25 "Conowongo" typo – correction required "Conowingo" (PBD18-4)
|

Comment: Pg. 2-11/17 “water storage tank” should say “water storage tank, and Torus dewatering tank. (PBD18-5)

Comment: Pg. 2-19/12 “...uses an ammonium chloride-based molluscide” verbiage should state “uses an Quaternary-amine-based molluscide” (PBD18-6)

Comment: Pg. 2-21/ 38 “...a consortium of Federal regional... rephrase wordage “a consortium of utilities and Federal, regional,...” (PBD18-7)

Comment: Pg. 2-37/ 8 “emission stacks” change word usage to “emission stack” (PBD18-8)

Comment: Pg. 2-37/8 “There is no visible plume” should read “There is no visible vapor plume...” (PBD18-9)

Comment: Pg. 2-43/24 “and railroads) were change word usage to “and railroads, etc.) were” (PBD18-10)

Comment: Pg. 2-47/39 “NRC is consulting with the FWS” change word usage to “NRC has consulted with the FWS” (PBD18-11)

Comment: Pg. 4-15/13 – 15 “The designed operation criteria are maintained in part by removal of sediments that are deposited in the canal. Maintenance of the designed depth for the intake canal helps ensure that approach velocities at the screens meet criteria. Delete text “These sentences should be deleted” (PBD18-12)

Comment: Pg. 4-15/19 “NPDES Permit PA00097733” correction required “NPDES Permit PA 0009733” (PBD18-13)

Comment: Pg 4-17/9 “Five mechanical draft cooling towers” correction required “Three mechanical draft cooling towers are located on berms...” (PBD18-14)

Comment: Pg. 4-34/33 “Hisroric” typo – correction required “Historic” (PBD18-15)

Comment: Pg. 4-36/26 “...not have an effect effect on any...” remove duplicate “...not have an effect on any...” (PBD18-17)

Comment: Pg. 4-36/35-36 “Given the commitments of the applicant to avoid future disturbances and to control access to lands it managēs...” modification to original understanding as stated “Given the commitments of the applicant to limit land disturbances in support of license renewal...” (PBD18-18)

Appendix A

- | **Comment:** Pg. 4-38/6-10 “The listing of counties is not correct.” Correction – proper information
| “For counties entirely in the 50 mile zone, delete Kent County DE, and add New Castle County
| DE. For countless partially in the 50 mile zone: add Kent County DE.” (PBD18-19)
|
- | **Comment:** Pg. 4-38/22 “...criteria, Table 4-8 indicates...” correction – proper graphic “...criteria,
| Figure 4-1 indicates...” (PBD18-20)
|
- | **Comment:** Pg. 4-39/Map “Maryland Counties include Kent and Queen Annes.” Typo/proper
| information “Maryland Counties include Queen Anne but not Kent” (PBD18-21)
|
- | **Comment:** Pg. 4-45/30-31 “...and its independent analysis, and pending the outcome of
| consultation with the FWS, it...” revise statement “...and its independent analysis, it...”
| (PBD18-22)
|
- | **Comment:** Pg. 4-45/34-35 “Therefore, it is the staff’s preliminary determination...” revise
| statement “Therefore, it is the staff’s determination...” (PBD18-23)
|
- | **Comment:** Pg. 4-48/38 “BEIR” correction required – spelling of acronym “Biological Effects of
| Ionizing Radiation (BEIR)” (PBD18-24)
|
- | **Comment:** Pg. 4-51/13 “isptope...” typo – correction required “isotope” (PBD18-25)
|
- | **Comment:** Pg. 4-51/35 “Considerable of technical literature” rephrase sentence to read “A
| considerable amount of literature” (PBD18-26)
|
- | **Comment:** Pg. 4-58/12 “Units w and E...DPR44 and Dpr-56 typo – correction required “Units 2
| and 3...DPR-44 and DPR-56” (PBD18-27)
|
- | **Comment:** Pg. 6-6/17-21 and 6-8/29-30 “On February 15, 2002, subsequent to the...This
| change in regulatory status does not cause the staff to change its position...” status change to
| “On July 23, 2002, the President signed into law House Joint Resolution 87 designating Yucca
| Mountain as the repository for spent nuclear fuel.” (PBD18-28)
|
- | **Comment:** Pg. 8-38/37 “...construc-tion...” typo – correction required “...construction...”
| (PBD18-29)
|
- | **Comment:** Pg. 8-55/7 “Pennsylvania Power & Light Company (Exelon)” typo – correction
| required “Exelon Generation Company LLC (Exelon)” (PBD18-30)
|
- | **Comment:** Pg. F-2/24 “A.1” correction “F.1” (PBD18-31)
|

Comment: I have read the above document and find the information content and its presentation to be clear and comprehensive, in response to the public needs regarding the license renewal process. All major regulatory requirements are noted and explained, in addition to specific responses to questions put forth during and after the general scoping meeting in November, 2001 in Delta, PA. Detailed coverage was given of all major environmental topics, including demographics, background operational data, and reasonable future activities. Current data that addressed specific health and operational concerns were presented, as requested by local residents and concerned citizens. Using risk management procedures, it was shown that any / all plant activities have minimal or small levels of risk to the environment or to human health. (PBD17-6)

Response: *The comments are noted. As appropriate, the comments resulted in modification of the SEIS text.*

Comment: Please elaborate on the term "staff" used frequently throughout the EIS. Specifically, the relationship of the Staff to the NRC and Exelon. (PBD22-1)

Response: *The term "staff" refers to the NRC staff and its contractors who participated in the environmental review and the preparation of the SEIS. The contractors were experts in selected environmental disciplines from Lawrence Livermore National Laboratory, Argonne National Laboratory, Pacific Northwest National Laboratory and Information Systems Laboratory. A listing of these experts is included in Appendix B of the SEIS. There is no organizational relationship between Exelon and the NRC staff and its contractors.*

Comment: Is there any information contained in document that is sensitive or classified, that should be removed or made available through different means? (PBD22-3)

Response: *There is no sensitive or classified information contained in the document that should be removed or made available through different means. Since September 11, 2001, the NRC staff has implemented a broad range of measures to strengthen the processes for protecting sensitive and classified information. One of these measures includes the establishment of a step in the SEIS pre-publication process which requires a review for the specific purpose of ensuring the published draft and final SEISs contain no sensitive or classified information.*

Appendix A

A.2 Public Meeting Transcript Excerpts and Comment Letters

Transcript of the Afternoon Public Meeting on July 30, 2002, in Delta Pennsylvania

[Introduction, Mr. Cameron]
[Presentation by Mr. Tappert]
[Presentation by Mr. Anand]

FACILITATOR CAMERON: Raj, let's see if there are some questions for you. And I just wanted you to clarify one thing before we go out to the audience.

You said the schedule was 25 months. Can you give people a specific target date, or month, for when this decision is supposed to be made?

MR. ANAND: The Commission plans to issue operating licenses for both units, units 2 and 3, in July 2003.

FACILITATOR CAMERON: You mean they will issue their decision on whether to renew the licenses?

MR. ANAND: Right.

FACILITATOR CAMERON: All right. You heard Raj talk about the overall process and, specifically, about the safety evaluation. We are going to go on to other subjects.

Are there any questions about the process at this point? Yes. And give us your name, please.

MR. GUNTER: My name is Paul Gunter, and I'm with the Nuclear Information Resource Service in Washington.

PBD01
0
1-
1

We have been following the issue of -- there are a whole host of issues, particularly with regard to age related deterioration of the reactors.

And the vulnerability of some of the materials that make up the reactor are being evaluated 10, 12 years in advance of the issuance of the license. And what we are seeing is that by and large there are more uncertainties with regard to how cracks grow, how they initiate, how quickly they can grow to failure.

And, yet, this license proceeding is taking it, basically, approaching this issue of age related deterioration, 10, 12 years in advance of when this license will be necessary.

Can someone address, to us, why the license renewal proceeding is occurring 12 to 14 years, in some cases, before the license is actually to expire?

FACILITATOR CAMERON: Thanks, Paul. And I not only would like the NRC staff to answer that question, but I think the implication in Paul's question is between the time the decision is made on these license renewal applications, if there was an affirmative decision, how will the NRC monitor continued aging types of impacts after that point.

We are going to John Tappert.

MR. TAPPERT: All right. Yes, you are accurate, we do it often well in advance of the expiration of the license. Our regulations allow them to submit an application up to 20 years before the original license expires.

The reason for that is to allow them to make economic decisions if, in fact, the license is not renewed, to replace base-load power. I mean, there is a long lead time for those kinds of facilities.

What we are assessing is to make sure that they have aging management programs in place to identify cracking and to replace components as they are needed.

Additionally, just because the license is renewed doesn't mean they are exempt from regulatory oversight. If a mechanism has come to our attention, I'm sure you are familiar with the Davis-Besse head degradation event, that is an operating reactor issue, and we are dealing with that, with all of the entire fleet of PWRs, irrespective of whether they are coming into license renewal or not.

So we still have a variety of regulatory means to go out and do inspections, and request actions for the licensees to respond to aging management or any other degradation mechanisms.

FACILITATOR CAMERON: Okay, thank you John. Let's go to -- yes, ma'am?

PBD02
02-1

MS. BERRYHILL: My name is Frieda Berryhill, and I'm concerned with this aging management program because we had a lot of problems with the cracks and embrittlement in the nozzles, particularly.

Will this be managed centrally from Washington, or does each plant have a managing program concerning aging?

FACILITATOR CAMERON: That is a great question. Can we have someone talk about how the NRC headquarters and regions, in our regional office, divide up responsibility for not only the license renewal review, but continued aging management issues? Does someone want to try to handle that?

We are going to go to John.

MR. TAPPERT: The question is, is the program being run out of headquarters, and the regional offices?

Appendix A

MS. BERRYHILL: Centrally, yes. We cannot address our concerns due to aging because that is really the main problem that concerns us.

MR. TAPPERT: Yes. I would say headquarters is -- we are running the license renewal review out of headquarters. I'm out of headquarters, most of these gentlemen are also out of our headquarters office, and the office of nuclear reactor regulation.

And we are doing the reviews of the aging management programs to make sure that they are in place, and acceptable. The region has a role, they do inspections for us, they inspect to make sure that they are looking at the right components, and that they have appropriate programs in place.

They also have ongoing inspection activities at the plant. You may or may not be aware we have NRC employees stationed at the plant, around the year. And those are regional employees.

So all the inspection activity is coming out of the region, but this particular review is being run out of headquarters, and we have contact numbers that will be provided in the presentation, to get a hold of us.

MS. BERRYHILL: But aging managing is the new --

FACILITATOR CAMERON: We need to get everybody on the transcript, so let me bring this out to you if you have a follow-up question. If you could just repeat that question, the last one you asked for?

MS. BERRYHILL: Yes, aging management is a new department, do we have someone to address when something like this comes up?

FACILITATOR CAMERON: Absolutely. John, why don't you go up to that mike and I will stay out here.

MR. TAPPERT: Okay. The branch that I'm part of is called license renewal and environmental impacts. And one of the sections looks at aging management programs.

And Raj Anand is the safety project manager who specifically is overseeing that review. We are going to give you a bunch of names at the end. You can contact any of us, and we will get you in contact with the right person. Actually Dr. P.T. Kuo is the one who is actually heading our organization.

FACILITATOR CAMERON: Thanks, John. And I would just emphasize, when we are done with the meeting today, please take the opportunity to talk to the NRC staff that are here, they will try to be helpful with questions.

And I think we do have some of our regional staff here, today, too. Let's go to this gentleman, and then we will go over here.

MR. NELSON: Allan Nelson, NEI. I would just like to respond a bit to the woman's question, if I may.

The NRC has developed a document called Generic Aging Lessons Learned, where it takes into all the operating experience that have occurred up to April 2001. From that point on it is up to the NRC, and the licensee, to evaluate any aging lessons learned that can take place from that time forward, and incorporate it into its license.

And then as part of its ongoing program continue to evaluate operating lessons learned, and implement those into their program, as they see fit for that particular licensee.

FACILITATOR CAMERON: Thanks, Allan, for that additional information. Let's go to you.

MR. SILVER CLOUD: Rutisa Lugisky, here locally. That is Silver Cloud in the English language. The question I have, has any forethought been given to 500 years, 1,000 years from now, as to the aging management thing? Honestly, has anyone thought that far out?

FACILITATOR CAMERON: Okay, thank you Silver Cloud. And I'm not going to try to say the Cherokee word for your name, for obvious reasons.

John, Raj, you heard the question, and it deals with continual evaluation. And do you have something for Silver Cloud?

MR. TAPPERT: This particular review that we are doing now is to relicense the plant for an additional 20 years. So the focus is to have aging management programs to cover that period of time.

When you are talking to these longer time frames, it is not so much this particular facility, which will not be operating in those times, but there will be a geological repository to handle the spent fuel waste, and those areas we do look at those kinds of time frames.

FACILITATOR CAMERON: When this license, if this license is renewed, it will be renewed for a specific period of time. Can you just tell people, you or Raj, what that renewal period is?

MR. TAPPERT: Right. The current expiration is 2013 and 2014, they will be adding another 20 years to that, 2033 and 2034.

FACILITATOR CAMERON: Thank you very much. Any other questions on this part of the process, before we go to the environmental?

(No response.)

FACILITATOR CAMERON: Okay, thank you very much, and thank you Raj, thank you John. Now we are going to go to Duke Wheeler, who is the project manager for the environmental review, and he is going to give you an overview of the environmental review process.

[Presentation by Mr. Wheeler]

Appendix A

MR. MCDOWELL: As Chip said, my name is Bruce McDowell, I work at the Lawrence Livermore Laboratory, and I'm the task leader for the team that prepared the supplemental EIS for the Peach Bottom Power Plant.

This slide shows that the approach that we use in making this analysis. The generic environmental impact statement, which Duke has referred to as the GEIS, NUREG 1437, identifies 92 environmental issues that are evaluated for license renewal.

Sixty nine of these issues are considered generic, or category one, which means that the impacts are the same for all reactors, or the same for all reactors with certain features, such as plants that have cooling towers.

For the other 23 issues, referred to as category 2, the NRC found that the impacts were not the same at all sites, and therefore a site-specific analysis was needed. And on this slide it shows the category 2 approach.

Only certain issues addressed in the GEIS are applicable to Peach Bottom. For those generic issues that are applicable to Peach Bottom, we assessed if there was any new information related to the issue that might change the conclusion in the GEIS, which is the new and significant information on the slide.

If there is no new information, then the conclusions of the GEIS are adopted. If new information is identified, and determined to be significant, then a site-specific analysis would be performed.

For the site-specific issues related to Peach Bottom, a site-specific analysis was performed

And, finally, during the scoping period, the public was invited to provide information on potential new issues, and the team during their review looked to see if there were any new issues that needed evaluation.

For each issue identified in the GEIS, an impact level is assigned. These impact levels are consistent with the Council on Environmental Quality Guidance for NEPA analysis.

For a small impact the effect is not detectable, or too small to destabilize, or noticeably alter any important attribute of the resource.

For example, the plant may cause the loss of adult and juvenile fish at the intake structure. If the loss of fish is so small that it cannot be detected in relation to the total population of the river, the impact would be small.

For a moderate impact the effect is sufficient to alter noticeably, but not destabilize important attributes of the resource. Using the fish example, again, if losses at the intake canal cause the population to decline, but then stabilize at a lower level, the impact would be moderate.

And, finally, for an impact to be considered large the effect must be clearly noticeable and sufficient to destabilize important attributes of the resource.

So if losses at an intake canal, for instance at Peach Bottom, cause the fish population to decline to the point where it cannot stabilize, and continually declines, that impact would be large.

In Chapter 2 of the draft supplemental EIS we discuss the plant and the environment around the plant. In Chapter 4 we then looked at the potential impacts for an additional 20 years of operation at the Peach Bottom Nuclear Power Station.

The issues that the team looked at are issues related to the cooling system, the transmission lines, radiological issues, socioeconomic issues, groundwater use and quality, and threatened and endangered species.

I'm going to take a few minutes to discuss the highlights of our analysis. If you have any questions about our findings, Chip will give you an opportunity to ask them.

One of the issues we looked at, closely, is the cooling system for the Peach Bottom station. This is the ladder, the cooling intake, and the canals.

Although there are a number of category 1 issues related to the cooling system, and remember that we said that category 1 issues are those that have been determined to have the same significance for all plants, no new and significant information was identified, either during scoping, by the Applicant, or by the Staff during the review.

The issues that the team looked at on a site-specific basis include water use conflicts, entrainment, and impingement of fish and shellfish, heat shock, and enhancement of microbiological organisms.

We found that the potential impacts in these areas were small and additional mitigation measures were not warranted.

Radiological impacts are a category 1 issue, because it is often a common concern to the public. I want to take a minute to discuss this issue at Peach Bottom.

We looked at the effluent release and monitoring program during our site visit. We looked at how the gaseous and liquid effluents were treated and released, as well as how the solid wastes were treated, packaged, and shipped.

We also looked at how the Applicant determines and demonstrates that they are in compliance with the regulations for release of radiological effluents.

This slide shows you the near site, or on-site location the Applicant monitors for atmospheric releases and direct radiation. There are a number of other monitoring stations beyond the site boundary, including locations where water, milk, fish, and food products are sampled.

Appendix A

| Our review of the releases, and the resulting dose calculations, found that the doses to the maximally exposed individuals in the Peach Bottom vicinity, were very small fractions of the EPA environmental radiation standards.

| In addition we found no new and significant information relating to this issue. The releases from the plant and the resulting off-site potential doses are not expected to increase on a year to year basis, during the 20 year license renewal term.

| During scoping comments were received with claims of elevated childhood cancer resulting from releases of strontium 90. I'm going to do a short summary at the end of my presentation. Any questions, I think, would best be directed toward Tricia, who is here from the NRC.

| But to summarize the findings in Section 4.7, doses to the public from routine Peach Bottom emissions were specifically evaluated in the 1996 generic EIS for license renewal, and were found to be within regulatory limits.

| In-plant monitoring of effluent streams establishes that there have been no significant releases of strontium 90 from the Peach Bottom plant. In addition no causal relationship has been established between levels of strontium 90 and deciduous teeth, and childhood cancer.

| Lastly there is a unanimous consensus, in the scientific community, that current radiation protection standards are protective of public health. Therefore the team concluded that the information provided during the scoping period, regarding strontium 90 releases is not new and significant, and does not change the conclusion in the 1996 GEIS, that the radiological impacts are small.

| The last issue I would like to discuss from chapter 4 is that of threatened and endangered species. There are no federally listed aquatic species that occur, currently occur, within the vicinity of Peach Bottom and the Conawingo pond.

| There are a number of terrestrial species listed as threatened and endangered that may occur in the range of the Peach Bottom Power Station and the transmission lines.

| The lower Susquehanna river is an important bald eagle area in Pennsylvania, and one of the areas in the state where bald eagles can be observed year round.

| There are ten active bald eagle nests near the Conowingo pond, and recent surveys indicate that as many as 10 to 15 eagles over-winter in the vicinity of the Peach Bottom discharge canal, which may be the only part of the river that is not frozen.

| Bog turtles are known to occur in the vicinity of the transmission line, but a survey performed on the line did not find any suitable habitat of those areas in the corridor.

Peregrine falcons are very rare in the Peach Bottom area, although the area is within their range. There is a plant species called the swamp pink, which was not observed during surveys of the transmission corridor.

In other chapters of the GEIS we evaluated the uranium fuel cycle and solid waste management, and decommissioning. All issues for the uranium fuel cycle and solid waste management, as well as decommissioning, are considered category 1.

For our analysis we did not find any new or significant information related to these issues, and so we adopted the conclusions in the GEIS.

The team evaluated the potential environmental impacts associated with the Peach Bottom power station not continuing operation. The team looked at no-action, new generation from coal-fired, gas-fired, and new nuclear, purchased power, alternative technologies such as wind, solar, and hydropower, and then a combination of different alternatives.

For each alternative we looked at, we looked at the same type of issues. For example, we looked at land use, terrestrial ecology, aquatic ecology, socioeconomics that we looked at during the license renewal term.

Our preliminary conclusion for the alternatives, and this includes the no-action alternatives, is that these alternatives may have environmental impacts that at least in some impact categories, reach moderate or large significance.

Now I would like to turn this back over to Chip, and if there are any questions specifically regarding the radiation issues?

FACILITATOR CAMERON: Okay. I think that we might have some follow-ons to Paul's question on radiation and other questions. So perhaps the easiest thing to do is to find out, to ask, to deal with the questions that are on other aspects of the draft environmental impact statement, get those questions in to Bruce, and answers, and then start off with Trish Milligan addressing Paul's question about who the regulations, NRC regulations, are targeted to.

So with these non-radiation questions, Judy, and Marcia.

MS. JOHNSRED: Judith Johnsred. I do want to ask Mr. McDowell to repeat his statement that I jotted down as: There is unanimous agreement in the radiological public health sector that the existing standards are adequately protective of public health. Did I get that correct, based on what you've just said?

MR. MCDOWELL: I can read it again.

MS. JOHNSRED: Yes, please.

Appendix A

| MR. MCDOWELL: I said: Lastly, there is near unanimous consensus in the scientific
| community.

| MS. JOHNSRED: Yes, I don't think you said near before, did you? Go ahead, I'm sorry.

| MR. MCDOWELL: I may have misspoke. There is near unanimous consensus in the scientific
| community that current radiation protection standards are protective of public health.

| MS. JOHNSRED: Have you looked at the, what I believe is, the current ICRP reexamination,
| specifically of tritium?

| MR. MCDOWELL: This sounds like a radiation question that I think Trish Milligan could better
| answer.

| MS. JOHNSRED: I have a second question here. I will come back to my second one if it
| comes to me.

| FACILITATOR CAMERON: Marcia, I'm going to come over to you. But let me just make a
| point. Is that even though Judy Johnsred had a question about have you considered, and we
| are going to go to that for answers, that some of these questions implicitly raise comments on
| the draft environmental impact statement, and we will take them as such, comments to consider
| in our review.

| Marcia:

| MS. MARKS: My question was on consideration of alternatives. I didn't see up there
| conservation. I mean, take a look at this room right now. If you would use some proper lighting
| you could reduce the energy needs extremely.
| And I think this is one of the best ways to reduce energy needs.

| FACILITATOR CAMERON: Okay, Bruce, how was conservation considered in terms of
| alternatives?

| MR. MCDOWELL: As I said at the start of this presentation, this is sort of the highlights of our
| presentation. But conservation is considered in chapter 8 of the supplemental EIS.

| FACILITATOR CAMERON: Okay. Another question before we go to the radiation? Yes, and
| give us your name, please.

PBD03

| MS. SMITH: I'm Sandy Smith, a member of
| Pennsylvania Environmental Network. I don't know,
| is this the time to ask a question that I have on
| environmental impact? I just heard you mention it.

03-1

I'm concerned, I know some people that have lived here all their life, and they have fished here all their life. And starting in the '80s they've noticed carp in this area that are one-eyed, have strange fins, are different, they don't fight much to be caught. And I'm under the impression, I don't fish or anything, but this is not common for carp. And this seems to be the only area around here that there seems to be some sort of a problem with the carp.

Have you, has anyone brought this to your attention, have you done anything about it, has it been identified, what is happening to the carp?

FACILITATOR CAMERON: Thank you.

MR. MCDOWELL: During our analysis we met with the Fish and Wildlife Service, and with the people that are responsible for the Fishery Restoration Program, where they do sampling, and they inspect, or they monitor the progress of the Shad Restoration Program in the river.

And so the people that we talked to I think were fairly familiar with the fishery in the river, and this has not come up. This has not come up. It may be a valid comment, it has not come up in our conversations with the state and local agencies.

MS. SMITH: Would you look into it?

FACILITATOR CAMERON: Absolutely, Sandy, we will consider that as a comment on this, that will be evaluated.

Judy, do you have that second question?

MS. JOHNSRED: Yes.

FACILITATOR CAMERON: All right.

MS. JOHNSRED: It came back to me. So Pennsylvania is in process of the introduction of a substantial package of legislation resulting from our joint state government commission's work this past year, that would foster the use of alternative sources, with particular emphasis on wind development.

Now, I do know, understand, that Exelon had been considering a 100 megawatt PB, pebble bed modular plant, and has apparently decided not to do so, reactor. And we will be having, to my understanding from the Penn State Research Center, approximately that amount of additional electricity committed from wind by the end of this year.

Appendix A

| So my question is, how and to what extent, did you handle the potential for wind development to satisfy future demand, alternatively, from the Peach Bottom plants?

| MR. MCDOWELL: If you would like to look in chapter 8, that is where it is discussed. Our general approach to looking at alternatives were looking at alternatives that would replace the capacity of the Peach Bottom plant.

| And we looked at a report, I can pull out the exact report for you, that analyzed or looked at the potential for wind sites in Pennsylvania. And a lot of the wind sites, as I remember, were in inaccessible locations, or were in environmental sensitive areas.

| And that limited the number of wind sites, and made some, I think, uneconomic. But due to the fact that wind power is not a very economic, or all the economies, it is not competitive, economically, and the fact that there is not very many locations within Pennsylvania, it didn't look in our analysis, and I will have to go back and show you what we looked at. That the -- I'm sorry, did you want to rephrase that?

| FACILITATOR CAMERON: Judy, do you have a follow-up?

| MR. MCDOWELL: That there wasn't a potential for wind power to replace the site.

| MS. JOHNSRED: In your economic analysis of wind were you including in comparison with the operation of the nuclear reactor, waste costs for management and disposal?

| MR. MCDOWELL: I think it was all costs.

| MS. JOHNSRED: All costs of wind. And what were the waste costs associated with wind that you considered, please?

| MR. MCDOWELL: No, I didn't say that there were waste costs of wind. I said we considered all the costs associated with the operation.

| MS. JOHNSRED: So were there costs associated with waste, related to wind generation?

| MR. MCDOWELL: I think that in any operation there is some waste.

| MS. JOHNSRED: And what would the waste be with respect to wind?

| MR. MCDOWELL: Well, I think you would have maintenance waste.

| MS. JOHNSRED: And how does that compare, in cost analysis, with the waste generated by the Peach Bottom reactors for the additional 20 years of operation?

MR. MCDOWELL: We did not do a comparison of waste streams between wind --

MS. JOHNSRED: Thank you.

MR. MCDOWELL: -- power and nuclear.

MS. JOHNSRED: Thank you.

FACILITATOR CAMERON: And, Judy, again the implication, I guess, is there is a critique implied there of the analysis. Sandy?

03-2

MS. SMITH: It kind of took me back. You said there were places that would be good for wind, but it would be inaccessible. I can't imagine any place

being inaccessible, when you think of where all the high tension utility wires are going through right now.

It almost looks like it would be inaccessible, and yet they are there. What place in Pennsylvania would be inaccessible for wind?

MR. MCDOWELL: I'm sorry, I didn't mean it was inaccessible for wind, I thought it was inaccessible for connection to a transmission grid.

MS. SMITH: I don't understand if the wires can go there?

MR. MCDOWELL: I can show you in the report. It is hard for me to talk without having the report in front of me. But we can talk about this, and I can discuss it with you, off-line.

FACILITATOR CAMERON: And, Sandy, is that okay with you if we do it specifically? All right, okay.

Let's do a couple more questions, and let's get to the radiation issue. All right, Silver Cloud, do you have a quick question for us? And then I'm going to ask Bruce if it is okay if Trish shares the microphone, comes up there to answer the questions?

MR. MCDOWELL: Sure.

FACILITATOR CAMERON: Silver Cloud?

PBD04 MR. SILVER CLOUD: Well, this is actually a statement of fact. I'm glad the lady made mention
0 of something about the fish. But ten years ago my family, we decided not to take any fish, or
4- partake of any fish out of the lake, because we noticed ten years ago that sores and
1 abnormalities on fish in the lake.

Appendix A

| We love perch, and we love etcetera, etcetera, the various things, the blue gill. So this is not a
| new thing, it is going on. And, apparently, not enough investigation is going on to really check
| this out.

| I can say this because I have seen it with my own eyes, and I do not lie.

| FACILITATOR CAMERON: Thank you, Silver Cloud. In other words, well not in other words,
| but another comment on issues to explore.

| And, Trish, could you come up and at least start with this issue?

| MS. MILLIGAN: Hi, I'm Trish Milligan, I'm a certified health physicist with the NRC. I'm also a
| pharmacist, I'm licensed to practice pharmacy in 13 states, including Pennsylvania.
| I spent a number of years as a nuclear pharmacist, dealing with radioactive drugs for
| diagnostics, and also for treatment. I've spent a fair number of my professional career working
| for nuclear reactors.

| I also worked for myself for a while, it didn't work out too well, and then I came to the NRC.
| To answer your question here, who we are trying to protect? When we do, we require
| licensees to file each year an annual effluent report. And in that annual effluent report we
| expect them to characterize the waste stream, and then we expect them to do dose
| calculations.

| In fact we require them to do dose calculations, looking at all of the critical groups. And the
| critical groups include infants, because we know infants are more than just small adults, they
| aren't, they have very different metabolisms, they breathe at different rates, they have different
| dose factors connected with infants.

| We also have them do calculations that look at children, and then we have them look at
| calculations for adults. And when they go through and do these calculations, and I've done
| these for a number of years for myself when I was working for a utility, that was my
| responsibility, was to do these calculations.

| You would do the calculations, and then one would float to the surface, if you will, as the critical
| group. Sometimes it was children, sometimes it was infants, occasionally it was adults, but
| typically it was children.

| These doses were reported in the annual effluent reports which are available publicly through
| the NRC, and I believe the licensee, Peach Bottom can supply them to you, also.

| And in these reports you look at what these doses are, and they are typically reported in milli
| rem doses. They are appendix I limits, which are very conservative limits, 5 milli rem whole
| body, and numbers that are similar to that for organ doses.

| And these doses are typically infractions of milli rem doses. So we look at these constantly.
| Each year that the licensee operates they file with us this report. So we have an ongoing

understanding of what the doses are to the whole range of the population. Not just organ doses, but skin dose, and whole body dose.
Does that answer --

FACILITATOR CAMERON: Paul, does that answer your question? And if you have a follow-up, if you wouldn't mind using that microphone?

MR. GUNTER: Well, obviously this is -- I'm Paul Gunter with Nuclear Information Resource Service.

Obviously there is an ongoing dialogue here. But just a simple question, in administering therapeutic radiation, do children get the same dose as adults, or is it recognized, in the therapeutical use of radiation, that children have a lower tolerance to radiation?
Is that generally correct?

MS. MILLIGAN: It depends on what you are treating, and what --

MR. GUNTER: I'm just saying generally.

MS. MILLIGAN: -- you are doing.

MR. GUNTER: Is it acknowledged that children have a lower threshold to radiation than adults?

MS. MILLIGAN: You would typically give a child a lower dose because it is a lower body mass.

MR. GUNTER: Right.

MS. MILLIGAN: But you are talking, in terms of therapy, you are talking extraordinarily high doses that are well above NRC dose limits, well above.

MR. GUNTER: My point, though, is that in considering a 20 year license extension, that what our concern is that there is a cumulative value there. And that the children, in our mind, is the target population, the critical population when evaluated the cumulative effect of 20 years additional operation of that reactor.

And it is our concern that that be the determining factor for a 20 year license extension.

MS. MILLIGAN: And you want us to look specifically at child dose?

MR. GUNTER: I think, again, I'm going to try to restate this clearly.

In considering a 20 year license extension, and 20 years additional operation, in our view the critical population that would determine that operation is the children. And that the

PBD
01
2

Appendix A

| cumulative effect, that there is a cumulative effect of 20 years additional operation, with ongoing
| routine releases that build up in the environment, that bio-magnify.

| The focus of our concern, and it should be your concern, is the bio-magnification to the children
| in this area. And it is our concern that that is not being addressed in the environmental impact
| statement.

| MS. MILLIGAN: When we look at, in the operating reactor space, the dose limits that are set
| up from our appendix I limits, are very, very small.

| To give you an example, if you ate one medium sized banana a day, every day for a year, you
| would come up with approximately a two milli rem dose to your whole body, from eating that
| banana, from natural radioactivity that is in that banana.

| Our dose limits, whole body, for appendix I is 5 milli rem. So you double your banana dose a
| day, and you've got our effluent limits from our plants.

| So when we look at what our licensees are actually releasing, they are releasing, typically, a
| tenth to a hundredth of that, in a total year's worth of dose to that particular critical group.
| So we are looking, very closely, and we watch closely, at what our licensees are allowed to
| release, and the doses are very, very small. You get, like I said, two bananas a day, and you
| are at our appendix I limits, and very few of our licensees, I think, have ever approached our
| appendix I limits.

| FACILITATOR CAMERON: I think that we do have a comment there from Paul, is that the
| analysis in the environmental impact statement, or the analysis or radiation doses should be the
| critical path item, so to speak, not only the effect of radiation on children, but the cumulative
| effect over a 20 year period.

| And Trish is, I take it, that what you are saying is that -- do we look at cumulative effects, in
| terms of -- it is all factored into the process?

| MR. SHANBAKY: My name is Mohamed Shanbaky, I'm the branch chief, region one,
| responsible for the inspection program at NRC, and inspection program at Peach Bottom.
| As far as cumulative effect, the doses that are being calculated are mostly a committed dose,
| both national and international expert, they calculate internal doses of radioactive material,
| based on 50 years.

| And when you talk about committed dose, to a child, it is still a very, very low fraction of what
| the EPA regulations say as to exposure to minors. So it is still, even if you consider the
| cumulative, and you talk about committed dose, it is still very low.

| FACILITATOR CAMERON: Okay, thanks, Mohamed.

Let's take a few more questions on this issue, and then we are going to have to move on to consider severe accidents.
This gentleman?

MR. AUGUST: My name is Bernard August. My question to you is, I've gotten a bit jaded about corporate responsibility, and things of this nature, recently, because we have all been affected by it.

What guarantee that the information that you are getting from the utilities that run nuclear power plants is accurate?

MS. MILLIGAN: Well, we have resident inspectors at the sites that live there. We also have inspection teams that go out and routinely look at all these different parts of the NRC program, of the licensee's program. So they are inspected on a regular basis.

FACILITATOR CAMERON: Does anybody from NRC want to supplement --

MR. SHANBAKY: I'd like to say one word on this. I have, as we speak right now, have resident inspectors from the NRC, what they are doing, they are walking down systems, they are looking at equipment, and they are looking at maintenance activities.

The licensee gives us unfettered access to all the plant's area, including all the vital equipment in the plant. We look at them, we touch them, feel them, we test them.
So it is not just we take the word of the licensee. We trust, but we verify, we go out and verify that the licensee is giving us factual information.

FACILITATOR CAMERON: Thanks, Mohamed. Let me see if there is anybody that has a question that we haven't heard from.

Let's take Judy, and then Marcia, and then let's go to Bob Palla. And, Trish, I think these may be questions for you, I'm not sure.

PBD05

MS. JOHNSRED: Yes, thank you, Judith Johnsred.
It is my understanding that the dose standards have been decided upon in terms of standard man. That is the measure for the setting of the doses that, then, presumably the plant will operate below.

0
5-
1
And it raises a couple of questions. A geneticist has asked me, repeatedly, how the NRC, in determining dose impacts, deals with not only the child, and not only the fetus, and not only the embryo, but cumulative impact upon the ova that a woman carries through her life, and that are the basis of, of course, the ultimate embryo, fetus, and child?

