

**UTILITY RADIOLOGICAL SAFETY BOARD OF OHIO
MEETING MINUTES
JULY 12, 2010**

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

The first order of business was roll call, taken by Lori Osborne.

I. ROLL CALL

| | |
|---------------------------------|--------------------|
| EMERGENCY MANAGEMENT AGENCY | MR. MELVIN HOUSE |
| DEPARTMENT OF HEALTH | MR. ROBERT OWEN |
| DEPARTMENT OF AGRICULTURE | MR. CHUCK KIRCHNER |
| PUBLIC UTILITIES COMMISSION | MR. DANIEL FISHER |
| ENVIRONMENTAL PROTECTION AGENCY | MR. KEVIN CLOUSE |
| DEPARTMENT OF COMMERCE | MR. DEAN JAGGER |

A quorum was declared.

II. READING OF THE APRIL 12, 2010 MINUTES (ADOPTED)

Mr. Melvin House asked for any additions, corrections or deletions to the minutes. He then asked for a motion to approve the April 12th minutes. Mr. Chuck Kirchner of the Ohio Department of Agriculture moved and Mr. Daniel Fisher of the Ohio Public Utilities Commission seconded. The motion was carried.

III. OLD BUSINESS

A. Update of the URSB Initiatives

Ms. Carol O'Claire reviewed the changes in the Working Group initiatives led by Ohio Emergency Management Agency (EMA).

The 2010 BVPS full participation exercise was conducted in the evening on April 20, 2010. Field Monitoring Teams (FMT) conducted their activities during the day. The two dry runs were conducted previous to the evaluated exercise. One dry run was conducted on March 23, 2010 with a second dry run on April 13, 2010 to address difficulties experienced during the first dry run.

FEMA V identified three state findings during the April 20, 2010 BVPS full participation exercise. The state received a Deficiency and two Areas Requiring Corrective Action (ARCAs) during the exercise. The state received the Deficiency under Criterion 4.a.2, "field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure." Two of the three FMTs did not receive the order to take KI from the FMT Coordinator. The state received an ARCA under Criterion 4.a.3, "field teams ambient radiation readings and radioiodine and particulate samples collected." One FMT incorrectly wrote the readings on the data form. The state received an ARCA under Criterion 2.b.2 "appropriate protective actions based on offsite dose projections." The Assessment Room incurred difficulties in the process of running dose projections.

The Deficiency under Criterion 4.a.2 will be re-demonstrated on July 22, 2010 along with the ARCA under Criterion 4.a.3 at the Ohio EMA EOC/JDF facility. The ARCA under Criterion 2.b.2 will be re-demonstrated during the September 28, 2010, PNPP exercise.

The 2010 PNPP partial participation exercise is scheduled for September 28, 2010. The dry run is scheduled for August 25, 2010. Training dates (with alternate dates) have been established.

The after action activities include an annual review of the State REP plan. Individual agencies continue to address issues noted from the two previous nuclear power plant exercises. The After Action meeting for the Beaver Valley full participation dry run exercise was conducted in the afternoon following the June 10, 2010 working group meeting. Issues arising from the April 20, 2010 BVPS evaluated exercise were identified and added to the After Action matrix. Unresolved After Action items were reviewed. Where appropriate the working group combined repeat issues or issues of a similar nature into one action item to be addressed. IZRRAG After Actions items are being captured separately. The issues are being addressed by e-mail with periodic meetings as necessary.

IZRRAG training and drills will continue to be conducted annually. IZRRAG training will be conducted on October 14, 2010. An IZRRAG drill to include the Field Team Center/Sample Screening Point activities will be conducted in November 2010. The next evaluated ingestion exercise for the State will be in 2012 with the Perry plant.

Davis-Besse remains in column two of the NRC Reactor Oversight Matrix. The placement was due to one white finding as described in NRC Inspection Report No. 05000346/2010502, regarding the June 25, 2009 explosion occurring in the switch yard.

Davis-Besse identified cracking in 24 of 69 Control Rod Drive Mechanisms during their 16th refueling outage. Repairs have been made and the plant synchronized to the grid on June 29, 2010. The state participated with the NRC in weekly conference calls that ended on June 30, 2010.

Beaver Valley continues to be in column one of the NRC Reactor Oversight Matrix.

The Perry plant continues to be in column one of the NRC Reactor Oversight Matrix.

The Working Group had previously determined the need for consistent plant data in the Assessment Room. FENOC attended the Beaver Valley 2006 exercise to evaluate state dose assessment needs. Beaver Valley has real time e-data available, but currently there is no simulator e-data link from Beaver Valley to the state EOC. The Beaver Valley simulator e-data link was projected to be operational before the exercise dry run in March 2010, but was unavailable. The e-data system was utilized during the 2008 dry run and evaluated exercise with the PNPP. The e-data system has not been completed for the Davis-Besse plant.

