

September 12, 2019

Three Mile Island Alert's Testimony Re: NUREG-1437 Supplement 10 Second Renewal Generic Environmental Impact Statement for License Renewal of Nuclear Plants Supplement 10 Second Renewal Regarding Subsequent License Renewal for Peach Bottom Atomic Power Station Units 2 and 3 Draft Report for Comment

Submitted by Eric Epstein, Chairman Three Mile Island Alert, Inc. Peach Bottom Inn, 6085 Delta Road Delta, Pennsylvania.

Background and History

The Peach Bottom Atomic Power Station ("Peach Bottom") is located in southern York County, Pennsylvania and co-owned by Exelon based in Illinois, and Public Service and Gas ("PS&G"), headquartered in New Jersey. Exelon's predecessor, Philadelphia Electric ("PECO"), applied for a license to operate the Peach Bottom Atomic Power Station ("PBAPS") in July, 1960. The application was approved by the Atomic Energy Commission ("AEC"). (1)

Peach Bottom 2 & 3 are Boiling Water Reactors. The reactors were designed by General Electric, and engineered by Bechtel. Both plants use a Mark 1 containment system. Peach Bottom 2's initial capacity was 1,159 MWt. Peach Bottom 3's capacity was initially set at 1,035 MWt for a total capacity of 2,194 MWt.

The construction permit for PBAPS, Units 2 and 3, was issued by the AEC on January 31, 1968. Both units were evaluated against the thencurrent AEC draft of the 27 General Design Criteria("GDC") issued in November, 1965. (1)

On July 11, 1967, the AEC published for public comment, in the *Federal Register* (32 FR 10213), a revised and expanded set of 70 draft General Design Criteria. The Atomic Energy Commission concluded that PBAPS, Units 2 and 3, **"conformed to the intent of the draft GDC."**

¹ Peach Bottom-1 is a 40 megawatt ("MWt"), High Temperature Graphite Moderated Reactor that operated from 1966-1974. The decommissioning fund is underfunded. Please refer to ADAMS as ML 15090A537.

On February 20, 1971, the AEC published in the Federal Register a final rule that added Appendix A to Title 10 of the Code of Federal Regulations (10 CFR) Part 50, "General Design Criteria for Nuclear Power Plants." **The NRC decided not to apply the final GDC to plants** with construction permits issued prior to May 21, 1971.

Unit 2 and Unit 3 began operation in July, 1974.

Thirty-five years later the Company was still unable to conform to operating standards. "A discovery of a licensee operating their facility in a manner contrary to the Updated Final Safety Analysis Report ("UFSAR") description highlighted the need for a special focused review that compares plant practices, procedures and/or parameters to the UFSAR description." (October 15, 1997, IR 50-277/97-06 & 50-278/97-06.)

On March 31, 1987, PECO was ordered by the Nuclear Regulatory Commission ("NRC") to shut down Peach Bottom 2 and 3 due to operator misconduct, corporate malfeasance, and blatant disregard for the health and safety of the area population.

On February 3, 1988 , John H. Austin resigned as president of PECO after an unusually critical report by the Institute of Nuclear Power Operations ("INPO") was published. The report asserted that Peach Bottom "was an embarrassment to the industry and to the nation." Zack T. Pate, president of INPO, added, "The grossly unprofessional behavior by a wide range of shift personnel...reflects a major breakdown in the management of a nuclear facility." On February 1, 1989, the NRC staff recommended that nuclear power plants that utilize the Mark 1 containment shell, modify the structure to reduce the risk of failure during a serious accident. PECO said it would make the \$2 to \$5 million changes only if the Commission makes the modifications a requirement.

This was the second time in two years that the NRC staff had advised the Commission to make changes to the Mark 1 containment structure.

The NRC released a report on June 21, 1989 relating to Mark 1 containment buildings entitled "Severe Accident Risks: An Assessment for Five U.S. Nuclear Plants." The NRC's six-member panel was evenly divided as to whether the Mark 1 containment would be breached during a serious accident. "The NRC decided not to order immediate changes in the Mark 1 containment." Yet half of the panel stated "with near certainty" that the Peach Bottom's containment structure would fail during a core melt accident.

In July, 1992, it was revealed that Peach Bottom and 86 other suspected nuclear reactors were dependent on a defective and dangerous fire-barrier system to protect electrical cables used for a safe shutdown during a fire/accident.