Appendix A

0 |
5- | That is one question. And related to it is the issue of how the NRC will incorporate the additive
2 | doses received from deregulated released, recycled, and reused radioactive materials, not only
| those generated at the plant, and then subsequently released, either as materials or waste, for
| recycle, but also essentially the other doses, each of them presumably small, that would be
| received from other sources of recycled radioactive materials.

| And I'm thinking here, in particular, of the fact that not only the NRC is considering a large
| expansion of release and recycle but, in fact day before yesterday the comment period closed
| on Part 71, the transportation harmonization regulations that also involve exemptions.

0 | Plus -- well, T-Norm is coming up, I guess, as well. So there are, suddenly, a great many
5- | additive sources for exposures. And it is not clear how those are incorporated in your analyses.

3 | MS. JOHNSRED: Let me answer the first part of your first question.

| When we established dose limits for the public, which is everyone in the public domain, not an
| occupational worker, we established doses that are at a considerably lower level, so 100 milli
| rem per year, for example, is a dose limit for the public.

| With that we feel that we have, that we provide good protection to the public from radiation.
| Now, I referred earlier, and we've talked about the EPA limits, which are 5 milli rem per year, so
| that is one-twentieth of what our limits are for our general Part 20 limits for radiation to the
| public.

| So we are looking at a very small fraction. And if you look at what is actually, what the
| members of the public receive from our power plant effluents, that is a fraction of a tenth, or a
| hundredth below that as well.

| So with that kind of protection you are looking at, it would be extremely low doses, to a woman's
| ova. Now, if you look at the contribution, from background radiation, from just living here, living
| in Pennsylvania, where we have a high background, eating naturally radioactive food, you see a
| dose contribution including from other sources, such as medicine, somewhere around 300 to
| 400 milli rem per year.

| I'm sorry? So you look at our limits are very, very small. And you look at other parts of the
| country that have even higher natural background radiation limits, and you see adequate
| protection provided by our licensee limits, from that added incremental dose.

| FACILITATOR CAMERON: And, Trish, is there anything that you can say on Judy's second
| question about how, I guess, new sources of radiation are dealt with through the regulations?

MS. MILLIGAN: When we look at release of recycled materials, we create a series of scenarios, a whole series of scenarios that look at this recycled metal becomes a fork, for example, or becomes a tire, or table, or pick anything.

We look at what would be the exposure, what would be the people, what would be the contributing dose assuming a resident time of, you know, maybe 20 hours a day sitting on top of that table, what would be your dose?

We consider all these various exposure scenarios, and then we come up with a dose limit that says, at this point this amount of material could, potentially, be released.

But I don't work on the materials side of the house, and I can't talk to all the regulations and what they are doing, I strictly work on the reactor side. And the materials side has put a lot of work into that, and I don't know all the regulations.

What we could do would be to direct you to the appropriate people in the materials side that could answer your questions much better than I can.

FACILITATOR CAMERON: Thanks, Trish and thanks, Judy. Let's take one last question from Marcia and let's bring Bob Palla up to talk about severe accident mitigation alternatives.

MS. MARKS: I think that Judy asked my first question, which was exposure to the pregnant woman, and to the ova over a woman's lifetime. And she asked that.

And most of the public isn't aware, Dr. Ellis Stuart just died, and she was able to prove transgenerational effects of radiation to the pregnant woman, onto the children.

My question, though, is when you are -- on your measurements, you said you measure the effluent. And if I read this correctly, in the environmental impact statement, you measure the strontium 89 only every four months.

If the half life is only 50 days, how in the world are you finding it? How often do you measure this effluent? You talked about a yearly report.

MS. JOHNSRED: What you are asking is how often do the licensee's measure their effluent stream? The licensee's monitor their effluent stream on a regular basis, regular being daily, minute by minute, hour by hour, day by day.

They have a good handle on what their water chemistry is, and what their effluent stream is.

MS. MARKS: Then what I read in the report was not --

MS. JOHNSRED: No, the numbers are tabulated quarterly. All the effluents and the water chemistry is done on a daily basis.

Appendix A

| [Presentation by Mr. Palla

| MR. AUGUST: In light of the fact that -- Bernard August -- that this plant here gets its water
| from the river, was any consideration at all given just in case a natural disaster, like the dam
| breaking, or anything like that, taken into consideration during this report?

| MR. PALLA: Dam break type of events, and floods, external floods, these type of events are
| considered in what was -- we term it the individual plant examination for external events.
| It is a type of a risk study that was done. These studies are not strictly quantitative type
| analysis, they are more of a -- it is an engineering assessment, really.

| But the results of those studies were submitted to the Staff, and reviewed as part of our review
| of the individual plant examination. They were found to be much lower in risk than the risk from
| internally initiated events.

| So they did not play a role in this analysis. The risks that we are trying to reduce here is largely
| driven by internally initiated events, which did not include those types of events.

| FACILITATOR CAMERON: Okay. Mohamed, before we go to the gentleman behind you, do
| you want to make a clarification?

| MR. SHANBAKY: A quick clarification on this. That was assessed in the original plant design.
| The plant have emergency cooling towers. Emergency cooling towers would provide adequate
| cooling for all necessary equipment shut down.

| The water supply is on hand, at the base of the tower you have, I believe, 3.7 million gallons of
| water that you would be using, it would give you seven days of water use to cool down the
| plant.

| So that was assessed, and the equipment is operational, and on-site.

| FACILITATOR CAMERON: Thank you, Mohamed. Let's go to this gentleman right back here.

| MR. EGBERT: Lawrence Egbert from Baltimore. You eliminated 174 candidate improvement
| possibilities, and then you subsequently eliminated 25 of the remaining 30.
| What was the difference between the way you eliminated them?

| MR. PALLA: Well, it was a sequential process. It began, the large number was the result of
| basically throwing out a large net, trying to look at analysis that were done at several different
| plants, and effectively including those as candidate SAMAs.

| And then so you start with a large number, many of which you know at the outset, probably
| aren't going to pass an initial screening, because in some cases an improvement might really
| have been evaluated at another plant, which is a pressurized water reactor.

So it may not be applicable, at all, in concept to a boiling water reactor, such as Peach Bottom. So it is -- we actually outlined it fairly clearly, I think, in our report what that sequential process was.

But, as I mentioned earlier, the process was to eliminate things that had already been implemented. Sometimes you might have two different alternatives that by and large do the same thing, so you can combine them into a single alternative that you can consider further. So there is some collapsing there, as well. Some of these fixes may address sequences that don't have any significant contribution to the risk profile, this would be another reason. And then some are so clearly resource intensive and expensive that you can tell that even if you eliminated all of the risk at the plant that this would not be cost beneficial.

So there is some confusion, it wasn't a very straightforward process, it was a multi-phased process that I think is explained in the report. But I could talk to you more about it, later, if you have some specific questions.

FACILITATOR CAMERON: Okay, they very much, Bob.

MR. PALLA: We look at that process to see that it is systematic, and logical, and that the criteria used to screen these things is reasonable.

FACILITATOR CAMERON: Okay. We have one more question for you, and then we are going to get to Duke Wheeler, again, for the conclusion, so that we can hear from everybody that has comments.

Yes, sir?

MR. MCCONNELL: Sam McConnell, and I'm a Peach Bottom resident. What is the agreement, or how does NRC operate with FERC, the Federal Energy Regulatory Commission, in regards to nuclear accidents, who takes priority, the requirement for electricity, or the nuclear accident?

FACILITATOR CAMERON: Do we have -- who wants to address that specific question, perhaps, within the general context of emergency planning? I think we will go to John Tappert for that one.

And, John, you heard the specific question that the gentleman had?

MR. TAPPERT: Yes. I mean, obviously, the mandate of the NRC is the health and safety of the public. So if there were an incident, or something, at the facility the first mandate of the Agency is the safety of the plant.

So energy concerns really aren't part of that picture.

FACILITATOR CAMERON: Do you want to comment on --

Appendix A

| MR. GUNTER: I just wanted to -- Paul Gunter, Nuclear Information Resource Service.
| The term that the NRC uses is called as low as reasonably achievable, ALARA. Now, ALARA
| is used a lot in determining cost beneficial analyses for safety.

| And I'm sure you worked ALARA into the license extension. But one of the principles of
| ALARA, one of the principal considerations of ALARA is economics. So -- and it is stated right
| there in the Code of Federal Regulations.

| So when you talk about balancing dose, for example, against continued operation, economics
| does come into play through the ALARA principle.

| FACILITATOR CAMERON: And, Paul, that is a good comment. And I think that maybe it
| would give Bob an opportunity to, when you talk about doing cost benefit on whether a
| particular SAMA should be implemented, you are talking about based on the assumption that
| the NRC regulations are being met.

| All of these things are over and above what is necessary to provide adequate protection to
| public health and safety?

| MR. PALLA: This is -- economics is deeply ingrained in this whole process. The SAMA
| evaluation is essentially looking at ways that risk can be reduced, these each have a cost. And
| then they would result in a reduction in core damage frequency, or person rem at the site, and
| the surroundings.

| And these are all put in terms of dollars and compared. You are comparing cost of
| implementation against costs that are associated with, you know, the benefits of reducing, or
| eliminating the accidents.

| So, yes, economics is really what this is.

| [Presentation by Mr. Wheeler]

| FACILITATOR CAMERON: Thank you very much. We are going to go right into our public
| comment portion of the program.

| And our first speaker is Joe Mangano. And, Joe, I hope I'm pronouncing your name right. But
| correct that if I didn't. And Joe is with the Radiation Public Health Project. And he has come
| down from New York City.

| And because of that I have to ask everybody to try to be brief, and I talked about the five to
| seven minute ground rule, because we do have a lot of speakers, and we do want to hear all of
| you.

Because Joe has come down from New York City, national group, we are going to give him just a couple minutes leeway, so he can make his presentation. -

And, Joe, if you would come up? And I'm going to move this out in the center, and you can refer to it as you want, okay?

PBD06

MR. MANGANO: Good afternoon, everyone. Again, I'm Joseph Mangano, I'm the National Coordinator for the Radiation and Public Health Project in New York

City.

We are a group of professional researchers. In the last eight years we have published 17 articles in medical journals, and written five books about the health effects of radiation exposure.

My comments today will be about, will be addressed to the environmental impact statement draft. And my -- the nature of my comment will be that, in essence, this is a very limited document to make any sort of decision on whether to extend the license of this plant for 20 years.

I will break my comments into three, very briefly. First of all, major meltdowns and accidents; number two, nuclear waste; number three, routine emissions and cancers.

First of all, in terms of accidents, we've known for a long time that any kind of a major core meltdown in a nuclear plant like Peach Bottom would be the worse environmental catastrophe in the United States history.

06-1

Twenty years ago the federal government did a study and showed that if either one of the cores of the Peach Bottom reactors had a full meltdown,

72,000 people would die, 45,000 would suffer acute radiation poisoning, and 37,000 others would develop cancers.

Now, remember, this is a minimum estimate, because if both reactors had meltdowns you could double that. This was done 20 years ago, the population has grown since, it only considers the area within 30 miles of the plants, and it ignores the stored fuel, the radioactive waste, which consists of much, much more radiation than is in the core.

In fact, there is hundreds of Hiroshima bombs worth of radiation in there. The EIS ignores this. It does not ignore the issue of an accident, but it ignores two new threats that we have here, beyond when the plant was opened.

First of all, September 11th changed everything. We now have this very new, and very clear, and very serious threat of a terrorist attack towards a nuclear plant, which certainly calls out for a new study, and consideration of safety factors.

Appendix A

| Number two, we are not talking about a plant that is just about to open. We are talking about a
| nuclear plant that is going to be operating from age 40 to 60.

06-2

| Now, so far the oldest reactor has been Big Rock
| Point in Michigan. It lasted 34 years, it is now
| closed, okay? We don't know what a 40 or 50, or 60
| year nuclear plant will be like; will the plants wear
| out mechanically?

| We just observed, recently, that the Davis-Besse reactor, in Toledo, Ohio, because of corrosion
| from the cooling water, a six inch steel lid, on top of the plant, was corroded down to 3/8ths of
| an inch of steel that was bent, and was found not by a routine inspection, but just by accident.

06-3

| So it is clear here that we need to see more in terms
| of what would happen in terms of an aging plant,
| and in terms of a possible accident.

| Number two is nuclear waste. The spent fuel pools that exist at Peach Bottom, and other
| reactors, were thought of as a temporary means of storing these radioactive fuel rods. They
| are still temporary, okay? Only they are filling up now.

06-4

| Almost 30 years later the fuel pools here at Peach
| Bottom are almost full. In fact they are putting some
| into dry cask storage, and the issue of Yucca
| Mountain, Nevada, being a permanent site, is moving along but it is still up in the air. It will be
| at least eight years before any transfers are to be made from there.

| That goes unaddressed here, as well. And the existence of this fuel, again, presents a threat to
| the public's health.

| Now, in terms of routine emissions, the position of the NRC, traditionally, has been that
| emissions will be monitored, the environmental levels of radiation will be monitored. If they fall
| within the federal safe permissible limits, therefore they are declared to be harmless.

06-5

| Our group believes that this is a presumptuous
| attitude to take. You don't know. For example, look
| at what happened at the World Trade Center. The
| Trade Center was attacked, and numerous
| chemicals, such as silicon, and asbestos, were put into the atmosphere at higher levels.

| Well, the EPA went in, did a study and said, yes, the levels are higher, but they are within safe
| limits, therefore they are harmless. At the same time this is happening about a quarter of the
| workers were suffering from some sort of respiratory ailment.

Three percent of them so badly that they are on the verge of having to retire. So we think the same should occur here in terms of nuclear reactors. And to do that you need two items.

06-6

Number one, you must look at the disease rates, and particularly at the cancer rates in the local area. Our group spends lots and lots of time doing that. I

will just point a few out here in the Peach Bottom area.

In Lancaster and York counties, which flank the reactor, in the years before, the 25 years before the plant opened, childhood cancer deaths in the two counties were seven percent below the U.S. rate.

06-7

Since 1987 the rate is 31 percent above the U.S. average, okay? Something happened that turned a low childhood cancer area into a high childhood

cancer area. Is it radioactive, is it some sort of other factor that must be looked at?

Among adult cancers in Lancaster, York, and Chester county, the three closest counties, the rate since '87, the rate of all cancers is 9 percent above the U.S. Breast cancer is 26 percent above the U.S. Thyroid cancer, which is very sensitive to radioactive iodine, 60 percent above.

06-8

Again, these are questions that remain unanswered. Whether or not radioactive plays a role, or not, has to be determined. And the way to determine that is

to look at the amount of radioactive in the body.

It is one thing to measure emissions, it is one thing to measure how much is in the air, and the water, and the grass. But the real question is, how much gets into the body? This is not something that we invented, this was done in St. Louis, years ago, to measure how much bomb test fallout went into people's bodies.

And it has been done in the 1990s in four different countries, in Greece, United Kingdom, former West Germany, and in the south Ukraine to measure how much is coming out from nuclear reactors like Chernobyl and Sellafield in England.

And in each case they looked at baby teeth and the amount of radioactive strontium 90, which only comes from atomic bombs and nuclear reactors. We are doing a study right now. I've collected almost 4,000 teeth.

Unfortunately here in Pennsylvania, southeast Pennsylvania, we only have 22 teeth, we need many more. We've collected many more, but are still in our processing them.

Appendix A

| So far, based on just these 22 teeth, the average level of strontium 90 is 68 percent higher than
| the other six states that we've collected teeth from. That is Pennsylvania, Connecticut, New
| York, New Jersey, Florida, and California.

| There is a reason for this. The EIS spent nine pages discussing, and challenging our baby
| teeth study, making the claim that this strontium 90 was all left over from the bomb test in the
| '50s and '60s.

| Well, back in the '50s and '60s the strontium 90 levels in teeth were pretty much average,
| compared to the rest of the country, now they are much higher. I don't think it is because of old
| bomb testing.

06-9

| And the other thing we found, so far, in southeast
| Pennsylvania and elsewhere, the children born in
| the 1990s have higher levels of strontium 90 than do
| those born in the '80s, they are going up slightly in Pennsylvania up 12 percent.

| This cannot be due to the old bomb test fallout just decaying, it has to be due to a current
| source of strontium 90 which is, can only be nuclear reactors.

| My time is almost up, here. Again, low levels, we are not talking about high levels of
| radioactive, here. This is not Hiroshima here, this is not Chernobyl, these are low levels of
| radiation.

| But, again, before we make the conclusion that it is harmless, or harmful, we must do these
| studies. And we've been wrong in the past, before. Years, until the '50s doctors did pelvic x-
| rays on pregnant women saying that these x-rays were too low a dose to be harmful, until they
| found that the risk of the child getting cancer doubled.

| For many years the Government said that bomb test fallout from the Nevada tests were
| harmless, even if it was getting in the milk, and the water, and the food. Finally in 1997 a study
| was done, by the federal government, showing that up to 212,000 americans developed just
| thyroid cancer from these bomb tests.

06-10

| So this is a learning process, this is a relatively new
| technology, we are learning things, and we should
| engage in the same type of process with nuclear
| reactors.

06-11

| So in conclusion I would highly recommend that no
| decision be made, by the NRC, to extend the license
| of this plant until a much more thorough assessment
| of environmental health threats are made. Thank you.

FACILITATOR CAMERON: And, Joe, thank you. And if we could, I don't know if it is possible to get a reduction of that map, an eight and a half by eleven that we could put on the transcript? We can try to work with that.

But since we have you here, live so to speak, and to make -- I guess I shouldn't say so to speak. Since we have an opportunity to talk to you, let me put it that way, I'm sorry. Would you mind if there is any questions that the NRC staff has to enable them to better evaluate this? And I don't want to get into a debate on this, okay? in terms of challenging. Could they ask you any questions that they have?

MR. MANGANO: Go right ahead.

FACILITATOR CAMERON: Is there any questions related to our evaluation? Trish?

MS. MILLIGAN: Yes, I just have two quick questions. NRC is always interested in new information, and we are constantly evaluating information on a regular basis.

On your report, there, if you could hold that up for me real quick? It says, right up here, strontium 90 concentrations in baby teeth measured at birth.

My first question is, how do you measure baby teeth at birth? Because that would be very new for us, to understand how you do that.

MR. MANGANO: Sure. The child aged 7, or whatever, loses a tooth, donates it to us, we measure it, and we --

MS. MILLIGAN: Back calculate?

MR. MANGANO: Basd on the half life of 29 years of strontium 90, extrapolate that level back. Most of the uptake is in the fetal, in the early --

MS. MILLIGAN: Right, so this is actually back calculation?

MR. MANGANO: So it is pretty close, that is what they did in St. Louis years ago.

MS. MILLIGAN: I just wanted to make sure that was clear. And the second thing is, could you please share with us your data on these increased cancer rates, so that we could see the data that you are looking at?

MR. MANGANO: Sure, I brought copies with me.

MS. MILLIGAN: Terrific, that would be great.

MR. MANGANO: Where I got them from, and all that, because I thought someone could use it.

Appendix A

| MS. MILLIGAN: Thank you very much.

| FACILITATOR CAMERON: Thank you very much, Joe. And we would be interested in a copy, a small copy, and I'm sure that there are members of the public that might be interested in looking at a copy of that, too.

| Thank you very much, Joe. You had a question on, for Joe?

| MR. PALLA: Yes.

| FACILITATOR CAMERON: Joe, we have one more question from the NRC staff.

| MR. PALLA: I had a question, at the beginning of your presentation you had some statistics about fatalities from major core melt events. And my question is, have you looked at, or are aware of more recent studies than the 30 or 40 year old? I forget exactly what -- okay. Have you looked at anything more recent than that, as far as the plant specific analyses that have been done for Peach Bottom, for example? Because the results from those studies are considerably lower than the numbers that you had cited.

| MR. MANGANO: To my knowledge that study, there has been one more subsequent study done after that, what they call the crack 2 report, in 1982 by Sandia National Labs.

| It was done in 1989, and it makes updated judgements on what would happen during an accident, but it does not give any specific numbers yet. So at this point that is all we have to go on.

| It is probably most useful not to make an exact judgement on exactly how many people would be injured, but just to give people an idea that, yes, hundreds of thousands of people would be involved, would either become ill or die.

| FACILITATOR CAMERON: Okay, thank you and thanks, Bob. We are going to go on to our next speakers. And our next three speakers. And thank you again, Joe. Silver Cloud Washburn. Silver Cloud, would you come up and please talk to us? And then we will go to Alan Nelson, and Dr. Judy Johnsred.

PBD04

MR. WASHBURN: Firstly I would like to start off by saying, to the person, the omnipotent, the it that made it possible for me to be here today,

| grandfather, Jehova.

| And I thank grandfather that everyone who is here is here, because they are concerned about this issue. My major concern with this issue, and my prayer is simply this.

Appendix A

I I would pray to Grandfather that it is, and that it has been well thought out. But it seems funny
I to me, why didn't they put it in the middle of New York City? Why did they have to put it on
I indian land?

I Think about it, we are constantly punished. Well, you know something? There is not going to
I be enough trees left on the planet earth to print the money that it is going to take.

04-7

The word is a guguplex of dollars, it is not there.

And I just beg you, I will tell you this, I will give you

the shirt off my back, I will give you everything I own,

I to shut this plant down. I would stand here and allow you to take my life because I love all
I people so much.

I Shut it down. I would walk out of here naked, I would be a pauper and a vagabond, I would be
I happy to do this. That is my contribution to the people. You have to understand that this is
I foolishness.

I Whatever happened, in the name of heaven, to common sense? You can go to college and get
I all the education you want from the books. But you all fail to realize, and most people do, and
I even I, until I was in my 40s, realized that common sense is the higher level of intelligence.

I And once you get in touch with the creator of all things, and ask to be shown, through these
I words given to me by a sacred spirit, isha del talalatacna (Phonetic) open my eyes that I may
I see.

I That voice told me, use these words wisely. Use them where you see a need to do good. So
I to you people, you wonderful people who I love, Gonkieu (Phonetic) in my tongue that means I
I love you.

04-8

Isha delta lalatacna (Phonetic) open my eyes that I
I may see. This is my prayer for everyone in this
I room. Please shut this place down, let us begin to

I bear this burden, and figure a way out of it. Thank you.
I (Applause.)

I FACILITATOR CAMERON: Thank you very much, Silver Cloud. And I would not want to follow
I Silver Cloud on a presentation, because he is very impressive.
I Alan Nelson will follow him, though.

PBD07

MR. NELSON: Well, how do you pick your spots?

I Good afternoon. License renewal is the best option
I for Peach Bottom. My name is Alan Nelson, I'm a senior project manager at the Nuclear
I Energy Institute. I'm pleased to have the opportunity to join this discussion today, among

interested citizens of Pennsylvania, and Maryland, state and local officials, NRC staff, and other parties on license renewal for Peach Bottom.

By way of background, the Nuclear Energy Institute coordinates energy policy for the U.S. energy companies that own a nuclear power plant. The institute also represents industry suppliers, fuel cycle companies, universities, and colleges, and other organizations involved in the beneficial uses of nuclear technologies such as medicine, agriculture, and food safety and space exploration.

Nuclear energy provides electricity for one of every five homes and businesses in America. Here in Pennsylvania electricity customers get their electric power from nine nuclear reactors, including Peach Bottom, as well as Limerick, TMI, Susquehanna, and Beaver Valley.

The purpose of today's meeting is to discuss environmental issues related to the license renewal application for Peach Bottom that Exelon has submitted to the NRC back in July 2nd, 2001.

Exelon is the tenth utility to seek nuclear plant license renewal. In March of 2000 the NRC, for the first time, approved a 20 year license extension for two reactors at the Calvert Cliffs Nuclear power plant on the shores of the Chesapeake Bay, in Maryland.

That approval was a landmark in the industry and evidence of tremendous long term energy and environmental benefits of nuclear power. To date ten reactors have received 20 year license extensions from the NRC, and the Agency is reviewing requests from 14 others, including Peach Bottom.

More than half of all 103 U.S. reactors are expected to submit applications over the next several years. Many more are expected to join them. Renewing nuclear power plant licenses for an additional 20 years is economical compared to the development of alternative energy resources.

As both the Nuclear Regulatory Commission and stakeholders have become more familiar with the process, we expect the license renewal process to become even more efficient.

07-1

Moreover there is a growing recognition, among the public and policy makers, both in the United States, and internationally, that we must maintain the clean air and other environmental benefits of nuclear energy.

The White House recognized, very clearly, air benefits of nuclear energy in its comprehensive energy strategy. Vice President Dick Cheney has said, and I quote: "If you are really serious about reducing green house gases, one of the solutions to the problem is to go back and take another look at nuclear power."

Appendix A

07-2

There are tremendous air quality advantages from nuclear energy, for both the health of Pennsylvania citizens, and from an economic view. License

renewal for nuclear power plants is important to our nation's future energy, security, and environmental needs.

Today's public meeting is part of an extensive process to help ensure that no important environmental issues are overlooked as the NRC continues to evaluate the Peach Bottom license renewal application.

Throughout its review the NRC will continue to keep interested citizens, and stakeholders, apprised of its progress. One of the requirements in the environmental review is for Exelon to compare the environmental impacts of alternative energy sources as part of evaluating possible alternatives to relicensing Peach Bottom.

The results of that evaluation are worth noting. For example, photo-voltaic cells generating the same 2,200 megawatts of power produced at Peach Bottom, will consume about 77,000 acres of land.

The draft generic environmental impact statement also evaluates other alternatives for providing electricity for the people of Pennsylvania, including power plants that burn coal, natural gas, oil, wind power, as well as hydro, geothermal energy, and biomass derivative fuels.

The GEIS even considers no-action alternative that was stated, do nothing. The report concludes that these alternative actions, including the no-action alternative, are not feasible, or have environmental impacts of moderate to high significance.

In contrast the report concludes that environmental impacts associated with renewing the Peach Bottom license are small. With the extension of the license it means 20 more years of environmental and economic benefits, and continued reliable electricity for consumers and businesses in southeastern Pennsylvania.

07-3

What exactly does license renewal mean? I happen to think it is a necessary option. Let me give you three key reasons why. First, license renewal will maintain economic electric generation that does not

produce green house gases, or other air pollutants, such as sulfur dioxide, nitrogen oxide, and particulates.

07-4

Second, license renewal will preserve good jobs for this area, and communities like Delta and Peach Bottom Township, where these plants are located,

will benefit from the plant's continued operation.

07-5

Third, renewal of Peach Bottom's license is far more economical than building a new power plant.

Many people don't realize that nuclear energy is the largest source of emission free electricity generation in America. It represents nearly 70 percent of our nation's emission free generation.

Hydroelectric power is second, with 29 percent, photo-voltaic cells, and wind power, each represent less than one percent of emission free generation.

It is obvious, from these figures, that nuclear energy provides vital clean air benefits to southeastern Pennsylvania, and the United States, considering that each state must control emissions from electric generating sources, through the Clean Air Act.

In your community Peach Bottom also provides stable jobs and safe, reliable, and affordable electricity. I want to close by saying that the draft GEIS is factual and complete, and could contribute to a fair and objective review of an environmental impact of license renewal at Peach Bottom.

And I would like to commend Exelon, and the nuclear professionals at Peach Bottom, for their continued excellent record of safety performance, and commitment, to protect the public health and safety, and the environment.

Together these are the key factors, in the NRC's conclusion, in the draft GEIS, that supports a positive decision on renewing the license for an additional 20 years.

Thank you very much.

FACILITATOR CAMERON: Thank you, Alan. next we are going to go to Dr. Judy Johnsred. Do you want to talk from here, or from there?

MS. JOHNSRED: Chip, I've already had a number of comments, and I think it would be preferable for others who have been silent, to proceed. And if I may, I would like to speak a little bit later.

FACILITATOR CAMERON: Thank you, Judy. Let's go to the next three speakers, then, and we can circle back to Judy. First Marcia Marks, then Paul Gunter, then Sandy Smith. Marcia?

PBD08

MS. MARKS: My name is Marcia Marks, and I live in Bethesda, Maryland.

I have about 40 years front line experience in public health, and social services. And I would like to talk to you, really, about what we are seeing in the community.

Appendix A

| If many of you have seen this, there have been five full page ads in the New York Times
| saying, why are more kids getting brain cancer, why can't Johnny read, sit still, or stop hitting
| the neighbor's kid?

| There are increases in asthma, diabetes, and many other diseases. Book titles by scientists,
| international scientists, "Our Stolen Future", "Our Children's Legacy", "Generations at Risk",
| and "Terminus Brain".

| What we are seeing in the public health community is a very straight deterioration of human
| health, and the health care costs are out of control. In 1962 Rachel Carson wrote in her book,
| "Silent Spring": Chemicals and radiation are changing the very nature of this world". And that
| is what we are seeing.

| In reading the environmental impact statement there were at least 132 references to the word
| small, and then in caps, SMALL, small risks, small environmental impacts, small significance,
| etcetera, etcetera.

08-1 | What is meant by small risks? Does that mean if my
| family and I get sick, that is just a small amount?

| What happens as the environmental impact
| statement said, that in 45 years the increase in population will be 62 percent, does small then
| become medium risks?

| The nuclear industry is protected by Congress, under the Price-Anderson Act, because no
| insurance company would take a financial risk of insuring a nuclear reactor.

| Who will protect me and my family if we get sick? Certainly not the federal government. The
| record and history has proven the government does not take financial responsibility when it
| harms its citizens.

| It took 50 years to get compensation for nuclear plant workers, and those who worked in the
| industry during the war. Gulf War veterans have received no remuneration.

08-3 | My next question is, and I have a lot of questions.
| Why has the government stopped taking in body
| measurements of strontium 90 in bones and teeth?

| The U.S. Agency for Toxic Substances and Disease Registry, is starting to measure toxic
| chemicals to determine human exposure.

| This is the best proof of toxins in the environment. The same needs to be done for radio
| nucleides, particularly SR90 in the bones and teeth. Why hasn't the government done this
| since 1963?

Appendix A

| FACILITATOR CAMERON: Okay, thank you, Marcia. And if after the meeting, perhaps one of
| the NRC staff could just talk to Marcia about the availability of the records that she was talking
| about. They should be public, but we will find out if they are.
| Paul Gunter.

PBD01

MR. GUNTER: Thanks, Chip. My name is Paul
Gunter, I'm the director of the Reactor Watchdog
Project for Nuclear Information and Resource

| Service.

| I would like to focus my comments, tonight, on the environmental impact statement as it relates
| to one specific structure, the containment.

| In 1972 the United States Atomic Energy Commission, their top safety advisor, Steven
| Hanaver, in a confidential memo to the general, regarding the General Electric Mark I
| containment pressure suppression system, as used at Peach Bottom, concluded that the safety
| hazards inherent in the GE containment design were preponderant, in excessive prevalence,
| and recommended that the Atomic Energy Commission not permit any more designs to be built.

| Joseph Hendrie, later to become chairman of the AEC successor agency, the Nuclear
| Regulatory Commission, wrote in an internal response that banning the Mark 1 pressure
| suppression containment could well end nuclear power and "would generally create more
| turmoil than I can stand thinking about."

01-4

| The AEC then issued operating licenses to Peach
| Bottom 2 in 1973, and unit 3 in 1974. By 1985 the
| Mark 1 boiling water reactor, or BWR, was again
| singled out by the NRC for special attention, because of strong indications of a high probability
| that its containment would not survive several accident scenarios.

01-5

| NRC director of nuclear reactor regulation, Harold
| Denton, told an industry conference that the Mark 1
| has a high probability, as high as 90 percent, for
| some accident sequences, such as an overpressurization accident.

01-6

| And as one NRC staffer described, the
| containment's effectiveness, in an over-temperature
| accident, core melt, as "like a hot knife through
| butter."

| By 1989 the NRC and the boiling water reactor owners, including Philadelphia Electric
| Company, began work on the Mark 1 containment improvement program.

With NRC approval Peach Bottom's operators installed an 8 inch diameter pipe, or hardened vent, that can be opened from the control room, to vent the reactor's primary containment through the 300 foot tall stack, bypassing the station's radiation filtration systems.

Operators at Peach Bottom now have the option to deliberately vent Peach Bottom's containment to the environment through controlled releases of the tremendous internal pressure of a nuclear accident, and its radioactive materials, such as noble gases.

01-7

Vent containment to save it. A botched design, a proposed ban by its own safety officials. Its primary containment system later verified to have an

irreversible design flaw. A principal safety boundary jury rigged, and Peach Bottom was given its first new lease on life with significant reduction of its often touted defense in depth hardware and philosophy.

Today these badly designed and deteriorating reactors are being relicensed for an additional 20 years only if increased risk of adverse environmental impact to our safety, and the economy, and the water, and the land resources.

01-8

The environmental impact statement does not address security concerns regarding the structure vulnerabilities of Peach Bottom's elevated irradiated

fuel storage ponds.

Every refueling cycle Peach Bottom's operators offload one third of the highly radioactive, and extremely hot nuclear fuel from the reactor core, and submerge it into a 40 foot deep elevated storage pond, for thermal cooling and radiation shielding, for a minimum of five years.

The Peach Bottom elevated storage ponds are located approximately between the sixth and the tenth story of each reactor building. Referred to as the spent fuel pool, in industry jargon, each storage pond is currently filled with hundreds of tons of high level radioactive waste.

01-9

As long as the reactors are operating they are constantly cycling thermally hot radioactive fuel rods into the attic of the reactor. It is NIRS stated concern that these elevated storage ponds are

extremely vulnerable to a variety of acts of sabotage, radiological terrorism.

The environmental impact statement does not adequately address the increased risk by significantly extending the Peach Bottom operating license, and the adverse environmental impact associated with a successful terrorist attack on this vulnerable target.

As reported by NRC's own technical study on spent fuel pool accident risk at decommissioning nuclear power plants published in October 2000, before the attack on the World Trade Center, and the Pentagon "Mark 1 and Mark 2 secondary containments generally do not appear to have any significant structures that might reduce the likelihood of aircraft penetration of the spent fuel

Appendix A

| pool. Although a crash into one of four sides of the BWR secondary containment may be less
| likely to penetrate because other structures are in the way of the aircraft."

| In other words, the Peach Bottom's 40 foot deep spent fuel pool shares only one of its walls in
| common with the exterior of the reactor building.

| NRC goes on to state, based on studies in NUREG CR 50.42, the evaluation of external
| hazards to nuclear power plants in the United States, "it is estimated that one of two aircrafts
| are large enough to penetrate a five foot thick reinforced concrete wall."

01-10

| The NRC report goes on to state: "It is further
| estimated that one of two crashes damage the spent
| fuel pool enough to uncover the stored fuel. For
| example, 50 percent of the time the location of the damage is above the height of the stored
| fuel."

| As stated earlier, the top of the reactor building surrounding the open surface of the spent fuel
| pool is basically a sheet metal siding with specified blow-out rating.

| Now, basically, this references the blow-out panels that are around the top third of the reactor
| building. These are basically sheet metal siding that are rated to blow out at a quarter pound
| per square inch.