Teletrix equipment has been purchased for training of Field Monitoring Teams (FMT). The Plume Tracker systems were used during FMT training conducted on March 9, 2010 and during the BVPS dry run and was used during the evaluated exercise. One additional unit was received which allowed three teams to be deployed during the April 20, 2010 exercise.

Ludlum Model 3 portable survey meters have been purchased to replace CDV-700RPs. All nuclear power plant affected counties will receive the Ludlum Model 3 instruments. Additional Ludlum Model 3 instruments and model 730 dosimeters have been purchased to ensure all monitoring locations in these counties have the Model 3 instruments and to replenish dosimetry as needed. Ten piezoelectric dosimeter chargers have been received for SFY 2010 to replenish responder supply and additional ten will be purchased in SFY 2011.

FMT air sampling equipment from Radeco Corporation has been received and will replace the older air sampling units. Training and incorporation of the new air samplers into the FMT procedures will follow the BVPS re-demonstration.

A committee, consisting of members from FENOC, ODH, and Ohio EMA, has been formed to evaluate dosimetry and instrumentation supplied to emergency workers. The committee has evaluated two different electronic dosimeters and is in the process of scheduling conference calls to discuss the evaluation of the units. A vendor demonstration was provided by Thermo-Fisher on May 27th to demonstrate recent additions to their product line. The committee will next discuss and evaluate deployable monitoring systems similar to Pennsylvania's equipment. This committee will provide recommendations to the NEPAC to determine a long term equipment plan.

Efforts continue with the improvement of the Ohio Plan for Response to Radiation Emergencies at Commercial Nuclear Power Plants with regard to NIMS compliance. Ohio EMA will continue to revise the plan in accordance with NIMS requirements as inconsistencies are discovered. No formal Federal guidance has been provided to aid in this task. The 2010 REP Plan was revised and submitted to FEMA and has received approval.

The Working Group has been advised that additional ICS training may be needed to ensure EOC staff have met NIMS criteria. The working group is investigating this issue and available training opportunities.

The comprehensive reviews for Perry, Beaver Valley, and Davis-Besse were completed. The URSB Working Group has received a redacted report and is awaiting the final report. A briefing from FENOC is anticipated.

Ken Barnhart, ODH, provided the Board with an overview of a common dose assessment and KI.

The working group, along with FENOC, had undertaken an evaluation of available software. A meeting was conducted on August 26, 2009 to discuss a common dose assessment program. More meetings are anticipated in the future to further discuss development of the program.

FENOC is still evaluating possible dose assessment program options and methods of funding the program. ODH and EMA are evaluating RASCAL 4.0. Meetings with representatives of each of the plants dose assessment staffs are needed to determine if the plants can provide the data to successfully run RASCAL.

All current issues have been addressed for public KI. The emergency worker KI will be the next issue to be addressed. Additional KI bags and inserts will be provided for northeast Ohio distribution.

Carol O'Claire, Ohio EMA, provided the Board with a status of draft REP guidance and NRC rulemaking.

Currently the NRC and FEMA released draft documents for public comment regarding radiological emergency preparedness. The comment period closed October 19, 2009. The Board has submitted comments to FEMA for consideration.

NUREG-0654 Supplement 3 draft was reviewed by the Working Group. Comments were submitted prior to the May 24, 2010 deadline.

The Working Group will continue to monitor the status of the draft documents.

B. Midwestern Committee Report

Mr. Robert Owen, ODH, updated the Board regarding the Midwestern Committee report.

Midwestern Committee Meeting

The Midwestern committee met in Chicago on May 25. The committee heard from working groups on the Midwestern fee states caucus, reciprocal rail inspection procedures, experiences with DOE funding, Planning Guide revision, and archiving the Office of Civilian Radioactive Waste Management (OCRWM) transportation issues. Reports on activities of these groups follow below. There was also committee discussion on DOE transportation plans, NRC rulemaking on transportation security requirements, and plans for the fall meeting. Concurrent with the Midwestern meeting were the Western Governor's Association Transportation Safety Technical Advisory Group, Southern States Energy Board, and Tribal Caucus meetings.

On the next day the Midwestern committee hosted the first meeting of the National Transportation Stakeholders Forum (NTSF), which met for the first time. This organization replaced the DOE Transportation External Coordinating/Working Group. The NTSF will be the mechanism through which DOE communicates at a national level with states and tribes about DOE's shipments of radioactive waste and materials.

