

**UTILITY RADIOLOGICAL SAFETY BOARD OF OHIO
MEETING MINUTES
APRIL 11, 2008**

Chair Nancy Dragani called to order the April 11, 2008 meeting of the Utility Radiological Safety Board of Ohio at 1:30 p.m.

The first order of business was roll call, taken by Ramona Hauenstein.

I. ROLL CALL

EMERGENCY MANAGEMENT AGENCY	MS. NANCY DRAGANI
DEPARTMENT OF HEALTH	MR. ROBERT OWEN
DEPARTMENT OF AGRICULTURE	MR. ANTHONY MITCHELL
PUBLIC UTILITIES COMMISSION	MR. SHAWN SMITH
ENVIRONMENTAL PROTECTION AGENCY	MR. JIM MEHL
DEPARTMENT OF COMMERCE	EXCUSED

A quorum was declared.

**II. READING OF THE JANUARY 7, 2008 AND FEBRUARY 7, 2008 MINUTES
(ADOPTED)**

The Board dispensed with reading of the January and February minutes. Ms. Dragani asked for any additions, corrections or deletions to the minutes. Ms. Dragani asked for a motion to approve the January minutes. Mr. Robert Owen of the Department of Health (ODH) moved to adopt the minutes and Mr. Shawn Smith of the Public Utilities Commission (PUCO) seconded. The motion was carried. Ms. Dragani then asked for a motion to approve the minutes of the February 7 Special Meeting. Mr. Shawn Smith moved and Mr. Anthony Mitchell of the Ohio Department of Agriculture (ODA) seconded. Motion was carried.

III. NEW BUSINESS

A. 2008 Exercises

Ms. Carol O'Claire reminded the Board that the Beaver Valley partial participation exercise is scheduled for June 24, 2008 (after hours). The dry run will be June 3 (also after hours).

The employees that mobilize in the EOC will be in the Assessment room, the Executive Room and the JPIC. The employees that go over to the EOF, the JIC and county liaisons will be pre-positioned.

The field activities (field monitoring teams, communication van and Ohio Department of Health screening points) will be demonstrated out of sequence during the day for the dry run only.

The table top exercise to discuss logistics will be May 14 at 9:00 a.m. in the Assessment Room at the EOC/JDF.

The field monitoring team training will be May 15 in Room 104 of the EOC/JDF at 9:00 a.m.

The Systems training was held on March 26 and was very well received.

B. Nuclear Regulatory Commission

Mr. Roland Lickus reported for the NRC, Region III.

Mr. Lickus was asked to give updates on regulatory affairs of Davis-Besse Nuclear Power Station and Perry Nuclear Power Plant. Mr. Lickus introduced the Senior Resident Inspector at the Perry Nuclear Power Plant, Mr. Mark Franke.

At the beginning of each calendar year, the NRC performs an assessment for all power plants for the prior calendar year. They were concluded in February. Davis-Besse results were a technical review of indicators for the most recent quarter and inspection results for the entire year. The meeting was held March 3rd and Davis-Besse was informed of the results. Overall, Davis-Besse operated safely and preserved public health and safety. All inspection findings were within the Licensee Response Category (column 1), meaning they were of very low safety significance and requires no additional level of oversight.

The NRC will perform a review of all the reports for the 5 years of assessments that were required by the Confirmatory Action Letter.

The annual review of Perry was also completed in February. The NRC concluded that Perry operated in a manner that protected health and safety and fully met all of the NRC cornerstone objectives. They are still in Regulatory Response (Column 2) of the Reactor Oversight Program. The plant received a “white” performance indicator in the area of emergency AC power. The NRC staff identified that the improvement in human performance noted in 2006 has not been sustained. The performance declined in the area of human performance, with cross-cutting issues identified in the area of work control and planning. In 2007, there were 12 “green findings” with a documented cross cutting aspect in human performance and work control and planning. These findings were for more than one of the cornerstones. This will remain until the plant has addressed and reversed the trend in this area or when the NRC feels the actions taken have addressed the issue.

Since the review letter issued on March 3, another performance indicator had been identified as “white” in the area of unplanned SCRAM’s. This was under review for quite a while, but it was determined that that performance indicator is in the “white” area also. This doesn’t have any affect on the Reactor Oversight Matrix; they are still in Column 2 (Regulatory Response). This will result in an additional inspection (95-001) which will be conducted in next few months.

