



Enclosure 5

Susquehanna Nuclear Power Plant

Nov. 7, 2012 – Unit 1 at the Susquehanna Steam Electric Station resumed service after completing a turbine blade inspection. PPL, the plant owner, said the inspection found signs of cracking on a small number of turbines. The blades were replaced.

PPL also said it will shut down Unit 2 for a similar inspection in the near future.

Nov. 9, 2012 – Unit 2 at the Berwick area plant was shut down because a computer system controlling the reactor's water level was not functioning properly.

Nov. 13, 2012 - The NRC issued a report on its third quarter inspection of Units 1 and 2 at the Susquehanna Steam Electric Station.

The report listed two NRC-identified findings and one self-revealing finding of very low safety significance.

The report also detailed a review conducted over the failure of an emergency diesel generator in December 2011., The NRC initiated an investigation at the start of 2012 to determine whether maintenance technicians and a quality control inspector “deliberately failed to properly assemble delivery values on 15 fuel pumps.” As a result of the investigation, the inspectors determined that the diesel generator failure was the result of “improper planning and implementation of work instructions” and not due to deliberate actions by the technicians and quality control inspector.

The NRC findings included a concern that PPL, the plant owner, “did not maintain adequate procedures to respond proactively to acts of nature.” Specifically, the NRC report said, PPL’s “adverse weather procedure did not ensure timely risk management activities for imminent adverse weather” despite advisories of a high wind watch and a tornado watch.

The National Weather Service had issued a high wind watch for Luzerne County from Sept. 17, 2012, through the evening of Sept. 18, 2012. A high wind advisory was issued on Sept. 19, 2102, and there also was a tornado watch for the county, the report said.

“The inspectors noted a number of items that could be potential missile hazards” such as “loose pieces of wood, loose wood blocks, wooden pallets, a wooden cable spool, stanchions, piping, piping flanges, a metal-frame door and pieces of sheet metal.” Despite the wind and tornado advisories, “the inspectors observed that not all of the items the inspectors had observed were noted by PPL nor were they all removed during the PPL walkdown.”

“The inspectors,” the report added, “concluded that, procedurally, PPL would not take anticipatory actions until there is a confirmed tornado and that tornado has probable impact on the station. This approach was determined to be inadequate given that the

touchdown of a tornado with probable impact on the station did not allot sufficient time to take preventive measures or mitigating actions and that a proactive approach to acts of nature was warranted.”

The report said PPL entered this matter into its corrective action program.

The NRC’s second finding indicated that PPL did not implement risk management actions during maintenance as required by station procedures. This stemmed from various activities.

“During the months of July and August 2012, there were multiple instances of inadequate implementation of risk management actions while maintenance was conducted,” the report said. The NRC said the matter would be treated as a non-cited violation due to its low safety significance and because the finding was entered into PPL’s corrective action program.

The self-revealing finding involved inadequate troubleshooting measures that caused repeated inoperability of secondary containment. This stemmed from an April 13, 2012, incident in which load centers were affected. The loss of the load centers “impacted secondary containment in that both reactor building heating, ventilation and air conditioning (HVAC) Zone I equipment compartment exhaust fans tripped due to the loss of power.” This set off a cascade of events that rendered Unit 2 secondary containment inoperable and affected the Unit III supply fans.

After reviewing an evaluation of the problem, it was determined that “the troubleshooting plan was limited in scope due to the desire to limit interruption to refueling floor work and pose minimal risk to the operating unit’s Zone III HVAC,” the report said. “The troubleshooting did not identify all of the faulted heaters and PPL did not account for this by ensuring that system configuration at the time of the equipment’s restoration would not result in the subsequent loss of secondary containment or protected equipment.”

In a licensee-identified violation in the report, the NRC noted that PPL said a 10-meter wind direction instrument on its primary meteorological tower was inoperable on Sept. 27, 2011. However, the Nuclear Emergency Response Organization was not notified of this problem. “From Sept. 27 through Sept. 30, 2011, PPL did not maintain an adequate method for accurately calculating dose projections and issuing publicly available records to offsite agencies,

The NRC said this matter was a green finding of low safety significance “since the capability for immediate dose projection existed via alternative meteorological towers.” The matter was entered into PPL’s corrective action program.

Nov. 19, 2012 – Unit 2 at the power plant resumed generating electricity after completing a turbine blade inspection and repairing a computer system that malfunctioned on Nov. 9. A previously announced turbine inspection revealed signs of cracking on a small number of blades. Those blades were replaced.

The computer system malfunction was caused by a failure of a processing unit that was replaced during the outage, PPL, the plant owner, said.

Nov. 20, 2012 - Unit 2 at the plant was shut down shortly after returning to service because of a hydraulic oil leak on a system that controls the flow of steam into the turbine, PPL said.

Nov. 29, 2012 - Unit 2 returned to service after repairs of the hydraulic system associated with the unit's main turbine. PPL, the plant owner, said officials detected leaks in the system as part of a routine inspection during startup procedures while at very low power levels.

Susquehanna Steam Electric Station

Dec. 14, 2012 – The NRC approved an exemption allowing the owner of the plant to postpone its biennial emergency preparedness exercise from Oct. 23, 2012, to Feb. 26, 2013.

Plant owner PPL requested the exemption due to an unplanned Unit 1 outage due to cracking experienced on some turbine blades (discussed in previous NRC reports).

Dec. 16, 2012 – Unit 2 at the nuclear power plant shut down automatically during routine testing of a valve on the unit's main turbine system. Operators were investigating why the testing caused a shutdown.

Dec. 28, 2012 – Unit 2 at the nuclear power plant resumed generating electricity after its Dec. 16, 2012, shutdown.

Operators said an electrical connection problem caused the shutdown during a routine valve test. "An unrelated issue with the positioning of a valve on one of the unit's main water pumps during start-up activities extended the out-of-service time," plant owner PPL said.