There was also a meeting of the DOE TRANSCOM users on the day after the NTSF meeting.

Planning Guide Review

A working group was formed to review the Midwestern Planning Guide, which outlines the expectations of the Midwestern states for all shippers that transport spent nuclear fuel, high-level radioactive waste, transuranic waste, or highway route-controlled quantities of radioactive material through the region. Key changes proposed by the group are revisions to reflect the changes to the federal disposal program, clarification where shippers should seek additional information, and changing two years to one year for proposing routes and preparing transportation plans for specific shipping campaigns of significant size. The document is being published and distributed to states.

State Experiences With DOE Funding

A survey was conducted of 32 states that have received DOE funding. Of these, 20 states responded. Carol O'Claire and Tom Breckenridge from OEMA participated in this group.

There was a wide variation in the states' experiences on receiving funds from DOE. Key issues noted were unclear guidance, timing in receipt of funds, and lack of accurate shipment information. These and other challenges could be addressed through the NTSF and ad hoc working groups.

Reciprocal Rail Inspections

Carlisle Smith of PUCO provided the update on activities of this group. The purpose of the group was to pursue development of something comparable to the Commercial Vehicle Safety Alliance (CVSA) Level VI inspection procedures, so that downstream states could understand and be confident in the earlier inspections. A consensus was reached in January on a form. The next step is to test the form, possibly rail shipments of foreign fuel.

OCRWM Issues Archive Project

Carryover funds from DOE for the previous grant period are being used to archive documents covering all of the old transportation issues that have been considered during the history of the Yucca Mountain Project. There were 55 issues identified and topic papers were being developed for each. The project ended on June 30.

Fee States Caucus

The group focuses on states that have implemented fees to cover the costs to the states for escorts, emergency management, inspections, and other shipment-related activities. A flyer on fees charged by seven of the Midwestern states was completed in January. The flyer will be posted on the committee's website and will be included as an appendix to the Planning Guide.

There has been a reduction of shipments through states with such fees.

Carlisle Smith of PUCO informed the committee that Ohio's rules in support of fee legislation was before the commission for approval.

Yucca Mountain Update

As noted in the last report to the board, the list of communities, states, lawmakers, organizations, and other interested parties that have publicly objected to DOE's cancellation of the Yucca Mountain Project continues to grow. Since the last meeting the state of Washington has joined the ranks. The NRC has ruled that DOE cannot withdraw their license application for the repository without Congressional approval.

Meanwhile, the Blue Ribbon Commission met on May 25-26. Presentations were heard from stakeholder groups, e.g., Nuclear Energy Institute (NEI) and National Conference of State Legislators (NCSL). NEI urged an integrated approach to managing spent nuclear fuel and high-level radioactive waste, while NCSL said the process determining disposal and storage options should be transparent and inclusive.

Future Actions

Aside from continuation of the working groups noted above, the NRC Rulemaking Review working group will be conducting a conference call to discuss whether comments should be submitted to the NRC on their proposed rulemaking for physical protection of byproduct material as it relates to transportation.

The next meeting of the committee will be in the fall in Wisconsin.

IV. NEW BUSINESS

A. Mr. Allan Barker, NRC Region III, updated the Board on the status of the FENOC plants.

Davis-Besse Nuclear Power Plant

On April 27, 2010, the first quarter integrated inspection report for Davis-Besse was issued. Based on the results of this inspection, two NRC-identified findings, and one self-revealed finding, all being of very low safety significance were identified. The NRC-identified findings were the failure to maintain normally energized medium voltage cables in an environment consistent with cable design, and a non-compliance with transient combustible material control procedures. The self-revealed finding was identified for the failure to adequately implement post-maintenance testing.

On June 23, 2010, the Nuclear Regulatory Commission issued a Confirmatory Action Letter to FirstEnergy Nuclear Operating Co. (FENOC) committing the company to actions needed to assure the NRC that FENOC can safely restart the Davis-Besse Nuclear Power Station. The NRC's confirmatory action letter is designed to address issues that contributed to the March 12 discovery of cracks and leakage in multiple Control Rod Drive Mechanism (CRDM) nozzles. The CRDM nozzles guide the control rods into the reactor core to shut down the reactor. The letter details and confirms FENOC's agreement to take certain actions in response to the identified cracks. Issues associated with the cracks are being reviewed by the NRC and the agency's special inspection team.

