

# The Utility Radiological Safety Board of Ohio



**Annual Report**

**State Fiscal Year 2007**



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# REPORT FROM THE CHAIRMAN



REPORT TO THE GOVERNOR AND GENERAL ASSEMBLY

(TO BE DEVELOPED)

## DESCRIPTION OF THE URSB



## DESCRIPTION OF THE URSB

The Utility Radiological Safety Board (URSB) of Ohio was established by the Ohio General Assembly as part of Amended Substitute House Bill 111 in July of 1989 and later revised by Amended Substitute House Bill 215 in June 1997. The Board's purpose is to develop a comprehensive policy for the State regarding nuclear power safety. The Board's objectives are to promote safe, reliable, and economical power; establish a memorandum of understanding with the federal Nuclear Regulatory Commission and the State; and recommend policies and practices that promote safety, performance, emergency preparedness, and public health standards that are designed to meet the State's needs.

The URSB membership consists of six state agencies: the Ohio Departments of Agriculture, Commerce, and Health; the Ohio Emergency Management and Environmental Protection Agencies; and the Public Utilities Commission of Ohio.

The URSB has a Working Group comprised of member agencies' staff to support the Board and a Citizens Advisory Council (CAC), which provides the Board with citizen concerns. Board meetings are held quarterly at the offices of the Ohio Emergency Management Agency at 2855 West Dublin-Granville Road, Columbus, Ohio. The meetings are open to the public.

To find out more information concerning the Utility Radiological Safety Board and its members, please refer to the URSB homepage at <http://www.ursb.ohio.gov/> or contact the URSB Secretary at (614) 889-7160.

The Board members for SFY07 and their respective designees are listed below:

Ohio Department of Agriculture  
Mr. Robert Boggs, Director  
Mr. Anthony Mitchell, Designee

Ohio Emergency Management Agency  
Ms. Nancy Dragani, Executive Director  
Mr. Melvin House, Designee

Ohio Department of Commerce  
Mr. Doug White, Director  
Mr. Dean Jagger, Designee

Ohio Environmental Protection Agency  
Mr. Chris Korleski, Director  
Ms. Cindy Hafner, Designee

Ohio Department of Health  
Alvin D. Jackson, M.D., Director  
Mr. Robert Owen, Designee

Public Utilities Commission of Ohio  
Dr. Alan Schriber, Chairman  
Mr. Shawn Smith, Designee

# URSB ACTIONS AND ACTIVITIES



## **URSB ANNUAL REPORT FY07**

### **SUMMARY OF URSB MEETINGS:**

#### JULY 10, 2006

A full participation ingestion exercise was conducted with the Beaver Valley Power Station and Columbiana County on June 27–28, 2006. The first day was demonstration of the emergency phase and included full activation of the State EOC and field activities to include the field monitoring teams, communications van and the sample screening point. The second day was a post-plume phase demonstration and included the Executive Room, the IZRRAG and the Field Team Center in addition to some assistance from the JIC. The JIC participation was limited due to an actual emergency occurring simultaneously with the exercise. Preliminary results indicate no findings for the state of Ohio and two Areas Requiring Corrective Action (ARCA's) for Columbiana County. The two ARCA's were in regards to misinformation on news releases and incorrect survey methodologies at two monitoring and decontamination facilities. The strengths for the state of Ohio included: The EOC Executive Group demonstrated the ability to simultaneously handle real-world activities with exercise activities.

The Perry Nuclear Power Plant has two open White findings in Mitigating Systems (2003). The White finding in Emergency Preparedness (2004) has been closed. Perry continues in the fourth column of the NRC oversight program. Perry was placed in the fourth column in Aug, 2004 as a plant with a Multiple Degraded Cornerstone Facility due to numerous equipment problems. The oversight matrix has five columns--the first column for a facility operating satisfactory requiring no additional NRC oversight and fifth column for a facility ordered to shutdown requiring NRC approval for start-up.

Due to the performance trend at Perry, the NRC issued a Confirmatory Action Letter (CAL) to the utility on September 28, 2005. The NRC conducted a public meeting on March 14, 2006 to give FirstEnergy the opportunity to discuss their corrective actions. Ohio EMA and ODH had representatives present. The outcome was a Phase 2 Performance Improvement Initiative Plan. The Ohio EMA observed the Phase 2 Improvement Initiative inspection. Both ODH and Ohio EMA continue to participate in CAL follow up inspections.

