

UTILITY RADIOLOGICAL SAFETY BOARD  
MEETING MINUTES  
JANUARY 17, 2012

Mr. Mel House, Ohio Emergency Management Agency, called to order the January 17, 2012 meeting of the Utility Radiological Safety Board at 1:30 p.m.

The first order of business from the agenda was the roll call taken by Tess Ocean.

I. ROLL CALL

EMERGENCY MANAGEMENT AGENCY  
DEPARTMENT OF HEALTH  
DEPARTMENT OF AGRICULTURE  
PUBLIC UTILITIES COMMISSION  
ENVIRONMENTAL PROTECTION AGENCY  
DEPARTMENT OF COMMERCE

MR. MEL HOUSE  
MR. MICHAEL SNEE  
MR. CHUCK KIRCHNER  
MR. DAN FISHER  
MR. KEVIN CLOUSE  
MR. DEAN JAGGER

A quorum was declared.

II. READING OF THE OCTOBER 11, 2011 MINUTES

The board dispensed with the reading of the October 11, 2011 minutes. Mr. House asked for additions, corrections or deletions to the minutes. Mr. House asked for a motion to approve the minutes. Mr. Chuck Kirchner of the Department of Agriculture moved to adopt the minutes and Mr. Michael Snee of the Department of Health seconded. The motion carried.

III. OLD BUSINESS

A. Updated Status of the URSB Initiatives

Mr. Michael Bear of the Ohio Emergency Management Agency and Mr. Steve Helmer of the Ohio Department of Health reviewed the URSB initiatives. Topics briefed included Perry Nuclear Power Plant Cross-Cutting Human Performance Issues, After-Action Activities, IZRRAG Activities, Reactor Oversight Program, Technology, the State-Dose Assessment Program, Potassium Iodide, REP Guidance and Rulemaking, Procedural Review and the Joint Inspection Observation Program.

Mr. House asked Mr. Helmer what the timeframe is for making a recommendation for dose assessment software. Mr. Helmer deferred to Ms. Pam Hintz of the Ohio Department of Health and said that the agencies are prepared to test RASCAL for the spring dry-run and to see how it works with the parameters. To answer the question, Mr. Helmer said that they don't know yet and are still working in the issue. Mr. House said we might want to exercise that pre-dry run. Mr. Bear stated that EMA has old exercise data, which could be input into the program to test it out. Mr. House commented that given the importance of exercises, it is difficult to test a new program during an exercise.

B. Midwestern Committee Report

Mr. Michael Snee reported that the Midwestern Radioactive Materials Transportation Committee met in Carlsbad, New Mexico in December. This meeting included a tour of the new trans-uranic

facility. One of the main points of the meeting was trans-uranic waste shipments are going down drastically. In the next couple years, the WIPP shipments will have decreased quite a bit. This is worrying people in Carlsbad, as this brings money into the community. They are also looking at land in the desert to try and put an interim storage facility there. They are looking at turning the WIPP facility into the next Yucca Mountain. This is about thirty years down the road, but seems to have community support in this. The next meeting is in May, as part of the National Transportation Safety Forum, in Knoxville, TN.

#### IV. NEW BUSINESS

##### A. URSB Working Group Quarterly Reports

Each of the participating URSB Working Group agencies provided a report of their respective state agency activities. Each agency's report is available upon request from the URSB Secretary.

##### B. Consideration of Status of the URSB Citizen's Advisory Council

Mr. Bear stated that in late November, he received an inquiry from someone who used to be on the Citizen's Advisory Council, which is a citizen's version of the URSB. Due to lack of interest, the council ceased to meet. Mr. Bear discussed the inquiry with Director Nancy Dragani, Chair of the Utility Radiological Safety Board, and it was decided to bring the discussion before the Board. Ohio EPA facilitated the Citizen's Advisory Council (CAC). Mr. Clayton provided an Executive Summary on the history of the CAC, which is attached to the end of the minutes.

The consensus of the Board was that one person is not "general public interest" and cannot justify reinvigorating the CAC.

Ms. Tammy Little, Legal Representative for the Utility Radiological Safety Board, stated that for about two years, there was a significant effort to try and generate interest in the CAC, to no avail. Ms. Little indicated that because of the very specific requirements in the Ohio Administrative Code rule, that the Board consider encouraging any interested party to participate in quarterly URSB meetings rather than trying to re-establish the CAC. Mr. House stated that by the end of the year, we will have held meetings in all three nuclear power plant regions and that will help the Board further gauge public interest. Ms. Little stated that all Administrative Rules have a regular five-year rule review cycle and these rules require that review in 2014.