The Davis-Besse commitments include:

- Shutting the plant down no later than October 1, 2011 and replacing the reactor head with a newly manufactured reactor head before returning to operation
- Providing technical information regarding the time at which the next inspection of the existing reactor head would be required, based on reactor head temperatures, regardless of the 2011 planned shut down
- Providing a sample of the CRDM nozzles to the NRC for independent crack analysis
- Strengthening its leakage monitoring procedures

The commitment to replace the reactor head in 2011 also addresses NRC concerns regarding the uncertainties for new cracks and the rate at which new cracks could grow. Additionally, the NRC has reasonable assurance that, while highly unlikely, if cracks were to develop, the structural integrity of the reactor head would be maintained at least until the 2011 shut down.

Although there is some additional analysis and information required from the utility, the NRC has been provided with reasonable assurances that there will be no undue risk to the health and safety of the public prior to the replacement of the reactor head. Therefore, the NRC's focus will continue to remain on the corrective actions, root cause of the problems and continued safe operation of the plant.

Though a date has not yet been set, the NRC will schedule a public meeting near the plant to present the results of the agency's special inspection. Issuance of a confirmatory action letter does not preclude the NRC from taking other additional actions for any violations of NRC requirements that may be identified.

A copy of the confirmatory action letter is available on the NRC Web site at www.nrc.gov/reading-rm/adams/web-based.html using the number ML101740519 or from the Region III Office of Public Affairs

One of the commitments in the CAL was that FENOC would provide to the NRC, in writing, the results of the Re-Inspection Years (RIY) calculation for Operating Cycle 17, performed in accordance with American Society of Mechanical Engineers (ASME) Code Case N-729-1 based on calculated RPV head temperatures. This commitment was due to the NRC prior to plant restart (Mode 2). The NRC acknowledge that, as confirmed in your June 22, 2010, letter to the NRC, the information was received and that a copy of the calculation used to determine this information has been provided to the NRC Special Inspection Team currently onsite. The results of the NRC review of the calculation will be documented in the Special Inspection Team inspection report, when it is issued following completion of the inspection. The NRC considers Commitment No. 1 of CAL No. 3-10-001, dated June 23, 2010, to be closed. Commitments No. 2 through 4 remain open.

Perry Nuclear Power Plant

On May 4, 2010, the first quarter integrated inspection report for Perry was issued. Based on the results of this inspection, two NRC-identified findings of very low safety significance were identified. The NRC-identified findings were the failure to accurately assess plant risk during maintenance activities, and a failure to make an accurate immediate operability determination based on plant conditions and available information.

Beaver Valley Power Station

On April 23, 2010, the first quarter integrated inspection report for Beaver Valley Units 1 and 2 was issued. Based on the results of this inspection, one self-revealed finding of very low safety significance was identified for the failure to properly implement work instructions causing leads to be inadvertently lifted for an alarm in the main control room.

National Academy of Sciences, Cancer Risk Study

The Nuclear Regulatory Commission has asked the National Academy of Sciences to carry out a new study on cancer risk for populations living near nuclear power facilities. The Nuclear Regulatory Commission discussed this request at the National Research Council's Nuclear and Radiation Studies Board public meeting on April 26, 2010. The public NRC presentation slides on the cancer study can be found at: <http://dels.nas.edu/global/nrsb/NRCAnnouncement> with one additional link to the "PDF copies here."

The PDF files available from the April 26 meeting include: 1) NRC Request for the Study; 2) Institute for Energy and Environmental Research, Perspectives on Studying Cancer Risk; and 3) University of North Carolina Testable Hypotheses for Cancer Risk.

FEMA Disaster Initiated Review

The following information on a FEMA disaster initiated review is offered to the board. A disaster initiated review will determine the status of offsite emergency preparedness, and its impact on restart activities, following a natural disaster (e.g., hurricane, tornado, flood, storm, earth quake) in the vicinity of a power reactor.

At 4:17 a.m. EDT on June 6, 2010, the Fermi Nuclear Plant declared an Alert after high winds caused some physical damage to the auxiliary building. The NRC entered Monitoring Mode at 4:53 a.m. in response to the event. As part of the NRC response to the event, the NRC resident inspectors arrived at the site and monitored the licensee's actions, observed operators in the control room, walked down plant systems, and maintained constant communication with Region III and NRC Headquarters. The plant shut down automatically, as designed, on June 6 at 2:38 a.m. after the high winds caused a partial loss of offsite power to the plant. Plant equipment functioned as designed during the shutdown.

In summary, the consideration to conduct a FEMA disaster initiate review should be completed while the emergency response personnel are assembled. This will afford the emergency responders an opportunity to provide input on the extent of condition from their advantage point. In addition, the decision basis should be documented.