A review is in progress of current equipment. Working Group recommendations are being considered for any needed new equipment to support a nuclear power plant emergency. The Working Group has assessed the need for consistent plant data in the Assessment Room, and met with FENOC to address this issue on December 6, 2005. Teletrix equipment has been purchased for training of first responders by Ohio EMA. There is a review in progress to assess Plume Tracker, a software training program for the Field Monitoring Teams.

An agreement between FENOC and the State of Ohio has been finalized that includes details of requirements for unescorted site access for the Joint Inspection Observation Program (JIOP). EMA is working towards unescorted access for four employees. ODH is working with their union.

The shelf life of KI for the general public and emergency workers is approaching expiration (May 2007). The State of Ohio is seeking clarification from the NRC on their position for replenishing the current KI tablet supply. The State of Ohio is not interested in obtaining liquid KI.

The Ohio Department of Health updated the Board on information regarding Midwestern Radioactive Material Transportation Committee. The Committee met on June 14-15 in Cedar Rapids, Iowa.

President Bush announced his intention to fund the Global Nuclear Energy Partnership (GNEP), a fuel reprocessing and recycling program, which could affect funding and shift the focus away from Yucca Mountain. The Committee submitted comments on DOE's advance notice of intent to prepare an environmental impact statement on the GNEP demonstration sites. Section 7 of the Nuclear Fuel Management and Disposal Act would exempt DOE from HMTAA regulations and give them the ability to preempt any state regulations, such as state fees or inspection programs. The Council of State Governments has adopted a resolution opposing passage of this bill with that clause. The National Academies of Science has completed a study on the safe transportation of spent nuclear fuel in the United States. Primarily they found such transportation to be relatively safe when conforming to current regulatory requirements. The Committee wrote a letter to the NRC expressing doubt that such a study would provide security information needed by states to adequately plan for such shipments. The Committee requested that NRC make it a priority to develop appropriate versions of its package security assessments and to share this information with the state organizations involved in ensuring the safety and security of shipments.

Beaver Valley Power Station Unit 1 completed their refueling outage on time, in 65 days, and under budget. Beaver Valley staff replaced all three steam generators and the reactor vessel head. Turbine generator work included rewinding the generator stator and replacement of the exciter rotor. An unplanned loss of cooling to the Spent Fuel Pool occurred when a valve which was being worked on began to leak and River Water (Service Water) had to be secured due to flooding in the cubicle with the leak. All fuel was in the Spent Fuel Pool. After approximately 10 minutes service water was returned to service using a different service water pump, restoring cooling to the spent fuel pools.

On April 18, Beaver Valley experienced a security event. A tractor-trailer (scheduled to pick up tooling from the outage) was stopped for security inspection at the Vehicle Inspection Facility prior to being granted access to the site. Search of the vehicle found a duffle bag that was closed and locked. Upon removal of the lock by Site Protection personnel it was observed that the bag contained a large amount of cash. Site Protection supervision was contacted and prior to a decision being made concerning granting entry the drivers of the vehicle decided to leave. Site Protection contacted Local Law Enforcement which pulled the truck over. The Regional Anti-Terrorism Task Force was activated. Under questioning by the FBI neither driver admitted the cash was theirs. The more than \$500,000.00 was confiscated by the FBI and the drivers released.

On April 11, 2006, Beaver Valley Power Station Unit No. 2 was at 100% power. A technical specification limiting condition of operation was entered on April 10, 2006, at 0436 hours due to the removal of the "Secondary Leak Containment Recovery System (SLCRS) for scheduled maintenance. At 0924 hours on April 11, 2006, an inadvertent actuation of fire protection system deluge valves resulted in both trains of the SLCRS being declared as inoperable with the requirement to initiate shutdown within 6 hours. In parallel with the plant shutdown, a Notice of Enforcement Discretion (NOED) was prepared for presentation to the NRC. At 1400 hours, with reactor power at approximately 26%, the request for a NOED was presented to the NRC for consideration. At 1520 hours, with reactor power at approximately 19%, the NOED was granted for a period of 48 hours and the plant shutdown was terminated. The unit returned to 100% power on April 12, 2006, at 1455 hours.