The company that produces the Thermo-Lag 330 system is Thermal Science, Inc. Among the problems with Thermo-Lag are: combustibility, toxicity, seismic qualification, vulnerability to water, incomplete installation and ampacity calculation errors. Peach Bottom's nuclear units were licensed to operate for 40 years, and designed to produce 2,194 MWt. Forty years later, the plants' operational lives have been extended by an additional twenty years, and their combined capacity increased to 3,951 MWt.

There is nowhere for high-level radioactive waste to go. As of 2018, Peach Bottom was home to over 2,500 tons of spent fuel. The waste is stored in casks and spent fuel pools.

On July 20, 2000, the U.S. Energy Secretary Bill Richardson said, "The government has agreed to allow PECO Energy Co. to defer up to \$80 million in nuclear waste fee payments for its Peach Bottom plant in Pennsylvania, to compensate for the Energy Department's failure to store its waste...The deal allows PECO to reduce the projected charges passed into the Nuclear Waste Fund to reflect costs reasonably incurred by the company due to the department's delay." (Press Release, U.S. Department of Energy, July 20, 2000.)

Spent fuel assemblies are stored at Peach Bottom. As of 2018, the waste was evenly distributed between spent fuel pools and dry casks:

Peach Bottom 2: 2,848 (spent fuel pool); 2,448 (dry cask storage). Peach Bottom 3: 2,877 (spent fuel pool); 2,448 (dry cask storage).

Peach Bottom discharges into the Susquehanna River, which empties into the Chesapeake Bay. In January 1989, the State of Maryland published a report of radioactive contamination of the Chesapeake Bay due to emissions from Peach Bottom. The City of Baltimore gets 250,000 gallons of drinking water per day from the Susquehanna River. Thirty years later Maryland continues to criticize Pennsylvania's efforts to clean up the Bay, while the amount of high-level radioactive waste grows by 60 metric tons annually. Adding to an already unfavorable environmental climate, Peach Bottom has permission to store low-level radioactive waste from Limerick on the shores of the Susquehanna River.

Recommendations for the Final Impact Statement

Power generation, cooling, and safety are intricately connected. There is no fence between generation and safety. And there should be no regulatory moat created by artificial safety definitions erected by nuclear generators. The lack of regulatory coordination establishes a deleterious precedent, and constitutes *de facto* approval of grandfathered and outdated regulations.

Even more baffling are the regulatory moats that federal and state agencies erect to protect rigid and exclusive zones of interest. This type of laissez-faire regulatory behavior gives rise to undesired corporate behaviors such as "grandfathering" and "back fits," deterioration of monitoring equipment, time delays causing avoidable leaks, and waivers for monitoring wells.

On August 15, 2002, the Environmental Impact Study ("EIS") of Exelon's request for a license extension, the NRC listed three safety issues that need to be addressed prior to approval: replacement of electric fuse clips; removal of the anti-aging plan; and, replacement of faulty cables. None of these issues were addressed in the NRC's 2019 Generic Environmental Impact Statements ("GEIS"). The NRC was silent about these deficiencies throughout NUREG-1437 Supplement 10 Second Renewal Generic Environmental Impact Statement for License Renewal of Nuclear Plants Supplement 10 Second Renewal Regarding Subsequent License Renewal for Peach Bottom Atomic Power Station Units 2 and 3. The only reference to "aging issues" dealt with "aging transportation." (GEIS, Socioeconomics, 4.16.4.)

The NRC staff must also review previously dated and delayed submissions, reconcile "grandfathered" exemptions, and clarify general and vague assumptions. (3) The present license extension should be held in abeyance until all the open and unresolved environmental issues identified by TMI-Alert are addressed and closed out in the Final Environmental Impact Statement for License Renewal of Nuclear Plants Supplement 10 Second Renewal Regarding Subsequent License Renewal for Peach Bottom Atomic Power Station Units 2 and 3. (4)

Three Mile Island Alert ("TMIA") intervened in Exelon's request for an Extended Power Uprate ("EPU") at Peach Bottom 2 and 3 at the Department of Environmental Resources ("DER"), and testified before the Nuclear Regulatory Commission. The net result was regulatory finger pointing. The issues raised were redirected and rerouted.

3 These issues were raised and reviewed, but remain unresolved, i.e., Peach Bottom Atomic Power Station review, NRC's Licensee Renewal Team Inspection Report, 05000277/2013007, March 12, 2013.