B. Mr. Ricky Collings provided the Board with an update on plant performance and FENOC activities:

Beaver Valley

a) Unit 2 Exercise – summary and results

The 2010 Exercise preparation for the Red Team included the following scenarios:

- Mini-Drill #1
- Dry Run Exercise #1
- Dry Run Exercise #2
- Evaluated Exercise

The Onsite ERO effectively demonstrated the ability to adequately respond to the events presented in the drill and exercise scenarios. During the four events assessed, there were a total of thirty-six (36) Drill and Exercise Performance (DEP) opportunities of which 32 were successfully met. During the Mini-Drill and Dry Run #1, two Declarations and two Notifications were either untimely or inaccurate. Remedial training was successful in correcting the problems, with no DEP failures in either the Dry Run 2 or Evaluated Exercises. All emergency facilities activated on time. Evaluation of these drills and exercises was based upon results from assessment of the established objectives, which, in turn, are based on compliance with 10CFR50.47(b) Emergency Planning Standards. During the four events assessed, there were a total of 353 objectives evaluated. 338 of the 353 total objectives were successfully demonstrated. Six objectives were associated with a Risk Significant Planning Standard, relative to DEP Indicators for Declaration and Notification of an emergency. The remaining nine objectives were for non-risk significant planning standard issues. Remediation was completed and the objectives were successfully demonstrated as part of the Evaluated Exercise. Based on an evaluation of objectives, as well as a thorough critique of both participant and observer comments, it was determined that the on-site Emergency Response Organization effectively demonstrated the ability to adequately respond to the events presented in the drill and exercise scenarios.

Off site performance during the Exercise resulted in:

- A Deficiency for the State of Ohio
- Two Area Requiring Corrective Action (ARCAs) for the State of Ohio

- An ARCA for Columbiana county in Ohio
- A Deficiency for Hancock county in West Virginia
- Two ARCAs for West Virginia (a third was corrected on the spot)
- Five Planning Issue for West Virginia

Remedial actions have been taken and the Deficiency in West Virginia was successfully re-demonstrated the week of July 5th. The Ohio Deficiency is scheduled to be re-demonstrated in the next few weeks. Resolution of the ARCAs is also underway with Ohio re-demonstrating at the same time as the Deficiency and other one during the Perry Exercise this fall.

b) June severe weather impact on station and sirens

Following severe weather on 6/2/2010 the following sirens experienced AC power failures: 013, 077, 116, 161, 162, and 167. Siren 013 remained on its battery backup during the outage. The storm also resulted in damage to Siren 110 due to a lighting induced power surge. All affected sirens were in Beaver County. The affected sirens were returned to service over several days. CR 10-77762 documented the issue.

c) Siren upgrade project status

Beaver Valley has 120 sirens. 27 of those were upgraded a few years ago including battery back up power. An additional 35 sirens were selected early in 2010 to be replaced. The sirens were manufactured and delivered to the site in early June. Replacement has progressed over the past 6 weeks with all but 5 sirens back in service. The remaining 5 have been installed and are awaiting DLC personnel to reconnect power to allow testing and completion of the project. There was a minor issue with communications between the new sirens and the control station. The cause was identified as a change that the vendor made to an internal card that did not recognize repeater signals. This issue was corrected and verified by testing. An industry Operating Experience report was issued to alert other utilities of the issue. Another project to replace additional sirens in 2011 is being processed to obtain funding.

Davis-Besse

a) 16RFO Axial Cracking and Repairs

During Davis-Besse's 16th Refueling Outage, testing of the existing reactor head Control Rod Drive Mechanism nozzles led to modifications on 24 of the 69 CRDM nozzles due to indications of Primary Water Stress Corrosion Cracking (PWSCC) – a known industry issue identified in the 1990s. Following these modifications, extensive testing was performed to verify the reactor head's structural integrity and assure its ability to operate safely and reliably through the plant's next operating cycle. The slightly higher temperature in the head region accelerated the process. The plant is calculating head temperatures frequently throughout the next operating cycle and using that data to evaluate the stresses on the nozzles. Additional actions would be taken if warranted by the analysis. The new reactor head assembly that includes materials more resistant to the corrosion cracking will be installed in 2011.

b) Update Groundwater Sample Results

Increased sampling of MW-105A was initiated due to elevated tritium levels (the highest level was 4,178 pCi/liter) in January 2010. Sampling of this well occurred monthly

through the spring, when all Groundwater Protection Initiative were sampled for the semi-annual requirements of the program.

In addition, seven pre-construction era wells were sampled in order to bound the area of the tritium plume. In all, six wells showed tritium concentrations over 2,000 pCi/liter. Included were MW-105A and five pre-construction era wells on the north and east side of the plant. Tritium in these wells ranged between 2,718 and 4,184 pCi/liter.

A Problem Solving Decision Making Team was formed and a problem solving plan was finalized on June 4. The plan requires sampling of the 6 wells on a monthly basis through the end of 2010 unless a well shows less than 2,000 pCi/liter for two samples in a row.