01-11

| This raises the question for NIRS, what is the blow-
| in rating for such, for this particular section of Peach
| Bottom? Where has NRC structurally analyzed this
| section of the reactor building and evaluated the degree of risk associated with extending the
| time at which we are vulnerable to the consequences of off-site radiation releases from an act
| of radiological sabotage at Peach Bottom?

| NIRS contends that the identified vulnerability is an unacceptable risk, with unacceptable
| consequences, in the clear and present danger of a post September 11th world.

| A relicensing proceeding that turns a blind eye on this glaring vulnerability is a sham on the
| public health and safety, and the environment.

| There are copies of this statement out front, and I will also submit a copy to NRC.

| FACILITATOR CAMERON: Great, thank you Paul, we will attach that to the transcript, also.
| Sandy?

| MS. SMITH: Good afternoon. I would like to comment, I didn't even think about it until I was
| standing here, listening to everyone's speeches. But my grim reaper outfit was made very
| quickly last night by my daughter, who is in theater, and so forth. And I was pregnant with Gretl

when TMI was 30 minutes from meltdown. So I guess this is a very apropos outfit that, in fact, I do wear to this. The grim reaper needs her glasses.

FACILITATOR CAMERON: And this is, I'm sorry, I didn't fully introduce you for the record, Sandy Smith.

PBD03

MS. SMITH: And I'm a member of Pennsylvania Environmental Network, and the human race.

03-3

Thank you for letting me speak today. Although I'm angered that this old nuclear plant is even up for the license renewal, the NRC's own standards stated

Peach Bottom was supposed to close 30 plus years ago.

What has changed? Has anyone from the NRC personally inspected every piece of rusty metal, worn parts, fractured cement? There is no way Peach Bottom can operate safely, or economically, and should be shut down, according to the Nuclear Regulatory Commission's own figures.

When death, health, and environmental desolation are added up, Peach Bottom is not a cheap source of energy, only a cheap way for the owners to make billions.

03-4

Is Peach Bottom required to put up a bond, and for how much? Is there any insurance for an accident, and what amount of insurance? What will happen if and when the plant becomes so unsafe that our land

03-5

values go down, and we can no longer live here?

03-6

Will the owners of Peach Bottom go into bankruptcy, like Enron? What will happen, who will pay for all this? According to the Federal Register Notice, each relicensing is expected to be responsible for

03-7

the release of 14,800 person rem of radiation during its 20 year life extension.

03-8

The figure includes releases from the nuclear fuel chain that supports reactor operation, as well as from the reactors themselves. The NRC calculates that this level of radiation release, spread over the

population, will cause 12 cancer deaths per unit.

And I think I figured that wrong, because I thought per unit meaning per nuclear facility, but we have two units here, so I guess that is maybe 24 deaths, instead of 12, I'm not sure about that.

Accidents and non-routine radiation releases are not included in the NRC's figures, and could cause still higher casualties. The NRC only calculated likely cancer deaths.

Appendix A

| So deaths from other radiation induced diseases, and non-fatal cancers, are not included in the
| calculations. I don't think there are 12 people in York County willing to give up their life for
| Peach Bottom. And TMI is close by.

| The NRC has said it expects as many as 100 reactors to apply for relicense extensions. This
| would result in some 12,000 cancer deaths among the U.S. population, but probably more
| because of the miscalculation on units.

03-9

 | Pennsylvania also has, is the second highest
 | number of nuclear reactors, and is the second
 | highest amount of nuclear waste. Because of this

| Washington says we have to have a nuclear dumping site.

| Pennsylvania doesn't want a nuclear dumping site, so why do we have this reactor going off,
| why are we creating more nuclear waste?

03-10

 | Nuclear power is not an admission free technology.
 | The entire nuclear fuel chain, the uranium, primary
 | mines on the lands remaining to the indigenous
| people, uranium conversion, enrichment, fuel fabrication, each step possesses workers,
| exposes workers and communities to radioactivity, and each step generates radioactive waste.

03-11

 | It defies the concept of disposal, they don't go away,
 | they just get moved around. There is no such thing
 | as a nuclear dump that won't eventually leak. The
 | NRC acknowledges that the allowable limit, 100 milli
| rems a year, for radiation exposure, via air, from any reactor to the general public, will cause a
| fatal cancer in 1 out of 286 people exposed.
| This is very high when compared to the standard of 1 in a million considered an acceptable
| level of human sacrifice for industrial activities.

| The 1986 catastrophe at Chernobyl has seriously affected the health and welfare of the
| byelorussian people. I was there, I met them, I know what I'm talking about, I saw the children.

| The average life expectancy of women has declined by five years. Only ten percent of the
| children are completely healthy. Cancer among adults and children have increased in Ukraine
| and Moldova as well. Two-thirds of Ukraine is contaminated, and 70 percent of the food.

| The watershed of Kiev basin has been so contaminated that it would require 200 billion dollars
| just to purify the water. 40 million people have to drink it and, yes, they are drinking it now.
| Children are drinking it, everybody is drinking it now.

- 03-12 TMI was 30 minutes from meltdown. How much disaster insurance does Peach Bottom carry for York County? We have a right to know. Are you going to pay for our land when it becomes useless? What will happen?
- NRC has offered to pay the cost for two day's supply of potassium iodide pills to people living within ten miles of a nuclear power plant. And this is not Laugh-in, or Friday Night Live, this is really it, or Saturday Night Live.
- Thyroid cancer is a major result of nuclear accidents. The exposures can continue for days, even after one leaves the area. It is in your blood, and so forth.
- If a nuclear accident occurred during a natural disaster, earthquake, hurricane, blizzard, ice storm, or an attack, evacuation would be difficult and time consuming, and people would need at least ten days to a month's supply.
- EPA's manual even states that it should be taken, the iodine tablets, three or four hours after the exposure if it is really going to work.
- 03-13 The NRC would also have to stockpile iodine pills in schools, day care centers, places of work, and so forth. Soaring rates of thyroid cancer are still appearing in children from the former Soviet Union, who were exposed to Chernobyl nuclear accident, and who received too little potassium iodine, and too late.
- 03-14 There is no way, even the seemingly simple protection can be carried out. Why do our tax dollars have to pay for Peach Bottom, a private company, hazardous operation?
- In the past three years older, worn out equipment has caused dozens of accidents in plants, causing them to shut down. In May and August of 2000, Peach Bottom unit 3 was forced into an emergency shutdown when its instrument valve failed, and caused a leak of contaminated reactor coolant outside of primary containment.
- 03-16 Much to the discussion, since the September 11th attacks, has focused on the resistance of reactor contaminant structures to aircraft strikes. I wonder about Peach Bottom. We all know it was built way too long ago, it won't hold up.
- We must assess the nuclear age itself in the wake of Chernobyl. These children are still going to Kiev, they are going to Israel for decontamination, coming back, and then suffering from radiation over, and over, and over again. But the mushrooms are big, let me tell you.

Appendix A

03-7

We must assess the nuclear age very carefully. There are more than 450 reactors in operation on the planet today. Each generates radioactive waste that will be a threat to human life for hundreds of thousands of years. That is everybody's children. Each routinely releases radioactivity into the air and water. Poland was the only country that protected their children with iodine pills. And that is not a Polish joke. To this day Scotland, sheep in Scotland are contaminated, and the land is contaminated from Chernobyl.

We have seen how far radiation can spread, which depends on the wind. We have also witnessed smoke from the Canadian forest fires. Radiation travels the same paths.

03-8

If nukes are so safe why do our phone books have an evacuation route, why is the industry trying to figure out where to dump their deadly waste, and

why is 46,000 dollars of your county's budget, our money, going yearly to radiation emergency response?

If the NRC does not close down Peach Bottom we will not have to worry about the terrorists, because we have our government representing the corporate world of nuclear energy already terrorizing us.

Thank you, let's hope we can stop this.

FACILITATOR CAMERON: Okay, thank you Sandy. And the next three speakers that we have are Donna Cuthbert, Alliance for a Clean Environment; Sam McConnell, and Lawrence Egbert, from International Physicians for Prevention of Nuclear War. Donna?

PBD09

MS. CUTHBERT: I am here today to address the common sense issues of this problem. The Alliance for a Clean Environment is a group founded in the greater Pottstown area, which is focused on harmful environmental health impacts in our region.

In the greater Pottstown area there is an enormous elevated childhood cancer rate. We also live right at the Limerick nuclear plant. It has been found that in our county there is an elevated cancer rate of childhood cancer deaths, ages 1 to 14, that have increased by 71 percent, from the '80s to the '90s.

Is it the Limerick nuclear power plant? Who knows, but it certainly had a part in it. Thyroid cancer has increased in the general population by 96 percent from the '80s to the '90s in that county, where we have the Limerick nuclear power plant.

Appendix A

09-9

Leaving the nuclear waste on site presents additional risks to the surrounding populations. We face far, far too much risk from nuclear waste already. Common sense tells us that the older the nuclear plants get, the more chance there will be for accidental disasters. Why would the NRC allow this increased risk?

In 1990 the National Academy of Science report called the biological effects of ionizing radiation stated that even, even quick decaying radiation is not necessarily safe.

09-10

Realistically there is no safe level of radiation. Why do we play these safe level radiation games? Why do we do that?

Nuclear power plants contain a toxic soup of extremely carcinogenic radiation. There is no way, there is no way to protect people from the ongoing radiation releases at a nuclear facility.

There is also no way to protect people from exposure as a result of a nuclear accident. Realistically this is not truly a guarantee. Some kinds of radiation from nuclear power plants remain in the human body forever.

09-11

So why would we continue a process when we know it does this kind of harm to human health? I believe Peach Bottom has the potential to be an enormous, enormous health risk.

09-12

In fact, even people who live in Pottstown could ingest airborne particulates routinely escaping from Peach Bottom. The Pottstown area gets much of its milk from dairies located in Lancaster and York counties, near Peach Bottom. And people ingest Peach Bottom milk.

Logically speaking it is irresponsible, and illogical, to extend the life of Peach Bottom. ACE urges you, urges you, to protect the enormous population which can be adversely affected by what happens at Peach Bottom.

09-13

Please, please, value the health and the environment. Please deny Exelon's application to extend Peach Bottom's license. Thank you.

FACILITATOR CAMERON: Thank you, Donna. Is Sam McConnell with us? Sam, do you want to come up and say a few words to us?

PBD10

MR. MCCONNELL: My name is Sam McConnell, I'm a local resident, and I'm concerned and presently involved with local environmental, health, welfare, and safety issues. My background that allows me to, in my opinion, to become involved and voice my desires, is I have 20 years in military nuclear power, including operation and maintenance, RADCON, radiation control, setting up checkpoints, radiophysics, nuclear physics, and more importantly, probably, from a standpoint of understanding what happens, I was the team leader for the nuclear power plant casualty response team.

I have one year of environmental assessment of a fossil fuel plant permit application to PADET. I'm not now, or have ever been, involved financially with any commercial electric plant.

I personally have been through the Peach Bottom application, its environmental impact volume twice, which is rather boring, but I did it. The safety volume, once, because I can understand what they are talking about. And the draft impact assessment, once. Unfortunately family got in the way, and I couldn't really tear it apart and digest it like I would have liked to.

10-1 As of today I'm personally in favor of approval of the application, as a local, for the following reasons.

Extending the license will be less of a local health, welfare, and safety impact than constructing a new plant, either nuclear, or fossil fuel.

10-2 The findings, the second reason is the findings of ongoing studies that show that fossil fuel plants emissions are considerably more damaging to the local health and welfare than previously thought.

Personal experience with the NRC oversight and control, for 20 years I had to live with them, and it was not easy, in the service. And NRC has been involved in monitoring nuclear power plants, and the military will tell you that it is rather grueling, what you go through, dealing with the NRC.

10-3 The fourth reason is because Peach Bottom has been a good neighbor. I've heard questions about release of information. I have news for you, we knew about the operators sleeping, as soon as it happened.

So far as I know we've known about every problem Peach Bottom has had. That is local information.

10-4 In summary, because I live here, in the real world today, and know that another plant will fill the void

Appendix A

less by Peach Bottom shutting down, I'm in favor of the licensing extension as more desirable than new construction of more nuclear reactors, or a fossil fuel facility, that would take their place in this void.

Because, unfortunately, we are in the Susquehanna river basin, and we will see, in fact today we generate more electricity, probably, than any other place in this country.

I've done the DOE studies, and we generate 17 percent more power than we can use in

Pennsylvania, and we are doing it for people who

don't live here. So we are getting the emissions that would have to come from a fossil fuel plant, right here, with no benefits. Thank you.

FACILITATOR CAMERON: Thank you very much, Mr. McConnell. And now Lawrence Egbert. Is it Dr. Egbert? Yes, Dr. Egbert could come up and speak to us.

DR. EGBERT: My name is Lawrence Egbert, I'm a physician licensed in Maryland, and I live in Baltimore. I'm told that Baltimore tends to be

downwind from here, but maybe Pottstown is worse.

I work with the International Physicians for the Prevention of Nuclear War in Texas, and we became very interested in the transportation of nuclear waste across New Mexico, and then evaluated, the Veteran's Administration evaluated the training of the physicians in the various hospitals along the route where waste would be transported.

And found that in New Mexico, at any rate, they weren't. So the physicians weren't trained to take care of the casualties, radioactive casualties, if a truck happened to have an accident in carrying the waste through their particular town.

We did a similar, but not as thorough, a study of the transportation across interstate 40 through Oklahoma, and also interstates 30, 10, and 20 in Texas, and basically came to the same conclusion.

If you have an accident with one of these trucks carrying the waste, do not expect us to be capable of good care. So I'm sorry about that. As far as I

know, at the present time, it is still in the state of lack of preparedness.

I would say another thing about Baltimore.

Baltimore had a little accident last summer, in one of our tunnels a train carrying chemicals, so that we

are a little sensitive about the possibility that any waste materials that might come from here, might come down interstate 95 and maybe go through some of our tunnels.

The U.S. chapter, I'm from the Baltimore chapter of the International Physicians for the Prevention of Nuclear War, but our national, United States national chapter, has explicitly said do not transport your waste to Yucca Mountain.

11-3 And not just for the reasons that I'm telling you, we are not prepared to take care of the casualties if there is accidents, but because of the general idea of terrorists, and also the idea that the waste, if you are going to carry the waste, if you are going to create the waste, then it is best to have it stored at the most local site that there is, in terms of general hazard.

11-4 We would, therefore, come to the conclusion, especially in Baltimore, and our steering committee has authorized me to tell you, keep your waste here, don't bring it through Baltimore, which is essentially saying close the plant down, and don't make any more waste.

Thank you.

FACILITATOR CAMERON: Thank you, Dr. Egbert. We have four remaining speakers, and possibly we will have some time, if Dr. Johnsred wants to talk to us for a little bit.

But we have Frieda Berryhill, Bernard August, Amy Donohue, and Mike Ewall. Frieda?

PBD02

MS. BERRYHILL: When you started you told us of the experiences of the people with the NRC, and years of service.

I was an intervenor when Delmarva Power and Light Company planned to build a nuclear power plant in Delaware, and that was in the early 1970s, and I've been at it ever since. So as far as years of study, and interest goes, I'm older than all of you. I have read more documents than you can possibly imagine.

As a matter of fact, when we got started Dr. Judy Johnsred and I were young and beautiful. Now we are only beautiful.

I'm well aware that these hearings, we have been to so many CYR hearings, Ms. Johnsred and I, you can't imagine, and how many papers we have submitted, and how many studies we have read.

CYR hearings are called public hearings. We have no delusions that our being here has any effect on anything, never has had. The nuclear industry self-destructed, not because of our efforts, and we know that. But it is our religion, it has become our religion, you see.

Appendix A

| Well, Peach Bottom at this time is one of seven nuclear power plants with active relicensing applications. Four plants have been licensed so far, and there is no indication that any statement in our position to this dangerous practice has any impact at all.

02-2

| As a matter of fact, having any new, having no nuclear power plants to work with, the NRC's willingness to keep their jobs going, with the same disregard for safety concerns, and concerns by opponents, is quite clear.

| Some years ago one of the NRC men said to me one time, well, no more new plants, we are out of a job. Well, now you are safe for God knows how many years.

02-3

| Most licenses do not expire for another 15 to 20 years. So I ask myself why now? The present license hasn't expired, and they are already apply. Don't you want to know why? To amortize the plant's debt further, further into the future.

| Therefore padding corporate revenues today. The NRC knows that, we know that, everybody knows that. This old worn and dilapidated plants originally licensed for 30 years, which was then considered to be reasonable. Having an extension for that reason only, keep the money going, just follow the money, and you have the answer.

02-4

| To make my point, cracks and leaks, and embrittlement of the material in aging plants is well known by the NRC. Nozzle cracking in the pressurized water reactors started in the late '80s, and only two months after Oconee was given the 20 year extension, the nozzle cracks were discovered.

| And I have an explanation, in the back of my statement, for anyone that wants to read it, what those nozzle cracks are.

02-5

| And, again, after extension the nozzle cracks were discovered. And earlier this year Quartz City in Illinois reported a problem with those. And that is a dangerous problem. I urge you to read them.

| Two other plants currently going through licensing process where cracks were found, that is North Anna, and Surrey. On March 7th, 2002, First Energy's Besse-Davis nuclear power in Ohio experienced the problem, which should alert the NRC to immediately halt all renewals. Boric acid corroded a six inch hole into the reactor vessel, leaving only a third of an inch metal cladding as protection against the reactor breach. The consequences could have been devastating.

And they discovered this by accident. I'm certain you will not permit me to list all the so-called close shaves and mishaps, and sloppiness with which this industry operates. Stupid mistakes with regularity.

At General Electric's Trojan plant the control room operator was listening to a baseball game while radioactive water was overflowing from a tank, and flooding the adjacent building.

On July 26th at Susquehanna a dry fuel storage cask had accidentally been filled with argon helium gas in its place, instead of the correct 100 percent helium gas. Nobody knows what the effects on the storage system are, of this.

Now, how can you make a mistake just -- it is beyond imagination.

Finally, I would like to direct the NRC's attention to the international situation concerning nuclear power in general. And the reason I do this is because in all the 30 years we were told how wonderful the French have their nuclear program under control.

And the French nuclear power program from Framatome has been held up as a marvel. But the chickens are coming home to roost. With an original price tag of 4.3 billion dollars, the Phoenix ran for a total of 30 months, over a dozen years since it went into operation. And the world's largest fast reactor is now closed for good. And that was the model held up to us for all these years.

And, by the way, the breeder reactor in Japan are no better. If the serious accident investigating general commit suicide. We are finally beginning to look into the nuclear industry's claim as to the actual contribution to the nation's energy pool.

And this has not yet hit the national consciousness. But there are groups now working on this, and this is very interesting. The production of nuclear power is extremely energy intensive.

02-6

The energy consumed by future needs, such as shipping 77,000 tons of nuclear waste all over the country, much more being produced, this doesn't even figure into the calculations. If the trillion dollar taxpayer investment, it delivers little more energy than wood.

Globally it produces less energy than renewables. In the 1990s global nuclear capacity was only one percent a year, versus 17 percent for solar cells, 24 percent last year, and 24 percent for wind power.

Last year California added more decentralized megawatts than its two nuclear power plants. Does anybody really want these plants?

Appendix A

Over the last few years utilities have been trying to sell them. Maine Yankee even created a white page complete with color photographs to promote the sale. There were no takers, the plant was retired.

02-7

When will this country find its sanity? Its sanity.
What are we doing to this planet?
Plutonium is radioactive for 250,000 years, and

some elements like iodine and technetium won't decay for millions of years.

02-8

I think it is time to stop, and maybe I will be here another 10 or 15 years. Thank you.

FACILITATOR CAMERON: Thank you, Frieda, and we hope you are here with us for another 10 or 15 years.

I should just say that we are here to listen to everybody today, and if there are comments made that need to be factored into our environmental or safety reviews we will do that, and that is the main purpose for why we are here.
Our next speaker is Bernard August.

PBD12

MR. AUGUST: My name is Bernard August, I've been an activist for 37 years.

Of course I'm a really good activist, because I was trained by Mrs. Berryhill. So I want to give her credit for sticking my neck out like this, and not giving up.

My specialty has always been to study the social consequences of this technology in relation to evacuation zoning, and the study of these plans. These plans are totally required by law, in each state, to comply for a nuclear power license.

12-1

But the evacuation planning is a farcical project in itself. There is no way that anybody escapes out of a ten mile EPZ safely, within a certain amount of

time.

Because what is expected of the society that live around the plant, is that they are giving proper notice that the accidents occur, and evacuation will be forthcoming.

12-2

The social consequences of a nuclear evacuation has been underplayed and on the side line for the last 30 years. It really has come to fore because of

9/11, and now the redistribution of potassium iodide tablets.

- 12-3 This idea that people will evacuate under some sort of system is completely baseless and irrelevant. |
- 12-4 There has been reports that come from the accident at Three Mile Island, whereas earlier the doctor mentioned about not having adequate physicians, and people to use in the evacuation. Will they be around? |
- 12-5 This has been determined that nuclear accidents are not the same as natural disasters. People who are responsible, who want to be, the system relies for their jobs to show up, will not show up. |
- Out of the doctors that were reported to show up for Three Mile Island, 70, I think only five or six showed up. That doesn't include the people who are going to have to drive the buses to bring the people out of the zone, the traffic police, and whatever. |
- 12-6 And what is going to happen if a nuclear evacuation is called? There is going to be spontaneous evacuation outside the ten mile EPZ, further jamming up the highways, and making it impossible for anybody to get out. |
- 12-7 So as I always say at these hearings, when I go to them, is that the least you can do is to tell the people to stay put in their houses. Because being on the road, in a disaster such as a nuclear accident, will lead to further loss of life, and environmental destruction. |
- 12-8 KI must be given to all the populations within at least 50 miles of the plant. I think the new federal law stated that because of the war in terrorism, the Homeland Security Act, that the evacuation plans are going to be extended to 20 miles now, instead of 10. |
- I live in Delaware. I am surrounded by approximately six or seven nuclear power plants on all sides. There is no way in hell that I'm going to get off the Delmarva Peninsula, and there is no way in hell that they are going to be able to distribute KI to me, after the announcement has been announced. |
- So, therefore, the social premise of nuclear power, the fact is that it receives multi million dollar subsidies to keep it operating, is a sham, and a technologic lie. Human nature cannot permit, does not permit perfection in its though process, and its designs, of such an egregious technology. It cannot be achieved. |
- 12-9 The idea that technocrats, bureaucrats can sit down and degrade human liberty and freedom to an |

Appendix A

| insurance risk assessment is totally bizarre. And I know our lives are lived this way in this
| country, because everybody has their ox to protect.

12-0

| But as the technology has proven, with its people
| who are in pursuit of nuclear weapons, and the
| security structures that are required for nuclear
| technology can't, and will never be there, for the total protection of the population at large.

| Thank you.

| FACILITATOR CAMERON: Thank you Mr. August. Do we have Amy Donohue?

PBD 3

| MS. DONOHUE: I was going to prepare a written
| statement but I got a little frustrated with it, so you will
| have to bear with me.

| After the last meeting that the NRC held here I submitted, probably, an 18 to 20 page report to
| them. And I prefaced that report with the following statement:
| I said, first of all let me be clear. I know that it doesn't matter what I say, or what anybody here
| says, during this process to relicense Peach Bottom nuclear power plant.

| The regulations say you, meaning the NRC, has to get public input. So you let us have our say.
| But in the end the decision will be made despite anything we have to say.

| Sometimes I really hate being right. I've put a lot of work into 18 pages, and what I've read in
| the draft environmental impact statement totally negated everything that I said.
| I haven't read the entire thing because I haven't had that time yet. But I had a particular interest
| in alternative power, because I live off the grid. I make all my own electricity by solar panels,
| solar photo-voltaic panels. I buy no electricity from PECO.

| So I've turned to page 8-43, to read what you had to say about solar power, I was quite
| amazed. Running Peach Bottom nuclear power plant for 20 more years, you are telling me,
| has a small environmental impact.

13-1

| But to replace nuclear power with solar power, you
| are telling me has a large environmental impact.
| Quite amazing. How can you say this and get away

| with it?

| I'm serious, I mean, it is laughable, if it weren't so serious. I was planning to have a poster sized
| photograph of my panels, but time ran out, so I don't have that.

If anybody is interested, let me know, and I will share with you the great possibilities that solar power has for us.

Underneath what it says about solar power is that it costs too much per kilowatt, I guess that is how it is. Well, let's talk about that, because I know that our federal government, meaning me the taxpayer, subsidizes the nuclear power industry quite a bit.

13-2 Everything from the insurance that Peach Bottom has that all nuclear power plants have is paid for by me, the taxpayer, through the federal government.
Is the Federal Government going to pay my insurance? I don't think so.

13-3 The other thing is we fund the nuclear regulatory industry through our taxes. I don't know how much you all make, but I bet it can buy a lot of solar panels.

13-4 Let's see, Yucca Mountain. If you decide to put that waste at Yucca Mountain how much are you planning on spending to do that? How much do you spend in regulation and cleanup from the mining of uranium?

i mean, you put all that money together, it can buy a hell of a lot of solar panels. I make all my own electricity with just a few. That is quite a lot of solar panels that can be bought.

I know all this because I do a lot of reading. But as I was preparing this afternoon to come here, actually this morning, I was going through trying to find a phone number, and I came across something that is called Pennsylvania Solar Manual, and it is produced by the Pennsylvania Energy Office.

So this is a Pennsylvania government publication. Within that, let me see if I can find it very quickly, in that manual it says, so this isn't coming just from me, it is coming from our state government.

Present day energy suppliers benefit from billions of dollars in subsidies. And this was published in 1993, so that is 1993 dollars, I guess, we are talking about.

13-5 It is estimated that over 50 billion dollars per year is spent by the Federal Government in directly subsidizing the costs associated with fossil and nuclear fuels.

Appendix A

13-6 | | These subsidies take the form of tax breaks,
| | research and development, environmental cleanup,
| | health costs, and military expenditures to ensure
| | energy supplies. These costs do not show up in the
| | price we pay for energy, but we pay for them just the same.

| | We pay for them in our tax dollars, we pay for them with our lives, in cancer. If these hidden
| | costs, often referred to as externalities, were included in the price we pay for energy, then solar
| | energy would be in a far better position to compete with conventional fuels.

| | So it is not just me saying that. I, like I said, have a particular interest in solar because that is
| | the way I live. And the reason I live that way is because I don't want to buy my energy from a
| | nuclear power plant.

| | I live eight miles, approximately, from Peach Bottom. I hear the sirens go off, I have probably
| | called the emergency number in our telephone book too often because sometimes I think I hear
| | them, and I'm not quite sure, so I call to make sure.

| | I hear them in the middle of the night in the last couple of years. There was no emergency, it
| | was a mistake. I said it at the first meeting. We live in a state of denial in the shadow of this
| | nuclear power plant.

13-7 | | Somebody else is talking about how we will
| | evacuate. I live next door to an amish family, lots of
| | buggies here, lots of buggies. Very dangerous,
| | normally, on route 74 with those buggies. I can't imagine evacuating all the people from this
| | area.

| | You know, I have an interest in organic farming. If that melts down, if we get contaminated,
| | that is gone. My land is useless for that, useless for pretty much anything.

| | So I want to get back to solar, I'm going off here, I'm sorry. The other thing you said about
| | solar is that we don't have enough sun in Pennsylvania.

| | So I found it, again, Pennsylvania Solar Manual put out by the Pennsylvania Energy Office. I
| | know we have enough sun because that is the way I get my electricity.

13-9 | | The amount of solar energy striking Pennsylvania
| | each year is 140 times greater than all the electrical
| | and fossil fuel energy consumed in the state
| | annually.

| | Even if the conversion efficiency of sunlight to energy is only 5 percent, solar energy could still
| | supply 7 times more energy than is consumed.

Yes, we have a lot of cloudy days, but the sun does come up every morning. There is no way for my solar panels except for, oh, maybe 20 years from now I may have to replace the batteries.

But those batteries can be recycled. They are not going to create cancer to populations around the country, around the world.

The panels that I use are by a company called Astropower. And Astropower is an independent solar panel company, and they produce their panels from recycled materials from the computer industry.

So even the materials used to make the panels is good for the environment, because they are using recycled materials.

13-10 So when I read that the environmental impact of replacing nuclear energy with solar power was large, and the impact of continuing Peach Bottom for 20 more years was small, I was totally blown away.

I don't need to read the rest of the report although I will, and I will submit, probably, another 20 page comment on it, to know that there is not a whole lot that I'm going to believe in that report.

13-11 Because this was just four paragraphs in your report. I wonder where you got all your information from? The numbers that are cited have NRC in parentheses. Since when is the Nuclear Regulatory Commission experts on solar energy?

I can give you, right now, names, telephone numbers of people who are experts on solar energy. I've spoken with them, they would agree to talk with you, they would agree to talk with the press, because they have studied it, they know. They are the experts. You may think you are experts on nuclear industry, but you are not on solar.

The other thing that I want to say, just briefly, is somebody else Sandy, I believe, talked about the twelve extra cancer fatalities as a result of each unit for another 20 years.

13-12 If somebody came into this room with a gun and killed 24 people in this room, promised not to kill anybody else for the next 20 years, would we allow them to walk out? Would we allow them not to be held responsible for those 24 lives in this room?

That is what the Nuclear Regulatory Commission is saying, that they are going to give a license to Peach Bottom to continue to do, 24 deaths.

Appendix A

I I would like to see the hands of 24 NRC or Exelon personnel, right now, who would be willing to
I give up their lives. Because you are asking us, those of us who live here 8 miles from that
I power plant, to do that.

I FACILITATOR CAMERON: Amy, I guess I'm going to have to ask you to wrap up.

I MS. DONOHUE: Okay, I'm done.

I FACILITATOR CAMERON: And if you have the patience and willingness, maybe, after the
I meeting the NRC people can talk to you about what methodology was used in terms of the
I solar analysis, and we appreciate your comments on that and, thank you.

I And we have Mike, Michael Ewall, now, to speak to us. Mike?

PBD14 MR. EWALL: My name is Mike Ewall, it is E-W-A-L-
L, with the Energy Justice Network.

I I testified back in November, and from my experience there I know that my comments will be
I ignored, because my comments were ignored then. And they actually told me why, so they
I weren't even pretending they were going to take them into consideration.

I I spoke the last time about terrorism impacts, and I was told that that was not something that
I we are allowed to really give comments on. Not that we are not allowed to give comments to,
I but that we are not going to be listened to and, obviously, none of it ended up in this EIS report,
I because that is being handled in a separate process that is generic to all reactors.

14-1 And while that is admirable that you have that, I
I think it would also be appropriate to have site
I specific terrorism impact information in here. You
I talk about -- you had a great acronym for it, severe accidents.

14-2 But there is nothing about severe, like, deliberate
I damage being done to this reactor. And as Paul
I Gunter gave, on some very clear testimony on the
I vulnerability site specifically to this reactor, I think that needs to be addressed.

I I don't have any illusions, either, that my comments are going to affect this in any way. I know
I also because some other things I said the last time about solar and wind, and conservation
I efficiency, also did not make it into this report.

14-3 I will go more into that in a minute. One of the
I things that I think need to be addressed in here,

though, that I just looked through this and noticed, is that there is nothing addressing the spent fuel, and where that would go.

And even if Yucca Mountain is built, and even if it manages to ship all the waste there with no accidents, and all these things that we are all hoping, some people are hoping would happen, I don't want to see Yucca Mountain at all.

14-4 But even if that happens Yucca Mountain is not going to have room for the waste that would be created in these extra 20 years. So you need to be talking about this in this report. Where is that waste going to go?

Because Yucca Mountain is not for that waste, it is only for the waste up to a certain point. Now, if a lot of that waste has to be temporarily stored in dry cask storage, we have a number of oops, mistakes, going on with dry cask storage, including one from just this past week.

14-5 Actually Frieda already made mention of it, in Northeast Pennsylvania, where they filled the dry casks with the wrong gases, argon and helium instead of just helium.

Now the NRC report from that stated that they don't know what impacts that might have, but it might degrade the effectiveness of these containers. And these are containers that we do not have the technology, or ability to repackage this waste, to put it back in the fuel pool.

14-6 So without those kinds of alternatives it is a big deal that they are filling these casks with the wrong gases. And in Point Beach, Michigan, and Palisades, you have the same kind of -- not the same kind, but you have other dry cask storage incidents with hydrogen bubble explosions, and wind several times blowing several feet off of the surface, near defective wells with dry casks.

14-7 Now, why are we possibly allowing more of the spent fuel to be created when we can't fit it in this reactor? We are not going to have any place to throw it away, like Yucca Mountain.

14-8 And the dry cask storage facilities don't even work, and they are glaring terrorist targets, and we know this, and I talked about this the last time, it was after September 11th, then too.

And we knew about this well before September 11th, and things got ignored. I'm shocked at how things are getting ignored now.

Appendix A

14-9

The no-action alternative in here I think is the best alternative and ought to be adopted, of course. And if you look, and I just downloaded this, right this morning, from the PJM interconnection website, PJM are the folks that run our grid around here.

And if you add up all the nuclear capacity in this state you get about 9 to 10,000 megawatts of capacity. Now, I have been helping communities fight off all these unneeded natural gas power plants, because Pennsylvania is already the largest exporter of electricity of any state.

14-10

We export so much electricity, I know it is not done on a state by state basis, but how much is generated versus used in each state? Pennsylvania is the largest exporter. And we export so much that we can fill all the deficits in the states from Vermont down to Virginia, and out to Michigan.

So that is quite a bit of excess electricity, and that is not including the fact that West Virginia and a lot of other states also have excess capacity.

14-11

Now, on top of that excess capacity, Pennsylvania has been faced with 50 to 70 new natural gas power plants. One of them right here in the Peach Bottom area. Now, these power plants, first of all, just the one here at Peach Bottom would be at least half as large as the reactors that are already here.

So half the capacity could, theoretically, if they build this plant, be shut down. But that is not being talked about.

Now, on PJM's website they are talking about adding well over 10,000 megawatts each year, in 2003, 2004, 2005. Now, just the -- and this is almost all natural gas. Just the natural gas power plants that are already built, within the recent few years, or under construction, or likely got built.

14-12

And a lot of them have been fought off, withdrawn, or defeated, and I have helped with some of those, I know this pretty well. But even the ones that are likely to go through is more than 10,000 megawatts.

Meaning we can not only shut down Peach Bottom, both units, we can shut down all the nukes in Pennsylvania, and no one's lights are going to go out, no one is even going to notice. We already have such a glut that even with a California style games happening here, by PPL, just like Enron did in California, PPL is being investigated for the same type of wholesale price manipulation.

Appendix A

| community energy is going ahead and building large wind farms in Pennsylvania, some of them
| on ridge lines.

14-17

| Yes, they are deforesting some of them, and there
| are impacts. However, Exelon knows this because
| they are funding them. There is a 60 megawatt wind
| farm going on line in Northeast Pennsylvania.

| Exelon is underwriting that. There are already two in Southwest Pennsylvania, Exelon
| underwrote those as well.

| There is another one going in, in West Virginia, in the Backbone mountain, another 60
| megawatts. That is also Exelon money behind that. So Exelon is not unaware of this.
| And if you are unaware of this it is because you are not talking to your licensee, because these
| are their projects, for the most part.

14-18

| And so the wind part of this report is woefully
| iPBDequate, it is scientifically inaccurate, it is just
| wrong, you need to do your homework. I've seen

| college reports, bachelor's degree college reports, that are much better documented than this,
| much better researched.