4 Testimony of Eric Epstein, Chairman of Three Mile Island Alert, Before the Advisory Committee on Reactor Safeguards Re: Nuclear Regulatory Commission's Draft Safety Evaluation in Support of the Proposed Extended Power Uprate License Amendment for the Peach Bottom Atomic Power Station Units 2 & 3, June 10, 2014. Exelon's numbers are misleading, and the NRC's audit is cursory and superficial. Exelon and the NRC have failed to account for Peach Bottom's advanced age, checkered history, decaying infrastructure, location on the Susquehanna River, and its role as a radioactive waste site for Limerick.

Three Mile Island Alert, Inc., argued that the Department of Environmental Protection and Nuclear Regulatory Commission exempted Exelon from preparing a final environmental impact statement for the project. The DEP and the NRC have not conducted a robust Environmental Impact Study. Both agencies allowed a 1973 grandfathered protocol to remain in place which predates aggressive environmental regulations implemented after 1973. (5)

TMIA noted that the EPA has passed regulations to make owners of water-intake structures take steps to reduce the numbers of fish and shellfish getting killed when they are sucked through or into water intakes.

These issues can not be exempted, ignored or rerouted. The issues raised in this Testimony need to addressed and resolved in the Final Environmental Impact Statement for License Renewal for Peach Bottom Atomic Power Station Units 2 and 3.

⁵ Testimony of Eric Epstein, Chairman of Three Mile Island Alert, Before the Advisory Committee on Reactor Safeguards Re: Nuclear Regulatory Commission's Draft Safety Evaluation in Support of the Proposed Extended Power Uprate License Amendment for the Peach Bottom Atomic Power Station Units 2 & 3, June 10, 2014, pages. 11-28.

On August 15, 2002, despite a favorable EIS of Exelon's request for a license extension at Peach Bottom-2 & -3, the NRC listed three safety issues that need to be addressed prior to approval: replacement of electric fuse clips; removal of the anti-aging plan; and, replacement of faulty cables.

The NRC's GEIS was silent on these issues. Given Exelon's track record, the staff must review all three areas prior to considering the extension of the license of Peach Bottom-2 and Peach Bottom-3.

The NRC should be mindful of its past observations and current retreat from safety. Over thirty years ago, a nuclear industry leader registered a strong cautionary note that rings today.

On February 3, 1988, John H. Austin resigned as president of PECO after a unusually critical report by the Institute of Nuclear Power Operations was published. The report asserted that Peach Bottom "was an embarrassment to the industry and to the nation." Zack T. Pate, president of INPO, added, "The grossly unprofessional behavior by a wide range of shift personnel...reflects a major breakdown in the management of a nuclear facility."

Enclosed please find a summary of systemic equipment environmental challenges managerial failures, and technical breakdowns from 1974 - 2019. Most of the information has been documented and provided by the NRC. If you won't listen to the public, maybe you will listen to yourself.

Please review the enclosed chronology of peril that began in 1974, and remains a strong reminder that Peach Bottom is one lapse away from disaster. This is the time for the NRC to reverse it's regulatory decline, and return to the principal of nuclear safety being built on the shoulders of defense in depth.

Respectfully Submitted,

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Three Mile Island Alert, Inc. is a safe-energy organization based in Harrisburg, Pennsylvania and founded in 1977. TMIA monitors Peach Bottom, Susquehanna, and Three Mile Island nuclear generating stations. http://www.tmia.com.

• Enclosed Summary of Problems

Peach Bottom: A History of Mismanagement

1974 - Peach Bottom came on line at a cost of \$375 per kilowatt.

March, 1983 - A spill of 25,000 gallons of radioactive water was reported at the plant.

June, 1983 - PECO was fined \$40,000 by the NRC for a valve violation.

July, 1983 - Philadelphia Electric identified cracks in their cooling pipes.

1983 -1987 - PE was issued a number of violation notices that cost the utility \$485,000 in civil penalties. All the violations involved failure of personnel to follow procedures.

June 19, 1984 - The NRC cited PECO for five alleged violations of technical specifications at Units 2 and 3. The NRC also proposed a \$30,000 fine.

Three of the alleged violations "involved exceeding the maximum allowable reactor heat-up rate, allowing pressure in the reactor to go beyond the limit specified for a given temperature and failing to recognize that a control rod was inserted into the reactor at a rate slower than required."