On January 25, the NRC issued an inspection report detailing the results of the NRC Special Inspection completed to evaluate the facts and circumstances of the loss of all feedwater during the reactor SCRAM on November 28.

One finding of very low significance was identified. However, there are several unresolved items that remain open during that inspection involving the operation of the RCICS after calibration in January of 2006; the initial classification and condition report and the quality of the investigation report. These items are expected to be closed out in subsequent NRC inspection reports, but have not been closed out as of yet. The NRC inspection team concluded that the response to the RCICS system failure on November 28 event was not consistent with the safety significance of that issue. The initial scope and depth, and level of effort applied by Perry to these issues were inadequate.

Public meetings will be held to discuss the end of cycle performance reviews. The review for Davis Besse will be on May 13, at 3:00 p.m. at the Energy Education Center. The Perry meeting will be April 15, 2008 at 6:30 p.m. at the Quail Hollow Resort in Painesville, OH. The NRC encourages anyone who is interested to attend.

C. Utility Reports

Mr. Vern Higaki, Fleet Emergency Preparedness Manager, was present to report for the Davis-Besse NPS and Beaver Valley PS. Present for FENOC from the Perry plant were Paul Harden, Vice President for Nuclear Support; Fred Cayia, Performance Improvement Director, Rick Smith, Emergency Response Manager.

Mr. Cayia noted that he understood that the Board had concerns and that they were not unfounded and that's why Perry is taking aggressive action. Perry officials fundamentally do not disagree with the special inspections and has had several meetings with the NRC. The Perry plant understands where the deficiencies are and have taken action to address the problems.

Beaver Valley Power Station

Beaver Valley units have continued to operate well since the last Statutory Meeting.

There are several topics of interest:

Unit 2 will be entering a refueling outage on Monday, April 14. The outage will include routine refueling activities and inspection activities. The outage is scheduled to conclude in mid-May.

The radiological emergency preparedness exercise package will be submitted to the States for advance review in the very near future. The FEMA submittal date is April 24. The exercise remains planned for an evening exercise on June 24.

The NRC is in the process of reviewing the Beaver Valley license extension submittal. FENOC is providing additional information to the NRC reviewers as requests are received. Larry Freeland will be leading the plant effort for implementation for actions for the license extension. Roy Brosi has been assigned as the acting Director of Performance Improvement.

Davis-Besse Nuclear Power Station

Davis-Besse started up from their 15th refueling outage on February 14 and has operated at or near full power during the past 57 days.

During the refueling outage the staff replaced 76 of 177 fuel assemblies, rewound the 150 ton turbine generator and completed more than 2,000 outage maintenance tasks. They completed inspection of the reactor head and vessel as well as the steam generators.

Other work completed included:

- Alloy 600 overlay scope
- Replacement of feedwater piping
- Maintenance on the cooling tower and
- Upgrade of the diesel generator governor system

There were no FENOC employee OSHA incidents and by the conclusion of the outage employees had worked over 8 million man hours without a lost-time accident.

The plant is currently operating at 100 percent power.

One thing not listed; there is an indication of a potential fuel leak.

Perry Nuclear Power Plant – Response to the February 8, 2008 Letter

Paul Harden was recognized to begin the response to the February 8, 2008 letter from the Board.

FirstEnergy is committed to continued safe and reliable operations. Reliability starts with equipment. They are taking proactive, preemptive measures to go after equipment issues in a predictable fashion rather than waiting until more serious problems develop. One of the examples is the planned, 9 day shutdown. It is as a result of a component not performing correctly. That alone did not affect plant performance, but however, that left only 1 similar train of components for reliable generation. That is not an acceptable situation. The plants are built with a level of redundancy for a reason. Perry employees are doing a thorough review of the plant to identify any other issues that have come up since the refueling outage that could threaten future generation. All those that were identified, they are addressing, so when the unit does come back online, it will perform in a safe and

reliable manner. Since the first of the year, Perry implemented the “Plan to Win: Seven for Success”. This is a program to address the top 7 areas that Perry has identified where there needs to be significant improvement. Mr. Harden has been assigned the officer of that program.