14-19

| The head of the Department of Environmental
| Protection in Pennsylvania, David Hess, was actually
| quoted at the Energy Conference where that natural

| gas presentation was given, saying that using just the decent wind speed sites in Pennsylvania,
| we can supply 30 percent of our electricity needs in this state.

| Now, what he is quoting is from the American Wind Energy Association, which is using
| Department of Energy data, which is working on being revised, it is not really that optimistic.
| However, 30 percent is pretty high.

| And even if it turns out to be 10 percent, that is very significant, and that needs to be addressed
| in this report. So you are obviously misgauging the impacts of wind.

14-20

| And also, a lot of this is addressing section E, on A-
| 48 you mention over 50 competitive suppliers in
| Pennsylvania. This report, again, needs to be

| updated. There were close to 50 when deregulation first hit Pennsylvania, that is before we had
| PPL doing the Enron-like games here.

| Since then competitors have fled as quickly as they can, we have very few suppliers that are
| left in this state right now, especially for the residential sector. For the business sector we have
| some, but it is still not looking that good.

- 14-21 And also on that same page, on page 8-48, there is basically no incentive for Exelon to be pushing conservation in a competitive market. Well, yes, that is a problem, that is a problem with the whole system of having a competitive market for things, when the logic in this report is saying, Exelon is not going to do it, that is not going to happen.
- 14-22 And that is, basically, the assumption that I saw in here because, otherwise, we can easily talk about methods of conserving enough electricity, and without just looking back at their failed attempts as a utility to work as against their own economic interest.
- 14-23 And, finally, page 8-49, the very first few lines it says, therefore it is not clear whether Exelon or another competitor supplier will construct new generating units to replace Peach Bottom units 2 and 3 if the license were not renewed.
- Again, you are getting at this idea that you have no idea what is going on currently, or if you do, you are not writing it into this report. This power is already being replaced.
- 14-24 So the whole no-action alternative, the wind, the solar estimates, the conservation efficiency estimates completely need to be rewritten. I've already submitted testimony on this, and it hasn't been incorporated.
- And to work off something Amy just said, she mentioned there is 50 billion dollars a year in federal subsidies to fossil and nuclear power, and that is about ten years ago. Only slightly less than one billion dollars, 600 million dollars, 60 million dollars according to a report by KPMG.
- That is the cost it would take to build a large scale solar panel production facility, where every year you can crank out the production of 500 megawatts worth of power. So in four years just one factory can replace Peach Bottom and then keep making more Peach Bottom's worth of electricity, but in the form of solar panels.
- Now, for that cost, and building it down to economy of scale, actually the question that I wrote for was what size would it take to make solar power affordable? That is the problem with it, and you mention this in the report, that solar panels are not affordable right now.
- 14-25 Well, building on the economy of scale that would be less than a billion dollars, 6 to 700 million dollars, will bring the cost of solar panel production down by four to five times, so that is cost effective with other forms of electricity generation.

Appendix A

14-26

And when I say cost effective I'm talking about cost effective with the subsidized, and not real cost that nuclear reactors are currently getting, because

nuclear reactors aren't cost competitive either, that is why they are so heavily subsidized. So that ought to be addressed.

FACILITATOR CAMERON: Okay, thank you for those specific comments, Mike. We are over our time and since Judy Johnsred graciously gave up her spot earlier, I promised that she would have at least a couple of minutes.

And Judy could you -- well, do you want them? If you would please just try to keep it brief for us? Dr. Judy Johnsred.

PBD05

DR. JOHNSRED: Thank you, Chip. My name is Judy Johnsred, I did my doctoral work in the field of the geography of nuclear energy, and I have a sort of a

unique position here today.

I represent the Environmental Coalition on Nuclear Power, founded in 1970, here in Pennsylvania. And Sierra Club, technical advisor to their national waste committee, currently.

But I was -- we were original intervenors in the licensing of units 2 and 3 of Peach Bottom. And so it's been a long 30 years for me, to have to come back here now and find that the agency personnel either haven't learned, haven't come to understand the nature of radiation injury, or they are not allowed to do their job.

There are three sets of people here that I really wanted to be able to address. Those of you who live here, and those who have come because they don't live here, but they care about here; the NRC Staff, and those who, I assume, are the majority here of Exelon company. And I think that what so many of us, including those associated with the industry, perhaps haven't really grasped is what is driving the force to relicense an aging plant with a less than sterling record.

05-4

When, indeed, there are available other much cleaner, much cheaper, much more durable sources to generate the electricity, the energy that we need.

We are beginning to hear, in Pennsylvania, about distributive energy, taken seriously, where in a community is concerned to supply for itself.

But what is driving this, why do you folks in the agency, who very frankly ought to know better, if you are reading the literature in your own field, if you were attending conferences that the NRC has not seen fit to bother to attend, concerning the impacts of low level radiation.

What is driving it? It is the law. How many of you have heard me read the law to you? Read the law. How many of you have read the National Nuclear Energy Policy Statement? Anybody in the room? Right, and you heard what they had to say.

You who work for the Agency? It is chapter 1, section 1, and you better listen, it is why we have the problem facing us, of 50 percent more high level radioactive waste, and far more radioactive waste and materials that will be deregulated, that are already being deregulated, to be recycled into the consumer products of all of us.

The law says, Atomic Energy is capable of application for peaceful as well as military purposes. It is, therefore, declared to be the policy of the United States that the development, use, and control of atomic energy shall be directed so as to make the maximum contribution to the general welfare, which is not defined in the law.

Subject at all times to the paramount objective of making the maximum contribution to the common defense and security, and the development, use, and control of atomic energy shall be directed so as to promote world peace, improve the general welfare, improve the standard of living, and strengthen free competition in private enterprise.

05-5

Now, there are two things not mentioned here. Did you catch them? There is not a word about protection of the public health and safety, or of the quality of the environment.

You have to read down several sections and, even then, those factors which are surely the paramount objective in our society, are subordinated by being equated with national security and the free enterprise factor.

05-6

I am appalled at the unwillingness of the Nuclear Regulatory Commission, and EPA, and DOE, to consider the information that is now becoming available concerning the impacts of ionizing radiation on the well being of living creatures, organisms of all kinds.

05-7

You fellows up here are well beyond being that healthy, young, standard man. So you ought to listen carefully. Because those standards that were mentioned to us by Dr. -- those standards were, in fact, developed based upon standard man, using weighting factors for organs, divorced from the reality of the variabilities in human susceptibilities to disease, to exposures, to the synergies between and among the sources of contamination that are with us, throughout our environment.

Appendix A

| And the comments that you have heard today that are very significant, concerning health
| impacts, are based upon essentially an epidemiological approach, and that is really all we've
| had in the past, on which to base our understanding of health impacts.

05-8

| But whenever a community has requested a health
| study, and the health study has shown that, indeed,
| there are excesses of certain cancers, or leukemia,
| the response has been, but that is too small a sample to have statistical significance.

| And I think we are at the point where we need to think about how many such insignificant
| studies add up to very substantial significance to be taken seriously.

05-9

| But the situation with regard to the health impact of
| the uses of ionizing radiation that increase within our
| society, within our environment, those today are
| being looked at in a very different way.

| And that way is through molecular and cellular radiation biology, that is really beginning to get
| us an understanding of the mechanisms of the damage.

| And I don't see that that is being factored into this study, anymore than the totalities, the
| systemic approaches that are necessary in order to have a valid environmental impact
| statement.

| Having promised you that I was going to make it very short, I'm not going to say many of the
| things that I think also need to be said. But I commend to you the comments, reasoned,
| careful, thoughtful, and correct comments that you have heard today, from many people who
| care about the well being of this area of southern Pennsylvania.

05-10

05-11

| I urge, really a total reworking of this EIS, of the
| environmental review necessary. And I would
| strongly, strongly urge the NRC to set a precedent of
| denying a license extension.

| FACILITATOR CAMERON: Thank you, Judy, and thank all of you for coming out and sharing
| your concerns, and your comments with us. We are going to be back at 7 o'clock for another
| meeting, open house at 6 before that.

| Thank you, and we are adjourned.

| (Whereupon, at 5:00 p.m. the above-entitled matter was concluded.)

Transcript of the Evening Public Meeting on July 30, 2002, in Delta, Pennsylvania

[Introduction, Mr. Cameron]
 [Presentation by Mr. Tappert]
 [Presentation by Mr. Anand]
 [Presentation by Mr. Wheeler]
 [Presentation by Mr. McDowell]
 [Presentation by Mr. Palla]

FACILITATOR CAMERON: And the NRC staff, our expert consultants, will be here after the meeting. So take the opportunity to talk with them if you care to about various issues. We are now going to go to formal comment from all of you, and we have some people signed up who wanted to make comments tonight.

And first I would like to ask Mr. Norm Wurzbach to come up. Norm? Come up here if that is comfortable for you, or you can go right here. Thank you.

- PBD15 MR. WURZBACH: Norm Wurzbach, I live about ten miles north of here, I run a beef farm operation. I appreciate having electric power into my farm, it supplies me with water, at night lights. I think it is a great benefit.
- 15-1 I feel that Peach Bottom probably produces the electricity I use. I have no problem with it, and I think it should be extended for another 20 years, because it is an attribute to the whole neighborhood, because a lot of people in the area do work at Peach Bottom, also.
- 15-2 As long as it keeps our electric rates down I think it is a good move, because it doesn't use fuel oil, it doesn't use gas. I use these items myself, and I also use coal, which it doesn't use.
- 15-3 So I'm not competing. So it keeps things cheaper, and we are importing too much oil right now, and that would be one of the alternatives, I think, and that is not good. Thank you.

FACILITATOR CAMERON: Thank you very much, Mr. Wurzbach. Next we are going to go to Nicki Roth. Is Nicki still here?

We will go back to Nicki if he or she comes in. Let's go to Alan Nelson, Nuclear Energy Institute. Alan? He is out there too. Okay. Sandy Smith?

MS. SMITH: Did you call me before?

FACILITATOR CAMERON: No, I didn't. And, Sandy, take your time to -- whatever you need to say.

Appendix A

MS. SMITH: Good evening. Even the grim reaper needs glasses. I just realized, earlier today, when I was standing here as the grim reaper, my daughter made this outfit for me really, quick, in about a half an hour.

But I was pregnant with her in '79 almost had the meltdown, minus 30 minutes. So perhaps this is a very apropos outfit to be wearing to get the message across.

Thank you for letting me speak. Although I'm very angered that this old nuclear plant is even being up for license renewal, the NRC's own standards stated Peach Bottom was supposed to be closed 20 plus years ago.

What has changed? Has anyone from the NRC personally inspected every piece of rusty metal, worn parts, fractured cement. This is no way that Peach Bottom can operate safely or economically, and should be shut down, according to the Nuclear Regulatory Commission's own figures.

When death, health, and environmental desolation are added up, Peach Bottom definitely is not cheap. Who is going to pay in York County, or in the surrounding areas if, perhaps, this corporation goes into bankruptcy down the road?

Who has a bond, what kind of insurance do we have with the spent fuel, with everything else? We don't. According to the Federal Register notice, each relicensing is expected to be responsible for the release of 14,800 person Rem of radiation during the 20 year life extension.

This figure includes releases from the nuclear fuel radiation release, spread over the population, and will cause 12 cancer deaths per unit. That would be 24 for Peach Bottom, they have two units.

There was a person who spoke this afternoon that said, is this really worthwhile, if we know for pretty much a fact, that at least 24 people will die in the next 20 years, because of this radiation?

If someone came in right now and shot 24 people, would that be all right, would anyone here like to volunteer for it? I don't think I know of anybody in York County that would like to volunteer for that sort of thing.

This figure does not include accidents that can happen along the way, other casualties. This is only calculated. There are not 12 people, there are not 24 people.

TMI is also close by. The NRC has said it expects as many as 100 reactors to apply for relicensing extensions. This would result, and I had figured it wrong, over 2,000 cancer deaths among the United States population.

Pennsylvania has the second highest number of nuclear reactors, with the second highest nuclear waste. And because of that our government is telling us we should have a nuclear dump. They are right, we made it, we might as well keep it here.

But we shouldn't have to have a nuclear dump. We don't need to be producing more, it can't all go to Yucca Mountain. Even if we are for Yucca Mountain it can't go there, because we would still be making too much if we keep relicensing these nuclear facilities.

Nuclear power is not an admission free technology. The entire nuclear fuel chain, the uranium, primary mines on the lands remaining to indigenous people, uranium conversion, enrichment, fuel fabrication, each step exposes workers and communities to radioactivity, and each step generates radioactive waste.

Radio curies defy the concept of disposal, they don't go away, we just move them around. There is no such thing as a nuclear dump that won't eventually leak.

The NRC acknowledges that the allowable limit, 100 milli rems a year for radiation exposure via air, from any nuclear reactor, to the general public, will cause a fatal cancer in 1 out of 286 people.

This is very high when compared to the standard of 1 in one million considered an acceptable level for human sacrifice for another industrial activity.

The 1986 catastrophe of Chernobyl has seriously affected the health and welfare of the belrussian people. I know, I was there. I saw it. I don't want to hear that our nuclear facilities are built different, it won't happen.

It almost did happen at TMI, I was there when it almost happened at TMI, too, that morning. But in Byelorussia it happened, I have seen the children, I have seen the children go back and forth to be detoxed in Kiev, and in Israel, and the parents not getting to see their children for maybe as long as six months.

Then they come back home again and it is all over again, radiation. The only thing good is that it sure grows mushrooms big. But that is it. The land, the everything is very desolate, very sad.

The average life expectancy of women has declined by five years, over there. Only ten percent of the children are completely healthy. Cancer among adults and children have increased in Ukraine and Moldova, as well.

Two-thirds of the Ukraine is contaminated and 70 percent of the food. The watershed of the Kiev basin has been so contaminated that it would take 200 billion dollars to just purify the water, which they don't have. Forty million people have to drink it, and they do.

TMI was 30 minutes from a meltdown. How much disaster insurance does Peach Bottom carry for York County? We have a right to know. They don't carry it.

Our tax dollars are paying for some peripheral. Who is going to pay for the Susquehanna if it is polluted like that? Where is this money coming from? I will tell you what is going to happen, they are going to go into bankruptcy, just like all the other corporations, because they can't do it, and we will be stuck possibly with useless land that absolutely no one wants.

Appendix A

And then where do we go, where do we live? The NRC has offered to pay the cost of two day's supply of potassium iodine pills for people living within ten miles of a nuclear power plant.

Thyroid cancer is a major result of reactor accidents. The exposure can continue for days, even after one leaves the area, it is in your blood, it continues.

If a nuclear accident occurred during a natural disaster, earthquakes, hurricanes, blizzards, ice storms, or an attack, evacuation would be difficult, time consuming, and maybe impossible.

And people would need at least 10 days to 30 days supply. Even the EPA manual states that these pills should be given within 3 to 4 hours after the accident, if it is going to do a tremendous amount of good.

So that means that even if you have them at home, if your children are at school, or at day care center, those centers have to have them too. They need to be stockpiled there, they need to be stockpiled at work.

Soaring rates of thyroid cancer are still appearing in the children over in the former Soviet Union countries, who were exposed to Chernobyl, because they received too little, too late, of iodine.

There is no way that this seemingly simple protection could be carried out, even here, in York County or surrounding area. Why do all of our tax dollars have to go to pay for Peach Bottom, a private company's hazardous operation?

In the past three years old and worn out equipment have caused dozens of incidents requiring plants to shut down. On May and August 2000, Peach Bottom unit 3 was forced into an emergency shutdown when an instrument valve failed and caused a leak of contaminated coolant.

The coolants are worse probably than the reactors, as far as the radiation. The NRC has just estimated that with a spill, within 50 miles, people will be affected. We know people will be affected.

Ten miles is a joke, this is affecting everybody, we must find another way. We must asses the nuclear age itself, in the wake of Chernobyl. There are more than 450 reactors in operation on the planet today.

Each generates radioactive waste that will be a threat to human life for hundreds of thousands of years. Each routinely releases radioactivity into the air and water.

Poland was the only country that protected their children with iodine tablets when Chernobyl erupted, and that is not a polish joke. As far right now, today, as Scotland they are still feeling the effects of Chernobyl with their sheep, they may not be able to be sold, and a lot of their land.

This is serious, it is lasting, it is not something that we can just put a band-aid on. There is no safe place. We saw the forest fires from Canada, that is exactly the way the radiation goes, by the air.

If nukes are so safe why do we have our phonebooks with evacuation routes? Why is the industry trying to figure out where to dump this deadly waste? And why is 46,000 dollars of our hard earned money in York County, being allotted every year for the radiation emergency response?

That is why it is so cheap, the nuclear plants don't have to pay for anything, hardly. We are paying for them. They are buying these cheap worn out plants that are ready to die, anyway. They are going to make as much money as they can on them, and go.

And that is exactly what is happening, and we are footing the bill for everything. The NRC, that is us. Those are our tax dollars, we are paying them, they are paying for the tablets that very few people will get.

If most people want them, and their protection, we are going to have to pay for them. We are paying for all these things, and we shouldn't be. The NRC does not close down, if they don't close down Peach Bottom we don't have to worry about the terrorism, because our government is terrorizing us enough by keeping these open.

And I hope you all check out the calendar that is out there. In case of an emergency at Peach Bottom, and they've got cute little pictures by children that have drawn them, and things to do, going into their basement, and everything.

These are little kids' pictures, and that is what that calendar is telling them about. We've got to grow up, we shouldn't have anything that is going to cause an emergency, that is going to cause an accident on this magnitude.

There are plenty of other ways we can make money, we don't need to make money this way. We all have a responsibility, if not to ourselves, to our children. And we don't need to do this to earn money for their education.

What good will their education be if they don't have a place to use it? Thank you, good night.

FACILITATOR CAMERON: Thank you, Sandy. We did hear, this afternoon, and this evening, from Sandy. But a statement that was in the draft environmental impact statement about 12 deaths. And we thought it was important enough to try to at least explain what the -- what that was supposed to mean.

And Patricia Milligan, who is a health physicist with the NRC is going to try to give us an explanation on that.

MS. MILLIGAN: Good evening, I'm Trish Milligan, I'm a certified health physicist, I work for the NRC. I'm also a pharmacist, I've spent a lot of years in the practice of pharmacy, and also nuclear pharmacy, so I have a wide spectrum background, and I've spent a number of years working for a nuclear power stations.

The 12 deaths that you are talking about, those aren't real deaths. It is not like we walk in and say, one, two, three, four, five, too bad for you guys.

Appendix A

| What we do is we calculate, statistically we calculate, based on a lot of assumptions, and a lot of
| models, what would happen if this person, or this large population received X amount of dose for
| a period of time.

| Now, there are several theories that are in considerable debate in the scientific community. And
| the theory that we use, and the model that we use to come up with these statistically calculated
| deaths, if you will, is something that is known as linear no threshold.

| We assume that any dose, no matter how small, has some impact. And we assume that it is
| more or less a straight line, higher dose, higher impact. And that is the model that we use.

| If you look at other work that is out there, in fact there was a statement put out by the Health
| Physics Society, which is a large collection of scientists in the field of radiation protection and
| physics, and only a very small percentage of those are involved in reactor health physics.

| They believe, based on evidence that is in the world today that there is, in fact, a threshold. And
| they would suggest, from their position statement, that any dose below 10 rem is considered
| inconsequential, because there is no body of evidence, hard evidence, to suggest that anything
| less than 10 rem is deleterious to health.

| At the NRC we have adopted the most conservative model, which is any dose would have some
| impact. Based on that, and based on the assumptions of human behavior, and this infinitely large
| population, we calculated if you believe A, B, C, D, E, then over a population, over a lifetime, you
| may expect to see 12 additional cancers in this area.

| Now, if you look at the, what I guess I would call the background cancer rate in this country, there
| is approximately 1.3 to 1.5 million new cancers that are diagnosed each year.

| So what we would be talking about would be a statistical number 12, or 2000 over 20 years, so
| that would be -- yes, so that would be, essentially, 100 additional cancers if you will, over an
| infinitely large population surrounding all the power plants.

| Now, people always get uncomfortable when we are talking about statistically calculated deaths.
| Because, after all, we are more than statistics. And I understand that.

| Having had cancer myself, and having lost a younger brother to cancer, I understand very much
| what statistics are all about, and none of us like to feel like we are statistically insignificant.

| But when we look at these kind of models we make some very broad, very conservative, very
| protective assumptions. So that when we say 12 additional deaths, or 2000 additional deaths
| over 20 years, those aren't real people, it is not like 12 people put up your hands and you are out
| of here.

| These are just statistical models that are done, much like what the EPA does when they do the
| risk analysis, where they decide there is an acceptable risk of 1 in 10,000 cancers. It doesn't
| mean that 1 in 10,000 of us is going to get a cancer from this particular toxin.

| It is just meaning based on these models, and these assumptions, this is the conclusion that we
| have come to, in order to affect a very wide margin of safety for the public.

So it is not like there is 12, or 2000 people equals 20 years are going to fall over, and that is from reactor emissions. That is just part of the modeling that we use, and it is a very, very conservative model, for which is under tremendous debate in the scientific community at this point.

Do you have any questions?

FACILITATOR CAMERON: Yes, I think there might be. Do you want to ask a question, Sandy?

PBD03
03-19

MS. SMITH: Well, on the risk assessment, I don't think any -- the risk is always, it is a risk. And we shouldn't be, I don't think you would have a risk with how many people are going to die from windmills.

So maybe we ought to work on some other energy things, here. We had Dr. Manago was here, and I'm not going to go on with his credentials, maybe some of you are familiar, maybe not.

But he is very well known in the field. He doesn't work for the NRC, or he doesn't own a nuclear facility, so he has nothing to gain, one way or the other. And he has done a lot of independent studies.

One of them is the famous tooth fairy study, where what he has done is that the body doesn't know the difference between strontium 90 and calcium. So strontium 90 being radiation. So the body will take in whatever is available.

If there is a lot of radiation in the area, and I'm making this simple, the body will take in more radiation than calcium. If you are in an area, maybe if you took more calcium, you would be all right.

At any rate is the idea is, the government has done these studies in the past, and the idea is, they are taking teeth from children that were born after 1970, across the United States, checking the teeth for strontium 90, and trying to see if there is hot spots, if there is any kind of correlation, or whatever.

03-20

And very interesting that here in Lancaster, York, and Chester County it is very high, it is 26 percent higher with the children. And he had some very good studies, and statistics, which he handed in before.

So it basically depends who you hear from. And I always like to hear from someone who has nothing to gain, politically, or money, or anything, rather than the fox watching the henhouse. Thank you.

FACILITATOR CAMERON: If anybody wants to see the full text of Joe Mangano's presentation today, it will be on the transcript that will be available. Thank you, Sandy, and thanks Trish, for trying to clarify that, clarifying that for us.

Appendix A

Mr. Guyll, are you ready? And I think this microphone is fixed now, isn't it? This is Mr. Ernest Guyll.

PBD16

MR. GUYLL: I prepared some written comments, I will just read from them, so I won't go too long.

I received the draft report for comment of the generic environmental impact statement for the license renewal of nuclear powers, regarding Peach Bottom atomic power station Units 2 and 3.

And this is not really a reader friendly document, and I had some trouble locating points of interest. I was here on November 7th, and made some comments there.

16-1

There was no mention of my question regarding an evacuation plan for the Amish in the event of a nuclear accident. And I made this question in the past at other NRC meetings. I've never seen any

evacuation plan for the Amish.

16-2

I found no mention of my request that past performance of the plant be taken into account, including control room operators sleeping on the job.

Perhaps that is not a new issue.

16-3

There was no mention of my concern of the danger of spent radioactive fuel being stored on site. There was no mention of my comments about the problems with the emergency warning sirens.

16-4

16-5

In an NRC document dated August 15th, 2001, it is noted, and I'm quoting here from the NRC document: "Two former contract technicians deliberately falsified siren testing maintenance records, and performed

inadequate siren tests while professing that all activities on siren records were properly done.

And, two, one of these technicians knowingly installed jumper wires to bypass failure detection circuitry on at least 10 siren boxes, which would demonstrate that the sirens were working properly, even if they were not."

And that might be an old issue, too, that might not be a new issue.

16-6

It is my opinion that the NRC had already decided to renew the license of the Peach Bottom power plant when they received the application. The only reason

meetings are held is to meet a requirement.

Sam Gejdenson, the former Chairman of the House Interior Subcommittee on Oversight said about the NRC: On a number of occasions the -- I'm sorry, I'm quoting here.

"On a number of occasions the Commission has acted as if it were the advocate for, and not the regulator of the nuclear industry."

16-7 I continue to be concerned about an earthquake, given the proximity of the martic fault line. And, by the way, that is spelled M-A-R-T-I-C, not M-A-R-T-I-C-K, as erroneously recorded in the report.

16-8 According to a Lancaster New Era article, on July 1st, 1994, corrosive cracks found inside a Peach Bottom reactor "could cause a meltdown during an accident or earthquake, the Nuclear Regulatory Commission said today. Cracks in the York County nuclear reactor are expected to grow, and will have to be monitored, the NRC said.

NRC officials also warned that the cracks could lead to a meltdown if they shift during an accident, or a natural disaster."

And I could find no mention of this in the draft report for comment. And that also might not be a new issue, that was seven years ago.

16-9 I would still like to know how many accidental releases of radiation have occurred at Peach Bottom since it began operations. I would like to know the type of radiation, the amount of each release. The draft report does not address this in detail.

16-10 I would like to have data on cancer cases, birth defects, and stillbirths in a ten mile radius of the plant, and compare this information to the national average.

16-11 The draft report does not address this in detail. I would like to know the type of radioactive isotopes at the plant, and the half life of these isotopes. Are strontium 90 and strontium 89 the only radioactive isotopes at the plant? Because I think those are the only two mentioned in the report.

16-12 The draft report notes the socioeconomic problems associated with the shutdown and decommissioning of Peach Bottom. However, if a power plant were to operate around the same area, using renewable resources, such a plant would need a large number of employees who would probably be just as involved in the community as the current Peach Bottom employees.

And I do not agree with the conclusion of the draft report which notes that the impact of renewing the license at Peach Bottom would have a small impact on land use, ecology, water use, and quality, air quality and waste.

Appendix A

I do not agree the use of renewable resources at the same site have a greater impact on the environment than the current plan.

16-13

Since the Peach Bottom plant is located on the edge of the great east coast megalopolis, an accident could have a devastating effect on millions of people.

We need to shut down and decommission the Peach Bottom atomic power plant before a horrible accident occurs.

FACILITATOR CAMERON: Thank you very much, Mr. Gyll. Duke, did you have something to add?

MR. WHEELER: Excuse me, Ernie, you are in our mailing list for correspondence related to our environmental review, and I'm wondering, do you recall receiving a copy of our environmental scoping summary report, back in April? I have a copy of it here that I will share with you.

I will let you see what it is. And if you did not receive a copy, when I get back to the office I will put a copy in the mail to you, and it does identify, it addresses various things that you brought up here, at least the great majority of them.

I don't have them all in my head. But, for example, your interest in the provisions for evacuation of the Amish, and where that fits into our license renewal. That is in our scoping summary report.

If you will see me after the meeting, I've got my copy of it, and I will make sure that you get a copy.

FACILITATOR CAMERON: That is correct, and I think that what Duke is saying is that we did try to be responsive to your comments. And, Duke, if you could talk to Mr. Gyll offline?

MR. WHEELER: And also the librarians are on my list. I will call the libraries and see if they got this particular document. I may need to mail it out again.

FACILITATOR CAMERON: Thanks, Mr. Gyll, and thanks Duke. We are next going to go to Mr. Alan Brinson, from the Emergency Management Agency of the Commonwealth of Pennsylvania.

MR. BRINSON: Good evening, everyone. My name is Alan Brinson, thank you. I appreciate and thank you all for coming out here.

This type of meeting is doing exactly what it is supposed to do; provide information, give you opportunities to discuss things, to learn some things, and perhaps to provide some clarification.

Today I heard a number of things mentioned that I would like to expound upon, a little bit. First of all I'm the lead emergency off-site planner for this state, for Peach Bottom atomic power plant.

And while I profess to be no expert, I have immersed myself in the emergency preparedness of this community, and am quite familiar with a number of facets associated with that.

The comments regarding the Amish community, it is very important. There are a number of provisions that have been set forth for the Amish community. This is not a new issue, it is something that comes up on a fairly routine basis, and particularly an important one at this time.

So that we can clarify exactly what is being done with the Amish community, let me go ahead and speak on it.

The easiest way to do this is to start off with the siren system, and the EAS. It was particularly troubling to us, the State of Pennsylvania, as well as the NRC, when Peach Bottom and the siren system indicated the problems that the gentleman just spoke about.

The utility, to their merit, actually self-reported that event. So it was the utility who took the first response, and many subsequent reports, to satisfy the Commonwealth, and the NRC, that the siren problem was addressed, and that any future problems with the siren would become certainly not the issue that was presented when falsification took place. But the utility did the right thing in reporting, and I think you will find that in the supplemental reports that were filed with the NRC.

Now, the siren system is the primary method for communicating with the public. Following that, an emergency alert system, turning to radios, and television. But there are also other methods for communicating across the Commonwealth.

If the sirens fail we immediately go into a route alerting. Much of this is done at the county level, and plans are in place for each county to respond to a siren failure and provide route alerting teams.

Now, against popular myth, the Amish do have radios. The Amish, from what I gather, are certainly tapped into the national oceanographic, or NOAA, through the national weather service radios. They certainly have the ability to get information, and we have the ability to put information through the National Weather Service, so that they have emergency information relative to Peach Bottom, through that delivery system.

As I said before, the counties have the predominant responsibility for including provisions in their plans for the treatment of not only the Amish, but all publics in the community area. Lancaster and York specifically address, in their plans, a set of procedures on how to address the Amish population. Chester county, they have one municipality in this EPZ, emergency planning zone, that is West Nottingham township.

And, frankly, they have four families. Those families are part of the police of West Nottingham, to be notified by the police in West Nottingham Township.

Much has to be said about the Amish way of communicating. The plans that the counties have are to notify the bishops. The bishops then have various methods to contact members of their community.

Appendix A

| And for many of us who are not familiar with the Amish, it seems to be something of a mystery.
| But for those of us who live in and amongst the Amish community, as I do, they have quite an
| efficient, and effective way for getting information out to each other, I can assure you of that.

| Now, they also have the same access to what is called a special needs survey that is conducted
| annually. The special needs surveys are sent out in mailings to every household in the EPZ.

| Those people who have special conditions, whether they need notification, whether they are
| hearing impaired, or whether they are unable to walk, or be transported, they go into a special
| needs form that is then placed with the county.

| So there is a data base in the county for people with special needs. Now, there has been an
| enhancement to that, because this Amish question is so important to us. The counties have now
| requested that their annual survey for special needs include a questionnaire.

| And you will be seeing this in the York area, I believe, in the near future. This survey question is
| going to be asking the question, do you have access to a phone or a radio?
| If the respondents to that survey indicate no, they will be placed in the special needs group. And
| as such the county, or the municipality, whatever jurisdiction is responsible, for communicating
| with those people, will then be -- they will be putting messages out to them through this special
| needs program.

| So there are many methods to communicating with the Amish. Any questions? Thank you very
| much.

| FACILITATOR CAMERON: Thank you, Al, for providing that information from the state for us,
| thank you.

| I would like to ask Dr. Shirley Liebman to come up and talk to us. Dr. Liebman?

PBD17

DR. LIEBMAN: I'm going to read my comments. I
usually don't read in some of these presentations, but
I will at this time.

| Our family has resided in Lancaster County since the '60s, and for the past 20 years or so, right
| in Holtwood, just ten miles or so north of here.

| My attendance at the first public scoping meeting last fall, for the license renewal, gave me a first-
| hand knowledge of the process that was discussed in detail, in numerous handouts, with much
| relevant data.

| Unfortunately the negative comments by the anti-nuclear activists were amplified by the media,
| rather than the overall supportive input by our local residents, such as myself, and most other
| interested attendees.

| Basically we feel that our national energy needs have been outlined, over these past decades.
| And the vital role that nuclear energy plays now, and should play in the future, is clear to us.

Appendix A

| So the results of my research, specifically if any of you wish to find out which kind of detectors
| are used, and you are concerned that the ability of the NRC to monitor properly the air, water,
| and solids materials, my colleagues and I have documented our work in over 200 publications,
| and presentations in about two or three dozen technical journals, many articles, book chapters,
| and books, and so forth.

| So there is lot of documented information that you can follow, for those who feel it necessary.
| Thank you.

| FACILITATOR CAMERON: Thank you very much, Dr. Liebman.

| Is Nicki Roth here? Okay, that is all the speakers we had for tonight. And is there anybody that I
| missed?

| (No response.)

| FACILITATOR CAMERON: Well, the NRC staff, our experts, archaeologists, and other
| disciplines are here. Please feel free to talk to them after the meeting.
| We are going to adjourn now, and thank you all for coming out and sharing your comments with
| us. Goodnight.

| (Whereupon, at 9:00 p.m. the above-entitled matter was concluded.)

January 2003

A-153

NUREG-1437, Supplement 10

To: Duke Wheeler, NRC
Peach Bottom EIS@nrc.gov
From: Shirley Liebman, Ph D.
Local Resident, Concerned Citizen of Lancaster Co.
Consultant Member, The CECOM Group, Inc., Wilmington, DE
Science & Engineering Consultant Network
Member, Board of U.S. Army Science & Technology (BAST)
National Research Council, Washington, DC
717-284-3478 FAX: voice mail: 717-284-5225
Email: Liebman-Pinnacle@msn.com

Date: July 13, 2002

Subject: Registration for Oral Comments at July 31st Public Mtg.
Peach Bottom Inn, Delta

I received the July 8, 2002 Memo concerning the public meeting on July 31st to comment on the Draft Environmental Impact Statement for the license renewal process at Peach Bottom

I would like to present a summary of the comments (sent via Email July 5th) that resulted from my evaluation of the Draft document. However, since I had attended last year's afternoon public scoping meeting in Delta, I recall that the majority of favorable comments (and applause from many attendees) had minor press coverage, while the evening 7 PM meeting had TV/press focused on the comments from non-local anti-nuclear activists. Hence, their negative, confrontational statements were amplified by the media.

For that reason, I defer to your scheduling of my comments to the session(s) most helpful to acknowledge and support the Draft document content and conclusions. Furthermore, I suggest updated commentary be made from NRC persons to address highlighted security measures, both for on-site facilities and for nuclear waste transport off-site. It should be made clear that we all share responsibility as active citizens in Homeland Defense efforts to support continuing safe, efficient operation of our nation's nuclear power plants.

Please advise me as to your response to my registration for comments. I will furnish a written summary prior to that time, should you request it.

Thank you for your time and attention.

To: Chief
Rules & Directives Branch
Mailstop T-6D 59
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Email: Peach_Bottom_EIS@nrc.gov

From: Shirley A. Liebman, Ph D.
91 Pinnacle Rd. West
Holtwood, PA 17532
Phone /FAX: 717-284-5225 Email: Liebman-Pinnacle@msn.com

Date: July 5, 2002

Subject: Response to Draft of Plant-Specific....Peach Bottom License Renewal

The following are comments made as requested in your correspondence of June 24, 2002, which included the Draft Plant-Specific Supplement 10 to the Genec Environmental Impact Statement Regarding Peach Bottom Atomic Power Station, Units 2 and 3 (TAC Nos. MB2011 and MB2012).

I have read the above document and find the information content and its presentation to be clear and comprehensive, in response to the public needs regarding the license renewal process. All major regulatory requirements are noted and explained, in addition to specific responses to questions put forth during and after the general scoping meeting in November, 2001 in Delta, PA.

