

The NRC identified several **precursor** problems with **fire protection** on the following dates: April 10, May 30 and November 1, 1985. Another related problem was documented on January 19, 1990.

The NRC's SALP for this period (February 1, 1986 to May 31, 1987) indicated PECO's performance was "unacceptable" because of the operators' inattentiveness and management's "inability to identify and correct operator conduct in other areas."

- April 1986 - An **explosion and fire** occurred at the plant's substation for emergency power.

- March 4, 1987 - At the turbine building at Unit 3 a **major fire** occurred at the maintenance cage.

- April 1-5, 1991 - The NRC issued a Notice of Violation. "The violation is of concern because of the possible incompatibility of the insulation with materials it is in contact with and the fact that it may compromise fire loadings and propagation potentials" (NRC inspections 50-277/91-14 and 50-278/91-14.)

- May 18, 1991 - The Unit 2 high pressure coolant injection (HPCI) system was made inoperable during fire protection system surveillance testing. (NRC inspections 50-277/91-16 and 50-278/91-16.)

- October 22, 1991 - A **fire** in the Unit 3 condenser bay occurred from 10:23 p.m. to 10:37 p.m. (NRC inspections 50-277/91-30 and 50-278/91-30.)

- December 18, 1993 - "Missed continuous fire watch" (50-277/94-04 and 50-278/94-04.)

- August 10, 1994 - A "**minor**" **fire** was extinguished on the Unit-2 reactor building roof. During this episode, the Unit-2 secondary containment was breached.

- October 1, 1996 - The Nuclear Regulatory Commission (NRC) fined Thermal Science, Inc. (TSI) **\$900,000** for "deliberately providing inaccurate or incomplete information to the NRC concerning TSI's fire endurance and ampacity testing programs." (James Lieberman, Director of Enforcement.) The fine was the largest assessed against a nuclear contractor and the second highest in the agency's history. In 1992, the NRC declared TSI's fire barrier, Thermo-Lag, "inoperable." (For related incidents, see December 18, 1993, September 29, 1994, May 19, 1998, October 12, 1999, and July 21, 2000.)

- September 2, 1997 - At Unit-2, "a **fire occurred** in the 3B circulating water pump motor." (IR 50-277/97-06 & 50-278/97-06.)

- March 1998 - "PECO personnel identified that five Fire Areas in the plant, containing 25 rooms, did not contain automatic fire detection systems...PECO intends to submit an exemption request...for the identified Fire Areas." (IR 50-277/98-10, 50-278/98-10; NOV.)

- August 23, 1998 - "... the motor driven fire pump unexpectedly started during the post-maintenance testing of the H-1 fire hydrant. Neither the work order or the routine test procedure contained any documentation to inform operators that the motor driven fire pump could start during the hydrant post maintenance testing nor did these documents contain instructions to fill and vent the fire system after work was performed." (IR 50-277/98-08, 50-278/98-08.)

- December 11, 1998 - "A fire watch was found **asleep** in the cable spreading room by inspectors." (IR 50-277/98-10; 50-278/98-10; NOV.)

- March 18, 1999 - The potential for a fire from flooding was identified at Units 2 & 3, and classified as an "outside design basis" event. (#35485.) (See August, 1999, for more information.)

In addition, "Between March and October 1998, PECO engineering identified five fire areas, containing cables for safety-related or safe shutdown equipment that did not have automatic fire detection systems as required..." (IR 50-277 & 278/99-05.)

- July 27, 1999 - The NRC found two Severity Level IV violations during an inspection, but classified the infractions as"

"The first NCV involved the inadvertent loss of the Unit 3 Auxiliary Transformer and associated fast transfer of four 4KV emergency busses due to inadequate equipment configuration control management by your operating staff [May 21, 1999.] The second NCV involved nonconformances to Peach Bottom Fire Protection Plan which were self-identified by PECO engineering personnel during comprehensive reviews of the Fire Protection Plan." (NRC, Curtis J. Cowgill, Chief, Projects Branch 4, Division of Reactor Projects.)

- October 12, 1999 - PECO "confirmed to the NRC that the corrective actions associated with the Thermo-Lag fire barriers at Peach Bottom had been completed." (PECO Energy Company, Form 10-K/A, 1999, p. 10.)(See September 24, 1994, October 11, 1996, May 19, 1998, and July 21, 2000, for related material).