The first set of monthly sampling of these wells showed all wells above 2,000 pCi/liter, with 5 of the six showing a slight decrease in tritium concentration. Pre-construction well analyzed at 3,675 pCi/liter, up slightly from 3,641 pCi/liter in April.

In addition to increased well sampling, various Storm Sewers are being evaluated for tritium, as well as sumps in the Turbine Building and Water Treatment Plant. These tritium levels have all been under 2,000 pCi/liter thus far. Samples from these sources will be evaluated again after the Plant has been back in operation for a period. Tritium levels in Plant sumps are expected to increase, and will be compared to the monthly well sample results to try to determine if there is an active leak or if the increased tritium being observed is from previous leaks. Notifications have been and will continue to be made for well samples over 2,000 pCi/liter tritium.

c) Expedited Head Replacement/Steam Generator Replacement

The replacement of Davis-Besse's Reactor Head has been accelerated to the fall of 2011. The new head was originally scheduled to be installed in 2014 along with the two steam generators. The new head uses Control Rod Drive Mechanism (CRDM) nozzles made of an Alloy 690 material which is less susceptible to Primary Water Stress Corrosion Cracking (PWSCC). The new head is also designed to use a new Integrated Head Assembly package. The steam generators are being fabricated and will be installed in 2014, as previously planned. These long-term improvements will strengthen the plant's material conditions.

d) June Severe Weather Impact

A tornado struck a 2 ¼ mile path in Ottawa County on June 5, 2010 at approximately 11:30 p.m. The severe weather associated with this evening caused only minor issues for the Davis-Besse Nuclear Power station. There was no loss of tech spec equipment. The tornado physically touched down in an area that is outside the Davis-Besse 10 Mile Emergency Planning Zone (EPZ). Three EPZ sirens did lose Alternating Current (AC) power during the evening from the strong winds, battery back-up power was available and the sirens did not lose their capability to function. AC power was restored the next day.

A fiber optic line that supplies some phone communications for the plant was severed by debris during the storm between the plant and Toledo. This resulted in temporary loss of one of the three phone communication paths from the station. The 4-way ring down phone was not affected. The fiber optics phone communication path was restored on June 7, 2010.

Perry Plant

a) Reactor Scram of May 11

On May 11, 2010, at 2318 hours, a manual Reactor Protection System actuation was inserted in accordance with Technical Specification (TS) 3.1.5, "Control Rod Scram Accumulators." Control Rod Drive (CRD) system charging water header pressure was less than the set point and multiple accumulator fault alarms were received on withdrawn control rods. The cause was a failed master trip unit which caused an invalid Division 2 loss of coolant accident initiation signal and loss of electrical power to the operating CRD pump and standby CRD pump. The operating CRD pump was in an allowed alternate electrical line-up at the time but could not be transferred to its normal source for a timely restart.

The failed trip unit was replaced and tested satisfactorily. Future replacement trip units will be required to have 100 hours burn-in prior to installation to reduce the potential for early failures. Plant procedures are being revised to improve recognition and evaluation of long-term plant configurations and degraded conditions. A four hour non-emergency notification was made to the NRC Operations Center at 0312 hours on May 12, 2010, in accordance with 10 CFR 50.72(b)(2)(i) as an initiation of any nuclear plant shutdown required by the plant's Technical Specification and 10 CFR 50.72(b)(2)(iv)(B) as any event or condition that results in actuation of the reactor protection system when the reactor is critical (Event Notification 45918).

b) Status of Cross-Cutting Areas of Human Performance and Problem Identification and Resolution

The current Perry Nuclear Power Plant (PNPP) status in regards to the Nuclear Regulatory Commission (NRC) Reactor Oversight Process (ROP) Cross-Cutting Areas is as follows:

The PNPP operated in a manner that preserved public health and safety and fully met all cornerstone objectives. Plant performance for the most recent quarter, as well as for the first three quarters of the assessment cycle, was within the Licensee Response column of the NRC's Action Matrix, based on all inspection findings being classified as having very low safety significance (Green) and all PIs indicating performance at a level requiring no additional NRC oversight (Green).

Human Performance

For the assessment period from January 1 through December 31, 2009, the total number of inspection findings with documented cross-cutting aspects decreased slightly to 19. Three cross-cutting themes are currently identified in the human performance area with five findings in H.3(a) (work control - planning); four findings in H.4(a) (work practices - human error prevention techniques); and four findings in H.4(c) (work control - oversight).