##### C. Nuclear Regulatory Commission

Mr. Allan Barker of the Nuclear Regulatory Commission reported on the following topics: oversight of the FENOC plants and the Davis-Besse public meeting that was held on January 5, 2012.

Mr. Barker's report to the Board is attached at the end of the Board-approved minutes.

##### D. Federal Emergency Management Agency

The Federal Emergency Management Agency representative was unable to attend the meeting, due to participation at the Site-Specific REP Program Manual Workshops.

#### E. Utility Reports

Mr. Fred Cayia, Director of Fleet Performance Improvement for FENOC, and Mr. Ricky Collings, Supervisor, Fleet Emergency Preparedness, attended the meeting. Mr. Collings provided the utility report updates on:

1. Beaver Valley Power Station
2. Davis-Besse Nuclear Power Station
3. Perry Nuclear Power Plant
4. FENOC

Specific topics of discussion included the Davis-Besse shield building cracking, the November 16, 2011 alert at Davis-Besse, the Perry Nuclear Power Plant start-up transformer replacement and the status of cross-cutting areas of human performance at Perry Nuclear Power Plant and the discussion topics for FENOC included the replacement of direct notification lines and status of Emergency Operations Facilities.

Questions addressed included the dedicated phone lines, the transformer replacement and spring clips not meeting standards discovered in the Part 21 process.

Mr. Cayia gave a presentation on the Davis-Besse Nuclear Power Station head replacement.

#### V. MISCELLANEOUS

##### A. Location of next URSB Meeting

The next URSB meeting will be held in Lake County, as their new EOC will be completed by April. The facility can handle up to 70 people, so there will be plenty of room if any members of the public attend.

##### B. Questions from the Public

There were no questions from the public.

#### VI. ADJOURNMENT

Mr. Mel House, Ohio Emergency Management Agency, asked if there was a motion to adjourn the meeting. Mr. Dan Fisher, Public Utilities Commission of Ohio, motioned to adjourn the meeting and Mr. Kevin Clouse, Environmental Protection Agency of Ohio, seconded. The motion carried. The meeting was adjourned.

# FENOC Report for the 1/17/2012 URSB Meeting

- 1) Beaver Valley Power Station
  - a. The station submitted in December 2011 a new set of Emergency Action Levels (EAL) reflecting the latest scheme NEI 99-01 Revision 5. The station will be implementing the scheme which will provide a more streamlined emergency scheme, and will increase our effectiveness and ability to protect the health and safety of the public. The schedule reflects the one year review by the NRC and then time to train the station staff. The new scheme is expected to be fully implemented in the fall of 2013.
  
- 2) Davis-Besse Nuclear Power Station
  - Head Replacement Animation  
Video to be presented the day of the URSB.
  
  - Shield Building Cracking  
Information to be supplied by Mr. Cayia on the day of URSB meeting.
  
  - November 16, 2011 Alert  
The initial conditions were that the plant was in Mode 5 and the outage organization was staffed on an around the clock basis. The Shift Engineer responded to a report that water was coming down on a Motor Control Center (MCC) in the auxiliary building. The Shift Engineer reported at about 0214 that there had been an explosion with a flash of flame at E11C. This occurred in a circuit breaker which supplies power to the motor that operates the Control Room Emergency Ventilation System Train 1 Inlet Damper. The station implemented the fire response procedure and activated the station fire brigade.  
  
At 0222 the Shift Manager evaluated plant and declared an Alert under emergency action level (EAL) HA4, FIRE or EXPLOSION affecting the operability of plant safety systems required to establish or maintain safe shutdown. The declaration was made based on the affecting the operability of plant safety systems in the auxiliary building. Operations de-energized Motor Control Centers E11A through E11D and the fire was reported extinguished at 0233 after isolating MCC E11C.  
  
The Control Room began offsite notifications at 0234. Problems were experienced with the Lucas County and State of Ohio legs of the 4-way ring-down phone not ringing. Operations personnel appropriately contacted Lucas County and the State of Ohio on a commercial phone and requested that they pickup the 4-way telephone. Once Lucas County and the State of Ohio joined Ottawa County on the 4-way circuit the dedicated phone worked as expected. The offsite notifications to state and local agencies were

completed in 19 minutes. It should be noted that the 4-way phone is tested every morning at approximately 0500. Recent tests prior to the Alert had all been successful.

After receiving the notification of an Alert due to a fire at the station Ottawa County dispatched Carroll Township Fire and EMS. No offsite support was requested by the station because the station fire brigade was successful in extinguishing the fire after the switchgear was de-energized.