- July 21, 2000 - "During the inspection, [April 14-18, 2000] the NRC identified two findings associated with the **adequacy of post-fire safe shut down** equipment circuit analyses at the station. Both of these issues were determined to be apparent violations...It is our understanding that you do not consider either of these two issues to be violations of 10 CFR 50 or your operating license. Additionally, we recognize that other commercial nuclear power plant operators, represented by the

Nuclear Energy Institute (NEI), have adopted a similar position regarding these issues. As such, in accordance with our current enforcement policy...the NRC will **defer any further enforcement action** relative to these issues until the staff evaluates NEI's proposed resolution methodology." Wayne D. Lanning, NRC, Director, Division of Reactor Safety. (See May 19, 1998 and October 12, 1999, for related events.)

- July 23, 2002- "Exelon did not evaluate in a prompt manner whether it was appropriate to disable the electrical trips of the EDGs from the cardox injection fire protections system after NRC inspectors identified that the trips were still active with the EDG cardox system isolated" (A Notice of Violation was issued on April 23, 2004 .

- In March and April 2003, Exelon took corrective actions to repair the observed low jacket water pressure conditions. The NRC said the...problem was not resolved.

Last June, commission inspectors documented that **lube oil had leaked from loose flange joint bolts on an emergency diesel generator** at the plant. That leak caused a **small fire** in the exhaust manifold during a test.

The NRC responded to the fire by issuing a green violation. Exelon agreed with the NRC's findings, he said.

- April 19, 2003 - A Green Non-Cited Violation was issued "when approximately 25 minutes into a planned load endurance test run for the E2 EDG, a small fire occurred on the EDG manifold" (IR 50-277-200-3003; IR-50-278/200-3003).

- "On May 14, 2003, at approximately 0410, the shift supervisor determined that the Alternate Shutdown Panel on Unit 3 was not operable following discovery of a de-energized power supply. The panel provides the capability to maintain a safe shutdown path for a fire in the cable spreading room, main control room or main control room fan room. Therefore, operators would have been prevented from implementing required actions for a fire in those areas. The apparent cause of the loss of power was a broken wire, which was discovered during routine testing of the panel.

- May 22, 2003 - The NRC identified a Green violation relating to Appendix R, i.e., fire protection. The NRC deemed the issue as being of "very low safety significance" (IR 50-277-03-009; IR-50-278/03-009).

- In June 2003, NRC inspectors found that plant technicians had not adequately tightened the engine top cover flange joint bolts of an emergency diesel generator during a maintenance procedure. As a result, lube oil leaked from the joint and caused a small

fire on the exhaust manifold during a test.

- September 4, 2003 - For about nine days in May, an undetected broken wire caused a loss of power to a redundant control station for Peach Bottom Atomic Power Station Unit 3.

A failure to observe work order test instructions after maintenance on the panel prevented plant technicians from immediately discovering the broken wire, according to a U.S. Nuclear Regulatory Commission report.

Damage to the power supply wire occurred during maintenance to the high-pressure coolant injection alternative control station — a system used to shut down the plant if the operators are forced to leave the main control room because of a fire, said NRC spokeswoman Diane Scenci.

While the violation is under commission review, the incident did not pose a safety threat since the plant repaired the wire and restored power to the back-up station on May 14, Scenci said.

By SEAN ADKINS Daily Record staff Tuesday, February 10, 2004

- The U.S. Nuclear Regulatory Commission will be more vigilant of Peach Bottom Atomic Power Station's Unit 2 reactor as result of a second-tier safety violation.

The commission has penalized the Unit 2 reactor with a "white" finding related to the failure of an emergency diesel generator during an unscheduled Sept. 15 reactor shutdown.

A white violation refers to an event at the plant that is considered as of low to moderate safety significance.

Since the generator failure affected both of the plant's units, NRC officials tacked on a green violation in regard to the power station's Unit 3 reactor.

A bolt of **lightning struck** a Chester County power pole Sept. 15, generating an electrical surge along power lines that feed into Peach Bottom Atomic Power Station.