The other two violations "involved changes to facility procedures in 1977-1979 that were not properly reviewed and three instances in 1980 and 1983 of failures to follow procedures." These violations were identified by an inspector between January 5 and 20, 1984 (United States Nuclear Regulatory Commission, Office of Public Affairs Region I, June 19, 1984).

December 1984 - An Institute of Nuclear Power Operations ("INPO") evaluation found **"clear evidence of declining performance".** In addition, the report claimed that these problems were "long-standing."

1985 - An NRC inspector observed a Peach Bottom operator **dozing** at the controls. No safety violation was charged.

June, 1985 - The plant was shut down due to mechanical problems.

October, **1985** - A emergency evacuation drill turned into **a serious incident** when Unit-2 reactor's water level dropped.

October, **1985** - PECO is fined by the Occupational Safety and Health Administration (OSHA) for safety violations leading to the **death of an employee.**

December 1985 - An INPO study (as reported by The Nuclear Monitor) concluded that PECO's performance continued to decline. A subsequent letter written in January by Zack Pate, President of INPO, to PECO Chairman John Everett, said **"standards of performance at the station are unacceptably low."**

Problems were identified in operations and maintenance, radiological protection, material condition and housekeeping. INPO also identified several non-licensed operators reading unauthorized materials. A total of 431 shortfalls were identified; 141 involved personnel performance. Pate noted,", and "we ... have considerable concern that the station's substandard radiological control practices may lead to the spread of contamination off-site, or some other serious radiological event.

Pate concluded, "From my assessment, this pattern will not change, and personnel performance at Peach Bottom will not improve, until you personally acknowledge the need and communicate the need, for real change to your organization."

June 11, 1986 - A \$200,000 fine for failing to pay attention to detail was issued. The incident involved the withdrawal of control rods. A high-level, NRC administrator noted that these violations indicated a continued "pattern of inattention to detail" and "a general complacent attitude." The original fine was set at a \$100,000, but doubled because of PE's history. In addition, the NRC reported 17 violations.

March 15, 1987 - The NRC levied a \$50,000 against PECO for illegally dismissing a worker who was exposed to radioactive gas.

March 31, 1987 - Peach Bottom was indefinitely shutdown. Operators were found sleeping on the job, playing video games, engaging in rubber band and paper ball fights, and reading unauthorized material.

October 1987 - An INPO visit found that since shutdown, "little clearly demonstrable action has been taken regarding corporate management's accountability for conditions at the station."

November, 1987 - The FBI discovered a drug distribution ring at Peach Bottom. (For more details see: January 8, 1988; February, 1988; May 2, 1988; November, 1989; and, May 10, 1999.)

January 8, 1988 - A maintenance sub-foreman pleaded guilty to involvement in a conspiracy to distribute methamphetamine. He is

one of six who were indicted last year in a conspiracy to distribute methamphetamine. (For more details see: November, 1987; May 2, 1988; and November, 1989.)

January 11, 1988 - INPO President Zack Pate strongly criticized Philadelphia Electric's management and their revised reorganization plan.

Pate noted that, "The fundamental approach to nuclear operational management at Philadelphia Electric Company has not changed and is unlikely to change noticeably in the foreseeable future." He added, "success ultimately depends on the individual managers in key line positions. Since for the most part, the same managers who have been ineffective in this area for years are in the key line positions in the new organization, substantial improvement is unlikely." Pate concluded, "Major changes in the corporate culture at PECO are required. The recently announced reorganization plan will not achieve this" (The Nuclear Monitor, February

22, 1988, pp. 1-2).

February, 1988 - Four PECO employees were indicted for allegedly distributing drugs at Peach Bottom. PECO maintained that the workers were not working in areas affecting safety. (For more details see: November, 1987; January 8, 1988; May 2, 1988; November, 1989; and, May 10, 1999)

Spring, 1988 - A cot for sleeping on the job was removed from an area located near the control room, and the NRC acknowledged knowing of its presence prior to its removal.

May, 1988 - Bessie Howard filed a complaint with the United States Department of Labor alleging that she was fired "in retaliation for her identification of safety problems relating to security at Peach Bottom." Beginning on January 24, 1988, Mrs. Howard reported that another security guard was sleeping on the job. She continued to report the matter until she was fired On March 16, 1988, by Burns Security, the security contractor for Peach Bottom. She was classified "status nine" and prohibited from working at other nuclear power plants or government facilities.