During the past assessment period, the number of findings with the same cross-cutting aspect of resources-documentation/procedures (H.2(c)) was reduced to below the threshold for substantive cross-cutting issue themes. While the NRC will continue to monitor the human performance area, based on the actions the PNPP took to decrease the number of findings in the H.2(c) aspect, the theme in this aspect was closed.

This assessment period is the fifth consecutive assessment period identifying a substantive cross-cutting issue in the human performance area. The NRC expressed continuing concern with the scope of the PNPP efforts and progress in addressing this cross-cutting area and concluded that the substantive cross-cutting issue in human performance will remain open.

Because efforts to effect improvements in the human performance area have not been sufficiently effective, the NRC requested that PNPP have an independent assessment of safety culture performed to help improve understanding of how the overall safety culture at PNPP may be impacting the ability to achieve sustained results. This assessment has been completed and is available for review during the NRC biennial Problem Identification and Resolution (PI&R) inspection scheduled for November 2010.

Problem Identification and Resolution (PI&R)

For the same assessment period, the NRC identified four findings in the PI&R area with the same aspect of P.1(c) (corrective action program -thorough evaluation). The NRC concluded that corrective actions have been unsuccessful in addressing this area and expressed concern that a weakness in the aspect of thorough evaluation may be a significant contributor to the PNPP's inability to correct the human performance issues. Because of the continued difficulties with PI&R, the NRC has a concern with the scope of PNPP's efforts and progress in addressing the cross-cutting area performance deficiencies and has concluded that a substantive cross-cutting issue exists in this area.

Summary

A mid-cycle assessment report has not yet been issued (typically early September). For the 2010 first quarter NRC Inspection report, two findings were identified one in H.1(b) and one in P.2(b); while six findings dropped off; one in H.3(a), one in H.3(b), two in H.4(c), and two in P.1(c). The second quarter inspection exit will be conducted later this month. The NRC will update their assessment with the 2010 results during the mid-cycle assessment report.

c) Recirculation pump trip of June 4

On June 4, 2010, at 0707 hours, the Reactor Recirculation Pump "A" tripped off due to the power supply breaker 5A opening. The 5A breaker opened as a result of a failed optical isolator circuit output card. The power plant entered single loop operations with final reactor power at approximately 58% rated thermal power. The optical isolator card was replaced. The operators then lowered reactor power to approximately 21% on Saturday, June 5 in order to recover Reactor Recirculation pump A and commence power ascension. Following a rod pattern adjustment and continued power ascension, the plant returned to 100% power on June 9, 2010.

The root cause investigation team concluded the Reactor Recirculation 'A' Pump trip was caused by an inadequate circuit design to suppress the voltage surge (Inductive Kick) from relay 1B33A-K150A. The design uses a diode across the relay to protect the optical isolator circuit card. The design did not effectively protect the circuit card resulting in failed transistors. When the card failed, the relay was de-energized and the pump 5A breaker lost a permissive to remain closed. Therefore, it opened causing the pump trip. Previous corrective actions to address similar failures were too narrowly focused and not implemented as intended. Additional corrective actions have been developed.

d) Increase in groundwater sample > 5000 picocuries/liter

On June 14, 2010 Environmental/Midwest Labs Inc. notified Perry Nuclear Power Plant chemistry personnel that sample results from Plant Piezometer Tube 6 showed a tritium value of 5,241 pci/ L. This sample was obtained at the station on May 2, 2010. This value exceeded the trigger criteria of 2,000 pci/L specified in the FENOC Groundwater Monitoring procedures.

Plant systems were walked down and verified to have no new signs of leakage. Radwaste water management logs showed no unusual or unexpected changes in water inventory. Preliminary results provided by the vendor for the other Perry groundwater monitoring wells and piezometer tubes sampled on May 2, 2010 in the station monitoring program show that no other wells approached this limit.

A back up sample was obtained on 6/14/2010 and indicated a tritium value of 2,870 pCi/L and is consistent with previous sample results from March 5, 2010. Based on the back up sample results and monitoring activities, there does not appear to be a new leak but rather a "recharge" of the previously reported leak from March 2006. The "recharge" is considered to have occurred after precipitation events re-introduce water to areas under the plant that were previously contaminated with tritium. The Offsite Dose Calculation Manual (ODCM) required reporting value for tritium (20,000 pCi/L) was not exceeded. No other regulatory limits were challenged or exceeded.