Detailed coverage was given of all major environmental topics, including demographics, background operational data, and reasonable future activities. Current data that addressed specific health and operational concerns were presented, as requested by local residents and concerned citizens. Using risk management procedures, it was shown that any / all plant activities have minimal or small levels of risk to the environment or to human health. Continued surveillance will ensure prompt actions wherever needed, since it is accepted fact....*all human activities carry a non-zero risk level.*

Expertise from several sources was included: Peach Bottom Plant employees, officials / consultants from state, regional, and local areas, as well as experts from our National Laboratories (LLNL, Argonne, and Los Alamos). Projections were made in specific areas as to any changes that would take place upon renewal of the 20-yr. license: no new adverse operational effects are anticipated. Responses are planned to the likely increases in nearby populations (York / Lancaster regions) and to heightened emergency management actions that are now basic to all U.S. nuclear reactor facilities.

Appendix A

In summary, the draft document is a fully informative, clear outline of the intended license renewal of Units 2 & 3 at Peach Bottom. All regulatory and citizens' requirements for safe, efficient operation are presented to meet or exceed the needed levels. It is excellent an public documentation in support of a successful renewal process.

Signed

Shirley A. Liebman, Ph.D.
Local Resident, Concerned Citizen, Lancaster County

Consultant Member, The CECON Group, Inc., Wilmington, DE
Science & Engineering Consultant Network

Member, Board of U.S. Army Science & Technology (BAST)
National Research Council, National Academies
Washington, DC

P.S I would be willing to present a summary of these comments at the upcoming public scoping meeting in Delta, July 31, 2002, if requested.

X-Mailer: Novell GroupWise 5.5.4
Date: Mon, 07 Oct 2002 12:46:55 -0400
From: "Peach_Bottom_EIS Peach_Bottom_EIS" <Peach_Bottom_EIS@nrc.gov>
To: <mcDowell5@llnl.gov>
Subject: Fwd: Supporting Info.

Return-path: <Odiejoe@aol.com>
From: Odiejoe@aol.com
Full-name: Odiejoe
Message-ID: <a22d75f92.2a7b119f@aol.com>
Date: Thu, 1 Aug 2002 18:35:11 EDT
Subject: Supporting info
To: prm@nrc.gov
X-Mailer: AOL 4.0 for Windows 95 sub 120
Mime-Version: 1.0
Content-Type: multipart/mixed; boundary="=_D68A4798 6D0C548A"

Dear Pat (or please tell me what I should call you).

Sandy Smith gave me your email, so I'm sending you the hard data I used, with sources, in my presentation yesterday. It's attached as a word file.

If you have any questions, please feel free to call me at 718-857-9825

Best wishes, Joe Mangano



PEACHB-42.DOC

STATISTICAL DATA USED IN
ASSESSING HEALTH RISKS
FROM THE PEACH BOTTOM NUCLEAR PLANT

1. Cancer Death Rates, Age 0-9, 1987-99, Local Counties

Area	Deaths 0-9	Population 0-9	Deaths/100,000	% +/- U.S.
Chester Co	28	727,529	3.85	+12.2%
Lancaster Co	45	859,737	5.23	+52.6%
York Co	22	627,052	3.51	+ 2.3%
3 PA Counties	95	2,214,318	4.29	+24.7%
Baltimore Co	51	1,180,863	4.32	+25.9%
Cecil Co	2	151,282	1.32	- 61.5%
Harford Co	23	402,673	5.71	+66.5%
3 MD Counties	76	1,734,818	4.38	+27.3%
6 Cos. < 40 MI.	171	3,949,136	4.33	+26.2%
				p < .04
U.S.	16,960	492,387,655	3.44	
Other PA/MD	887	25,858,026	3.43	

Sources: U.S. Centers for Disease Control and Prevention (www.cdc.gov, data and statistics, CDC Wonder), accessed July 16, 2002. Includes ICD-9 codes 140 0-239.9 (1987-98), and ICD-10 codes C00-D48.9 (1999).

2. Cancer Death Rate Trends, Age 0-9, Lancaster and York Counties

1950-74 (Before Plant Startup)

Type of Cancer	Deaths	% +/- U.S.	Expected*
Leukemia	111	+ 5%	105.7
Other Cancers	88	- 19%	108.6
Total	199	- 7%	214.3

1975-84 (After Plant Startup)

Type of Cancer	Deaths	% +/- U.S.	Expected*
Leukemia	21	+11%	18.9
Other Cancers	28	+ 4%	26.9
Total	49	+ 7%	45.8

* Deaths/% +/- U.S.

1987-99 (Most Recent)

County	Deaths	Population	Rate/100,000	% +/- U.S.
Lancaster Co.	45	859,737	5.23	+53%
York Co	22	627,052	3.51	+ 2%
Total	67	1,486,789	4.51	+31%

Summary:

1950-74	7% below U.S.
1975-84	7% above U.S.
1987-99	31% above U.S.

Sources: Jablon S, et al. Cancer in Populations Living Near Nuclear Facilities, Volume 2, Table 1-C.22. National Cancer Institute. NIH Pub. No. 90-874. Washington DC: U.S. Government Printing Office, 1990 (covers all data up to 1984).

U.S. Centers for Disease Control and Prevention (www.cdc.gov, data and statistics, CDC Wonder), accessed July 16, 2002. Includes ICD 9 codes 140 0-239.9 (1987-98), and ICD-10 codes C00-D48.9 (1999) (covers 1987-99 data).

3. Cancer Death Rate Trends, Age 60 and Over, Lancaster and York Counties
Includes Cancers Most Sensitive to Radiation Exposure

Type of Cancer	% +/- U.S. 1950-74 (deaths)	% +/- U.S. 1975-84 (deaths)	% Change
All Cancers+	- 3% (13755)	+ 4% (9342)	+ 7% *
Leukemia	- 7% (514)	+ 0% (344)	+ 7%
Hodgkin's Disease	- 12% (77)	+ 4% (30)	+16%
Other Lymphoma	+10% (387)	+ 8% (307)	- 2%
Multiple Myeloma	-10% (152)	+21% (186)	+31% *
Female Breast	+ 9% (1203)	+17% (813)	+ 8%
Thyroid	-11% (52)	+35% (33)	+46%
Bone and Joint	+ 5% (82)	+13% (24)	+ 8%

+ Excluding leukemia
* statistically significant change

Sources: Jablon S, et al. Cancer in Populations Living Near Nuclear Facilities, Volume 2, Table 1-C 22
National Cancer Institute, NIH Pub No 90-874 Washington DC: U.S. Government Printing Office, 1990

4. Breast Cancer Incidence, Females, Three Counties Closest to Peach Bottom, 1999

Age	Cases	Popul.	Crude Rate	1970 Std Pop	Adj. Rate
0-4	0	13,631	0.0	084416	0.0
5-9	0	14,800	0.0	098204	0.0
10-14	0	14,653	0.0	102304	0.0
15-19	0	14,460	0.0	093845	0.0
20-24	1	12,179	8.2	080561	0.7
25-34	4	30,213	13.2	122569	1.6
35-44	54	40,164	134.4	113614	15.3
45-54	126	32,083	392.7	114265	44.9
55-64	83	17,642	470.5	091480	43.0
65-74	101	14,685	687.8	061195	42.1
75-84	60	10,462	573.5	.030112	17.3
85+	22	4,318	509.5	007435	3.8
TOT	451	219,290	205.7		168.6 (1998 = 154.2)
0-4	0	15,773	0.0	084416	0.0
5-9	0	16,697	0.0	098204	0.0
10-14	0	17,264	0.0	.102304	0.0
15-19	0	16,378	0.0	093845	0.0
20-24	0	13,843	0.0	080561	0.0
25-34	8	31,492	25.4	122569	3.1
35-44	30	37,229	80.6	.113614	9.2
45-54	79	30,509	258.9	114265	29.6
55-64	67	19,156	349.8	091480	32.0
65-74	89	17,550	507.1	061195	31.0
75-84	69	14,238	484.6	030112	14.6
85+	21	6,229	337.1	.007435	2.5
TOT	363	236,358	153.6		122.0 (1998 = 128.4)
0-4	0	11,118	0.0	084416	0.0
5-9	0	12,555	0.0	098204	0.0
10-14	0	13,026	0.0	.102304	0.0
15-19	0	12,522	0.0	093845	0.0
20-24	0	10,056	0.0	080561	0.0
25-34	5	26,290	19.0	122569	2.3
35-44	40	33,183	120.5	113614	13.7
45-54	78	27,315	285.6	114265	32.6
55-64	91	16,475	552.4	091480	50.5
65-74	76	13,919	546.0	061195	33.4
75-84	75	10,853	691.1	030112	20.8
85+	24	4,512	531.9	007435	4.0
TOT	389	191,824	202.8		157.4 (1998 = 143.7)
0-4	0	40,522	0.0	084416	0.0
5-9	0	44,052	0.0	098204	0.0
10-14	0	44,943	0.0	102304	0.0
15-19	0	43,360	0.0	093845	0.0
20-24	1	36,078	2.8	080561	0.2
25-34	17	87,995	19.3	122569	2.4
35-44	124	110,576	112.1	113614	12.7
45-54	283	89,907	314.8	114265	36.0
55-64	241	53,273	452.4	091480	41.4
65-74	266	46,154	576.3	061195	35.3
75-84	204	35,553	573.8	030112	17.3
85+	67	15,059	444.9	007435	3.3
TOT	1203	647,472	185.8		148.5 (1998 = 141.6) U.S. 1998 = 118.1

Sources: Pennsylvania State Cancer Registry, Harrisburg PA, cancer cases; U.S. Centers for Disease Control and Prevention (www.cdc.gov, data and statistics, CDC Wonder), population.

5 Nuclear Power Plants with Largest Radioactive Releases, 1970-87 (of 72 operating plants)

A Airborne Iodine-131 and Effluents (all chemicals with half-life of over 8 days)		B Airborne Fission and Activation Gases	
Plant, State	Total Releases*	Plant, State	Total Releases*
1. Dresden, IL	95.58	1. Three Mile Island, PA	10,066
2. Oyster Creek, NJ	76.80	2. Dresden, IL	9,255
3. Millstone, CT	32.64	3. Millstone, CT	6,762
4. Quad Cities, IL	26.79	4. Oyster Creek, NJ	5,374
5. Indian Point, NY	17.46	5. Nine Mile Point, NY	3,698
6. Nine Mile Point, NY	14.61	6. Monticello, MN	3,478
7. Three Mile Island, PA	14.41	7. Humboldt Bay, CA	2,796
8. Brunswick, NC	14.19	8. Browns Ferry, AL	2,490
9. Monticello, MN	12.13	9. Quad Cities, IL	2,306
10. Turkey Point, FL	6.67	10. Brunswick, NC	2,272
11. Pilgrim, MA	6.56	11. Big Rock Point, MI	1,690
12. Big Rock Point, MI	6.20	12. Pilgrim, MA	1,557
13. San Onofre, CA	4.16	13. Peach Bottom, PA	851
14. St. Lucie, FL	3.59		
15. Humboldt Bay, CA	3.41		
16. Calvert Cliffs, MD	3.40		
17. James A. Fitzpatrick, NY	3.34		
18. Oconee, SC	2.43		
19. Peach Bottom, PA	2.06		

*In trillions of picocuries
+ In thousands of curies

C. Liquid Effluents: Mixed Fission and Activation Products

Plant, State	Total Releases*
1. Millstone, CT	580.97
2. Joseph M. Farley, AL	576.73
3. LaCrosse, WI	196.00
4. Nine Mile Point, NY	193.20
5. Surry, VA	180.87
6. San Onofre, CA	161.10
7. Dresden, IL	150.12
8. Browns Ferry, AL	118.56
9. Quad Cities, IL	110.33
10. Arkansas 1-2, AR	102.64
11. Oconee, SC	78.73
12. Cooper, NE	70.79
13. Indian Point, NY	61.03
14. Salem, NJ	60.09
15. Peach Bottom, PA	56.69

Source: Nuclear Regulatory Commission annual reports, reprinted in Gould J et al., The Enemy Within New York, Four Walls Eight Windows, 1996.

6 Iodine-131 Concentrations in Pasteurized Milk, Washington DC and Philadelphia
All measurements in picocuries of I-131 per liter of milk

Philadelphia						
Month	1985	1986	1987	1988	1989	1990
Jan.	8	2	6	6	-4	3
Feb.	4	-1	5	-1	3	4
Mar.	2	5	2	9	6	-4
Apr.	-	-	3	-2	1	-
May	7	7	3	7	1	7
June	4	7	2	5	4	4
July	3	-	1	6	0	1
Aug.	-3	-2	4	-3	4	-
Sept.	2	5	5	2	6	6
Oct.	5	4	5	3	7	7
Nov.	1	2	4	5	5	1
Dec.	3	3	6	4	6	1

Washington DC						
Month	1985	1986	1987	1988	1989	1990
Jan	-	-	-	-	3	-
Feb.	-	-	-	-	0	-
Mar.	-	-	-	-	3	-
Apr.	-	-	-	5	4	-
May	-	13	4	4	4	-
June	-	10	-	7	-	-
July	-	1	1	2	5	-
Aug.	-	8	-	-	-	-
Sept.	-	5	-	4	-	-
Oct.	-	5	-	7	-	-
Nov.	-	5	-	6	-	-
Dec.	-	-	-	2	-	-

Totals:
 U.S. Average 1985-90 for 60 cities = 2.61
 Philadelphia 224 picocuries/67 measurements = 3.34 (+28%)
 Washington 105 picocuries/24 measurements = 4.38 (+68%)

Source: Office of Radiation Programs Environmental Radiation Data, Volumes 41-64.
 U.S. Environmental Protection Agency Montgomery AL 1985-1990.

Note: The Environmental Protection Agency stopped reporting monthly levels of Iodine-131, Cesium-137, and Barium-140 in milk in December 1990

7. Latest Results of Study of Strontium-90 in Baby Teeth

Teeth collected 3800
 Teeth processed 1463
 Teeth processed, born after 1979 1352

Location (home during pregnancy)	No. Teeth b. after 1979	Avg pCi Sr90/ g Ca in teeth at birth
Philadelphia area*	22	2.57
California	106	1.73
Florida	121	2.08
New Jersey	225	1.55
Connecticut	44	0.96
New York		
Suffolk County	544	1.38
Nassau County	59	1.25
New York City	78	1.44
Westchester County	65	1.55
Putnam County	20	1.88
Orange/Dutchess/Ulster County	18	1.86
All other	76	
TOTAL	1352	1.53 (similar to 1956 births)

Philadelphia average is 68% greater than all teeth (2.57/1.53)
 * includes southeast Pennsylvania, plus Philadelphia suburbs in New Jersey

Average Sr-90 concentration, by birth year (number of teeth in parentheses)

	Phila. Area	All areas
1990-96	2.72 (8)	1.55 (556)
1980-89	2.45 (14)	1.51 (793)
1970-79	3.32 (7)	2.75 (77)
1960-69	-	3.97 (22)

Philadelphia area teeth have always had higher Sr90 concentrations than other areas. In all areas, there has been an increase from the 1980s to the 1990s, suggesting that a current source of Sr90, most likely nuclear reactor emissions, is building up in children's bodies.

Source: Radiation and Public Health Project, July 16, 2002

8. Changes in Radioactivity Levels in Local Air and Water, 2001

**Gross Beta in Drinking Water
(Measured Monthly)**

Location	Jan 1 - July 31	Aug 1 - Dec 31	% Change
4L (8.7 mi SE of Peach Bottom)	1.90	2.90	+52.6%
6I (5.8 mi NW of Peach Bottom)	2.00	2.76	+38.0%

**Gross Beta in Air Particulate Samples
(Measured Weekly)**

Location	(31 weeks) Jan 1 - Aug 5	(21 weeks) Aug 6 - Dec 31	% Change
3A (3.6 mi SW of Peach Bottom)	18.48	23.90	+29.3%
5H2 (30.8 mi. NW of Peach Bottom)	17.19	26.05	+51.5%

Source: Exelon Nuclear Generation Support Peach Bottom Atomic Power Station Units 2 and 3: Annual Radiological Environmental Operating Report, Number 59, 2001.

January 2003

A-159

NUREG-1437, Supplement 10

9. Prevailing Wind Directions, Cities Nearest to Peach Bottom

Month	Harrisburg	Philadelphia	Wilmington DE	Baltimore MD
Jan.	WNW	WNW	WNW	WNW
Feb.	WNW	NW	NW	NW
Mar.	WNW	SW	WNW	WNW
Apr	WNW	SW	WNW	WNW
May	W	WSW	S	W
June	W	WSW	S	WNW
July	W	WSW	NW	W
Aug	W	SW	S	W
Sept.	WNW	SW	S	S
Oct.	W	WSW	NW	NW
Nov.	NNW	WSW	NW	WNW
Dec.	WNW	WNW	WNW	WNW

Number of months with prevailing winds from the Northwest, West-Northwest, West, West-Southwest, or southwest

Harrisburg - 12
 Philadelphia - 11
 Wilmington - 8
 Baltimore - 11

The majority of any airborne releases from Peach Bottom would be propelled towards the east, including the highly populated areas of southeast Pennsylvania and northern Delaware

Source: Bair FE (ed). The Weather Almanac, 6th Edition. Detroit: Gale Research Inc., 1992. Wind patterns measured from 1951 to 1963.

Exelon
Nuclear

Exelon Nuclear
 2001 Ashton Way
 Kennett Square, PA 19348
 www.exeloncorp.com

August 27, 2002

Chief
 Rules and Directives Branch
 Mailstop T-6D 59
 U S Nuclear Regulatory Commission
 Washington, DC 20555-0001

Subject Comments Concerning Draft Plant-Specific Supplement 10 to the Generic Environmental Impact Statement Regarding Peach Bottom Atomic Power Station

Dear Sir

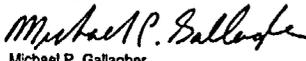
This letter is being submitted in response to the NRC's request for comments concerning the draft plant-specific Supplement 10 to NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants," regarding the renewal of operating licenses for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3, for an additional 20 years of operation

Exelon Generation Company, LLC appreciates the opportunity to comment on this draft Supplement 10 to NUREG-1437. We agree that the adverse environmental impacts of license renewal for PBAPS are not so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable

Specific comments on draft Supplement 10 to NUREG-1437 are provided in Attachment 1

If you have any questions, please do not hesitate to contact us

Very truly yours,



Michael P. Gallagher
 Director, Licensing & Regulatory Affairs
 Mid Atlantic Regional Operating Group

Enclosures Attachment 1

Template = 7/DM-013

E-RTDS = 7/DM-23
Call = D. Whooler (DHW)
130102K (HFD)

7/01/02
67 FE 44245
(8)

Appendix A

ATTACHMENT 1

	Number	Location (pg/line)	What is in DEIS	What should be in DEIS	Why the change
18-1	1	1 11 / 4,7	Exclon	Exelon	Spelling
18-2	2	2-7 / 18	The operation is infrequent	This dredging operation is	English
18-3	3	2 7 / 29, 32, 34	rocket	This term should be deleted.	The term rocket is a colloquial term that does not come from product literature
18-4	4	2 6 / 25	Conowongo	Conowingo	Spelling
18-5	5	2 11 / 17	... water storage tank.	... water storage tank, and Torus dewatering tank	The fourth tank is not named properly
18-6	6	2-19 / 12	... uses an ammonium chloride-based molluscide	uses an Quaternary-amine-based molluscide	Correction to what is used.
18-7	7	2-21 / 38	a consortium of Federal, regional,	a consortium of utilities and Federal, regional,	The consortium also included utilities
18-8	8	2-37 / 2, 6	emission stacks	emission stack	There is only one oil gas stack visible at Peach Bottom
18-9	9	2-37 / 8	There is no visible plume	There is no visible vapor plume	Clarify that the plume that is being talked about is a water vapor plume
18-10	10	2 43 / 24	and railroads) were	and railroads, etc) were	These taxes were collected from more than just the utilities shown
18-11	11	2 47 / 39	NRC is consulting with the FWS	NRC has consulted with the FWS	Consultation has already taken place
18-12	12	4-15 / 13 15	The designed operation criteria are maintained in part by removal of sediments that are deposited in the canal. Maintenance of the designed depth for the intake canal helps ensure that approach velocities at the screens meet criteria.	These sentences should be deleted.	The impingement criteria are maintained at the outer intake structure. The intake canal, and the sediment removal described here follow the intake structure and, as such, have no bearing on maintaining the intake velocities necessary to reduce impingement.
18-13	13	4-15 / 19	NPDES Permit PA00087733	NPDES Permit PA 00087733	Correction to the number on the permit
18-14	14	4-17 / 9	Five mechanical draft cooling towers	Three mechanical draft cooling towers are located on barge	While it is true that five towers were built the permit now allows for three towers. Since three towers are allowed by permit, there are now three towers standing
18-15	15	4-34 / 33	Historic	Historic	Spelling

January 2003

A-161

NUREG-1437, Supplement 10

Comments on Draft Supplement 10 to NUREG-1437
Attachment 1
Page 1 of 3

Number	Location (pg/line)	What is in DEIS	What should be in DEIS	Why the change
18-1	1 11 / 4,7	Exrelon	Exrelon	Spelling
18-2	2 7 / 18	The operation is infrequent	This dredging operation is	English
18-3	3 2-7 / 29, 32, 34	rocket	This term should be deleted	The term "rocket" is a colloquial term that does not come from product literature
18-4	4 2-8 / 25	Conowango	Conowango	Spelling
18-5	5 2 11 / 17	water storage tank.	... water storage tank and Torus dewatering tank	The fourth tank is not named properly
18-6	6 2 19 / 12	... uses an ammonium chloride based molluscide	uses an Quaternary-amino-based molluscide	Correction to what is used.
18-7	7 2-21 / 38	.. a consortium of Federal, regional, ...	a consortium of utilities and Federal, regional	The consortium also included utilities
18-8	8 2 37 / 2, 8	emission stacks	emission stack	There is only one off gas stack visible at Peach Bottom
18-9	9 2-37 / 8	There is no visible plume	There is no visible vapor plume	Clarify that the plume that is being talked about is a water vapor plume.
18-10	10 2-43 / 24	and railroads) were	and railroads, etc) were	These taxes were collected from more than just the utilities shown.
18-11	11 2 47 / 39	NRC is consulting with the FWS	NRC has consulted with the FWS	Consultation has already taken place.
18-12	12 4-15 / 13 15	The designed operation criteria are maintained in part by removal of sediments that are deposited in the canal. Maintenance of the designed depth for the intake canal helps ensure that approach velocities at the screens meet criteria	Those sentences should be deleted	The impingement criteria are maintained at the outer intake structure. The intake canal, and the sediment removal described here follow the intake structure and, as such, have no bearing on maintaining the intake velocities necessary to reduce impingement
18-13	13 4-15 / 19	NPDES Permit PA00037733	NPDES Permit PA 0009733	Correction to the number on the permit.
18-14	14 4-17 / 9	Five mechanical draft cooling towers ...	Three mechanical draft cooling towers are located on barge	While it is true that five towers were built, this permit now allows for three towers. Since three towers are allowed by permit, there are now three towers standing
18-15	15 4-34 / 33	Historic	Historic	Spelling

Comments on Draft Supplement 10 to NUREG-1437
Attachment 1
Page 2 of 3

Number	Location (pg/line)	What is in DEIS	What should be in DEIS	Why the change
18-16	16 4-38 / 24 25	The applicant should reflect the aforementioned in its licensing basis commitments and...		While Exrelon has stated that it did not anticipate any additional land disturbances, or major structural modifications, or maintenance activities beyond previously disturbed areas as a result of license renewal those were not licensing basis commitments. If it was determined that any of these areas needed to be addressed as a result of license renewal, then the proper Federal, State, and local agencies would be consulted prior to the activity
18-17	17 4 36 / 26	... not have an effect on any	... not have an effect on any	Remove duplicate wording
18-18	18 4 36 / 35-36	Given the commitments of the applicant to avoid future disturbances and to control access to lands it manages,	Given the commitments of the applicant to limit land disturbances in support of license renewal, ...	Exrelon has committed in letters to appropriate agencies, to limit maintenance activities to previously disturbed areas and it has stated that it did not anticipate any additional land disturbances in support of license renewal. No commitments were made to avoid all future land disturbances nor to control access to lands it manages
18-19	19 4-38 / 6-10	The listing of counties is not correct	For counties entirely in the 50 mile zone delete Kent County DE, and add New Castle County DE. For counties partially in the 50 mile zone add Kent County DE	Correction to the proper information
18-20	20 4-38 / 22	... criteria, Table 4-8 indicates	... criteria, Figure 4-1 indicates	Correction to the proper graphic
18-21	21 4-39 / Map	Maryland Counties include Kent and Queen Annes	Maryland Counties include Queen Anne, but not Kent	Spelling and correction to the proper information
18-22	22 4 45 / 30-31	... and its independent analysis, and pending the outcome of consultation with the FWS, it	... and its independent analysis, it	Delete the pending consultation with FWS since that has already occurred
18-23	23 4-45 / 34 35	Therefore, it is the staff's preliminary determination	Therefore, it is the staff's determination	Consultation with FWS has been completed
18-24	24 4-48 / 38	BEIR	Biological Effects of Ionizing Radiation (BEIR)	Spelling of acronym at first usage

Appendix A

Comments on Draft Supplement 10 to NUREG-1437
Attachment 1
Page 3 of 3

Number	Location (pg/line)	What is in DEIS	What should be in DEIS	Why the change
18-25	25	4-51 / 13	isotope	isotope
18-26	26	4-51 / 35	Considerable of technical literature	A considerable amount of literature
18-27	27	4-58 / 12	Units w and E , DPR44 and Dpr 58	Units 2 and 3 . DPH-44 and DPR-56
18-28	28	6-6 / 17-21 6-6 / 29-30	On February 15, 2002, subsequent to the . This change in regulatory status does not cause the staff to change its position	On July 23, 2002, the President signed into law House Joint Resolution 87 designating Yucca Mountain as the repository for spent nuclear fuel
18-29	29	8-38 / 37	construction	construction
18-30	30	8-55 / 7	Pennsylvania Power & Light Company (Exelon)	Exelon Generation Company, LLC (Exelon)
18-31	31	F-2 / 24	A 1	F 1



STATE OF DELAWARE
DEPARTMENT OF STATE
DIVISION OF HISTORICAL AND CULTURAL AFFAIRS
HISTORIC PRESERVATION OFFICE
18 THE GREEN
DOVER • DE • 19901-3611

1717 P HVC 1/021 / 28 0666

FAX 1/302/ 718 8660

September 9, 2002

Mr. Louis L. Wheeler
Senior Project Manager
License Renewal and Environmental Impacts Program
Division of Regulatory Improvements Programs
Office of Nuclear Reactor Regulations
Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Mr. Wheeler:

- 19-1 We received your March 7 letter regarding the Nuclear Regulatory Commission's (NRC) opinion that for compliance with Section 106 of the National Historic Preservation Act, the presence of any historic property along the Keeney Transmission Line are beyond the area of potential effects. We believe this opinion to be inconsistent with the Advisory Council on Historic Preservation's (Council) regulations and with information provided to this Office during the initiation Section 106 consultation for the proposed relicensing of the Peach Bottom Atomic Power Station (PBAPS). In a July 5, 2000 letter sent to Ms. Joan Larrivee, of my staff, from James Hutton, Director of Licensing for PECO Nuclear, Mr. Hutton identified the original undertaking included authorizing the construction in 1974 of the Keeney Transmission Line as the "Only one new transmission corridor [which] was required to integrate PBAPS into PECO Energy's bulk power system when the facility was constructed. This line, from Peach Bottom to the Keeney Substation in Delaware, is the only transmission line/corridor under review during this [current] license renewal process." In this letter initiating consultation with this Office, Mr. Hudson effectively identified reauthorizing of the Keeney Transmission line as an element of the licensing renewal, the undertaking, and as part of the Area of Potential Effect, as per the Council's definition of an *undertaking* (36 CFR 800.16(y)) and the project *Area of Potential Effect* (36 CFR 800.16(d)). Especially important to the definition of undertaking is the notion that it includes "the geographical area or areas within which a undertaking *may directly or indirectly* (my emphasis) cause alterations in the character or use of historic properties, if such properties exist." It is important to note here, there is no discussion of ownership or control which limits the consideration of whether to include any location or property therein within the boundary of the APE. Such limitations would
- 19-2

January 2003

Letter to Wheeler
September 9, 2002
Page 2

hamper the ability to adequately identify and consider to the fullest extent, what types and degrees of impact or effect an undertaking would have on historic properties for any type of undertaking at any possible location. The Council does not set such restrictions on determining a project undertaking and its APE. The reauthorization of the Keeney Transmission Line, as part of this project, even though it is not owned or controlled by the licensee is not pertinent to the identification of historic properties and the evaluation of effects which the undertaking may have on those historic properties which are present within the APE. (See the attached information provided by Laura Dean of the Council as it pertains to determining an undertaking's area of potential effect: Points to remember Item #2, and, Colorado River Indian tribes v. Marsh, 605F. Supp 1425 (C D. Cal. 1985) Additionally, in the *Lower Delaware Valley Transmission System Agreement, Schedule 3, Revision No 1*, Page 1 of 2, which you included as an attachment to your March 7 letter, there was an agreement for DP & L (now Conectiv) to construct the Delaware section of the Keeney Transmission Line. Essentially, even while the licensee did not construct this line, it was clearly a contractual arrangement to provide the licensee with the facilities to convey power to its bulk power system, as referenced in Hutton's July 2000 letter. It is part of the undertaking and should be included in the project APE.

The identification of the Chesapeake and Delaware Feeder Canal (Feeder Canal), as an historic property within the project APE, was made by my staff during the consultation process. Comments were provided in an attachment to your March 7 letter, prepared by the licensee, as to their opinion on the non-eligibility of this property. It is important to remember that if there are disagreements between the federal agency and the SHPO as to the eligibility of a particular property, it is the federal agency's responsibility, using 36 CFR Part 61 qualified professionals, to seek a formal determination of eligibility from the Secretary of the Interior, pursuant to 36 CFR 800 4(c)(2) of the Council's regulations. To our knowledge this has not been done.

Finally, it is our contention the Feeder Canal, which we believe may be eligible for listing in the National Register of Historic Places, has been and is continuing to be subjected to destruction due to the lack of adequate maintenance of the transmission line. A bridge which was clearly present in the 1950-1960s which crossed the Feeder Canal was either removed or left to deteriorate. Sometime in the 1970's, the canal was filled in crusher run rock to provide access along this transmission line and to specifically cross this body of water. This in filling has resulted in the loss of the physical features of the Feeder Canal where it is crossed by the transmission line and the subsequent blocking of the flow of water within the Canal. It is our opinion, the lack of maintenance and/or retention of a bridge which spanned the canal and the lack of security to prevent unauthorized use of the access road or any other area along the banks of the Feeder Canal within the transmission right-of-way has caused significant deterioration and alteration of the

A-163

NUREG-1437, Supplement 10

Letter to Wheeler
September 9, 2002
Page 3

character of this property and therefore constitutes adverse effects due to destruction and neglect under 36 CFR 800 5(b)(2)(i) and (vi) of the Council's regulations. Towards trying to reverse or correct these adverse effects and to prevent further deterioration, the recommendations made in my October 29, 2001 letter were presented.

By copy of this letter, we are requesting the Advisory Council to participate in the consultation process and provide guidance on expediting the review for this undertaking, pursuant to Appendix C, Criteria 2 of their regulations. We believe there has been an inconsistent application of their regulations during the Section 106 consultation for the relicensing of the PBAPS and the Keeney Transmission Line.

If you have any questions or desire to discuss this matter further, please contact Faye Stocum at the address above. Thank you.

Sincerely,



Daniel R. Griffith
State Historic Preservation Officer

Enclosures

cc: Don Klima, ACHP
Faye Stocum

Appendix A

June 14 02 10:46A

June 14 02 10:46A

P.02

OPTIONAL FORM NO. 10-99
MAY 1962 EDITION
GSA FPMR (41 CFR) 101-11.6

FAX TRANSMITTAL

TO: *Faye Storum*
FROM: *Fallon Dean*
SUBJECT: *202-739-5885*
DATE: *2002-06-06*
TIME: *5:07*

1 of pages = 6

Eligibility and inclusion

If a property meets the criteria for inclusion in the National Register, this doesn't automatically result in its being listed. To be listed, a property must be formally nominated using NPS forms and following NPS procedures. Agencies are not required to nominate properties in order to comply with Section 106, although Section 110(a)(2) of NHPA does require agencies to have programs in place for nominating federally owned or controlled historic properties.

If an owner of private property objects to including his or her eligible property in the National Register, they may block it from being listed. Effects on such a property are not exempt from Section 106 review, however, since the property remains eligible for the Register. Private owners may do as they wish with their historic property, provided that they are not receiving Federal assistance or approvals. If they are, the Federal agency involved must comply with Section 106 before the project can be implemented.

Identifying historic properties

Agencies are required to make a "reasonable and good faith effort to carry out appropriate identification efforts. . ." [36 CFR § 800.4(b)(1)] This responsibility rests squarely with the Federal agency and cannot be delegated (with the exception of certain HUD programs). The agency can solicit the help of applicants, grantees, or others to carry out this work, but it is up to the agency to see that the work is carried out properly and to make appropriate use of the results.

In consultation with the SHPO/THPO, the agency determines the scope of needed identification efforts and takes action to identify potential historic properties. The agency then evaluates the significance of those properties and decides whether any could be affected by the undertaking.

Determining an undertaking's area of potential effects

The agency's first step in establishing the scope of needed identification efforts is to determine the undertaking's area of potential effects. This is done in consultation with the

SHPO/THPO. [36 CFR §800.4(a)(1)] The area of potential effects (APE) is defined as

... the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking. [36 CFR § 800.16(d)]

If there is disagreement concerning the extent of the APE, the consulting parties may seek guidance and assistance from the Council. Also, the Council can elect to issue an advisory comment to the agency on its APE determination. [36 CFR § 800.9(a)] If this occurs, the agency has to consider the views of the Council in reaching a final decision regarding the boundaries of the APE.

Points to remember. When defining an area of potential effects (APE), agencies need to remember that:

1. The APE is defined before identification begins, when it may not yet be known whether any historic properties actually are within the APE. To determine an APE, it is not necessary to know whether any historic properties exist in the area.
2. An APE is not determined on the basis of land ownership.
3. The APE should include:
 - all alternative locations for all elements of the undertaking;
 - all locations where the undertaking may result in disturbance of the ground;
 - all locations from which elements of the undertaking (e.g., structures or land disturbance) may be visible or audible;
 - all locations where the activity may result in changes in traffic patterns, land use, public access, etc., and

Court Decisions

project. The Corps prepared the plan and obtained the Council's concurrence in the plan in 1983.

The court rejected plaintiffs' claim that the Corps had not complied with the provisions of the MOA that required a treatment plan. First, the court determined that Section 606(C)(3) of the Council's regulations, which states that a valid MOA shall evidence satisfaction of the federal agency's responsibilities under Section 106 of NHPA, creates a "presumption of compliance." 547 F. Supp. at 989-90. Even without this presumption, the court held that the Government's documents demonstrated compliance with the terms of the MOA. *Id.* at 990.