Beaver Valley Unit 1 commenced a Technical Specification required shutdown at 1415 hrs on May 26 due to Train B Solid State Protection System inoperable. Reactor start up and return to service occurred on May 27.

FENOC was notified that on June 23, 2006 Ohio Emergency Management Agency received concurrence from The Department of Homeland Security to relocate two sirens as part of the Davis-Besse siren upgrade project. The two new sirens had been installed at the new locations earlier this year, but not energized until concurrence was received from DHS.

On May 2, 2006, Perry Nuclear Power Plant discovered that a specific set of Division 1 Emergency Diesel Generator (EDG) Control Room Control Switch contacts were not designed to isolate the Control Room from the local Division 1 EDG controls in the event of a control room fire violating the PNPP fire protection program and could adversely affect plant shutdown in the case of a control room fire. Compensatory actions (procedure changes) have been completed to address this issue.

### October 10, 2006

The dry run for the Perry NPP Partial Exercise was held on October 4, the graded exercise will be October 24. There is a review in progress to assess Plume Tracker, a software training program for the Field Monitoring Teams. A demonstration of this system will be scheduled following the October 24<sup>th</sup> exercise. The 2006 State Radiological Emergency Preparedness (REP) plan was approved by the Department of Homeland Security (DHS) and distributed. Further review will be necessary to become National Incident Management (NIMS) compliant.

The Department of Health contacted the NRC who indicated that there will be more guidance within the next week or so on the NRC one-time purchase of replacement of KI for the public that expires in May of 2007. This will not include the KI for emergency workers and the institutionalized which are separately funded, which also expires in May 2007.

The Department of Health updated the Board on activities of the Midwestern Radioactive Material Transportation Committee. The Department of Energy (DOE) has established a new Routing Topic Group to begin to establish a national suite of routes for the transportation of spent nuclear fuel to Yucca Mountain. Dan Fisher from PUCO will represent Ohio on this topic group.

A proposed amendment to add Section 313 to the federal FY 07 Energy and Water Development appropriations bill (H.R. 5427) would divert money from the Nuclear Waste Fund to pay for the development of “consolidation and preparation facilities” in as many as 31 states that have nuclear power plants. The Midwestern Legislative Conference, among others, passed a resolution urging that Congress reject the language of this section. Key points against the language by the Midwestern Committee are diverting funding away from the repository, diversion from the concept of consolidating waste in a centralized storage location, unnecessary transportation of waste, nine Midwestern states are potentially targeted for these facilities, private initiatives are already in progress, too ambitious a timetable for construction of these facilities and no funding to states analogous to Section 180(c) of the Nuclear Waste Policy Act.

The final version of the Annual Report, which by law is made to the Governor and General Assembly; was presented to the Board. The verbiage was approved by the Board. The report will be printed and distributed before the end of the year.

Mr. Lickus, NRC Region III presented a new employee, Sheri Minnick, to the Board. She will be a governmental liaison with Mr. Lickus. Ms. Minnick comes from Region 1 where she was an Agreement State Liaison.

In August of 2006, the NRC completed its performance review of Davis-Besse for the first half of 2006. This included review of performance indicators for the most recent quarter and inspection results for previous 12 months. Plant performance for the most recent quarter 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 and all performance indicators indicating performance at a level requiring no additional NRC oversight. Mr. Lickus noted that the NRC has received a request from Davis-Besse to rescind the annual assessment requirement in the area of operations in the Confirmatory Action Letter (CAL).

Perry has completed a performance review and met all cornerstone objectives. The two “White” Findings in mitigating systems remain open. The NRC has a number of inspections scheduled. There was a CAL issued in September of 2005 to confirm Perry’s actions. Perry is reviewed on a quarterly basis. The assessments show that Perry continues to operate in a manner that preserves public health and safety but remains in the multiple/degraded cornerstone (Column 4).

Regulatory Information Summary (RIS) 2006-12. Following the September 11 attacks, the NRC evaluated the EP planning basis given the threat environment. The NRC concluded that the EP planning basis does remain valid; however they recognize that security events differ from accidental events and the EP regulations and guidance could be enhanced.

Non-evaluated security drills will be held over the next 3 years in addition to biennial exercise. This will be discussed at the Region 3 scheduling conference. Tentatively, Davis-Besse is looking at the third quarter of 2008 and Perry is looking at the first quarter of 2009.