- A report issued by the NRC indicated "that security personnel were forced to work excessively long hours, sometimes up to 12 hour shifts; were not given meal breaks, and were required to remain at posts for extended periods of time without being rotated to other posts, a violation of NRC regulations." (York Daily Record, May, 1988).

May 2, 1988 - Four Peach Bottom employees were charged with conspiracy to distribute methamphetamine at the plant and elsewhere. Thirteen people, most of whom work at Peach Bottom, have been charged with drug-trafficking as a result of an FBI investigation. (For more details see: November, 1987; January 8, 1988; February, 1988; November, 1989; and May 10, 1999.) August 11, 1988 - The NRC proposed fining PECO \$1.25 million for "management problems that resulted in a forced shutdown of the company's Peach Bottom nuclear plant." In addition, the NRC proposed fining 33 reactor operators for sleeping on the job, playing video games, engaging in spit ball battles, and other unprofessional activities. Fines of \$500 to \$1,000 were recommended. PECO spokesperson Williams Jones disclosed that the company "has lost more than \$90 million since the NRC ordered Peach Bottom shutdown..." (Patriot News, August 12, 1988).

November 17, 1988 - The NRC fined PECO \$50,000 because security guards were found sleeping on the job, inattentive duty and improperly posted. The NRC also noted that "a key that could have unlocked doors to a security area was issued to a unauthorized employee, couldn't be found and officials didn't do anything about it once they discovered it was missing." William T. Russell, NRC regional administrator, noted, "The improvements made to date were not effective in precluding the occurrence of the violations." (The Patriot News, November 17, 1988, B 2.)

January 1989 - The state of Maryland published a report of radioactive contamination of the **Chesapeake Bay** due to to emissions from Peach Bottom. (Note: The city of Baltimore gets 250,000 gallons of drinking water per day from the Susquehanna River.)

September 15, 1989 - The Pennsylvania Superior Court reversed a lower court's decision dismissing charges by George Field against the Philadelphia Electric Company. Field, a healthphysics technician, alleged that PECO directly released radiation on him to avoid shutting the plant down. The three judge panel concluded: We can visualize no conduct more outrageous in character, so extreme in degree, that went beyond all possible bounds of decency and to be regarded as atrocious and utterly intolerable in a civilized community, than to vent highly radioactive steam upon an employee. Furthermore, this was an intentional act. They elected to do this to him and then attempted to conceal the resulting situation The three judge panel remanded the case back to York County Common Pleas Court. Field is seeking \$5.2 million in damages. (The Philadelphia Inquirer, September 15, 1989, 3-B.) October 15, 1997 - "A discovery of a licensee operating their facility in a manner contrary to the Updated Final Safety Analysis Report (UFSAR) description highlighted the need for a special focused review that compares plant practices, procedures and/or parameters to the UFSAR description. (IR 50-277/97-06 & 50-278/97-06.)

December 16, 1997 - Following an NRC inspection, the staff reported, "...the practice of permitting blanket approvals for overtime work on safety related activities for multiple weeks with no hourly limit specified resulted in abuses that were considered a breach in the intent of the overtime authorization process." (02.3) (Executive Summary.)

On July 20, 2000, "U.S. Energy Secretary Bill Richardson on Thursday said the government has agreed to allow PECO Energy Co. to defer up to **\$80 million in nuclear waste fee payments** for its Peach Bottom plant in Pennsylvania, to compensate for the Energy Department's failure to store its waste...The deal allows PECO to reduce the projected charges passed into the Nuclear Waste Fund to reflect costs reasonably incurred by the company due to the department's delay." (Press Release, U.S. Department of Energy. July 20, 2000.)

August 3, 2000 - PECO was assessed a "White" level Violation for its "failure to properly classify radioactive waste for shallow land burial...Specifically, the shipment was identified as Class A waste containing 99 curies when it should have been classified as Class B waste containing 407 curies." (NRC, Hubert J. Miller, Regional Administrator). (Refer to June 28, 1999, for background information. See April 25, 2000, for a related incident.)

On April 5, 2002, Exelon outlined the projected timeline for approval of License Amendment Request and anticipated approval in May 2014. Peach Bottom announced an Extended Power Uprate ("EPU") to 3,951 MWt core power for both units, which is 120% of Original Licensed (core) Thermal Power have been addressed and closed out. **August 15, 2002, d**espite a favorable EIS of Exelon's request for a license extension at Peach Bottom-2 & -3, the NRC listed **three safety issues** that need to be addressed prior to approval: replacement of electric fuse clips; removal of the anti-aging plan; and, replacement of faulty cables.