The court dismissed plaintiffs' NHPA claims and held that further action withholding possession of the condemned lands on these grounds would not be warranted. *Id.* The Fifth Circuit affirmed 733 F.2d at 380.

The district court also found that the Corps' programmatic environmental impact statement (EIS) prepared under the National Environmental Policy Act on the waterway project sufficiently addressed the impacts of the project on cultural resources. No site-specific EIS for Cedar Oaks and Barton townslap was needed. 507 F. Supp. at 991. The appellate court affirmed. 733 F.2d at 381.

87

Colorado River Indian Tribes v. Marsh, 608 F. Supp. 1423 (C.D. Cal. 1985).

Plaintiffs, Indian tribes and an environmental organization, sought to enjoin the US Army Corps of Engineers from issuing a permit to a developer for the placement of riprap along the western shore of the Colorado River in California. The purpose of the riprap was to stabilize the riverbank and establish a permanent boundary line for private property that the developer proposed to subdivide and develop into a residential and commercial community. The site of the development,

known as the River City project, was directly across the river from the Colorado River Indian Reservations and directly south of additional portions of the reservation lying on the west side of the river. The land abutting the development site on the west was owned by the United States and administered by the Bureau of Land Management (BLM) of the Department of the Interior. The BLM land, an archeological district, included several significant cultural and archeological sites.

The developer applied to the Corps for the riprap permit in April 1978. The following day, the Corps prepared an environmental assessment under the National Environmental Policy Act (NEPA) and concluded that, because significant impact upon the environment would result from the developer's proposed project, an environmental impact statement (EIS) should be prepared. The draft EIS was prepared and published in September 1979. In January 1981, the Corps informed the developer that a thorough cultural resources survey of resources on and near the proposed development site was needed before the Corps could complete the final EIS.

In June 1981, however, before the survey was begun, the Corps refused the draft EIS as a result of changes in Corps policy regarding its jurisdictional authority and announced that no EIS and no further cultural resource evaluation were required. The Corps' decision to reject the draft EIS was apparently made in conformity with its proposed cultural resource regulations published in 1980, regulations that had never been adopted in final form or incorporated into the Code of Federal Regulations.

Under the proposed regulations, the Corps was required to assess both direct and indirect impacts of its permits on properties listed or officially determined eligible for listing in the National Register of Historic Places. This review requirement extended beyond the area in which the permit would have direct physical effects to the "affecting area," that area within which direct and indirect effects could be reasonably expected to occur.

Federal Historic Preservation Case Law

For properties that were not listed or officially determined eligible for listing in the Register, but that might be eligible for listing in the Register, the proposed regulations listed the Corps' review in the area within the Corps' jurisdiction—the "formal area," defined as that area which would be physically affected by the proposed work.

The Corps issued the riprap permit to the developer on May 21, 1982. Plaintiffs then filed this action, alleging that the Corps failed to comply with NEPA and the National Historic Preservation Act (NHPA).

After discussing the factors that must be present for a preliminary injunction to be granted, the court addressed the likelihood of plaintiffs' success on the merits of their case. Defendants first contended that no EIS was necessary under NEPA because Federal involvement in the River City project was minimal and "major Federal action" was therefore lacking. The court disagreed, finding that NEPA requires assessment of both direct and indirect effects of proposed Federal action on both "the site and air" (i.e., locations). 603 F. Supp. at 1433. That there was minimal Federal involvement in the project did not excuse defendants from compliance with NEPA, for "it is not the degree of Federal involvement that dictates the amount of living of our society, but it is the potential and degree of impact from development that bears upon the overall welfare and enjoyment of our society." *Id.* at 1432. "Major Federal action" does not have a meaning under NEPA independent of "significantly affecting the quality of the human environment." *Id.* at 1433.

The Corps' limitation of the scope of its environmental assessment of the bank stabilization activities and its resulting conclusion that there would be no impact on cultural resources were improper and contrary to the mandate of NEPA. *Id.* at 1433.

The court next addressed plaintiff's claim that the Corps had violated NHPA by designating between properties actually listed in or determined

eligible for the National Register and properties that might be eligible for the Register and by attaching different historic review responsibilities to each. The court held that this distinction between properties with NHPA and the regulations of the Advisory Council on Historic Preservation implementing Section 106 of NHPA. *Id.* at 1438. Using the Council's definition of "eligible property" in Section 800.2 of its regulations as encompassing all properties that meet the criteria for inclusion in the Register, the court concluded that, in enacting NHPA, Congress intended to protect all properties that are of inherent historic and cultural significance and not just those that have been "officially recognized" by the Secretary of the Interior. *Id.* The court cited Executive Order No. 11193 and Section 110(a) of NHPA as support, finding that Federal agencies must exercise caution to ensure the physical integrity of those properties that appear to qualify for inclusion in the National Register. *Id.* at 1435.

The Corps' action in assessing the effects on properties that might qualify for inclusion in the National Register solely within the "formal area" and its failure to survey and consider the effects on like properties in the broader "affecting area" was a breach of its responsibilities under NHPA. *Id.* at 1438.

Finally, the Court granted a preliminary injunction, finding that irreparable harm to cultural and archeological resources as a result of the development was possible. *Id.* at 1434-39.

88

Sierra Club v. War, No. CV-83-5878 AWT (C.D. Cal. Nov. 18, 1983), aff'd sub nom. Sierra Club v. Clark, 774 P.2d 1406 (9th Cir. 1985).

Plaintiffs challenged both the Bureau of Land Management's (BLM) California Desert Conservation Management Plan, which designated a



Ferris N. Chodasing
Governor

Kathleen Kennedy Townsend
Lt. Governor

Maryland Department of Natural Resources

POWER PLANT ASSESSMENT DIVISION

Towers State Office Building, B-3
Annapolis, Maryland 21401-2397

September 13, 2002

J. Charles Fi
Secretary

Karen M. We
Deputy Secret

Chief
Rules Review and Directives Branch
Division of Administrative Services
Mailstop T 6 D 59
U S NRC
Washington, DC 2055-0001

Dear Sir

We have reviewed the draft document entitled *Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Peach Bottom Atomic Power Station (APS), Units 2 and 3* (NUREG-1437, Supplement 10). On behalf of the State of Maryland, the Department of Natural Resources (DNR) Power Plant Research Program (PPRP) has been involved with this license renewal, specifically reviewing issues that are of concern and interest to the State of Maryland.

Our review of this document reflects our knowledge of power station operations, both fossil-fired as well as nuclear, and input received from other Maryland agencies. Based on review of this draft document, the State of Maryland concurs with Staff conclusions that adverse environmental impacts of Peach Bottom APS license renewal are not so great that preserving the option of license renewal would be unreasonable. However, your Staff in updating and finalizing the document may consider the following comments.

Fish and Shellfish Impingement

In Section 4.1.3, the text indicates that Exelon has conducted studies at the Peach Bottom site during the fall season to assess the impingement of outmigrating juvenile American shad and river herring. This was accomplished by examining intake screens at Units 2 and 3 three times weekly from October 18 through December 20 (23 sample dates) (page 4-15).

- 20-1 This text is somewhat confusing in that it can be interpreted as meaning that only 23 samples were taken at the plant and that the numbers impinged should be extrapolated to determine the total annual impingement. However, we are aware that each of the samples represents a

Chief, Rules Review and Directives Branch
September 13, 2002
Page Two

cumulative sample -since the prior sample- such that the numbers of fish reported from the 23 samples represents the total number impinged over the study period. We suggest that clarification is necessary to substantiate the conclusion that impingement is not regarded as significant.

- 20-2 In the same section, on page 4-16, the statement is made that the losses of shad and river herring due to impingement are a very small percentage of the total number of outmigrating fish and that fish losses are not sufficiently high to pose a threat to the fish restoration effort. While the numbers are small at the present time, the Anadromous Fish Restoration Cooperative 2002 for the Susquehanna River anticipates much larger run sizes in the future. With significant population increases, the numbers impinged may increase and could begin to assume significance. Because current EPA regulations require that PBAPS renew its NPDES permit every five years, we recognize and accept that this issue can be addressed and, if necessary, mitigated through the NPDES process at the time of each renewal. We suggest here, however, that this document in its final version should note that an expected increase in abundance of migratory fishes as a result of restoration efforts could result in an increase in impingement, but that such impingement impacts will be captured and addressed by the NPDES permitting process.

We appreciate having the opportunity to comment on the draft *Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants, Supplement 10 Regarding Peach Bottom APS*.

Sincerely,

Richard McLean
Manager, Nuclear Programs

RM rd

Telephone: (410) 260-8662
DNR TTY for the Deaf: (410) 260-8839
Toll Free #: 1-877-620-8DNR

www.dnr.state.md.us/har/inorm

PFAD@dnr.state.md.gov

January 2003

A-167

NUREG-1437, Supplement 10



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Custom House, Room 344
200 Chestnut Street
Philadelphia, Pennsylvania 19106-2904

RECEIVED
7/1/02
Rules and Directives Branch
WANTS

September 13, 2002

ER 02/0570

Chief, Rules Review and Directives Branch
U.S. Nuclear Regulatory Commission
Mail Stop T6-D59
Washington, D.C. 20555-0001

Dear Sir

The Department of the Interior has reviewed draft Supplement 10 (NUREG-1437) to the Generic Environmental Impact Statement for the Peach Bottom Atomic Power Station (Peach Bottom), Units 2 and 3, located on the Susquehanna River in Lancaster County, Pennsylvania. Please give these comments careful consideration in preparing final Supplement 10.

General Comments

The Department shares a goal with the Nuclear Regulatory Commission (NRC) to bring Peach Bottom into compliance with current environmental regulations. With the advances in our understanding of ecological relationships, it is appropriate and useful that federal and state natural resource agencies use the license renewal process to review site conditions in order to maintain the highest level of environmental protection. The following comments are intended to assist the NRC with protection of natural resources.

Specific Comments

Thermal Release

- 21-1 We recommend the inclusion of "thermal release" in final Supplement 10 as a "source of potential or known impact." One of the reported negative effects of thermal discharge is increased incidence of disease and parasites in fish attracted to the plume. Dr. John Cairns of Virginia Polytechnic Institute may have published on this and related subjects, and we suggest he be consulted. He can be reached at the Center for Environmental and Hazardous Materials Studies, 1020 Derrington Hall, NPI&SU, Blacksburg, VA 24061-0415 (telephone: 703-231-5538).

Handwritten notes: Template = AD4-013, K-EDS = AD4-03, Call = J. Williams (DWW), H. Bernick (HFB)

- 21-2 As a means to avoid adverse impacts to aquatic life, the Department recommends that NRC require upgrading of this project to include a closed cooling system instead of the existing open cooling system.

Fish Entrainment and Impingement

Peach Bottom is licensed to Excelon (formerly known as Philadelphia Electrical Company, or PECO) and is located in York County on the lower Susquehanna River. Since Peach Bottom came online in 1974, it has withdrawn water for cooling from Conowingo Pond, which is the lower-most pool on the Susquehanna River. The U.S. Fish and Wildlife Service (USFWS) is restoring American shad to the Susquehanna river basin. During the autumn outmigration period, juvenile American shad pass downstream through Conowingo Pond.

RMC Environmental Services (RMC) has been contracted by PECO to evaluate entrainment at the Peach Bottom cooling water intake. RMC examined intake-screen-wash samples for juvenile American shad over the last eight autumn outmigration periods. RMC found juvenile shad impinged each year, except 1987-1988 when Peach Bottom was shut down. Samples were taken three times each week and represented the total accumulation of impinged fish. The number of impinged juvenile shad found has ranged from a high of 341 fish in 1986 (October 14 - December 10) to a low of 3 fish in 1989 (August 22 through November 22). This level of mortality, by itself, is not considered detrimental to the Service's restoration program, but the loss must be considered within the context of other sources of loss. These numbers are expected to increase as the number of American shad restored to the Susquehanna River also increases.

About two dozen species of fish were found impinged on intake screens (R. St Pierre, USFWS, personal communication) totaling about 3000 fish within a three-month sampling period for the sampling season of 2001. Species included riverine fish as well as shad species. Of the species found, those making up the bulk of the fish biomass found include channel catfish (1326), gizzard shad (1281), blueback herring (105), bluegill (71), American shad (65), largemouth bass (17), white crappie (15) and yellow perch (11). At a minimum, the applicant should establish a year-round screen sampling protocol to account for year-round fish losses.

- 21-5 Excelon uses traveling mesh screens and a spray wash system together to reduce or minimize impacts to fish. To further minimize the impacts, in the process of replacing worn or damaged screens, the screens should be replaced with mesh size less than or equal to one millimeter. Additionally, entrance velocities should be less than or equal to 0.5 feet per second (Gowan and Garman 1999). Impinged biota should be removed from the traveling screens and returned to the river.

Decommissioning Facilities

- 21-6 The draft Supplement 10 contains an evaluation of partial or total decommissioning of existing facilities as the alternative to relicensing. Such analysis should answer at least the following

additional questions: How would contaminated facilities and unused or spent fuel be disposed? How would the project sites be reclaimed? What would be the consequences for fish and wildlife resources and their habitat at both the former project sites and disposal areas?

Exposure to Radiation

- 21-7 A thorough review should be made on the effects of various levels of radiation exposure on fish and wildlife resources and their habitats. Such exposure may result from leakage, accident (e.g., Three Mile Island, Chernobyl) or disposal. [We suspect that the risk of radiation exposure over time may increase, despite planned maintenance as plants age.]

Transmission Lines

- 21-8 **Contaminant Management on Rights-of-Way:** Transmission towers frequently leach zinc, which is toxic to vegetation and creates bare soil areas. PCBs often leak from old transformers. Remediation is possible and should be a condition of relicensing. Herbicide use should be minimized.
- 21-9 **Erosion Control on Rights-of-Way:** Transmission lines are frequently kept in early stages of succession, grassed or farmed. Soil erosion from these areas contributes to the degradation of streams, rivers, and bays by adding nutrients, sediment, and pollutants of concern in the Chesapeake and Delaware Bay drainages. We recommend that rights-of-way be maintained to avoid erosion of sediments into surface waters. One measure to control erosion would be to maintain multiple vegetative strata to reduce splash, sheet and gully erosion.
- 21-10 We suspect that many transmission line corridors expand opportunities for various forms of recreation. Some of these (i.e., off-road vehicle use) may result in alteration, degradation or destruction of fish and wildlife habitats, particularly streams and wetlands, as well as the harassment and disturbance of wildlife. We recommend that controlled public use of rights-of-way (type and season) to avoid such degradation be a condition of relicensing.
- 21-11 **Wildlife Management on Rights-of-Way:** Multiple strata of vegetation would also create feeding and nesting cover for some migratory bird species, while perhaps reducing the effects of forest fragmentation on others. The Department is concerned that fragmentation of large forest blocks is reportedly contributing to the population decline of some area-sensitive migratory birds.
- Appropriate management of rights-of-way would make considerable land available for wildlife. This has been demonstrated in Maryland and discussed in the transmission line document prepared by the USFWS's Power Plant Team (*Management of Transmission Line Rights-of-Way for Fish and Wildlife*, Vol. 1, Background Information. FWS/OBS-79/22).
- 21-12 Transmission lines kept in early successional stages prevent nesting by birds requiring tree cavities. Excellent management opportunities exist to enhance some rights-of-way by providing

and maintaining nest boxes for cavity-nesting species like bluebirds, great crested flycatchers, wrens, and chickadees displaced from areas where forest has been cleared.

Right-of-Way Routing: Some migratory birds, particularly waterfowl and herons, will not fly within one-quarter mile of powerlines, depending on lighting (time of day) and the reflectivity of the line. This effectively takes valuable migratory bird habitat when transmission lines cross wetlands. We recommend that plans for routing existing lines to avoid wetlands be developed in consultation with the USFWS as part of the relicensing process.

- 21-13
- 21-14 **Maintenance of Rights-of-Way:** To avoid and minimize taking migratory birds, active nests, and their eggs, we recommend that time-of-year restrictions on vegetation clearing and maintenance on rights-of-way be part of any license or amendment. In the Northeast, such restrictions would include the primary migratory bird nesting season from April 1 to July 13 (for raptors, it is February 1 to July 15). Buffers around active raptor nests of at least 100 meters may be sufficient. In addition, activity within a 100-meter radius of raptor nests should be avoided from February 1 through July 13.

Cumulative Impact Evaluations

- 21-15 We recommend that secondary and cumulative evaluations of this project be primarily quantitative, that nuclear plants be considered along with the "other sources" of cumulative impacts, and that cumulative impacts to avian and terrestrial resources be included along with aquatic resources. We also recommend that ichthyoplankton be considered with aquatic resources.
- 21-16
- 21-17 One question that should be evaluated is the cumulative impact of impingement and entrainment on finfish or other aquatic life in the Conowingo Pool area. To answer this question, NRC or Exelon would first need to know the losses from all water intakes in the water body; the finfish population size, dynamics, exploitation, structure, etc; and how the impingement/entrainment losses are partitioned among the various intakes. This information is useful for determining where, when, and under what conditions entrainment and/or impingement losses cause an observable effect on fish populations or other aquatic life. This question will be difficult to answer without sufficient advance preparation, however.
- 21-18 We also recommend that the cumulative effects of transmission line operation and maintenance be part of the evaluation. Topics such as forest fragmentation, electromagnetic field effects, bird collisions, and contaminants should be explored.
- 21-19 As implied elsewhere, Exelon should identify state-of-the-art technology, design, operation and maintenance for cooling water systems, transmission lines and other operating features of nuclear plants. These features should be incorporated into the cumulative impact analyses and the existing projects when appropriate during the relicensing process.

Mitigation

- 21-20 Currently, there are no provisions for mitigating impacts to Susquehanna River fish caused by impingement by the intakes at the Peach Bottom facility. The current fish collection practices conducted by the licensee's consultant, Normandeau, while useful for monitoring shad mortality, cannot be considered an acceptable form of mitigation. As a long-term (for the life of the license) mitigation practice we find this practice inappropriate. Although the current level of mortality of American shad, by itself, is not considered detrimental to the Shad Restoration Program, the loss must be considered within the context that fish mortality numbers are expected to increase as the number of American shad restored to the river also increases. Additionally, the losses of resident fishes are not accounted for. In this context, we strongly recommend that NRC and Exelon determine the impact on all finfish, not only American shad, and other aquatic life, due to impingement in the Peach Bottom water intake in the Conowingo Pool, and that appropriate long-term mitigation measures be developed and implemented by the licensee to mitigate for riverine and anadromous fish losses.

Fish and Wildlife Coordination Act

- 21-21 Relicensing has the same consultation requirements as original licensing under the Fish and Wildlife Coordination Act (FWCA). Consultation under NEPA does not supplant the need for consultation under FWCA; although these laws are similar, they do not have the same requirements with respect to fish and wildlife, and reporting by the USFWS. As Exelon develops an application for relicensing, the USFWS should be consulted during scoping of issues, study needs, and interpretation of results. Draft applications should be made available by the applicant for review and comment. The USFWS comments (i.e., FWCA report) will be provided to the applicant and should be part of their application submitted to the NRC. That report should be considered by NRC when preparing the EIS for the plant. There may be a need for further consultation under the FWCA on NRC's preferred alternative if the "Federal Action" will be significantly different than that proposed by the applicant.
- 21-22 The Department appreciates NRC's request for comments on the draft Supplement 10 and is willing to cooperate further to the extent that we can. At the same time, the USFWS requests that the NRC initiate consultation under the FWCA for relicensing nuclear power plants. The Service does not believe that either the equal consideration or mitigation planning provisions of the FWCA are satisfied by the NEPA process alone. To fully consider the protection of fish and wildlife resources and their habitats affected by each plant, NRC should request that the Service provide NRC with reports in accordance with the FWCA which should be part of NRC's decision document.

Summary of Recommendations

The Department recommends that the NRC adopt the following recommendations in order to maintain optimum protection of natural resources at the Peach Bottom Atomic Power Station:

- 21-23 1. Require system upgrading at this project to include a closed cooling system instead of the existing open cooling system.
- 21-24 2. Evaluate the potential consequences of decommissioning (contaminated facilities and unused or spent fuel disposal, reclaiming project site, consequences for fish and wildlife resources and their habitats at former project sites and disposal areas) in the alternatives analysis for relicensing.
- 21-25 3. Require the intake screen replacements to have a mesh size of one millimeter or less intake water velocities less than 0.5 feet per second, and return biota collected by the traveling screens returned to the river.
- 21-26 4. Require maintenance of transmission line right-of-ways for wildlife feeding cover and nesting activities, while minimizing habitat degradation and encouraging habitat enhancements.
- 21-27 5. Require applicant to maintain multiple layers of vegetative cover in transmission line rights-of-way to reduce or control splash, sheet and gully erosion.
- 21-28 6. Require controlled public use of transmission line rights-of-way (type and season) to avoid erosion and sedimentation.
- 21-29 7. Require an assessment of cumulative impacts of all projects from all water intakes in the Conowingo Pool area, including finfish population size, dynamics, exploitation, and structure, and, the partitioning of impingement/entrainment losses among the various intakes.
- 21-30 8. Require an assessment of cumulative effects from transmission line operation and maintenance, including forest fragmentation, electromagnetic field effects, bird collisions, and contaminant issues.
- 21-31-9. Require development and implementation of an appropriate year-round assessment method for evaluating Susquehanna River fish losses and a mitigation plan for losses of Susquehanna River fish (resident and anadromous) caused by intake impingement.
- 21-32 10. Initiate and continue consultation with the USFWS under the FWCA for the relicensing of the Peach Bottom Nuclear Power Plant.

We appreciate the opportunity to review the draft environmental document and provide comments on natural resource protection. If you have any questions regarding the these comments, please contact Jennifer Kagel of the USFWS's Pennsylvania Field Office at (814) 234-4090.

Sincerely,

Michael T. Chezik
Michael T. Chezik
Regional Environmental Officer

cc:

A. Hoar, FWS, Hadley, MA
J. Kegel, FWS, State College, PA

Reference

Gowan, C. and G. Garman. 1999. Design criteria for fish screens in Virginia: Recommendations based on a review of the literature. Prepared for: Virginia Department of Game and Inland Fisheries, Richmond, VA.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1660 Arch Street
Philadelphia, Pennsylvania 19103-2029

SEP 17 2002

11/1/02

Chief, Rules Review and Directives Branch
U.S. Nuclear Regulatory Commission
Mail Stop T6-D59
Washington DC 20555-0001

67512-44245
10

Re: Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants, Supplement 10 Peach Bottom Atomic Power Station, Units 2 and 3 NUREG-1437

Dear Sir/Madam

In accordance with the National Environmental Policy Act of 1969 and Section 309 of the Clean Air Act, the Environmental Protection Agency (EPA) has reviewed the Generic Environmental Impact Statement (GEIS) for License Renewal of Nuclear Power Plants, Supplement 10 Peach Bottom Atomic Power Station, Units 2 and 3. EPA has assigned the GEIS a rating of LO 1 (Lack of Objections / Adequate), which indicates that we have no objections to the proposal and that the GEIS adequately addressed the environmental impacts of the proposed alternative. General comments and a copy of EPA's ranking system are enclosed for your information.

Thank you for the opportunity to review and comment on this project. If you need additional assistance the staff contact for this project is William Arguto, he can be reached at 610-814-3367.

Sincerely,

William Hoffman
William Hoffman, Acting Director
Office of Environmental Programs

Enclosures

Printed on 100% recycled/recyclable paper with 100% post-consumer fiber and process chlorine free

1/10/03 = ADM - 01/03

Customer Service Hotline 1-800-438-2474

11/1/02
11/1/02
11/1/02

Re: Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants, Supplement 10 Peach Bottom Atomic Power Station, Units 2 and 3. NUREG-1437

General Comments

- 22-1 Please elaborate on the term "staff" used frequently throughout the EIS. Specifically, the relationship of the Staff to the NRC and Exelon
- 22-2 Are Emergency Planning and Community Right to Know (EPCRA) 313 reporting requirements considered or are any of the EPCRA requirements applicable to this supplement.
- 22-3 Is there any information contained in document that is sensitive or classified, that should be removed or made available through different means?
- 22-4 Section 2.2.3 - Are there any storm water control measures or requirements that are considered in water quality or resource issues
- 22-5 Section 4.1 - Accumulation of contaminants in Sediment, Page 4-6. Is there routine monitoring of sediments to assess changes in conditions.
- 22-6 Section 4.1.1 - Water Use Conflicts - Are drought conditions incorporated into water use conflict planning. Minimum monthly average flows are discussed but not discrete significant events or worse case conditions.
- 22-7 Section 4.1.2 - A 1977 NPDES permit is referenced and the best technology available for the intake structure for minimizing adverse environmental impacts. Although subsequent permit reviews have required no further entrainment studies is this still the best technology available?
- 22-8 Section 4.2.1 Electromagnetic fields, acute effects - Are there any considerations for anticipating what would trigger a concern for future effects during the license renewal term? For example, if additional transmission lines are added in the area will it change the conclusion of this section.

Environmental Impact Statement (EIS) Rating System Criteria

RATING THE ENVIRONMENTAL IMPACT OF THE ACTION

LO (Lack of Objections) - The review has not identified any potential environmental impacts requiring substantive changes to the preferred alternative. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposed action.

EC (Environmental Concerns) - The review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact.

EO (Environmental Objections) - The review has identified significant environmental impacts that should be avoided in order to adequately protect the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). The basis for environmental Objections can include situations:

- 1 Where an action might violate or be inconsistent with achievement or maintenance of a national environmental standard,
- 2 Where the Federal agency violates its own substantive environmental requirements that relate to EPA's areas of jurisdiction or expertise,
- 3 Where there is a violation of an EPA policy declaration,
- 4 Where there are no applicable standards or where applicable standards will not be violated but there is potential for significant environmental degradation that could be corrected by project modification or other feasible alternatives; or
- 5 Where proceeding with the proposed action would set a precedent for future actions that collectively could result in significant environmental impacts.

EU (Environmentally Unsatisfactory) - The review has identified adverse environmental impacts that are of sufficient magnitude that EPA believes the proposed action must not proceed as proposed. The basis for an environmentally unsatisfactory determination consists of identification of environmentally objectionable impacts as defined above and one or more of the following conditions.

- 1 The potential violation of or inconsistency with a national environmental standard is substantive and/or will occur on a long-term basis,
- 2 There are no applicable standards but the severity, duration, or geographical scope of the impacts associated with the proposed action warrant special attention, or
- 3 The potential environmental impacts resulting from the proposed action are of national importance because of the threat to national environmental resources or to environmental policies.

RATING THE ADEQUACY OF THE ENVIRONMENTAL IMPACT STATEMENT (EIS)

1 (Adequate) - The draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

2 (Insufficient Information) - The draft EIS does not contain sufficient information to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the proposal. The identified additional information, data, analyses, or discussion should be included in the final EIS.

3 (Inadequate) - The draft EIS does not adequately assess the potentially significant environmental impacts of the proposal, or the reviewer has identified new, reasonably available, alternatives, that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. The identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. This rating



NORMANDEAU ASSOCIATES, INC.

1921 River Road, P. O. Box 10
Drumore, Pennsylvania 17518
(717)548-2121
(717)548-2582 (fax)
www.normandeau.com

September 27, 2002

Mr Duane A. Neitzel
Battelle Northwest
P O Box 999 (K6-85)
Richland, Washington 99352

***** Via Email (duane.neitzel@pnl.gov) *****

Dear Duane,

Per your request relative to the abnormalities observed on fish collected in Conowingo Pond, given below is my formal response.

We began fish sampling in Conowingo Pond in 1966 with the construction of Muddy Run Pumped Storage Station, about 6 miles upstream of PBAPS on the east shore. Sampling gear included trawl, trap nets, seines, gill net, and electrofishing. We have also operated the west fish lift at Conowingo Dam since 1972 and the east fish lift since 1991. At the west fish lift, fish are sorted, counted, and targeted migratory species transported or used for studies as designated by the regulatory agencies. At the east fish lift, fish were treated similarly between 1991 and 1995 until the fish lifts became operational at Hollywood and Safe Harbor dams in 1996. Since 1996 we have operated fish lifts at Hollywood Dam (7 miles upstream of PBAPS) and fish Safe Harbor Dam (7 miles upstream of Hollywood). Fish collected in these sampling efforts were examined, counted, either a subsample preserved or released back to the river, or allowed to continue movement upstream. I would "guesstimate" we have handled over 20 million fish of over 60 species during this period. The only abnormalities we've observed, on rare occasions, were scoliosis (bent back) on channel catfish or sores on brown bullhead, a situation commonly seen in catfish forms. In the earlier sampling period (1966 to 1980) we were on Conowingo Pond essentially on a daily basis, less frequently thereafter. As a side note, the operation of PBAPS was shut down by NRC order from 1987 to 1989. Our most recent sampling, mostly between June and October, occurred in 1996 to 2000. Additionally, we check fishes impinged on screens at PBAPS during the downstream migration of juvenile American shad.

I hope the above observations help you. If you have further questions, please do not hesitate to call me at 717-548-6430.

Sincerely,

Dilip Mathur

Dilip Mathur
Sr Fisheries Scientist / Vice President

Enclosures

DM/cll

cc Paul Harmon, George Nardocci, Eric McClellan, Ray Bleistine (Normandeau)
Tracy Sgltin, Bob Matty, Bill Maher (Exelon)

02270_1.dml@berhard.doc

Bodford, NH, Corporate

Norfolk, CT	Lewes, DE	Plymouth, MA	Pt. Pleasant Beach, NJ	Drumore, PA	Aiken, SC
Yarmouth, ME	Hampton, NH	Westmoreland, NH	Peekskill, NY	Spring City, PA	Abion, WA

An Employee-owned Company
An Equal Opportunity Employer

Nuclear Regulation Committee,

You are all accountable
for supporting the continued
operating of Peach Bottom
Nuclear Reactor Plant.

23-1
23-2
23-3

When theres a disaster
and millions dead then
will you stop the insanity
of Nuclear energy.

Only to build Nuclear Bombs
with the old waste products
do you use Nuclear power

Why not do something safe.
You are accountable.
not me for that death trap.

Handwritten notes in margin: 23-1, 23-2, 23-3, and other illegible scribbles.

DEPARTMENT OF
HEALTH
in pursuit of good health
(717) 783-1677

November 12, 2002

Chief, Rules and Directives Branch
Division of Administrative Services
Mail Stop TG 135A
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Sir or Madam:

This letter provides information related to the NRC staff environmental review being performed for the proposed license renewal of Peach Bottom Atomic Power Plant, Units 2 and 3 (Deck # Nos. 50-277, 50-278)

Sincerely,

Joel H. Hersh
Joel H. Hersh, M.D., M.P.H.
Director
Bureau of Epidemiology

23-4 I will seek out
safe alternatives.

23-5 You people are crazy
to keep that kind of
plant in operation.

23-6 Be forewarned. You are
accountable for your choice
I am for stopping all
nuclear energy plants now!

23-7 We have technology to
keep us all strong & healthy.
Wind Generators, Magnetic generator,
Steam generator etc
when will your nightmare end.

Pennsylvania Department of Health
PO Box 90
Harrisburg, PA 17108

Review of the Radiation and Public Health Project's
 "Comment on Environmental Issues Regarding Duquesne
 Corporation Proposal to the U.S. Nuclear Regulatory Commission
 To Re-License the Peach Bottom 2 and 3 Reactors"

by

Gene Weinberg, MPH, DRPH
 Pennsylvania Department of Health.

Calculation of Age-adjusted Rates

The incidence and mortality rates presented in the report are all age-adjusted. While it is not feasible to check each population (denominator) and every numerator (deaths, incidences) the methodology appears to be correct. I re-calculated several rates and each matched the table.

Cancer Death Rates - All Cancers, Combined

The authors use the geographic and temporal distributions of cancer deaths to describe the effects of ambient radiation levels on the population's cancer burden. The report states that cancer death rates in York and Lancaster Counties increased as a result of the start-up of the Peach Bottom Units 2 and 3. A change in the cancer death rates from 30 percent below the U.S. rate prior to start-up, to 2% higher than the U.S. rate after the units became operational are described.

With the exception of those cancers with a short survival (stomach, lung, liver, pancreas), death rates are inappropriate for measuring the cancer risk in a population, incidence rates should be used. Cancer mortality is determined by many factors, including, the incidence rate of the disease, severity, health care, competing causes of death, and coding rules. For cancers with long survival, death rates are useless. Thyroid cancer is the best example, survival is nearly 100 percent. For every 12 new cases that occur in Pennsylvania, there is only one death.

Cancer is a group of diseases, each with different tissues of origin, different pathology, and risk factors. Therefore, lumping all types together is meaningless. The total

cancer rate is the net effect from factors specific to the individual types. The following have caused large increases in total cancer incidence in Pennsylvania independent of any risk factors in the environment, a) Screening; As a result of breast and prostate cancer screening, the number of cancers increased 7,000 between 1985 and 1992, b) Personal Risk Factors, Changes in smoking patterns of women resulted in increasing incidence of lung from 2,600 cases 1985 to almost 3,900 in 1995; Better Diagnostic Methods have resulted better case-finding and in higher incidence, for example brain and colon cancers.

Differences in disease rates between populations are expected, for no other reason than random variation. The change from 2 percent lower to 3 percent higher than the U.S. rate, should be considered "no difference".

Cancer Death Rates - Site Specific

Changes in death rates for the most radiosensitive tissues (organ sites) are presented. When compared to the rates for the U.S., there is a net increase in the county death rates. Again, all the limitations of mortality data apply. The most significant risk factors are not considered. For example, a major determinant of breast cancer risk is hormonal status. Women who had their first child after age 32 have twice the risk as women who had their first child before age 20. Age at menopause also determines life-long estrogen exposures and breast cancer risk. Because women of higher social class tend to start families at an older age, this group has a greater risk of developing breast cancer. Because of the socioeconomic characteristics of a population and changing demographics, breast cancer rates might be elevated. For 1994-1998 both the breast cancer incidence rate and mortality rate for York and Lancaster Counties were lower than the state. For many cancers the causes are not currently known, though important risk factors have been identified. These should be addressed. Viruses likely play a role in the etiology of Hodgkin's disease other lymphomas, as well as leukemia. Occupational exposures to aromatic hydrocarbons (benzene) likely increase rates in some groups. Chronic immune stimulation by viruses and other health conditions (bronchitis, bowel disease, allergies) may contribute to the risk of multiple myeloma. There is increasing evidence that cigarette smoking contributes to leukemia risk. Consequently smoking patterns may affect cancer rates in other radiosensitive organs.

the ground sources, cosmic rays, building materials, internal, ground, and dental exposures add about 90 millirem.

Discussion

The conclusions of the report, "Environmental Issues Regarding Exelon Corporation Proposal to the U.S. Nuclear Regulatory Commission To Re-License the Peach Bottom 2 and 3 Reactors" by the Radiation and Public Health Project can not be supported. There are several methodological problems. This is an ecological study not an analytical study. The evidence presented is built on overestimating cancer rates in populations to their proximity to atomic energy facilities. This approach fails to consider actual human exposures, the doses, established dose-response curves for low levels of exposure, as well as latency; the period between exposure and disease.

Other weaknesses are, 1) the use of mortality, a measure insensitive to cancer risk, when incidence data are required, 2) aggregating different types of cancers, rather than examining individual types, 3) not considering other sources of ionizing radiation, and 4) disregarding established risk factors and their attributable risks.