Mr. Lickus also reported that on October 4 the NRC released findings of a group of experts concerning inadvertent releases of radioactive liquids, particularly tritium. The task force found no impact on public health from the events. The group went back to data from 1996. There were 26 separate recommendations that applied to the NRC, plant operators or both. The recommendations included updating regulations on monitoring the environment in and around the plant and indicated the operators cooperate with local governments by voluntarily reporting releases that fall below regulatory requirements.

Beaver Valley staff conducted a maintenance outage on Unit 1 to search for suspected a piece of foreign material in one of the steam generators. After draining and cooling down of the steam generator, cameras were inserted in the secondary side to search for the material, but none was detected. Most likely the material was cleared out when the steam generator was drained. The operators also performed an examination of the steam generator tubes to confirm there were no marks or blemished on the tubes from the foreign material. Repairs were made to provide ongoing surveillance of the system.

Beaver Valley experienced a reactor trip on September 7, 2006. A faulty electronic circuit card caused a reactor trip, leading to a two day shutdown. Troubleshooting explored and eliminated other causes that could have led to the trip. Although the failure was believed to be random, additional testing of the faulted card was under investigation at the vendor facility by the utility's Root Cause Team.

The NRC has issued a preliminary "White" finding to Beaver Valley as a result of their inspection of the June exercise. The finding pertains to dose assessment processes used during the exercise and cites concerns about communication between dose assessment personnel and the Technical Support Center in determining a revised dose projection.

The Beaver Valley Power Station 12th refueling outage began on Oct 2 with reactor shutdown. The shutdown was conducted event free and turbine disassembly was in progress by October 5. Reactor vessel head removal was completed without incident and fuel off-load is scheduled for October 9. Other major work includes overlay welding to strengthen pressurizer nozzles and increasing the size of the containment sump strainer. The size of the containment sump is being increased from 150 to 3,000 square feet.

Actions to implement the power uprate for Unit 1 and 2 are in progress. Unit 1 increase of a 3 percent uprate was completed as part of the spring 2006 steam generator replacement outage. An additional uprate of 5 percent will be conducted during the fall 2007 outage and is contingent upon completion of required engineering calculations. Unit 2 uprate of 3 percent will be completed in the current refueling outage. An additional 5 percent uprate will be implemented during the spring 2008 outage and requires modification of the feedwater regulating valves and high pressure turbine rotor.

The Davis-Besse Nuclear Power Station reactor was shutdown at approximately 2:30 a.m. on Sept. 6 following indication of degraded condenser vacuum. Initial indication of degraded vacuum was first identified at 1:38 a.m. Power was reduced to 45 percent and then a manual shutdown of the reactor was performed. Inspection confirmed a break in one of the turbine bearing drain lines that passes through the condenser. The break in the 1.5” line allowed air entry into the condenser causing degradation of vacuum. A temporary modification was made on the line and the plant was returned to service at 7:18 a.m., September 8.

Plans for DHS Comprehensive Reviews continued with the surrounding communities of the Perry Plant. The Comprehensive Review is scheduled for the week of November 27. The review will consist of a question and answer session with first responder organizations, including law enforcement, fire departments and county emergency response elements. Comprehensive Reviews have been completed for approximately 45 percent of the commercial nuclear industry. Davis-Besse and Beaver Valley Comprehensive Reviews are scheduled for the weeks of March 6 and May 21, 2007; respectively.

Discussions were held with the URSB Working Group concerning the definition of “release in progress.” A FENOC procedure has been developed to ensure consistent guidance to the plant staff in reporting a radioactive material release during an emergency plant event. The internal FENOC procedure is being reviewed by three states as well as county representatives to develop a common understanding of the definitions to be used by the plant staffs at all FENOC plants.

Ellen Anderson, FENOC Fleet Radiation Protection Manager, met with representatives from the URSB Working Group on August 2 to review information on groundwater protection. This effort is in response to the industry issues regarding tritium releases.

The Groundwater protection action plan was reviewed with the URSB Working Group. FENOC has hired a hydro-geologist onto its staff to provide additional measures. The assessment of the Perry Plant has been completed with the final report to be issued by the end of the month. Draft conclusions from Perry is that site system, geology, and hydro-geology have a low potential for releases to ground water onsite to impact near ground water receptors. In parallel, the site evaluation at Davis-Besse is also in progress with a final report also expected by the end of the month.