The Carroll Township Fire Chief provided feedback that he was concerned that no one was immediately available to respond to his questions and that site security turn him away. Follow-up will be conducted with Carroll Township Fire personnel.

Emergency Response Organization personnel responded quickly to their assigned emergency response facilities. Several members of the ERO were working backshift supporting the outage and immediately responded to their assigned emergency response facility. The Emergency Assistant Plant Manager who was on-shift immediately responded to the Control Room, however he did not relieve the Shift Manager of Emergency Director responsibilities until 0300, 38 minutes after the event was declared. This turnover could have been more timely. The expectation is that turnover occurs as soon as possible unless turnover to the Emergency Director in the TSC/EOF is imminent. The Shift Manager should be relieved as soon as possible so that he may return to his plant oversight role.

Emergency Director turnover from the control room to the TSC/EOF did not occur until 47 minutes after the TSC and EOF were activated. This turnover occurred 80 minutes after the Alert was declared. The Operations Support Center (OSC) assembled and documented dispatching 7 emergency repair teams. With the declaration of the emergency, 240 nonessential personnel from the Protected Area were assembled in the Training Center and directed to standby.

The Joint Information Center (JIC) was activated, however no media reported to the facility. Local news media responded to the edge of the plant property. Information about the event was obtained by the media by contacting corporate communications representative via telephone.

The event was terminated at 0443, facility debriefs were conducted and the ERO was released. The ERO response to the event was evaluated against established drill objects and credit was given for those objectives that were successful demonstrations.

The weaknesses and opportunities for improvement are documented in Condition Reports (CRs) and entered into the corrective action program. These CRs, their associated corrective actions and SAP notifications will track these items to completion.

### 3) Perry Nuclear Power Plant

a. Start-Up Transformer Replacement

On September 26, 2011, at 0158 hours, the unit 1 startup transformer was taken out of service to perform scheduled maintenance. The unit 2 startup transformer and the manual unit 1 backfeed lineup were considered to be the two qualified offsite circuits required by the plant's Technical Specifications.

Following discussion with the NRC, further review of this configuration determined that the backfeed lineup could not be credited as a qualified offsite circuit. As a result of the NRC input, this review also revealed that required Technical Specification actions were not completed when the startup transformer was declared inoperable on September 26, 2011. Transformer maintenance was secured and the unit 1 startup transformer was returned to service on September 28, 2011, at 2222 hours.

On September 29, 2011, at 0529 hours, the unit 1 startup transformer tripped due to an internal fault. The transformer fault was caused by an internal flash-over between the B phase bushing corona ring and the grounded tank wall. The flash-over resulted from a damaged corona ring (cracks) on the B phase transformer high voltage bushing and a low transformer oil dielectric. Analysis of the corona ring determined that the cracks existed prior to the transformer fault.

On October 2, 2011, at 0100 hours, a planned shutdown was commenced to repair the unit 1 startup transformer and at 1614 hours, plant shutdown was completed by manual actuation of the Reactor Protection System.

Corrective actions for these events include approval of a License Amendment to clarify the use of a delayed access circuit as a qualified offsite circuit and installation of a replacement startup transformer. Additional corrective actions, based on the conclusions of the ongoing root cause evaluation, will be described in a supplemental licensee event report.

b. Status of Cross-Cutting Areas of Human Performance

The NRC's mid-cycle assessment letter dated September 1, 2011, stated that the NRC determined that performance during the assessment period continued to exhibit weaknesses in the area of human performance. In their end-of-cycle assessment letter dated March 4, 2011, the NRC advised Perry of a substantive cross-cutting issue (SCCI) in the area of human performance with cross-cutting themes in the components of work planning (H.3(a)) and documentation/procedures (H.2(c)) and indicated that these would remain open until the number of findings in the H.2(c) and H.3(a) aspects were reduced and Perry demonstrated the implementation of effective corrective actions that result in sustained performance improvement in the human performance area.

The NRC did not perform Inspection Procedure 92702, "Follow-up on Corrective Actions for Violations and Deviations," prior to the mid-cycle assessment letter. The delay was at Perry's request due to several human performance issues in refuel outage 13. The IP 92702 inspection was completed in December 2011, and the results will be factored into the 2011 annual assessment letter, which should be issued in early March 2012.

Since the NRC did not conduct this inspection, the NRC stated that the substantive cross-cutting issue will remain open until conditions specified in their end-of-cycle assessment letter are satisfied. The NRC changed their assessment process and now each theme identified in their end-of-cycle assessment letter will now be classified as a separate substantive cross-cutting issue. Because of this change, the number of SCCIs documented in the NRC mid-cycle assessment letter changed even though the cross-cutting themes and the NRC's concern with Perry's lack of sustained effectiveness in addressing these themes remain the same.