In addition to radiation, there are a number of risk factors for thyroid cancer. Both iodine deficiency and iodine excess can cause thyroid cancer. Consequently, cruciferous vegetables appear to be protective, while seafood may increase risk. There appears to be an association with breast cancer risk. Like breast cancer, the influence of estrogens and other endocrine hormones can affect risk. External, acute, childhood x-radiation is carcinogenic for long periods of time. The greater the exposure, the greater are the chances of developing thyroid cancer. Prior to 1960, there were significant iatrogenic sources, dental, treatment of skin diseases, tonsillitis, and thyroid conditions. These were far greater than sources from atomic energy, and have been linked to rising incidence.

Dose-Effects

The potential effects from radiation exposure are established, but only at very high doses. Through the authors maintain that Peach Bottom releases contributed to unusually high cancer rates, epidemiological studies and studies of biological effects of low dose radiation do not support this. Based on risk assessments from the International Commission on Radiological Protection (ICRP), the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) and the Biological Effects of Ionizing (BEIR) III Report of the National Academy of Sciences, the exposures could not have affected either incidence rates or mortality rates in these counties. Each of these report similar excess risks. They determined that if 1,000,000 people are each exposed to 1,000 millirem (1rem each), between 110 and 120 extra cancers would occur over their lifetimes. In any normal population of 10,000 people about 30 percent (3,000) will be expected to develop cancer according to the American Cancer Society. If that same group received 1,000 millirem of radiation, 3 more cancers might develop, of which 2 may be fatal, however it would be impossible to distinguish which cancers resulted from the exposures.

Radiation exposures from nuclear power plants are extremely low. Based on 1980 data, for persons living from 1 mile to 25 miles from nuclear power plants, the total dose from all pathways is between a low of 0.00001 millirem to a high of 0.05 millirem. In contrast, the average person in the United States receives about 100 millirem per year from natural

Appendix B

Contributors to the Supplement

Appendix B

Contributors to the Supplement

The overall responsibility for the preparation of this supplement was assigned to the Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission (NRC). The statement was prepared by members of the Office of Nuclear Reactor Regulation with assistance from other NRC organizations, and the Lawrence Livermore National Laboratory. Representatives from Argonne National Laboratory, Pacific Northwest National Laboratory, Energy Research Incorporated, and the Information Systems Laboratory also participated in this review.

Name	Affiliation	Function or Expertise
NUCLEAR REGULATORY COMMISSION		
Louis Wheeler	Nuclear Reactor Regulation	Project Manager
John Tappert	Nuclear Reactor Regulation	Section Chief
Barry Zalzman	Nuclear Reactor Regulation	Technical Monitor
James Wilson	Nuclear Reactor Regulation	Project Management
Andrew Kugler	Nuclear Reactor Regulation	Project Management
Robert Palla	Nuclear Reactor Regulation	Severe Accident Mitigation Alternatives
Stacey Fox	Nuclear Reactor Regulation	Environmental Scientist
Jason Flemming	Nuclear Reactor Regulation	Project Management
Nina Barnett	Nuclear Reactor Regulation	Administrative Support
Richard Emch	Nuclear Reactor Regulation	Project Management
Gregory Suber	Nuclear Reactor Regulation	Project Management
LAWRENCE LIVERMORE NATIONAL LABORATORY^(a)		
Bruce McDowell		Task Leader
Lily A. Sanchez		Water Use, Hydrology
Humayun N. Khan		Radiation Protection
Paul McGuff		Cultural Resources
Crystal E. Quinly		Land Use, Related Federal Programs
Nancy Woods		Technical Editor
Rebecca Jones		Administrative Support
Priscilla Woods		Administrative Support
ARGONNE NATIONAL LABORATORY^(b)		
Michael Lazaro		Air Quality

Appendix B

Name	Affiliation	Function or Expertise
PACIFIC NORTHWEST NATIONAL LABORATORY^(c)		
Duane A. Neitzel		Aquatic Ecology
Michael R. Sackschewsky		Terrestrial Ecology
Michael J. Scott		Socioeconomics, Alternatives
INFORMATION SYSTEMS LABORATORY		
Jim Meyer		Severe Accident Mitigation Alternatives
Kim Green		Severe Accident Mitigation Alternatives
Mohsen Khatib-Rahbar		Severe Accident Mitigation Alternatives
Michael Zavisca		Severe Accident Mitigation Alternatives
<p>(a) Lawrence Livermore National Laboratory is operated for the U.S. Department of Energy by the University of California.</p> <p>(b) Argonne National Laboratory is operated for the U.S. Department of Energy by the University of Chicago.</p> <p>(c) Pacific Northwest National Laboratory is operated for the U.S. Department of Energy by Battelle Memorial Institute.</p>		

Appendix C

Chronology of NRC Staff Environmental Review Correspondence Related to Exelon Generation Company's Application for License Renewal of Peach Bottom Atomic Power Station, Units 2 and 3

Appendix C

Chronology of NRC Staff Environmental Review Correspondence Related to Exelon Generation's Application for License Renewal of Peach Bottom Atomic Power Station, Units 2 and 3

This appendix contains a chronological listing of correspondence between the NRC and Exelon Generation Company (Exelon) and other correspondence related to the NRC staff's environmental review, under 10 CFR Part 51, of Exelon's application for renewal of the Peach Bottom Atomic Power Station, Units 2 and 3, operating licenses. All documents, with the exception of those containing proprietary information, have been placed in the Commission's Public Document Room, at One White Flint North, 11555 Rockville Pike (first floor), Rockville, MD, and are available electronically from the Public Electronic Reading Room found on the Internet at the following web address: <http://www.nrc.gov/NRC/ADAMS/index.html>. From this site, the public can gain access to the NRC's Agencywide Document Access and Management Systems (ADAMS), which provides text and image files of NRC's public documents in the Publicly Available Records (PARS) component of ADAMS. The ADAMS accession numbers for each document are included below.

- June 26, 2001 Letter from Mr. Robert S. McCord, Harford County Acting Director of Governmental and Community Relations, identifying Mr. James Mason, Public Information Manager, as the Harford County point of contact for NRC interests related to the Peach Bottom license renewal environmental review (Accession No. ML011360033).
- July 2, 2001 Letter from Mr. Jeffrey A. Benjamin, Exelon, to the NRC, submitting the application for the renewal of the operating licenses for the Peach Bottom Atomic Power Station, Units 2 and 3 (Accession No. ML011840304).
- July 18, 2001 NRC staff letter to Mr. James A. Hutton, Exelon, forwarding an information copy of a notice sent to the Office of the Federal Register regarding receipt and public availability of the Peach Bottom license renewal application. (The notice was published in the Federal Register on July 25, 2001, at 66 FR 38753.)
- July 26, 2001 NRC News Release No. 01-092, "NRC Announces Availability of License Renewal Application for Peach Bottom Atomic Power Station" (Accession No. ML012130029).

Appendix C

- August 20, 2001 NRC staff letter to Mr. George Meyn, Harford County Public Library, Whiteford, MD, regarding the maintenance of reference material for public access related to the Peach Bottom license renewal environmental review (Accession No. ML012330206).
- August 20, 2001 NRC staff letter to Ms. Martha Gunder and Ms. Essy Day, Collinsville Community Library, Brogue, PA regarding the maintenance of reference material for public access related to the Peach Bottom license renewal environmental review (Accession No. ML012330179).
- September 5, 2001 NRC staff letter to Mr. Michael P. Gallagher, Exelon, forwarding an information copy of a Federal Register notice of acceptance for docketing of the application and notice of opportunity for hearing regarding the renewal of the Peach Bottom operating licenses, and the NRC schedule for the safety and environmental reviews of the license renewal application. (The Federal Register notice was published on August 31, 2001, at 66 FR 46036-46038). (Accession No. ML012490088).
- September 17, 2001 NRC staff letter to Mr. Michael P. Gallagher, Exelon, forwarding a Federal Register Notice of intent to prepare an environmental impact statement and conduct scoping. (The notice was published in the Federal Register on September 24, 2001, at 66 FR 48892-48893.) (Accession No. ML012600025).
- October 11, 2001 NRC staff letter to Mr. John Wolflin, U.S. Fish and Wildlife Service, requesting information relevant to the NRC environmental review (Accession No. ML012850256).
- October 16, 2001 NRC public meeting notice (memorandum with information for the NRC web site) of the November 7, 2001, public meetings in Delta, PA to facilitate public participation in the environmental review scoping process (Accession No. ML012890176).
- October 24, 2001 NRC staff letter to Chief Roy Crazy Horse, Chairperson, New Jersey Commission on American Indian Affairs, inviting participation in the environmental review scoping process (Accession No. ML012970498).
- October 26, 2001 NRC staff letter to Mr. Jim Rementer, Delaware Tribe of Indians, inviting participation in the environmental review scoping process (Accession No. ML012990489).

- October 26, 2001 NRC News Release No. I-01-061, "NRC Seeks Public Input on Environmental Statement for Proposed Peach Bottom Nuclear Power Plant License Renewal," which provides information on the upcoming November 7, 2001, public meetings in Delta, PA; the public availability of the licensee's application; and the environmental review process (ML020170238).
- October 26, 2001 Three emails from Ms. Faye Stocum, Delaware State Historical Preservation Office staff, forwarding 15 photographs of the area where the Keeney transmission line intersects a Chesapeake and Delaware feeder canal (ML020230253).
- October 26, 2001 Letter from Faye L. Stocum, Delaware State Historic Preservation Office archaeologist to Paul McGuff, Lawrence Livermore National Laboratory, providing information on a concern regarding the extent and continued adverse effect of original construction and continued usage of the transmission line on an historic property (ML020310091).
- October 26, 2001 NRC staff letter to Chief Billy Tayac, Piscataway Indian Nation, inviting participation in the environmental review scoping process (Accession No. ML013020430).
- October 29, 2001 Letter from Daniel R. Griffith, Delaware State Historic Preservation Officer (SHPO) to the NRC regarding an historic property within the license renewal project area of potential effect (Chesapeake and Delaware Feeder Canal) (Accession No. ML013650064).
- November 6, 2001 Email to Peach_Bottom_EIS@nrc.gov from Mr. George Crocker, Executive Director, North American Water Office, providing public input to the environmental review scoping process (Accession No. ML020110480).
- November 7, 2001 Energy Justice Network document with public input to the environmental review scoping process - given to the NRC at a November 7, 2001, public scoping meeting (document was attached to the meeting transcript) (Accession No. ML020170483).
- November 7, 2001 Letter from the County Commissioners of York County with input to the environmental review scoping process - given to the NRC at a November 7, 2001, public scoping meeting (letter was attached to the meeting transcript) (Accession No. ML020170484).

Appendix C

- November 8, 2001 Letter from Hugh Jackson, Public Citizen's Critical Mass Energy and Environmental Program, to the Chief, Rules and Directives Branch, providing public input to the environmental review scoping process (provides same input as a November 7, 2001, email to Peach_Bottom_EIS@nrc.gov (Accession No. ML 020310088).
- November 10, 2001 Email to Peach_Bottom_EIS@nrc.gov from Mr. Thomas H. Gehr providing public input to the environmental review scoping process (Accession No. ML020230264).
- November 13, 2001 Email to Peach_Bottom_EIS@nrc.gov from Mr. Ken Zieber providing public input to the environmental review scoping process (Accession No. ML020230260).
- November 19, 2001 Letter from the Fish and Wildlife Service, Chesapeake Bay Field Office, responding to the October 11, 2001, NRC staff request for information on threatened and endangered species in the Peach Bottom license renewal project area (with attached NRC staff Note to File) (ML020290308).
- November 20, 2001 Delaware State Historic Preservation Office letter discussing the Section 106 regulations of the Advisory Council on Historic Preservation and providing a list of entities having an interest in historic preservation (ML020310082).
- November 20, 2001 Telefax received from the Alliance For A Clean Environment providing public input to the environmental review scoping process (Accession No. ML020020383).
- November 20, 2001 Letter from the York County Chamber of Commerce providing input to the environmental review scoping process (Accession Mo. ML013650052).
- November 21, 2001 Email to Peach_Bottom_EIS@nrc.gov from Mr. Joseph Mangano, Radiation and Public Health Project, providing public input to the environmental review scoping process (Accession No. ML020230268).
- November 26, 2001 NRC staff letter to Mr. Michael P. Gallagher, Exelon, forwarding the October 29, 2001, letter from the Delaware SHPO to the NRC and requesting information related to the SHPO interests (Accession No. ML013300623).

- November 26, 2001 Email to Peach_Bottom_EIS@nrc.gov from Mr. David P. Harry providing public input to the environmental review scoping process (Accession No. ML020310096).
- November 26, 2001 Letter from Mr. Richard I. McLean, Maryland Department of Natural Resources, providing input to the environmental review scoping process (Accession No. ML020230262).
- November 26, 2001 NRC staff letter to Ms. Katrina S. Anderson, Director, Quarryville Library, Quarryville, PA regarding the maintenance of reference material for public access related to the Peach Bottom license renewal environmental review (Accession No. ML013300616).
- November 26, 2001 Letter from Amy Donohue to the Chief, NRC Rules and Directives Branch, providing public input to the environmental review scoping process (also provided by telefax on November 27, 2001) (Accession No. ML013460258).
- December 3, 2001 NRC Press Release I-01-066, "3rd Library to Make Available Peach Bottom License Renewal Information," in response to public interest expressed during the November 7, 2001, public meetings to have documents made available at the Quarryville, PA library (ML020250330).
- December 20, 2001 NRC staff letter to Exelon requesting additional information regarding Severe Accident Mitigation Alternatives (ML013540507).
- January 14, 2002 Pennsylvania Department of Environmental Protection letter informing the NRC staff that the Peach Bottom facility is in compliance with its NPDES permit (ML020310086).
- January 17, 2002 NRC staff request to the U.S. Fish and Wildlife Service, Pennsylvania Field Office, requesting concurrence in NRC staff conclusions pertaining to threatened and endangered species (ML020180445).
- January 18, 2002 Summary of the public scoping meetings held in Delta, PA as part of the NRC staff environmental scoping process (ML020180346).
- January 23, 2002 Letter from Exelon responding to the NRC staff letter dated November 26, 2001, requesting information related to the Chesapeake and Delaware feeder canal which crosses the Keeney transmission line (ML020600194).

Appendix C

- January 30, 2002 Letter from Exelon responding to the December 20, 2001, NRC staff request for additional information regarding Severe Accident Mitigation Alternatives (ML020510139).
- March 7, 2002 NRC staff letter to the Delaware SHPO responding to the SHPO letters of October 29 and November 20, 2001, which discuss a property of historic interest located along a transmission line corridor in Delaware (ML020660229).
- April 17, 2002 Letter from U.S. Fish and Wildlife Service responding to the January 17, 2002, NRC staff request for concurrence in conclusions pertaining to threatened and endangered species (ML021510200).
- April 19, 2002 NRC staff letter to Mr. Michael P. Gallagher, Exelon, forwarding the Peach Bottom License Renewal Environmental Scoping Summary Report (ML021120382).
- May 30, 2002 NRC staff Note to File with information enclosed for the docket files and public availability which was provided to the staff by the licensee, Conectiv Power Delivery, and the U.S. Fish and Wildlife Service (ML021510206).
- |
| June 24, 2002 NRC staff letter to Mr. Michael P. Gallagher, Exelon, forwarding a copy of
| the notice sent to the Federal Register for publication regarding the
| availability of the Peach Bottom Draft Supplemental Environmental
| Impact Statement (DSEIS) for review and public comment
| (ML021750129)
|
- | June 24, 2002 NRC staff letter to Mr. Michael P. Gallagher, Exelon, forwarding a copy of
| the Peach Bottom DSEIS for review and comment (ML021750183).
|
- | July 5, 2002 Email to Peach Bottom EIS@nrc.gov from Shirley A. Liebman providing
| comments on the DSEIS (ML022060545).
|
- | July 8, 2002 NRC staff letter to Mr. Michael P. Gallagher, Exelon, correcting the date
| for the end of the public comment period specified in the June 24, 2002,
| letter (ML021900079).
|
- | July 8, 2002 NRC Meeting Notice regarding the public meeting on July 31, 2002, in
| Delta, PA. (ML021900031).
|

July 13, 2002	Email to <u>Peach Bottom EIS@nrc.gov</u> from Shirley A. Liebman, providing comments on the DSEIS and requesting an opportunity to speak at the DSEIS public comment meeting (ML022060514).
July 27, 2002	Email to <u>Peach Bottom EIS@nrc.gov</u> from Shirley A. Liebman forwarding comments prepared for the July 31, 2002, public meeting (ML022130325).
July 29, 2002	Email to <u>Peach Bottom EIS@nrc.gov</u> from Shirley A. Liebman forwarding final written comments and background information for the 7:00 p.m. public meeting on July 31, 2002 (ML022130328).
August 1, 2002	Email from Joe Mangano, Radiation and Public Health Project, to Patricia Milligan, NRC staff, forwarding supporting information for his presentation at the July 31, 2002, public meeting (ML022210147).
August 8, 2002	Anonymous letter to the NRC Rules and Directives Branch (unsigned, undated, no return address, post marked August 8, 2002) providing general comments in opposition to the continued operation of Peach Bottom Atomic Power Station (ML022270363).
August 19, 2002	Summary of the July 31, 2002, public meeting in Delta, PA to receive public comments on the DSEIS (ML022310317).
August 27, 2002	Letter from Exelon providing comments on the DSEIS (ML022560046).
September 9, 2002	Letter from the Delaware State Historic Preservation Officer providing comments related to the National Historic Preservation Act as it applies to NRC consideration of the portion of the Keeney transmission line which lies in Delaware (ML022700286).
September 13, 2002	Letter from the United States Department of the Interior providing comments on the DSEIS (ML022680545).
September 13, 2002	Letter from the Maryland Department of Natural Resources providing comments on the DSEIS (ML022750079).
September 17, 2002	Letter from the United States Environmental Protection Agency, Region III, providing comments on the DSEIS (ML022630453).

Appendix C

- | September 27, 2002 Letter to NRC environmental consultant at Pacific Northwest National
| Laboratory from Normandeau Associates, Inc. which describes
| observations from fish sampling in Conowingo Pond (ML022750082).
|
- | November 12, 2002 Letter from the Pennsylvania Department of Health providing an
| evaluation of information submitted to the NRC staff by the Radiation and
| Public Health Project (ML023250318).
|
- | December 16, 2002 Email from Exelon to the NRC staff forwarding the "Interconnection
| Agreement By and Among PECO Energy Company And Exelon
| Generation Company, L.L.C. [and] PSEG Nuclear, LLC For The Peach
| Bottom Atomic Power Station," dated January 12, 2001 (ML023530119).
|
- | January 9, 2003 NRC staff letter to the Delaware State Historic Preservation Officer (DE
| SHPO) replying to the DE SHPO letter of September 9, 2002
| (ML030090187).
|
- | January 9, 2003 NRC staff Letter to Conectiv Power Delivery forwarding a copy of the DE
| SHPO letter dated September 9, 2002, and the NRC staff reply dated
| January 9, 2003 (ML030090261).
|

Appendix D

Organizations Contacted

Appendix D

Organizations Contacted

During the course of the staff's independent review of environmental impacts from operations during the renewal term, the following Federal, State, regional, and local agencies were contacted:

Administrator, Treasurer, York County

Assistant Superintendent, South East District Schools

Convention & Visitors Bureau, York County

Delaware Department of Natural Resources and Environmental Control

Delaware Natural Heritage Program

Delaware State Historic Preservation Office

Fish, Wildlife and Marine Resources, New York Division

Gifford Pinchot State Park (GPSP Administers Susquehannock State Park)

Lancaster County Assessment Office

Lancaster County Community Action Program

Lancaster County Planning and Zoning

Lancaster County Planning Commission

Lancaster Parks and Recreation Department

Maryland Department of Housing and Community Development, Division of Historical and Cultural Programs

Maryland Department of Natural Resources

National Marine Fisheries Service

National Renewable Energy Laboratory

Appendix D

Natural Resources Conservation Service, New Castle County, Delaware

Parks and Recreation, York County

Peach Bottom Township

Pennsylvania Association of Visitor and Convention Bureaus

Pennsylvania Department of Environmental Protection

I Pennsylvania Department of Health

Pennsylvania Fish and Boat Commission

Pennsylvania Game Commission

Pennsylvania Historical and Museum Commission, Bureau for Historic Preservation

Realty Advisor, Stewartstown, Pennsylvania

Realty Advisor, York, Pennsylvania

Solanco School District

Susquehanna River Basin Commission

Treasurer, Lancaster County

United Way of Lancaster County

US Fish and Wildlife Service - Chesapeake Bay Field Office

US Fish and Wildlife Service - Pennsylvania Field Office

York County Planning Commission

Appendix E

Exelon Generation Company's Compliance Status and Consultation Correspondence

Appendix E

Exelon Generation Company's Compliance Status and Consultation Correspondence

The list of licenses, permits, consultations, and other approvals obtained from Federal, State, regional, and local authorities for Peach Bottom Units 2 and 3 is shown Table E-1. Following Table E-1 are reproductions of consultation correspondence prepared and sent during the evaluation process of the application for renewal of the operating licenses for Peach Bottom Units 2 and 3.

Table E-1. Federal, State, Local, and Regional Licenses, Permits, Consultations, and Other Approvals for Current Peach Bottom Units 2 and 3 Operation

Agency	Authority	Description	Number	Issue Date	Expiration Date	Remarks
NRC	10 CFR Part 50	Operating license, Peach Bottom Unit 2	DPR-44 (Unit 2)		August 8, 2013 (Unit 2)	Authorizes operation of Unit 2
NRC	10 CFR Part 50	Operating license, Peach Bottom Unit 3	DRP-56 (Unit 3)		July 2, 2014 (Unit 3)	Authorizes operation of Unit 3
FWS	Section 7 of the Endangered Species Act (16 USC 1536)	Consultation	NA	November 19, 2001		Requires a Federal agency to consult with FWS regarding whether a proposed action will affect endangered or threatened species
NMFS	Section 7 of the Endangered Species Act (16 USC 1536)	Consultation	NA	November 19, 2001		Operation during the renewal term
SRBC	Susquehanna Basin Compact (18 CFR 803)	Approval	Docket 19830506	May 12, 1985, no expiration date		Consumptive Use of Conowingo Pond water
PDEP	Storage Tank and Spill Prevention Act 32	Registration	187882	Issued annually		Storage tanks (gasoline, used oil, hazardous substances, unlisted materials)
PHMC	Section 106 of the National Historic Preservation Act (16 USC 470f)	Consultation		Letter from PHMC to PECO, December 14, 2000		The National Historic Preservation Act requires Federal agencies to take into account the effect of any undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places.
MDE	Section 307 of the Coastal Zone Management Act [16 USC 1456(c)(3)(A)]	Consistency determination	NA	Letter from MDE dated April 23, 2002		Consistency of license renewal with the Maryland Coastal Management.

Table E-1. (contd)

Agency	Authority	Description	Number	Issue Date	Expiration Date	Remarks
PDEP	Pennsylvania Clean Stream Law, as amended, 35 P.S. Section 691.1 et seq.	National Pollution Discharge Elimination System Permit and Section 401 certification			December 1, 2005	Permit for discharge of waste waters from cooling water, waste water settling basin, auxiliary boiler blowdown, sewage treatment plant, dredging rehandling basin, raw intake screen backwash water; and storm water outfall
PDEP	Pennsylvania Dam Safety and Encroachment Act (32 P.S. Section 693.1 et seq.), Clean Stream Law (35 P.S. Section 691.1 et seq.), Flood plain Management Act (32 P.S. Section 679.101 et seq.)	Permit	E36-693		December 31, 2010	Maintenance dredging of intake area
PDEP	Pennsylvania Safe Drinking Water Act	Permit	6791502	March 21, 1994, no expiration date		Public Water Supply permit
PDEP	Air Pollution Control Act P25 Pa. Code Chapter 127)	Air emissions permit	67-05020		February 29, 2004	Emissions from diesel emergency generators, miscellaneous diesel engines, and other miscellaneous units
DSHPO	Section 106 of the National Historic Preservation Act (16 USC 470f)	Consultation	NA	Letter from DSHPO to NRC dated October 29, 2001		Impact on sites listed or eligible for listing in the National Register of Historic Places
DSHPO	Section 106 of the National Historic Preservation Act (16 USC 470f)	Consultation	NA	Letter to NRC from DSHPO dated September 9, 2002		Identifies need for consultation
MHT	Section 106 of the National Historic Preservation Act (16 USC 470f)	Consultation	NA	Letter MHT to Exelon, September 22, 2000		Impact on sites listed or eligible for listing in the National Register of Historic Places

Table E-1. (contd)

Agency	Authority	Description	Number	Issue Date	Expiration Date	Remarks
PDER	Clean Water Act (33 USC Section 1251 et seq.), Pennsylvania Clean Streams Law (35 P.S. Section 691.1 et seq.)	Individual Discharge Permit	PA 0009733	November 3, 2000	December 1, 2005	Contains effluent limits for Peach Bottom Units 2 and 3 discharges to the Susquehanna River.
EPA and PDEP	Clean Water Act Section 401 (33 USC 1341)	Certification of compliance with state water quality standards	NPDES permit constitutes compliance			Discharges during license renewal term

E-4

- DSHPO - Delaware State Historic Preservation Officer
- EPA - U.S. Environmental Protection Agency
- FWPCA - Federal Water Pollution Control Act (also known as the Clean Water Act)
- FWS - U.S. Fish and Wildlife Service
- MDE - Maryland Department of the Environment
- MHT - Maryland Historical Trust
- NMFS - National Marine Fisheries Service
- NPDES - National Pollutant Discharge Elimination System
- NA - Not applicable
- PDEP - Pennsylvania Department of Environmental Protection
- PDER - Pennsylvania Department of Environmental Resources
- PECO - PECO Energy
- PHMC - Pennsylvania Historical and Museum Commission
- SRBC - Susquehanna River Basin Commission



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 17, 2002

Ms. Bonnie Crosby
U.S. Fish and Wildlife Service
Pennsylvania Field Office
315 South Allen St., Suite 322
State College, PA 16801-4850

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3, LICENSE RENEWAL - "NO EFFECT" AND "NOT LIKELY TO ADVERSELY AFFECT" DETERMINATIONS FOR THREATENED AND ENDANGERED SPECIES

Dear Ms. Crosby:

This is a request for your concurrence with conclusions which have been developed during the preparation of an environmental impact statement. The conclusions pertain to threatened and endangered species in the project area for the proposed license renewal of the Peach Bottom Atomic Power Station (PBAPS).

The U.S. Nuclear Regulatory Commission (NRC) is preparing a Supplemental Environmental Impact Statement (SEIS) for the proposed license renewal of the operating licenses for (PBAPS) Units 2 and 3, located in Peach Bottom Township, southeastern York County, PA. The current PBAPS licenses will expire in 2013 and 2014 for Units 2 and 3, respectively. The proposed license renewal would extend these operating licenses to 2033 and 2034. One factor considered within this SEIS is the potential for adverse impacts to federally listed endangered or threatened species that may result from continued operation of the facility for up to 20 additional years.

The PBAPS facility includes two boiling water reactors, a control building, a turbine building, and several other structures and facilities, including cooling water intake and discharge structures. The facilities are located on the west bank of the Susquehanna River, approximately 2 miles north of the Maryland/Pennsylvania border. The site is located approximately 8 miles upstream from Conowingo Dam and 6 miles downstream from Holtwood Dam. One transmission corridor is included in the analysis for the PBAPS SEIS. This 54 km (34 mile), 500kV transmission line crosses the Susquehanna River at the PBAPS site, enters Maryland near the village of Rock Springs, then traverses Cecil County, MD, and ends at the Keeney substation in northern Delaware, approximately 5 miles south of Newark, DE.

The licensee for PBAPS, Exelon Generation Company (Exelon), formerly PECO Energy Company (PECO), contacted the USFWS Pennsylvania Field Office concerning threatened and endangered species through a letter dated October 11, 2000, (PECO 2000). The Pennsylvania Field Office provided a response to PECO on October 18, 2000, (USFWS 2000a). The NRC staff contacted the USFWS Chesapeake Bay Field Office on October 11, 2001 (NRC 2001), and received a response dated November 19, 2001 (USFWS 2001). We have reviewed these letters, additional information provided by PECO, and information obtained through discussions with State wildlife biologists in Pennsylvania, Maryland and Delaware.

Federally listed species potentially affected by the PBAPS license renewal include the American bald eagle (*Haliaeetus leucocephalus*) and the bog turtle (*Clemmys muhlenbergii*). An additional species, the swamp pink (*Helonias bullata*) has also been reported from the vicinity of the project area. It is our understanding that one additional species, the Delmarva peninsula fox squirrel (*Sciurus niger cinereus*) may occur as experimental populations in Cecil County, MD and New Castle County, DE, but no natural populations are known from those counties (USFWS 1993) and it will therefore not be considered further.

The bald eagle is known to occur in York and Lancaster Counties, PA, Cecil County, MD, and New Castle County, DE. The Lower Susquehanna River is one of the most important areas for bald eagles in Pennsylvania. There are approximately 10 known nests on Conowingo Pond, 6 on the Maryland side of the border and 4 on the Pennsylvania side. The nests within Pennsylvania are all upstream of the PBAPS site, with the nearest located on Lower Bear Island, approximately 5 km (3 miles) upstream from the PBAPS site (Daniel Brauning, PA Department of Wildlife, personal communication, November 2001). The locations of the nests within Maryland were not precisely indicated, but the nearest nest would be at least 2 miles downstream from the PBAPS site (David Brinker, Maryland Department of Natural Resources, personal communication, November 2001).

The lower Susquehanna River is also a very important wintering area for bald eagles. In Maryland, there are usually between 25 and 30 eagles that winter in the vicinity of Conowingo Dam (David Brinker, personal communication), while in Pennsylvania there are usually between 10 and 20 wintering eagles on Conowingo pond (Brauning and Peebles 2001). In especially cold periods, as many as 15 to 20 eagles have been reported to congregate near the PBAPS discharge canal because it may be the only non-frozen portion of the river (Daniel Brauning, personal communication, corroborated by PECO Energy personnel).

The presence of the PBAPS does not appear to adversely affect the local bald eagle population, and there are indications that the nesting eagle population on the lower Susquehanna may be approaching saturation (PGC 2001). The PBAPS facility has been operating at this location since the early to mid 1970's. Since that time the eagle population has increased dramatically in the vicinity of Conowingo Pond, as it has throughout Pennsylvania. The NRC staff therefore concludes that continued operation of the PBAPS facility for an additional 20 years beyond the current license terms is not likely to adversely affect bald eagles. During especially cold periods, the operation of the plants may have a beneficial effect, because the warm discharge water may be the only available foraging area.

Bog turtles are known to occur in York and Lancaster Counties, PA, Cecil County, MD, and in New Castle County, DE (USFWS 1997). There is no suitable habitat at the PBAPS site itself. However, the Peach Bottom-to-Keeney transmission corridor traverses several streams and wetlands. PECO commissioned a "Phase 1" bog turtle habitat survey (Tetra Tech 2000) along the entire length of the transmission corridor following procedures described in USFWS 2000b. Four of the five stream crossings identified during the survey were incised channels through upland habitats, with no adjacent wetlands present. These channels are rocky, with no muck substrate. Therefore, these areas lack the criteria (hydrology, substrate, and vegetation) identified by USFWS 2000b for suitable bog turtle habitat. The fifth site supports a small wetland (< 0.04 ha [0.1 acre]) with at least one low area of mucky soil and a few wetland plants such as jewelweed (*Impatiens* sp.), skunk cabbage (*Symplocarpus foeditus*), and rushes

B. Crosby

3

(*Juncus* sp.). However, most of the area is covered by a dense stand of mile-a-minute weed (*Polygonum perfoliatum*). Additionally, the hydrology of the site does not meet bog turtle habitat criteria. The marsh does not appear to be spring fed, but is instead a depressional area with no evidence of shallow rivulets or other features described in USFWS 2000b. Therefore, it is concluded that there is no suitable bog turtle habitat within the Keeney transmission corridor. Based on the results of this survey, the NRC staff concludes that continued operation of PBAPS for an additional 20 years will have no effect on bog turtles.

The swamp pink is a perennial, rhizomatous member of the lily family (Liliaceae). New Jersey supports the greatest number of populations, but populations also are found in Delaware, Maryland, and further south in Virginia, North and South Carolina, and Georgia (USFWS 1991). In Maryland, all known populations appear to occur within freshwater seepage areas along streams (USFWS 1991). All the known populations within Cecil County occur along the fall line between the coastal plain and piedmont ecological regions (David Brinker, personal communication) which lie several miles south of the Peach Bottom-to-Keeney transmission line. All the transmission line corridors within Cecil County have been surveyed on several occasions by the Maryland Department of Natural Resources. These surveys identified two locations along the Keeney line with rare or unusual plant species (the Richardsmere and Rock Springs Natural Areas), but did not identify any occurrences of the swamp pink within the Keeney transmission corridor (MDNR 1998). In Delaware, the swamp pink is known from southwestern New Castle County, but not from the project area in the northwestern part of the county (Bill McAvoy, Delaware Natural Heritage Program, personal communication). Therefore, the NRC staff concludes that the continued operation of PBAPS for an additional 20 year license term will have no effect on the swamp pink.

Based on these considerations, the NRC staff has concluded that renewal of the PBAPS operating licenses for an additional 20 years beyond the current license terms will have either no effect (swamp pink and bog turtle) or is not likely to adversely affect (bald eagle) listed species in the vicinity of the PBAPS site or the associated transmission corridor. The NRC staff requests your written concurrence with these conclusions, if appropriate, for inclusion in the SEIS currently under preparation.

Thank you for your consideration of this request. If there are any questions, please contact me by telephone at (301) 415-1444 or by email at dxw@nrc.gov.

Sincerely,
Original Signed By: LLWheeler
Louis L. Wheeler, Sr. Environmental Project Mgr.
Environmental Section
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Enclosure: List of References

Appendix E

References

- Brauning, D.W. and B. Peebles 2001. Bald Eagle Research and Management, Bald Eagle Breeding and Wintering Surveys. Project Annual Job Report. Pennsylvania Game Commission, March, 2001.
- Maryland Department of Natural Resources, 1998. Ecologically significant areas in Cecil County. Sites newly identified or updated in 1998. Report to the Coastal Zone Management Division, Maryland, Department of Natural Resources, December 1998.
- PECO Energy Company, 2000. Peach Bottom Atomic Power Station, Units 2 and 3 License Renewal: Request for information on threatened and endangered species. Letter from Mr. James A. Hutton, PECO, to Mr. Michael McCarthy, USFWS, October 11, 2000.
- Pennsylvania Game Commission. 2001. "Bald Eagles Continue Their Impressive Comeback." Pennsylvania Game Commission News Release #48-01, June 26, 2001.
- Tetra Tech NUS, Inc. 2000. Bog Turtle Habitat Survey along the Keeney Transmission Corridor. Prepared for PECO Energy Company, Kennett Square, PA.
- U.S. Fish and Wildlife Service, 1991. Swamp Pink (*Helonias bullata*) Recovery Plan. Newton Corner, MA, 56 pp.
- U.S. Fish and Wildlife Service, 1993. Delmarva Fox Squirrel (*Sciurus niger cinereus*) Recovery Plan, Second Revision. Hadley, MA, 104 pp.
- U.S. Fish and Wildlife Service, 1997. "Endangered and Threatened Wildlife and Plants; Final Rule" to list the northern population of the bog turtle as threatened and the southern population as threatened due to similarity of appearance. Federal Register Vol. 62, No. 213, November 4, 1997.
- U.S. Fish and Wildlife Service. 2000a. Letter from Mr. David Densmore, USFWS to Mr. James Hutton, PECO Energy, October 18, 2000.
- U.S. Fish and Wildlife Service, 2000b. Guidelines for Bog Turtle Surveys. Pennsylvania Filed Office, State College, PA., August 30, 2000, Revision.
- NRC, 2001. Letter to Mr. John Wolfli, U.S. Fish and Wildlife Service requesting information on endangered or threatened species in the Peach Bottom license renewal project area, October 11, 2001.
- U.S. Fish and Wildlife Service, 2001. Letter to Ms. Cynthia A. Carpenter, NRC, responding to October 11, 2001, request for information on the presence of endangered or threatened species in the Peach Bottom license renewal project area, November 19, 2001.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Pennsylvania Field Office
315 South Allen Street, Suite 322
State College, Pennsylvania 16801-4850



April 17, 2002

Duke Wheeler
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Mr Wheeler:

This responds to your letter of March 13, 2002, requesting our review of the Peach Bottom Atomic Power Station, Units 2 and 3, license renewal - "No Effect" and "Not Likely to Adversely Affect" determinations, located in York County, Pennsylvania. The Power Station is located within the range of two federally listed species, the threatened bald eagle (*Haliaeetus leucocephalus*) and bog turtle (*Clemmys muhlenbergii*). The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species.