All required actions from the Groundwater Monitoring Plan have been completed. No further actions required.

e) June 23 earthquake

The June 23, 2010 Val-des-Bois, Quebec earthquake occurred at 1:42 pm local (eastern) time 56 km (35 miles) north of Ottawa, Ontario. The preliminary estimate of magnitude (M) is 5.0, at a depth of 16 km (10 miles). This earthquake occurred near the southern edge of the Western Quebec Seismic Zone. Earthquakes within this zone are mostly small. They tend to cluster in a wide area that is slightly elongated northwest-southeast. Historically, earthquakes in the Western Quebec Seismic Zone have caused damage roughly once a decade. As reported in a local newspaper, "By the time the rumbling reached Ohio, it would have felt more like a 2.0-magnitude quake."

Two nuclear plants declared an Emergency Event;

Cook in Michigan made the following notification to the NRC, "At 1428 [EDT] on Wednesday, June 23, 2010, an Unusual Event was declared for Unit 1 and Unit 2 based on Emergency Plan criterion N-1 'Natural or Destructive Phenomena Inside the Protected Area'.

"The Unusual Event was declared following detection of ground motion by persons on site, with confirmation based on United States Geological Survey information. Plant operation was not impacted by the event. Site structure and system inspections were made in accordance with the Abnormal Operating Procedure for Earthquake. No damage was identified."

Vermont Yankee made the following notification to the NRC, "An Unusual Event was declared at 1425 EDT due to reports from site personnel of an earthquake felt onsite. This

was verified through the National Earthquake Information Center. Plant seismic monitors did not actuate.”

"Actions Taken: Implemented OP 3127, Natural Phenomenon, for an earthquake. Plant personnel are walking down systems for any damage indications. [There is no indication of damage] at this time."

No other Plants in the northeast or mid-west made declarations.

The earthquake was felt onsite and reported to the Perry Control Room. Plant Operators entered the Earthquake abnormal operating instruction and actions taken found no structural damage. The Emergency Plan was reviewed for entry criteria, but the criterion was not met as alarms were not indicated on the Monitoring panels (see the following EAL wording).

Category L: Natural or Destructive Phenomena

Initiating Conditions Entry Criteria

Control Room receives report from plant personnel who felt an earthquake, and

EITHER,

(a) WHITE event indicator light on local Seismic Monitoring Panel 0H51-P021

OR,

(b) AMBER light(s) on Seismic Monitoring Panel 0H13-P969

FENOC

a) E-data update (BVPS/DBNPS)

Beaver Valley – The equipment to install a cyber secure environment for Unit 2 simulator has been received. Information Technology (IT) is building the environment and FENOC has lined up the points to be installed. The screens are exactly the same so they are also ready for data when the server work is completed. Estimate is in the next 60 days the data will be available, formatted, tested and released to Production. Unit 1 simulator data will be moved to the same server system as Unit 2 after upgrades are completed this fall during the outage.

Davis-Besse – An initial set of points have been selected, rough drafts of the screen layouts have been developed and IT resources have been budgeted. Meetings with site personnel are planned in August with programming to begin in early fall with a goal of getting actual plant data to Production prior to Thanksgiving. Simulator data is targeted by the middle of February 2011.

b) Common dose assessment update

A common program has been identified. FirstEnergy Procurement is in discussions with the vendor and has provided a cost estimate. This estimate was used to make a presentation to the Project Review Committee meeting in June. The PRC approved the approach and moved the project into the next phase. The effort will be prioritized with other approved projects and funding provided as available. The approach will be to phase in the program over two years with Beaver Valley being the first plant to get the new program and progressing to Davis-Besse and finally Perry. There is another path being reviewed. Another utility is working to develop a front end program to the RASCAL

program. The front end is intended to make the program more user friendly and provide auto-population of information. FENOC is a beta tester of the program.

c) Central Joint Information Center

A facility has been identified and floor plan developed. Fleet EP presented the project at the Project Review Committee meeting in June. The PRC approved the approach and moved the project into the next phase. The effort will be prioritized with other approved projects and funding provided as available. The target schedule is to renovate the facility in 2011 and move functions in 2012 after Beaver Valley's Evaluated Exercise but before Perry's.

d) Comprehensive Review

The three site reports have been reviewed and information associated with Emergency Preparedness has been consolidated. The material is not Safeguards related but it is identified as "Official Use Only – Security Related Information". FENOC is prepared to debrief the information to the State of Ohio but is not allowed to be open for public review.

V. MISCELLANEOUS

Tammy Little provided an update on HB 495: the Utility Radiological Safety Board was removed from the Sunset Review Committee's list. Nancy Dragani provided testimony to the Committee.

The next meeting of the Utility Radiological Safety Board will be October 12, 2010.

VI. ADJOURNMENT

Mr. Mel House asked for a motion to adjourn. Mr. Bob Owen, ODH made the motion to adjourn and Mr. Chuck Kirchner, ODA seconded the motion. The motion was carried.

DATE

UTILITY RADIOLOGICAL SAFETY BOARD