### January 8, 2007:

A partial participation exercise of the Perry Nuclear Power Plant was conducted on October 24, 2006. ODH Lab demonstration was conducted on October 23. There was one Area Requiring Corrective Action (ARCA) identified for the State of Ohio. The ARCA was due to the inability of the Department of Health Laboratory to demonstrate that the Canberra Industries germanium detectors had been calibrated properly since November, 1997.

The Department of Health updated the Board on Midwestern Radioactive Material Transportation Committee activities. The committee met in Carlsbad, New Mexico on November 14-16, 2006. The committee has several work groups participating with DOE on several key issues. Updates were provided on routing; Section 180(c) funding, rail transportation planning, transportation security information, and the transportation practices manual review. A proposed amendment to add Section 313 to the federal FY07 Energy and Water Development appropriations bill (H.R. 5427) would divert money from the Nuclear Waste Fund to pay for the

development of “consolidation and preparation facilities” in as many as 31 states that have nuclear power plants. It remains the concern of many states and organizations that establishment of these interim storage facilities would divert funds from the development of the central repository for spent nuclear fuel and high level radioactive waste and disallow governors the opportunity to participate in the decision-making process. There have been additional actions taken by states. The State of Connecticut sent an e-mail to republican governors urging co-signing a joint letter opposing the bill. The State of New Jersey sent a similar e-mail to democratic governors. The Conference of Radiation Control Program Directors has passed a resolution that supports continued cooperation between the states and DOE on the safe transportation of spent nuclear fuel and high-level radioactive waste. The best achievable schedule for operation as a high-level waste repository is March 2017. DOE Office of Civilian Radioactive Waste (OCRWM) believes that developing a comprehensive national spent fuel transportation plan and a collaborative process with stakeholders will be integral to implementing a transportation system that is safe and secure and merits public confidence.

The NRC continues to perform baseline inspections of the Davis-Besse Nuclear Power Station. Performance levels indicate that there is a level of performance requiring no additional oversight. Davis-Besse has requested that the NRC terminate their requirement for additional audits for five (5) years in the Operations area. This request is still under review pending receipt of additional information from Davis-Besse.

The NRC has completed all follow-up inspections of the Perry Nuclear Power Plant. There are no additional inspections beyond baseline inspections scheduled. FirstEnergy has sent a letter requesting closure of the open “White” findings, closure of the cross-cutting issues and transition from Column 4 of the Reactor Oversight Program to a level commensurate with current performance.

During this fall’s outage (October 2 through November 12, 2006), Beaver Valley became one of the first U.S. nuclear plants to safely and effectively implement Alloy 690 weld overlays to Unit 2’s Pressurizer nozzles.

The Nuclear Regulatory Commission issued Beaver Valley a final white finding, involving the plant’s emergency response procedures. The NRC stated that dose assessment procedure inadequacy led to a deficiency during the June 2006 evaluated exercise. The deficiency relates to releases of unknown duration and not to any of the documented accident scenarios in the site’s Final Safety Analysis Report (FSAR). The Beaver Valley staff is implementing procedure changes that will direct Beaver Valley’s Emergency Response Organization to be more aggressive in obtaining a valid release duration estimate rather than relying on a default value. Beaver Valley will also revise the time period used for releases of unknown duration from one hour to a value more consistent with other utilities’ practices. This change will be submitted to the NRC for approval prior to its implementation. Beaver Valley will implement other procedure revisions in the first quarter of 2007 and will demonstrate their effectiveness during upcoming mini-drills.

The Nuclear Regulatory Commission cited the company for a violation of agency requirements that occurred in 2005. The violation is related to the preparation of a work package used for the replacement of the Beaver Valley Unit 1 reactor vessel head earlier this year. As noted in a letter to FENOC on July 31, 2006, an investigation conducted by the NRC Office of Investigations (OI) confirmed a finding identified by FENOC and reported to the NRC identified that a former contract mechanical engineer at the Shippingport (Beaver County), Pennsylvania, plant had failed to complete required work for an Engineering Change Package (ECP). Specifically, NRC confirmed that the engineer did not attach all of the necessary evaluations for the reactor vessel head replacement but signed a document on June 1, 2005, indicating the ECP was complete. OI determined the engineer's actions were deliberate. FENOC implemented corrective actions to prevent a recurrence. These steps included conducting a thorough review of previous work by the contractor; retraining Beaver Valley engineering personnel; and taking disciplinary action against responsible individuals.