4) FENOC

a. Replacement of Direct Notification Lines

The new EOF/Alternate TSCs will continue to use dedicated ringdown lines to the state and counties for Davis-Besse and Perry. New products are being procured to support the upgrade. The users will see no difference in the process but we will be adding a number of new capabilities that will be explored after the facilities are occupied.

b. Status of Emergency Operations Facilities

- Beaver Valley – The final walk down of the facility was completed in early January. The contractor is working on the punchlist. Information Technology is working to install the computers, monitors, and communication/data servers in the facility. The ERS staff has scheduled walkthroughs and table top efforts for the staff in February. MIDAS dose assessment has been tested. The station and vendor are working to provide automatic update of data to the facility in time for walk through. Furniture has been delivered and set up.
- Davis-Besse – The facility is about a month behind the other facilities. The Sanitary system permit has been received as well as the well water use permit. Weather related issues will prevent installation of final sanitary system until the weather breaks as does the final paving of the parking lot. There is a license amendment needed for the facility to use MIDAS. They are shifting source term to the fleet standard (NUREG 1228) which will require a review by the NRC. Their current dose assessment program (PCDose) will be used in the interim.
- Perry – The facility is scheduled for final walk through within the next week. Status is about the same as Beaver Valley but lagging a week or so on their time line.

- c. The Emergency Response Paging System at Beaver Valley has been upgraded. The system provides more data on individuals that call in to the system. It now tracks every individual that has called in, when they responded and the answers to a number of fitness for duty and response time questions. Beaver Valley is the second plant to get this upgrade behind Davis-Besse. Perry is undergoing testing now.

# NRC Oversight Activities at Davis-Besse, Perry and Beaver Valley

## Davis-Besse Nuclear Power Plant

On October 26, 2011, the third quarter integrated inspection report for Davis-Besse was issued. Based on the results of this inspection, three findings of very low safety significance (GREEN) were identified by the NRC. Additionally, one licensee-identified violation which was determined to be of very low safety significance (GREEN) was documented on the failure to properly rig and lift a new safety-related battery charger into position. The NRC-identified findings were as follows:

- The licensee's failure to establish adequate measures (e.g., perform a review of radiographic (RT) film weld records) to ensure material procured from a contractor (replacement control rod drive mechanism (CRDM) housings) met the American Society of Mechanical Engineers (ASME) Code. Consequently, two replacement CRDM housings were procured with RT film weld records that did not conform to the ASME Code-required film density ranges. As a corrective action, the licensee returned the affected CRDM housings to a vendor facility for completion of new RT film records prior to installation on the replacement vessel head.
- The licensee's failure to control the configuration of the emergency core cooling system (ECCS) room cooler service water (SW) outlet valves in accordance with procedures. Specifically, the licensee failed to update procedures used to set the appropriate throttle position for the valves, and by using information tags to control valve position, failed to follow plant status control procedures.
- The licensee's failure to correct deficiencies, deviations, and/or non-conformances associated with safety-related systems, structures, and components (SSC) in a timely manner, as required by the licensee's quality assurance program manual and corrective action program implementing procedure. Specifically, the inspectors identified a trend on the part of the licensee to leave certain low significance/low priority corrective actions for various safety-related SSCs completely unscheduled and unaddressed. The finding was of very low safety significance because each of the SSC deficiencies, deviations, and/or non-conformances identified by the inspectors represented an issue that did not result in the loss of operability or functionality.

## Davis-Besse Public Meeting

At the January 5, 2012, public meeting with approximately 300 people in attendance, the NRC and the plant's owners, FirstEnergy Corp., talked about the discovery of the cracks during work to cut a hole in the Davis-Besse shield building, and the NRC's subsequent

conclusion that the building remained capable of performing its safety function. The licensee has committed to submit their root cause evaluation by February 28, 2012, to the NRC. The NRC blog provides additional information on the Davis-Besse shield building issue at:

<http://public-blog.nrc-gateway.gov/>

To highlight as an example, the following questions and answers from the NRC blog are provided.

Q2. What was NRC's response and how did NRC inspectors reach the conclusion that the shield building is safe?

A2. The NRC put together a team of about ten specialists from the NRC Midwestern office in Illinois and the NRC Headquarters office in Maryland to provide a thorough and independent review of FENOC's testing of the cracks, their methodology, calculations and analyses to determine the impact of the cracks on the building's ability to perform its safety function.