On August 30, 2002, high differential pressures on the circulating water intake screens forced the manual shut down of Peach Bottom. "The **problem was caused by a sudden surge in the amount of fish (Gizzard Shad) that entered the intake canal and clogged the screens.** Unit 3 power was returned to 100 percent following cleaning of the circulating water screens and restating of the 3'A' circulating water pump." (Nuclear Regulatory Commission, IR-50-277/02-05; 50-278/02-05).

November 13, 2003: An NRC team investigated September shutdown of 2 reactors, (Kristin Finan, Dispatch/Sunday News)

The U.S. Nuclear Regulatory Commission and representatives from Exelon, the company that operates the plant, presented their early report last night to the public at the Peach Bottom Inn in Delta.

A major problem with the September shut-down was a malfunction with a system backup, said NRC spokesman Neil Sheehan. Typically, if there is a problem with a reactor, emergency diesel generators provide more power. But the reactors shut off after an hour, and one of the diesel generators shut down.

Team members said that while the generator's failure appears to be an equipment problem, they were not yet sure who should have been accountable.

Team members also found degraded conditions within the plant that should have been updated and said concerns voiced by staff members were never investigated. They noted lapses in the monitoring of equipment, procedural problems concerning what action should be taken after a shutdown and conflicts over which departments should take action about specific issues.

"We have not been as diligent at identifying problems and getting them out on the table as we need to," said Rusty West, Peach Bottom site vice president. "We need to better understand all the equipment anomalies that we have and pursue them with great vigor."

The NRC's Inspection team found six "Green: violations as a result of the incidents. All six were deemed Non-Cited violations

This was the forty-third, forty-fourth, forty-fifth, forty- sixth, forty-seventh and forty-eighth Non-Cited Violation since June 1998. Exelon's total cost avoidance, i.e., "credit" for 48 Non-Cited

2005: A former Peach Bottom nuclear plant employee said he was "sickened" by the large numbers of sport fish he saw sucked out of the Susquehanna. "When the water comes in, fish would swim in through tunnels and swim into wire baskets," said the man who lives in southern Lancaster County and asked that his name not be used. "**There were hundreds and hundreds of fish killed each day. Stripers and bass and walleye and gizzard shad and all kinds of fish. It took a forklift to carry them out.**" (*Intelligencer Journal*, January 15, 2005).

January 22, 2006- Fire watch technician pleads guilty to falsifying records.

A contracted employee at the Peach Bottom Atomic Power Station pleaded guilty January 9 to the falsification of records used to safely operate the dual-reactor nuclear power plant. Between Jan. 17, 2005, and March 20, 2005, Tracy David, formerly of Bartlett Service Inc., failed to conduct hourly fire watch inspections in multiple sections of the plant including the emergency diesel generator room and the cable spreading room. Contacted by telephone, David - a resident of Quarryville, Pa., according to court documents - declined to be interviewed for this story. Based in Plymouth, Mass., Bartlett Services is a subcontractor for the Peach Bottom Atomic Power Station. On 199 occasions, David claimed that she had completed her rounds of fire watch inspections while on duty at the plant, said Neil Sheehan, spokesman for the U.S. Nuclear Regulatory Commission. Last year, both the NRC and plant officials ran independent investigations that uncovered evidence that showed that David had falsified her fire watch inspections and had not completed her rounds. When interviewed by representatives of the NRC's Office of Investigations, David commented that one reason for her accused offense was that she had been disgruntled after being passed over for a promotion, Sheehan said." There were a significant number of fire watches that were missed," he said. "

In December, 2006 Exelon was fined \$640,000 by the Susquehanna River Basin Commission ("SRBC") for water violations at Peach Bottom related to water use and power uprates. (SRBC, Docket #: 20061209). Exelon failed to seek the Commission's approval for any change in their processes that required them to increase water usage by 100,000 gallons a day.

In the summer of 2007, Peach Bottom-2 & 3 was detected **returning water to the Susquehanna River at temperatures in excess of 110 degrees.** Communities and ecosystems that depend on limited water resources are adversely affected by "normal operating conditions" at nuclear stations.