The 7 areas are:

Leadership, Alignment and Engagement
Equipment Reliability Improvement
Radiation Protection fundamentals
Outage improvement
Operation fundamentals
Maintenance fundamentals and human performance
Problem identification and resolution

Mr. Fred Cayia explained to the Board some of the details and challenges that Perry has gone through in the past year and the steps that Perry staff has taken to improve performance; specifically addressing the issues that were in the letter from the Board.

Perry has recently completed their 11th Refueling Outage. It went from April 2 to May 13, 2008.

Tasks accomplished during the refueling outage that increased plant safety and reliability include:

- Vessel Disassembly Refuel and Fuel Shuffle
- In-vessel Inspections
- Inspect and re-channeled 50 Bundles
- Replace 16 Control Rod Blades
- Replace 15 Control Rod Drive Mechanisms
- Replace 50 Local Power Range Monitors (in-vessel instrumentation)
- Plant Design Improvements
- LP Turbine B and C Rotor Replacements
- Replace 3 Turbine Valve Actuators
- Feed Water Venturi Repair
- Cooling Tower Inspections

During this refueling outage, there were over 2,500 work orders and many dollars (about 42 million) invested in the equipment improvements.

Security/Emergency Drill – September 12.

This was a Hostile threat based drill. There was Federal, State, County and local participation. NRC Commissioner Lyons was in attendance and observed activities at Lake County and on-site. He was very complementary at a national regulatory information conference and noted that a number of the items in the drill were put into use a few weeks later for a train derailment in Lake County.

Startup from Refueling Outage – May 13

- Turbine tripped during low power operation
- Reactor remained stable
- Control Circuit card issue resolved question: There was a circuit card that was not fully inserted. Mr. Cayia stated that they instituted a verification process to correct the problem.

Reactor Trip – May 17

There was new Digital Feedwater Control System tuning in progress. The plant systems responded as designed, no safety system actuations occurred. The software compatibility issue was resolved – they have downloaded software patches, vendor had error in software code that was revealed by this trip. Even though the software had extensive testing before installation at the vendor and on-site, Perry staff have improved both the design process; how they work with vendors and put in more rigorous testing procedures before installation of future software. Ms. Dragani asked if this software has been installed at other two plants and if so, had the patches been sent to the other plants. The reply was that it was specific to the Perry plant.

It was noted that there is an “operating experience process”. This is done daily within the FENOC fleet and there is a process that if something happens at one FENOC site, the other two sites are given items to check out and verify that they don’t have a similar problem. The information is also shared with the nuclear industry, not just FENOC facilities, so there is also a learning process that comes from what happened at other plants.

Manual Reactor Shut down – June 22

- Shutdown to repair flow control valve
- Recirculation pump breaker issue
- Conservative decision to shut down made
- Repaired valve and breaker

This shutdown caused a new “white” finding for unplanned SCRAM under the NRC Reactor Oversight Program.

Ms. Dragani asked if there was a planned replacement time schedule for replacing aging equipment or if there needed to be indications that a piece of equipment was failing. Mr. Cayia replied that there is now a maintenance strategy. That is a strategy to go after replacing/renewing large components and they rely on surveillance testing and preventative maintenance that is done during a refueling outage for the smaller components. In this case, the testing did not reveal that it was about to fail.

She then asked if this manual reactor shutdown was related to the recirculation pump problem in December of 2004. Mr. Cayia replied no, that in December of 2004 it was a design issue with the circuit. The problem with the breaker had to do with the relays replaced during the outage.

Mr. Smith of the PUCO asked for a summary of the changes resulting from the manual shutdown and how they would better catch these kinds of connector failures?

Mr. Cayia replied that they go back to look to see if there were clues missed and provide feedback to the technician group that performed this type of maintenance (cause analysis) and analyze the procedures for weaknesses and what is needed for enhancement. They also do an analysis to check where the same problem might exist in other areas and check those areas also (called extent of condition).

Mr. Helmer of ODH asked about how the verification processes work. Mr. Cayia replied that in some cases, there are two types of higher level verifications, one is called concurrent (2 people checking the work) and independent. They pre-designate in the procedures which verification practices are expected and in all cases, supervisors review the paperwork and sign off that it was done correctly. This was a change in that it might have been a practice prior to, it is now in the procedures.

Mr. Mitchell of Agriculture asked that when a problem does occur, how does FENOC communicate to the other plants and what is the timeline to assure that the same problem doesn't occur at another plant.