The Confirmatory Order Independent Assessments continue at Davis-Besse. Three assessments were completed during the fourth quarter of 2006. All were determined to be effective. The independent assessment of the Nuclear Safety Culture was determined to be highly effective.

The Perry plant was shut down by manual scram by Operations due to degrading Instrument Air header pressure early on the morning of December 13, 2006. The air leak was discovered at a piping joint in an air supply line to a maintenance station in the diesel generator repair shop. Operations promptly isolated the air leak, and the air system was restored to normal pressure. The plant shut down proceeded normally. Complications with the neutron monitoring system (source range monitors that are required to start up the reactor) delayed start-up. The issues with the system were corrected, allowing the plant to restart on December 18 and synchronize to the grid on December 19, 2006.

Department of Homeland Security, NRC and other federal agencies were present to conduct the Comprehensive Review at the Perry Plant area during November, 2006. The sessions were well attended and included first responder organizations, county, State of Ohio agencies that support the Perry Plant radiological emergency plan. Security organization along with local law enforcement, Ohio State Highway Patrol, Coast Guard, and Federal Bureau of Investigation also participated in the safeguard portion of the review.

Overall results were positive with several areas of improvement noted that were debriefed with the respective plant or offsite organizations. Two "Best Practices" were identified by the DHS team and included 1) effectiveness of cross training between Perry Joint Fire Department and the Perry Plant and 2) good coordination between local law enforcement and Perry Plant security organization.

#### April 9, 2007:

The Department of Health updated the Board on activities of the Midwestern Radioactive Material Transportation Committee. DOE is once again proposing legislation that will enhance the nation's ability to manage and dispose of commercial spent nuclear fuel and Defense high-level radioactive waste. Section 7 of the bill on transportation is the same section that was opposed by states before. The section allows for easy pre-emption by DOE of state transportation regulations. The committee will address this issue at its next meeting.

The Massachusetts's Attorney General sought support from other interested states on a petition for rulemaking by the NRC, requesting that the NRC address the environmental and public health risks posed by high density storage of spent nuclear fuel at nuclear power plants. Ohio did not participate.

Twelve sites across the country, including the DOE Piketon facility, have been selected for further study on feasibility of hosting a facility for advanced nuclear fuel recycling. Nuclear waste would be divided into its reusable and non-reusable parts, and an advanced recycling reactor would demolish radioactive aspects of the fuel and generate electricity. This would reduce the amount of nuclear waste to be stored permanently. The committee is interested in the transportation issues associated with this program. Further updates on this effort will be presented by DOE at the next meeting of the committee.

URSB Resolution 07-01, Comments on "Release in Progress Position" was adopted by the Board. This resolution accepts FENOC's position on what constitutes a release in progress as applied for all FENOC sites. Language regarding "release" will be incorporated onto the protective actions recommendation forms.

Following the placement of Perry in the (Multiple/Repetitive Degraded Cornerstone) Column IV in 2004, FENOC implemented a Performance Improvement Initiative (PII) to improve and sustain performance at Perry. In 2005, the NRC issued a Confirmatory Action Letter (CAL) to confirm the commitments regarding implementation of the PII. In addition to routine inspections, the NRC has conducted extensive supplemental inspections, to assess the success of this PII and the commitments made in the CAL. The NRC has concluded that these actions have been successful and that sustained performance improvements at Perry have been realized. Therefore, the NRC has recently concluded that the two White findings in the areas of Problem Identification & Resolution areas (PI&R) area and human performance area are closed. The NRC has also returned Perry to normal NRC oversight transitioning Perry from Column IV to Column I with closure of the CAL.

The NRC reached out to Lake, Geauga and Ashtabula counties in a local government outreach initiative. Three meetings were held with the president county board of commissioners from March 6-8, 2007. This outreach initiative is being conducted for all 16 NRC Region 3 sites, in an effort to establish a point of contact with counties, provide them with some information about the NRC mission and introduce them to NRC resident inspectors. The effort is not an emergency preparedness/emergency response outreach.