Bald Eagle

Bald eagles typically occur in the vicinity of aquatic ecosystems; they frequent lakes, reservoirs, large rivers (e.g., Delaware River, Juniata River, Susquehanna River), and wetland systems. Their nests are usually built in large trees within two miles of these features. Because eagles are vulnerable to human disturbance, particularly during the nesting season, nests are often located in relatively remote forested areas.

The Fish and Wildlife Service proposed to remove the bald eagle from the federal *List of Endangered and Threatened Wildlife* on July 6, 1999 (*Federal Register*, Vol. 64, No. 128), but final action on that proposal has not been taken. The bald eagle, therefore, continues to be listed under the Endangered Species Act. Any changes in the regulatory status of the bald eagle can be monitored by accessing the Service's web site (www.fws.gov).

The bald eagle population in Pennsylvania has increased substantially from the three nest sites found in the State from 1963 through 1980. In 2001, 53 eagle nests were documented. Because bald eagles are continuing to recover and expand their breeding range in Pennsylvania, new eagle nests may be found in previously undocumented locations.

The Pennsylvania Game Commission has determined that the project is in the vicinity of 10 eagle nests on the Lower Susquehanna. In Pennsylvania, the closest nest site is located three miles upstream. Downstream of the project (Maryland), the closest eagle nest is approximately two miles away. Because of the distance between the project and the known eagle nests, continued

Appendix E

operation of the power plant is not likely to adversely affect the bald eagle.

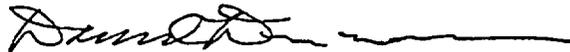
Bog Turtle

A Phase I Bog Turtle Habitat Survey was conducted by Tetra Tech in 2000. According to the report, no wetlands are located at the power plant site. However, the transmission corridor traverses several streams and wetlands. Four of the five streams were incised channels with rocky substrates. The fifth stream crossing had a small, adjacent wetland. However, hydrology adequate to support bog turtles is not present in this wetland. Therefore, based on our review of this information, we conclude that the proposed project will have no permanent or temporary impacts on palustrine wetland habitat that could be occupied by bog turtles.

If this project is implemented as proposed, we concur that renewal of the license of the Peach Bottom Power Station will not effect the bog turtle or its habitat, and is not likely to adversely affect the bald eagle. This response relates only to endangered or threatened species under our jurisdiction, based on an office review of the proposed project's location. No field inspection of the project has been conducted by this office. Consequently, this letter is not to be construed as addressing potential Service concerns under the Fish and Wildlife Coordination Act or other authorities.

If we can be of further assistance, please contact Bonnie Dershem of my staff at 814-234-4090.

Sincerely,



David Densmore
Supervisor



STATE OF DELAWARE
DEPARTMENT OF STATE
DIVISION OF HISTORICAL AND CULTURAL AFFAIRS
HISTORIC PRESERVATION OFFICE
15 THE GREEN
DOVER • DE • 19901-3611

50-277/278

TELEPHONE (302) 739-5685

FAX (302) 739-5660

September 9, 2002

Mr. Louis L. Wheeler
Senior Project Manager
License Renewal and Environmental Impacts Program
Division of Regulatory Improvements Programs
Office of Nuclear Reactor Regulations
Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Mr. Wheeler:

We received your March 7 letter regarding the Nuclear Regulatory Commission's (NRC) opinion that for compliance with Section 106 of the National Historic Preservation Act, the presence of any historic property along the Keeney Transmission Line are beyond the area of potential effects. We believe this opinion to be inconsistent with the Advisory Council on Historic Preservation's (Council) regulations and with information provided to this Office during the initiation Section 106 consultation for the proposed relicensing of the Peach Bottom Atomic Power Station (PBAPS). In a July 5, 2000 letter sent to Ms. Joan Larrivee, of my staff, from James Hutton, Director of Licensing for PECO Nuclear, Mr. Hutton identified the original undertaking included authorizing the construction in 1974 of the Keeney Transmission Line as the "Only one new transmission corridor [which] was required to integrate PBAPS into PECO Energy's bulk power system when the facility was constructed. This line, from Peach Bottom to the Keeney Substation in Delaware, is the only transmission line/corridor under review during this [current] license renewal process." In this letter initiating consultation with this Office, Mr. Hudson effectively identified reauthorizing of the Keeney Transmission line as an element of the licensing renewal, the undertaking, and as part of the Area of Potential Effect, as per the Council's definition of an *undertaking* (36 CFR 800.16(y)) and the project *Area of Potential Effect* (36 CFR 800.16(d)). Especially important to the definition of undertaking is the notion that it includes "the geographical area or areas within which a undertaking may directly or indirectly (my emphasis) cause alterations in the character or use of historic properties, if such properties exist." It is important to note here, there is no discussion of ownership or control which limits the consideration of whether to include any location or property therein within the boundary of the APE. Such limitations would

Add: Duke Wheeler

IE 2.5

Letter to Wheeler
September 9, 2002
Page 2

hamper the ability to adequately identify and consider to the fullest extent, what types and degrees of impact or effect an undertaking would have on historic properties for any type of undertaking at any possible location. The Council does not set such restrictions on determining a project undertaking and its APE. The reauthorization of the Keeney Transmission Line, as part of this project, even though it is not owned or controlled by the licensee is not pertinent to the identification of historic properties and the evaluation of effects which the undertaking may have on those historic properties which are present within the APE. (See the attached information provided by Laura Dean of the Council as it pertains to determining an undertaking's area of potential effect. Points to remember Item #2; and, Colorado River Indian tribes v. Marsh, 605F. Supp.1425 (C.D. Cal. 1985.) Additionally, in the *Lower Delaware Valley Transmission System Agreement, Schedule 3, Revision No. 1*, Page 1 of 2, which you included as an attachment to your March 7 letter, there was an agreement for DP & L (now Conectiv) to construct the Delaware section of the Keeney Transmission Line. Essentially, even while the licensee did not construct this line, it was clearly a contractual arrangement to provide the licensee with the facilities to convey power to its bulk power system, as referenced in Hutton's July 2000 letter. It is part of the undertaking and should be included in the project APE.

The identification of the Chesapeake and Delaware Feeder Canal (Feeder Canal), as a historic property within the project APE, was made by my staff during the consultation process. Comments were provided in an attachment to your March 7 letter, prepared by the licensee, as to their opinion on the non-eligibility of this property. It is important to remember that if there are disagreements between the federal agency and the SHPO as to the eligibility of a particular property, it is the federal agency's responsibility, using 36 CFR Part 61 qualified professionals, to seek a formal determination of eligibility from the Secretary of the Interior, pursuant to 36 CFR 800.4(c)(2) of the Council's regulations. To our knowledge this has not been done.

Finally, it is our contention the Feeder Canal, which we believe may be eligible for listing in the National Register of Historic Places, has been and is continuing to be subjected to destruction due to the lack of adequate maintenance of the transmission line. A bridge which was clearly present in the 1950-1960s which crossed the Feeder Canal was either removed or left to deteriorate. Sometime in the 1970's, the canal was filled in crusher run rock to provide access along this transmission line and to specifically cross this body of water. This in filling has resulted in the loss of the physical features of the Feeder Canal where it is crossed by the transmission line and the subsequent blocking of the flow of water within the Canal. It is our opinion, the lack of maintenance and/or retention of a bridge which spanned the canal and the lack of security to prevent unauthorized use of the access road or any other area along the banks of the Feeder Canal within the transmission right-of-way has caused significant deterioration and alteration of the

Letter to Wheeler
September 9, 2002
Page 3

character of this property and therefore constitutes adverse effects due to destruction and neglect under 36 CFR 800.5(b)(2)(i) and (vi) of the Council's regulations. Towards trying to reverse or correct these adverse effects and to prevent further deterioration, the recommendations made in my October 29, 2001 letter were presented.

By copy of this letter, we are requesting the Advisory Council to participate in the consultation process and provide guidance on expediting the review for this undertaking, pursuant to Appendix C, Criteria 2 of their regulations. We believe there has been an inconsistent application of their regulations during the Section 106 consultation for the relicensing of the PBAPS and the Keeney Transmission Line.

If you have any questions or desire to discuss this matter further, please contact Faye Stocum at the address above. Thank you.

Sincerely,



Daniel R. Griffith
State Historic Preservation Officer

Enclosures

cc: Don Klima, ACHP
Faye Stocum

ability and inclusion

OPTIONAL FORM NO. 10 (7-99)

FAX TRANSMITTAL

To: **Faye Strum** From: **Laura Dean**

Dept: **302-739-5685** Phone: **202-600-8527**

Fax: **302-739-5660** Fax: **202-600-5072**

NSN 7540-01 317-7288 5079-101 GENERAL SERVICES ADMINISTRATION

of pages = 6

If a property meets the criteria for inclusion in the National Register, this doesn't automatically result in its being listed. To be listed, a property must be formally nominated using NPS forms and following NPS procedures. Agencies are not required to nominate properties in order to comply with Section 106, although Section 110(a)(2) of NHPA does require agencies to have programs in place for nominating federally owned or controlled historic properties.

If an owner of private property objects to including his or her eligible property in the National Register, they may block it from being listed. Effects on such a property are not exempt from Section 106 review, however, since the property remains eligible for the Register. Private owners may do as they wish with their historic property, provided that they are not receiving Federal assistance or approvals. If they are, the Federal agency involved must comply with Section 106 before the project can be implemented.

Identifying historic properties

Agencies are required to make a "reasonable and good faith effort to carry out appropriate identification efforts. . . " [36 CFR § 800.4(b)(1)] This responsibility rests squarely with the Federal agency and cannot be delegated (with the exception of certain HUD programs). The agency can solicit the help of applicants, grantees, or others to carry out this work, but it is up to the agency to see that the work is carried out properly and to make appropriate use of the results.

In consultation with the SHPO/THPO, the agency determines the scope of needed identification efforts and takes action to identify potential historic properties. The agency then evaluates the significance of those properties and decides whether any could be affected by the undertaking.

Determining an undertaking's area of potential effects

The agency's first step in establishing the scope of needed identification efforts is to determine the undertaking's area of potential effects. This is done in consultation with the

Jun-14-02 10:46A

P.02

SHPO/THPO. [36 CFR §800.4(a)(1)] The area of potential effects (APE) is defined as:

... the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking. [36 CFR § 800.16(d)]

If there is disagreement concerning the extent of the APE, the consulting parties may seek guidance and assistance from the Council. Also, the Council can elect to issue an advisory comment to the agency on its APE determination. [36 CFR § 800.9(a)] If this occurs, the agency has to consider the views of the Council in reaching a final decision regarding the boundaries of the APE.

Points to remember. When defining an area of potential effects (APE), agencies need to remember that:

1. The APE is defined before identification begins, when it may not yet be known whether any historic properties actually are within the APE. To determine an APE, it is not necessary to know whether any historic properties exist in the area.
2. An APE is not determined on the basis of land ownership.
3. The APE should include:
 - all alternative locations for all elements of the undertaking;
 - all locations where the undertaking may result in disturbance of the ground;
 - all locations from which elements of the undertaking (e.g., structures or land disturbance) may be visible or audible;
 - all locations where the activity may result in changes in traffic patterns, land use, public access, etc.; and

Jun-14-02 10:46A

P.03

Court Decisions

project. The Corps prepared the plan and obtained the Council's concurrence in the plan in 1983.

The court rejected plaintiffs' claim that the Corps had not complied with the provision of the MOA that required a treatment plan. First, the court determined that Section 800.6(c)(3) of the Council's regulations, which states that a ratified MOA shall evidence satisfaction of the Federal agency's responsibility under Section 106 of NHPA, creates a "presumption of compliance." 567 F. Supp. at 989-90. Even without this presumption, the court held that the Government's documents demonstrated compliance with the terms of the MOA. *Id.* at 990.

The court dismissed plaintiffs' NHPA claims and held that further action withholding possession of the condemned lands on these grounds would not be warranted. *Id.* The Fifth Circuit affirmed. 733 F.2d at 380.

The district court also found that the Corps' programmatic environmental impact statement (EIS) prepared under the National Environmental Policy Act on the entire waterway project sufficiently addressed the impacts of the project on cultural resources. No site-specific EIS for Cedar Oaks and Barton township was needed. 567 F. Supp. at 991. The appellate court affirmed. 733 F.2d at 381.

87

Colorado River Indian Tribes v. Marsh, 605 F. Supp. 1425 (C.D. Cal. 1985).

Plaintiffs, Indian tribes and an environmental organization, sought to enjoin the U.S. Army Corps of Engineers from issuing a permit to a developer for the placement of riprap along the western shore of the Colorado River in California. The purpose of the riprap was to stabilize the riverbank and establish a permanent boundary line for private property that the developer proposed to subdivide and develop into a residential and commercial community. The site of the development,

known as the River City project, was directly across the river from the Colorado River Indian Reservation and directly south of additional portions of the reservation lying on the west side of the river. The land abutting the development site on the west was owned by the United States and administered by the Bureau of Land Management (BLM) of the Department of the Interior. The BLM land, an archeological district, included several significant cultural and archeological sites.

The developer applied to the Corps for the riprap permit in April 1978. The following fall, the Corps prepared an environmental assessment under the National Environmental Policy Act (NEPA) and concluded that, because significant impact upon the environment would result from the developer's proposed project, an environmental impact statement (EIS) should be prepared. The draft EIS was prepared and published in September 1979. In January 1981, the Corps informed the developer that a thorough cultural resources survey of resources on and near the proposed development site was needed before the Corps could complete the final EIS.

In June 1981, however, before the survey was begun, the Corps retracted the draft EIS as a result of changes in Corps policy regarding its jurisdictional authority and announced that no EIS and no further cultural resource evaluation were required. The Corps' decision to retract the draft EIS was apparently made in conformity with its proposed cultural resource regulations published in 1980, regulations that had never been adopted in final form or incorporated into the Code of Federal Regulations.

Under the proposed regulations, the Corps was required to assess both direct and indirect effects of its permits on properties listed or officially determined eligible for listing in the National Register of Historic Places. This review requirement extended beyond the area in which the permit would have direct physical effects to the "affected area," that area within which direct and indirect effects could be reasonably expected to occur.

129

Jun-14-02 10:46A

P. 04

Federal Historic Preservation Case Law

For properties that were not listed or officially determined eligible for listing in the Register, but that might be eligible for the Register, the proposed regulations limited the Corps' review to the area within the Corps' jurisdiction—the "permit area," defined as that area which would be physically affected by the proposed work.

The Corps issued the riprap permit to the developer on May 21, 1982. Plaintiffs then filed this action, alleging that the Corps failed to comply with NEPA and the National Historic Preservation Act (NHPA).

After discussing the factors that must be present for a preliminary injunction to be granted, the court addressed the likelihood of plaintiffs' success on the merits of their case. Defendants first contended that no EIS was necessary under NEPA because Federal involvement in the River City project was minimal and "major Federal action" was therefore lacking. The court disagreed, finding that NEPA requires assessment of both direct and indirect effects of a proposed Federal action on both "on site" and "off site" locations. 605 F. Supp. At 1433. That there was minimal Federal involvement in the project did not excuse defendants from compliance with NEPA, for "it is not the degree of Federal involvement that influences the standard of living of our society, but is instead the potential and degree of impact from development that bears upon the overall welfare and enjoyment of our society." *Id.* at 1432. "Major Federal action" does not have a meaning under NEPA independent of "significantly affecting the quality of the human environment." *Id.* at 1431.

The Corps' limitation of the scope of its environmental assessment of the bank stabilization activities and its resulting conclusion that there would be no impact on cultural resources were improper and contrary to the mandate of NEPA. *Id.* at 1433.

The court next addressed plaintiff's claim that the Corps had violated NHPA by distinguishing between properties actually listed in or determined

eligible for the National Register and properties that might be eligible for the Register and by affixing different historic review responsibilities to each. The court held that this distinction between properties and different scopes of responsibility was at odds with NHPA and the regulations of the Advisory Council on Historic Preservation implementing Section 106 of NHPA. *Id.* at 1438. Using the Council's definition of "eligible property" in Section 800.2 of its regulations as encompassing all properties that meet the criteria for inclusion in the Register, the court concluded that, in enacting NHPA, Congress intended to protect all properties that are of inherent historic and cultural significance and not just those that have been "officially recognized" by the Secretary of the Interior. *Id.* The court cited Executive Order No. 11593 and Section 110(a) of NHPA as support, finding that Federal agencies must exercise caution to ensure the physical integrity of those properties that appear to qualify for inclusion in the National Register. *Id.* at 1435.

The Corps' action in assessing the effects on properties that might qualify for inclusion in the National Register solely within the "permit area" and its failure to survey and consider the effects on like properties in the broader "affected area" was a breach of its responsibilities under NHPA. *Id.* at 1438.

Finally, the Court granted a preliminary injunction, finding that irreparable harm to cultural and archeological resources as a result of the development was possible. *Id.* at 1434-39.

88

Sierra Club v. Watt, No. CV-83-5878 AWT (C.D. Cal. Nov. 18, 1983), *aff'd sub nom. Sierra Club v. Clark*, 774 F.2d 1406 (9th Cir. 1985).

Plaintiffs challenged both the Bureau of Land Management's (BLM) California Desert Conservation Management Plan, which designated a



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D C. 20555-0001

January 9, 2003

Mr. Daniel R. Griffith
State Historic Preservation Officer
Division of Historical and Cultural Affairs
15 The Green
Dover, Delaware 19901-3611

Dear Mr. Griffith:

This letter responds to your correspondence of September 9, 2002, in which you disagreed with the NRC staff position that the Delaware portion of the Peach Bottom-to-Keeney transmission line corridor is outside the Area of Potential Effects (APE) for the proposed renewal of the operating licenses for the Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3.

The NRC staff has considered your views and has determined that the Delaware portion of the Peach Bottom-to-Keeney transmission corridor is outside of the APE. Notwithstanding any representations made by NRC applicants, the Agency official (the Director, Office of Nuclear Reactor Regulation) has determined that the APE for a license renewal action is the area at the power plant site and its immediate environs which may be impacted by post-license renewal land disturbing operation or projected refurbishment activities associated with the proposed action. The APE may extend beyond the immediate environs in those instances where post-license renewal land disturbing operations or projected refurbishment activities specifically related to license renewal of the nuclear power plant potentially have an effect on known or proposed historic sites. This determination is made irrespective of ownership or control of the lands of interest.

For the proposed PBAPS license renewal, the licensee has stated, and our review has shown, that there will be no major structural modifications, that maintenance activities will be confined to previously disturbed areas, and that there will be no additional land disturbance. Further, the NRC staff has determined that the decision to approve or deny the requested license renewals would not affect maintenance practices or land disturbances beyond the substations at the PBAPS site where the generating units are connected to the distribution system. Therefore, the APE for the proposed PBAPS license renewal is the plant site, which is wholly within the Commonwealth of Pennsylvania. The PBAPS APE does not extend into Maryland or Delaware. In its letter of December 14, 2000, the Pennsylvania Historical and Museum Commission, Bureau for Historic Preservation (the State Historic Preservation Office), determined that National Register-listed, eligible, historic, and archeological resources are present in the general vicinity of the PBAPS site, and stated an opinion that the proposed license renewal will not affect any of those resources. The NRC staff agreed with this determination and opinion. Therefore, consultation was not required.

In response to your interest in the degraded portion of the feeder canal, where it crosses the transmission line corridor in Delaware, the NRC staff included this site in its review of environmental resources of interest as the staff prepared its environmental impact statement (EIS) to comply with the National Environmental Policy Act (NEPA). The NRC staff review included a visit to the canal during the staff's PBAPS site audit in November 2001. The staff

D. Griffith

- 2 -

disclosed its NEPA findings in its Draft Supplemental Environmental Impact Statement (SEIS) issued for public comment on July 5, 2002.

The NRC staff has determined that, even if the APE were to be extended through Maryland to the Delaware portion of the Keeney transmission line corridor, the proposed renewal of the PBAPS operating licenses would have no effect on the feeder canal where it crosses the Peach Bottom-to-Keeney transmission line corridor. In light of your expressed interest in this matter, we are providing, by separate correspondence, a copy of your September 9, 2002, letter, along with a copy of this reply, to the owner/operator of the Delaware portion of the Keeney transmission line corridor (who is not an NRC licensee) to ensure it is aware of your concerns (Conectiv Power Delivery, Newark, DE).

Additional information regarding the NRC staff review of your interest is enclosed. The staff will include a discussion of this matter in the Final SEIS scheduled for publication in February 2003. No further action is considered necessary. If there are any questions regarding this correspondence, please contact me at (301) 415-1444.

Sincerely,



Louis L. Wheeler, Senior Project Manager
Environmental Section
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Enclosure: Additional Responses to DE SHPO Correspondence

cc w/encl: See next page

Responses to comments in correspondence received from the Delaware State Historical Preservation Office (DE SHPO) regarding the feeder canal:

Comment: The Atomic Energy Commission might not have met National Historic Preservation Act Section 106 responsibilities when it made its early 1970s decisions to grant operating licenses for Units 2 and 3 at Peach Bottom.

Response: The NRC staff carefully reviewed the records and found that the Atomic Energy Commission (AEC) met the compliance standard for historic preservation consideration when the AEC made its decisions to issue the initial operating licenses for Peach Bottom Atomic Power Station, Units 2 and 3 (PBAPS).

The original regulations, implementing Section 106 of the Act (36 CFR 800), were promulgated in 1979, five years after the NRC granted the original licenses for operation of Units 2 and 3 at Peach Bottom Atomic Power Station. The Advisory Council on Historic Preservation had no prescribed regulatory process for Federal agencies to demonstrate compliance with National Historic Preservation Act Section 106 responsibilities until 1979.

As required by Section 106, in 1972 the AEC provided information on the proposed action for PBAPS, including information on historic and archeological resources and determinations, to the Advisory Council on Historic Preservation with a request for comment. There is no record to indicate that the Advisory Council on Historic Preservation objected to the AEC's determinations.

The feeder canal, now identified as a historic property by the DE SHPO, was documented in September 1974, after the AEC issued the operating licenses. The Nuclear Regulatory Commission (NRC) was not aware of the feeder canal until informed by the DE SHPO's office in 2001.

Comment: The proposed license renewal is a Federal undertaking with the potential to affect historic properties.

Response: The NRC staff agrees.

Comment: The feeder canal is a historic resource that meets standards for listing on the National Register of Historic Places.

Response: Without taking a position in agreement or disagreement with the DE SHPO, the NRC staff considered the canal as though it were a historic resource potentially eligible for listing on the National Register for the limited purpose of addressing the DE SHPO's interests.

Comment: Operation of the PBAPS under the current license has caused adverse effects on the feeder canal at the transmission line crossing.

Response: Operation and maintenance of the Peach Bottom-to-Keeney transmission line was not the cause of past adverse effects on the feeder canal at the transmission line crossing. The utility corridor at the intersection with the feeder canal is approximately 400-feet wide; it is the same width as it was in 1968, well before the Peach Bottom line was added to the corridor.

- 2 -

Three other overhead transmission line easements, and at least one underground utility easement share the corridor at the crossing. An NRC decision to either approve or deny the license renewal applications for PBAPS would not alter maintenance practices along the Delaware portion of the Peach Bottom-to-Keeney transmission line; maintenance would continue the same with or without the use of an easement on the corridor for the Peach Bottom-to-Keeney transmission line. The licensee does not own the land at the corridor crossing of the feeder canal nor does it have maintenance responsibility for the corridor at the crossing. The corridor is clear of trees, but is grass and brush covered, and has been in a similar condition since before the Peach Bottom-to-Keeney transmission line was constructed. A gravel-surfaced utility road meanders through the corridor and crosses the remnant trench for the feeder canal underneath the Peach Bottom line, but is not exclusively for maintenance of the Peach Bottom-to-Keeney transmission line. The access road that crosses the feeder canal replaced previous fords in the area of the corridor dating back to as early as 1937.

The old feeder canal alignment remains a visible and well-defined feature along much of its original route through present-day woodlands. It displays less definition and more in-filling as it passes under the transmission corridor. The changes under the transmission corridor are cumulative effects from a range of human and natural activities that extend back in time to a period well before the addition of the Peach Bottom-to-Keeney transmission line to the utility corridor.

NRC team review of aerial photographs indicates the feeder canal remained relatively intact until after 1968. At that time, and before 1977, small noticeable changes began to occur and continue today. First, a utility road crossed the feeder canal at a new place in the transmission corridor and below the present-day Peach Bottom-to-Keeney transmission line. Second, a series of cumulative changes began then, and continue to the present. These include gradual loss of vegetation along the alignment of the canal and a progressive loss of sharpness in the features of the canal as viewed from the air.

Comment: The NRC staff should consider three specific actions to take into account the effects of the undertaking to grant the license renewals for PBAPS.

Response: The DE SHPO requests fall into two categories: (1) an action suggested with the intent to correct the perceived negative result of past operations, and (2) specific actions to prevent future deterioration of the feeder canal. The NRC staff forwarded the recommendations to the applicant in correspondence dated November 26, 2001, even though the recommended actions have no direct bearing on the undertaking.

For the license renewal period, the applicant indicated that it plans (1) no major structural modifications, (2) to limit maintenance activities to previously disturbed areas, and (3) no additional land disturbance. Consistent with the NRC's "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (NUREG-1437), under such conditions, the NRC staff believes continued operation of PBAPS would have no effect on any known or on potential unknown or undiscovered historic or archaeological resources located in areas of potential effect.

As part of its consideration of the DE SHPO correspondence, the NRC staff completed a supplementary analysis based on a scenario which postulated the inclusion of the Delaware

portion of the Peach Bottom-to-Keeney transmission line corridor in the National Historic Preservation Act Area of Potential Effect. In that supplemental analysis, the NRC staff applied the criteria of adverse effect pursuant to 36 CFR § 800.5(a)(1) and found that the proposed undertaking to extend the PBAPS licenses would not alter the characteristics of the potentially historic property known as the Chesapeake and Delaware feeder canal. This conclusion followed consideration of DE SHPO views concerning such effects and incorporated analyses of past, present, and potential future conditions.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 9, 2003

Mr. Robert Jubic
Connectiv Power Delivery
I-95 and Route 273
P.O. Box 9230
Newark, Delaware 19714-9239

Dear Mr. Jubic:

This purpose of this letter is to inform you of an interest of the Delaware State Historic Preservation Officer (DE SHPO) in a historic property that came to our attention during our review of the license renewal application submitted by Exelon Generation, LLC, for Peach Bottom Atomic Power Station, Units 2 and 3. The interest concerns a potential historic site located in the Delaware portion of the Peach Bottom-to-Keeney transmission line corridor.

Enclosed is a letter dated September 9, 2002, from the DE SHPO to the NRC staff which provides information related to DE SHPO's interest. Also enclosed is an NRC staff reply to the September 9, 2002, letter.

If there are any questions regarding this correspondence, please contact me at (301) 415-1444.

Sincerely,


Louis L. Wheeler, Senior Project Manager
Environmental Section
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Enclosures: As stated

cc w/encs: See next page

Appendix E

Enclosures to NRC staff Letter to Conectiv Power Delivery

There are two enclosures:

The September 9, 2002, letter from the Delaware State Historic Preservation Officer to the NRC staff is located in this Appendix at pages E-11 through E-17.

The January 9, 2003, NRC staff letter to the Delaware State Historic Preservation Officer is located in this Appendix at pages E-18 through E-22.

Appendix F

GEIS Environmental Issues Not Applicable to Peach Bottom Units 2 and 3

Appendix F

GEIS Environmental Issues Not Applicable to Peach Bottom Units 2 and 3

Table F-1 lists those environmental issues listed in the *Generic Environmental Impact Statement for License Renewal of Nuclear Plants (GEIS)* (NRC 1996; 1999)^(a) and 10 CFR Part 51, Subpart A, Appendix B, Table B-1, that are not applicable to Peach Bottom, Units 2 and 3, because of plant or site characteristics.

Table F-1. GEIS Environmental Issues Not Applicable to Peach Bottom Units 2 and 3

ISSUE—10 CFR Part 51, Subpart A, Appendix B, Table B-1	Category	GEIS Sections	Comment
SURFACE WATER QUALITY, HYDROLOGY, AND USE (FOR ALL PLANTS)			
Altered salinity gradients	1	4.2.1.2.2 4.4.2.2	The Conowingo Pond is a freshwater lake with no salinity gradient.
AQUATIC ECOLOGY (FOR PLANTS WITH COOLING-TOWER-BASED HEAT DISSIPATION SYSTEMS)			
Entrainment of fish and shellfish in early life stages	1	4.2.2.1.2	Because Peach Bottom Units 2 and 3 operate primarily with a once-through heat dissipation system, entrainment is a Category 2 issue and is discussed in Section 4.1.2.
Impingement of fish and shellfish	1	4.2.2.1.3	Because Peach Bottom Units 2 and 3 operate primarily with a once-through heat dissipation system, impingement is a Category 2 issue and is discussed in Section 4.1.3.
Heat shock	1	4.2.2.1.4	Because Peach Bottom Units 2 and 3 operate primarily with a once-through heat dissipation system, heat shock is a Category 2 issue and is discussed in Section 4.1.4.

(a) The GEIS was originally issued in 1996. Addendum 1 to the GEIS was issued in 1999. Hereafter, all references to the "GEIS" include the GEIS and its Addendum 1.

Table F-1. (contd)

ISSUE—10 CFR Part 51, Subpart A, Appendix B, Table B-1	Category	GEIS Sections	Comment
GROUND-WATER USE AND QUALITY			
Ground-water use conflicts (potable and service water, and dewatering; plants that use >100 gpm)	2	4.8.1.1 4.8.2.1	Peach Bottom Station uses <100 gpm of groundwater.
Ground-water-use conflicts (Ranney wells)	2	4.8.1.4	Peach Bottom Units 2 and 3 do not have or use Ranney wells.
Ground-water quality degradation (Ranney wells)	1	4.8.2.2	Peach Bottom Units 2 and 3 do not have or use Ranney wells.
Ground-water quality degradation (saltwater intrusion)	1	4.8.2.1	Peach Bottom Station uses <100 gpm of groundwater, and is not near a saltwater body.
Ground-water quality degradation (cooling ponds in salt marshes)	1	4.8.3	This refers to a feature (cooling ponds) not installed at Peach Bottom.
Ground-water quality degradation (cooling ponds at inland sites)	2	4.8.3	This refers to a feature (cooling ponds) not installed at Peach Bottom.
TERRESTRIAL RESOURCES			
Cooling pond impacts on terrestrial resources	1	4.4.4	This refers to a feature (cooling ponds) not installed at Peach Bottom.

F.1 References

10 CFR Part 51. Code of Federal Regulations, Title 10, *Energy*, Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions."

U.S. Nuclear Regulatory Commission (NRC). 1996. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants*. NUREG-1437, Volumes 1 and 2, Washington, D.C.

U.S. Nuclear Regulatory Commission (NRC). 1999. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Main Report*, "Section 6.3 – Transportation, Table 9.1, Summary of findings on NEPA issues for license renewal of nuclear power plants, Final Report." NUREG-1437, Volume 1, Addendum 1, Washington, D.C.

BIBLIOGRAPHIC DATA SHEET

(See instructions on the reverse)

1 REPORT NUMBER
(Assigned by NRC, Add Vol., Supp., Rev.,
and Addendum Numbers, if any)

NUREG-1437, Supplement 10

2 TITLE AND SUBTITLE

Generic Environmental Impact Statement for License Renewal of Nuclear Plants (GEIS)
Supplement 10
Regarding Peach Bottom Atomic Power Station, Units 2 and 3
Final Report

3 DATE REPORT PUBLISHED

MONTH	YEAR
January	2003

4 FIN OR GRANT NUMBER

5 AUTHOR(S)

6 TYPE OF REPORT

Technical

7 PERIOD COVERED *(Inclusive Dates)*

8 PERFORMING ORGANIZATION - NAME AND ADDRESS *(If NRC, provide Division, Office or Region, U.S. Nuclear Regulatory Commission, and mailing address, if contractor, provide name and mailing address)*

Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

9 SPONSORING ORGANIZATION - NAME AND ADDRESS *(If NRC, type "Same as above", if contractor, provide NRC Division, Office or Region, U.S. Nuclear Regulatory Commission, and mailing address)*

Same as 8 above

10 SUPPLEMENTARY NOTES

Docket Numbers 50-277, 50-278

11 ABSTRACT *(200 words or less)*

This draft supplemental environmental impact statement (SEIS) has been prepared in response to an application submitted to the NRC on July 2, 2001, by Exelon Generation, LLC (Exelon) to renew the operating licenses for Peach Bottom Atomic Power Station, Units 2 and 3, for an additional 20 years under 10 CFR Part 54. This SEIS includes the staff's analysis that considers and weighs the environmental effects of the proposed action, the environmental effects of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse effects. It also includes the staff's preliminary recommendation regarding the proposed action.

The NRC staff's recommendation is that the Commission determine that the adverse environmental impacts of license renewal for Peach Bottom Atomic Power Station, Units 2 and 3, are not so great that preserving the option of license renewal for energy-planning decisionmakers would be unreasonable. This recommendation is based on (1) the analysis and findings in the Generic Environmental Impact Statement for License Renewal of Nuclear Plants (NUREG-1437); (2) the Environmental Report submitted by Exelon; (3) consultation with Federal, State and local agencies; (4) the staff's own independent review, and (5) the staff's consideration of public comments.

12. KEY WORDS/DESCRIPTORS *(List words or phrases that will assist researchers in locating the report)*

Peach Bottom Atomic Power Station, Units 2 and 3
Peach Bottom
Supplement to the Generic Environmental Impact Statement
GEIS
National Environmental Policy Act
NEPA
License Renewal

13 AVAILABILITY STATEMENT

unlimited

14 SECURITY CLASSIFICATION

(This Page)

unclassified

(This Report)

unclassified

15 NUMBER OF PAGES

16 PRICE



Federal Recycling Program

**UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001**

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300