The FENOC organization has what is called a newsflash. The goal is when there is a significant equipment or human performance problem, they have a 24 hour clock to develop the specifics and share with the industry.

Also, FENOC has the morning fleet call that was mentioned previously. If they are in a refueling outage, that will happen more often.

When there is an external operating experience, the goal within the industry is to get something out within 60 days that has details on what happened.

Reactor Recirculation Pump– June 27

- Plant was stabilized at 60 percent power with one of the recirc pumps not operating
- Immediate investigation was performed that showed that there was a problem with electrical wiring that was overlooked
- Conservative decision to shut down plant and replace motor was made. Another refurbished motor was put in place. The removed motor was sent off-site and will be refurbished. The newly refurbished motor will replace the

“Bravo” motor, in the 2009 Refueling Outage. There is a plan in place to purchase a new motor in 2009.

Reactor Trip – November 28

- Problem with power supplies in the new Digital Feedwater System; has redundant power supply, changed basic design, improved monitoring; added 3rd power supply
- Manufacturing defect internal to the power supplies discovered. This was a first of a kind failure; the vendor had never seen this type of problem before. The manufacturer discovered that others manufactured during a 6 week time frame had the same problem and they are in the process of replacing.
- Improved Digital Feedwater Power Supplies
- High Pressure Core Spray system was activated to restore reactor water levels

Reactor Core Isolation Cooling System (RCIC) – November 28

- Automatically started then tripped
- Improper flow controller adjustments
- Upgrading to a new model
- Would perform on Manual
- Performed root cause analysis and found that they made process changes several years ago that led to the error in January of 2006 that they made
- Settings were set back to the setting established during initial plant startup
- December 12 settings were improved, but not optimum; however the vendor also believed that these were the proper settings. The plant has ordered 3 of a newer version of these controllers to improve performance and reliability.

Annulus Exhaust Gas Treatment System – December 21

- A low flow condition occurred in the ventilation system
- Discharge Damper issue
- Redundant equipment restored
- Damper actuators repaired

Summary: They are improving plant performance and reliability by proactively addressing equipment issues, improving preventative maintenance strategy and feedback from that strategy, and strong commitment for plant upgrades from FirstEnergy (\$20 million above what would have been budgeted).

This also includes hiring strategies and knowledge transfer; also changing how procedures are written to account for loss of operating experience. The facility is involved with Lakeland Community College and has offered summer internships.

In the letter to FirstEnergy, the Board requested a comparison of Perry to other Boiling Water Reactors.

**Boiling Water Reactor Comparison
 U.S. Nuclear Regulatory Commission Reactor Oversight Process:**

	Licensee Response Column 1	Regulatory Response Column 2	Degraded Cornerstone Column 3	Multiple/ Repetitive Degraded Cornerstone Column 4	Unacceptable Performance Column 5
	Davis-Besse Beaver Valley	Perry			
Total Units	87	8	8	1	0
BWR's	29	5	1	0	0

Rick Smith, Emergency Response Manager, briefed the Board on what changes have been made that should improve communication.

Perry has added a Voice Mail Box system. This is already in place at Davis-Besse. You call into a dedicated number and leave a message. It will automatically page 4 emergency response representatives. This is exclusive to the State and the 3 counties. Ms. Dragani asked if there was a timeframe that a response could be expected. The system continues paging every 15 minutes for 3 hours until answered. If there is information that needs to be collected, there might be a slight delay.

There is a new FENOC procedure "Communicating Events of Potential Public Interest". As a fleet, FENOC developed a procedure to identify types of events not classified, but might attract public attention. One of the concerns of the state is timeliness.

IV. MISCELLANEOUS

The next meeting of the Utility Radiological Safety Board will be July 7, 2008. Tammy Little reminded the Board members that April 15, 2008 was the deadline to file their Ethics Commission Form.

Ms. Dragani proposed that the Working Group should take a look at plans for future meeting, there might be an opportunity to perhaps have a Board meeting at the plant and have a tour along with the meeting; if possible, the Board meeting in October.

VI. ADJOURNMENT

URSB Statutory Minutes
April 11, 2008

Ms. Dragani asked for a motion to adjourn. Mr. Smith moved and Mr. Mitchell seconded. Motion passed.