• November 28, 2007 - Sleeping on the job ignored. Security issues prompt more inspections for Peach Bottom

Between March and August of 2007, Kerry Beal videotaped 10 of his fellow Wackenhut Corp. officers at the Peach Bottom plant napping in a secure location of the plant while on the job.

August 22, 2008. The NRC's Regional NRC office under review for response to sleeping guards.

The NRC Office of the Inspector General reviewed whether its Region I office responded adequately in handling the letter it received in March 2007 alleging security officers were sleeping on the job at Peach Bottom, and concluded the Region I office was inconsistent in its response.

On May 13, 2011, the NRC said there would be no significant environmental impact with the **transfer of low-level radioactive waste from the Limerick Generating Station in southeastern Pennsylvania to a storage facility at the Peach Bottom plant.**

Peach Bottom officials initially requested a license amendment to allow the transfer of the waste on January 6, 2010. The waste does not include any transfer of spent nuclear fuel from Limerick.

On July 23, 2012, the NRC issued a letter to Peach Bottom officials informing them of some security inspection issues in January 2011.

September 28, 2012: TMI-Alert submitted Testimony on Exelon Generation Company, LLC ("Exelon" or "the licensee") submitted a license amendment request for Peach Bottom Atomic Power Station, Unit 2 and Unit 3.

TMI Alert intervened in Exelon's request for an extended Power Uprate at Peach Bottom 2 and 3 at the Department of Environmental Resources, the Nuclear Regulatory Commission and the Susquehanna River Basin Commission.

TMIA lost the case, and the issues we raised we're not addressed:

TMIA argued that the DEP exempted Exelon from preparing a final environmental impact statement for the project, instead allowing a 1973 grandfathered protocol to remain in place before the state and federal governments enacted aggressive environmental regulations.

TMIA stated that EPA has passed regulations to make owners of water-intake structures take steps to reduce the numbers of fish and shellfish getting killed when they are sucked through or into water intakes.

September 12, 2012, about 50 workers at Peach Bottom nuclear plant exposed to low levels of radiation.

On April 26, 2013, the NRC submitted a letter to plant operator Exelon seeking additional information relating to a request to increase the maximum power level at Units 2 and 3 from 3,514 megawatts thermal to 3,951 megawatts thermal. The request, the NRC notes, represents an approximate 12.4 percent increase from the current licensed thermal power level.

On June 10, 2014, Testimony of Three Mile Island Alert to Postpone Approval of the Proposed Extended Power Uproot License Amendment for the Peach Bottom Atomic Power Station Units 2 & 3 Until Open and Unresolved Environmental, Health & Safety Issues Are Addressed. The testimony was presented in Bethesda, maryland before the Advisory Committee on Reactor Safeguards .

November 3, 2014 - In a letter to officials of Exelon, the plant's owner, the NRC said it found an apparent violation identified during a security inspection of the Independent Spent Fuel Storage Installation at the Peach Bottom plant. Details were not disclosed.

The letter said the NRC characterized the violation as an escalated enforcement action. However, no civil penalties were imposed.

"Because your facility has not been the subject of escalated traditional enforcement action within either the last two years or the two most recent inspections, the NRC considered whether credit was warranted for corrective action," the NRC said. "The NRC considered that credit is warranted for Exelon's corrective actions taken to address the violation.

"Therefore, in recognition of the absence of previous escalated enforcement action, and to encourage prompt and comprehensive correction of violations," a civil penalty would not be imposed, the NRC said.

The finding warranted "escalated enforcement."

2016: The amount of money Exelon spent to provide "gifts, hospitality, transportation and lodging for state officials" in Pennsylvania in 2016 was **\$11,843.** An additional **\$490,207**, was spent to lobby candidates in Pennsylvania in 2016. The amount the Exelon PAC spent to fund candidates in Pennsylvania in 2016 was **\$1,111,840.** ("The Caucus," March 21, 2017.)

2016-2018: Exelon nearly tripled its lobbying expenditures in Pennsylvania between 2016 and 2018.

Among those advocating on behalf of Exelon include former regulators who oversaw previous Peach Bottom license extensions and uprates including: Former Secretary of the Department of Environmental Protection John Hanger, Former Secretary of the Department of Environmental Protection Michael Krancer, Former Secretary of the Department of Environmental Resources Nicholas DeBenedicits, and former Pennsylvania Governor Tom Ridge.