The strike led to the automatic shutdown of the plant, which triggered the formation of a special, augmented NRC inspection team.

As part of its findings, the team found that faulty protection circuitry and a loose wire failed to contain the surge that disabled the plant.

Exelon has replaced all damaged fuses and tightened necessary wires to help ensure a similar event will not shut down the power station.

Within moments of the September shutdown, the plant's four diesel generators kicked on to power the station's vital equipment and offices.

- DELTA (Aug. 16, 2004) -- Exelon Nuclear's Peach Bottom Atomic Power Station's fire brigade extinguished a **small fire onsite yesterday after a backup emergency diesel generator's** exhaust gasket on the roof of the diesel generator building unexpectedly caught fire.

The fire occurred during routine testing of one of the station's four diesel generators. The fire prompted the declaration of an Unusual Event at 6:14 p.m. Tuesday, in accordance with station procedures, due to a fire in the Protected Area that was not extinguished within 15 minutes. The fire was extinguished at 6:35, and the Event was terminated at 8:40 p.m. No offsite fire responders were needed to extinguish the fire.

- Jan 22, 2006 - A contracted employee at the Peach Bottom Atomic Power Station pleaded guilty Jan. 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, 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.

By SEAN ADKINS Daily Record/Sunday News

- February 27, 2007 - Fire at a Unit-3 transformer at 9:41 am forced the plant to reduce power to 53%.

NRC: '02 miscue accidental

In 2002, a plant security officer falsified fire watch logs at Peach Bottom Atomic Power Station.

- Mar 13, 2007 — A contracted security officer at Peach Bottom Atomic Power Station - who logged a fire watch he didn't actually perform - did not willfully falsify fire watch records, according to a U.S. Nuclear Regulatory Commission investigation.

In April 2002, a Wackenhut contract security officer did not conduct a required fire watch but indicated on a log sheet that the action had been completed, according to NRC Office of Investigations records.

While investigating an unrelated matter in July 2006, commission investigators learned about the 2002 missed fire watch, said Neil Sheehan, a commission spokesman.

Investigators discovered that the officer believed his missed fire watch would be conducted by another officer during a scheduled tour of that same area. However, the second officer was assigned to cover the area once every four hours and not every hour as required to cover fire watches.

Despite the error, the plant discovered the missed fire watch quickly and completed the round.

The NRC investigation blamed miscommunication and a lack of experience by the first security officer assigned to the duty for the missed fire watch. The commission determined that the failed fire watch was a minor violation of commission rules and was not subject to further enforcement.

David Lochbaum, a nuclear power expert with the Union of Concerned Scientists, said he did not understand why the NRC did not rule the missed fire watch as deliberate.

"If you didn't do the walk downs, you know what you did or didn't do," he said. "I don't know how that can be accidental. The paper was filled out to make it look like (the fire watches) were all done."

After the 2002 missed fire watch, Wackenhut took corrective actions, reminding all of its officers concerning the frequency of fire watches, said Shawn Kirven, senior vice president of nuclear operations for Wackenhut Nuclear Services.

The company retrained the officer who missed the fire watch to ensure that he understood his duties, he said.

In addition to their security rounds, officers would monitor certain sections of the plant each hour to check for smoke or other signs of fire. For example, guards would check if fire doors were closed or that welding was

not being performed without proper fire barriers in place, Kirven said. Peach Bottom has since assigned fire watch duties to other workers, allowing officers to focus primarily on security, said April Schilpp, a spokeswoman for Exelon Nuclear.

The April 2002 incident was not related to the plant's decision to assign those duties to other workers, she said.

Lancaster Online.com: Fire extinguisher malfunction leads to alert at Peach Bottom
Intelligencer Journal

- Published: Aug 09, 2007 12:56 AM EST

LANCASTER COUNTY, Pa. - The unintentional discharge of a fire extinguisher in one of Peach Bottom Atomic Power Station's emergency diesel generator rooms forced Exelon Nuclear to declare an alert at the plant Wednesday afternoon.

The alert was terminated about an hour later, according to a news release from Exelon.

There was no fire and no injuries.

The extinguisher "mechanically failed" about 3:36 p.m. Wednesday, and the alert was terminated at 4:53 p.m., according to the release.