To make a conclusion about the safety of the shield building, the NRC team:

- monitored the licensee's activities at the plant as they were identifying the extent and nature of the cracks
- examined the licensee's methodology for assessing the impact of the cracks on the shield building
- made sure the samples taken from the building were sufficient to indicate the extent and the severity of the cracks in the building as a whole
- reviewed the calculations and the assumptions on the shield building's ability to withstand stresses it would be under during normal operation and during events such as tornadoes and earthquakes.
- continued to ask questions about the specifics of the licensee's calculations; challenged their assumptions; requested additional information; and made sure the calculations demonstrated that the shield building has sufficient structural strength to fulfill its safety function.

Q34. What impact do these cracks have on license renewal?

A34. The NRC's license renewal team is continuing to evaluate this issue and will take all necessary actions to ensure the licensee address any concerns the NRC may have prior

to granting license renewal along with reviewing the issue for any generic concerns for other facilities.

### Perry Nuclear Power Plant

On November 1, 2011, the third quarter integrated inspection report for Perry was issued. Based on the results of this inspection, one NRC-identified and two self-revealed findings of very low safety significance (GREEN) were identified. Additionally, one severity level IV violation was also identified by the inspectors. The two self-revealed findings were the licensee's failure to accurately assess plant risk during maintenance on an emergency service water pump and the failure of workers to comply with established radiological protective measures for entry into and work within high radiation areas. The severity level IV violation occurred when the licensee failed to report an occupational radiation safety performance indicator occurrence to reflect an individual entering on April 22, 2011, a locked high radiation area in the drywell under vessel area without the appropriate radiological controls in place. The NRC-identified finding was as follows:

- The licensee failed to accurately assess occupational dose specific to effective dose equivalent (EDE) determinations. As a part of the baseline occupational radiation safety inspection program, inspectors reviewed the licensee's implementation of EDE dose assessments for the spent fuel pool divers and identified errors. The inspectors noted that, when the licensee utilized EDE to assess the dose for multiple divers, the licensee failed to measure the highest exposed portion of combined bodily compartments. Specifically, the thorax and abdomen were being treated as combined compartments with the dosimeter located on the thorax while the highest exposed portion of that combined compartment was the abdomen. The primary cause of this finding was related to the cross-cutting aspect of human performance in the component of resources. Specifically, licensee did not provide complete and accurate procedures to the radiation safety staff.

### BEAVER VALLEY

On November 2, 2011, the third quarter integrated inspection report for Beaver Valley Units 1 and 2 was issued. Based on the results of this inspection, no findings were identified.

To: Utility Radiological Safety Board

From: Zack Clayton, Ohio EPA

Subject: Executive Summary of the status of the CAC

Date: January 11, 2012

I will be taking my talking points from 4937-1-02 , resolution 2000-003, and the CAC report from the 2004 and 2005 annual reports.

The Utility Radiological Safety Board (URSB), by Resolution 90-007, dated December 14, 1990, created the Citizen's Advisory Council on Nuclear Power Safety (CAC). The CAC is to provide an open forum for discussion of public health and safety issues associated with the operation of Nuclear Power Plants in Ohio. Ohio EPA is the most recent agency appointed by the URSB to facilitate the functions of the CAC. The original makeup of the CAC included twenty citizen representatives. Throughout its active history the CAC met quarterly as a whole body and committees met more often as needed for their work.

Over time the membership of the CAC dropped off as interest in nuclear power waned. The elected representatives or county health commissioner would have schedule conflicts, college students stopped applying, and local citizen interest faded. By 2000, CAC rules required amending in URSB Resolution 2000-003 to specify that members could delegate an alternate attendee and added attendance requirements to allow inactive members to be removed so as to attain a quorum for the active members still attending. In addition the definitive listing for CAC membership was removed to favor a more flexible set of characteristics in a membership pool, and the size was reduced to a flexible 11 to 19 members.

Interest in the active CAC membership continued to decline. By 2004 there were 9 active CAC members. They determined that there were no major issues requiring CAC review outside of other public processes ongoing for the Davis-Besse NRC part 350 meetings. These involved the Davis-Besse extended maintenance outage. The CAC held three meetings in 2004. At the final meeting the CAC determined that there was no further need for the group to continue meeting under the circumstances and recommended cessation of operation.

In 2004 and 2005 public notices to the areas and counties surrounding the plants and individual requests to known environmental interest groups in extended areas around the plants solicited no persons interested in CAC membership. The CAC did not meet in 2005 and is on hiatus until such time as an issue of general public interest arises.

The URSB meetings are always public noticed and there have been no public member attendees at any recent sessions.