The discovery, in Oct 2006, that five circumferential indications in three dissimilar metal welds on the pressurizer at the Wolf Creek Generating Station raised safety concerns based on the size and location of the indications. This is the first time that multiple circumferential primary water stress-corrosion cracking indications have been identified in a weld. Therefore the NRC issued Confirmatory Action Letters (CAL) to 40 licensees, including Davis-Besse.

In a CAL dated March 20, 2007, FENOC made commitments regarding butt welds in the pressurizer at Davis-Besse. These commitments address: 1) completion schedules for inspection/mitigation of the welds; 2) RCS leak monitoring frequency, action levels, and actions; 3) reporting requirements, and 4) reinspection frequencies.

Pennsylvania utilities along with the Pennsylvania Emergency Management Agency and the Bureau of Radiation Protection discussed protocol for courtesy reporting of events of potential public interest (EPPI) on January 19. Parties agreed that utilities will contact offsite agencies typically within 4 hours or within the next business day if the event were to occur during off hours. Contact names were provided from both the state agencies and the utilities in case the need arises to contact someone during off hours. A sample list of items to be considered an EPPI threshold was drafted as guidance to all parties.

The Davis-Besse Nuclear Power Station (DBNPS) received complements from Department of Homeland Security (DHS) following successful completion of its Comprehensive Review. During the final debrief, the DHS Team indicated that the relationship and integration between DBNPS and local law enforcement agencies was among the best seen through the Comprehensive Review process. The team was impressed with the quality of the on-site Security and Emergency Response presentations and federal, state and local support of the review activities.

The goal of the review was to evaluate Davis-Besse's ability to synchronize its activities and plans with external agencies in response to a hostile threat. The review process involved the DHS, DBNPS Site Protection and Emergency Preparedness teams, along with respective local, state and federal agencies that would support the site during a security related event. During the Comprehensive Review Exit Meeting, the team debriefed three best practices and four suggested improvement areas.

Best practices included:

1. 30 hospitals are being trained on handling contaminated injured personnel.
2. Communication systems provide key plant data to the State of Ohio.
3. A web-based Fire/Law Enforcement database provides good resource information.

Areas for Improvement included:

1. Communications capability between the Davis-Besse Fire Brigade and offsite Fire Departments could be enhanced.
2. Establishing designated staging areas.
3. Additional training evolutions to exercise interoperability of communications capabilities.
4. Local Fire Department training for crime scene preservation.

As part of the NRC confirmatory order related to the Davis-Besse reactor vessel head degradation event, Davis-Besse is committed to performing independent assessment of four key programs for a period of five years (2004-2008).

The Alert and Notification System Siren Self Assessment has been rescheduled for the week of October 1, 2007. The Ottawa County Ohio EMA Resident Radiological Analyst will be involved in this assessment.

On Tuesday, February 13, 2007 at 0945 the station entered an “isolation watch” in accordance with station procedure due to a severe winter storm. The “watch” was upgraded to a “warning” at 1445 and terminated on February 14, 2007 at 1200. A core station complement (routine shift staff and emergency response organization personnel) was maintained over night as a contingency measure.

Due to a power outage in downtown Toledo, the Davis-Besse Nuclear Power Station experienced a loss of offsite communications capability. A loss of two of three available telephone system pathways is a condition reportable to the Nuclear Regulatory Commission. At approximately 2000 on February 13, 2007, two of the three telephone pathways were unavailable and full telephone service was restored at 2214.

Measures are being developed to improve the phone system reliability as part of the plant corrective action program.

Department of Homeland Security, NRC and other federal agencies were present to conduct the Comprehensive Review at the Perry Plant area during November, 2006. The sessions were well attended and included first responder organizations, county, State of Ohio agencies that support the Perry Plant radiological emergency plan. Security organization along with local law enforcement, Ohio State Highway Patrol, Coast Guard, and Federal Bureau of Investigation also participated in the safeguard portion of the review.

Overall results were positive with several areas of improvement noted that were debriefed with the respective plant or offsite organizations. Two “Best Practices” were identified by the DHS team and included 1) effectiveness of cross training between Perry Joint Fire Department and the Perry Plant and 2) good coordination between local law enforcement and Perry Plant security organization.

**THE FOLLOWING IS A SUMMARY OF THE STATUS OF THE URSB WORKING GROUP INITIATIVES AT THE END OF SFY07:**

1. **DBNPS FULL PARTICIPATION EXERCISE (EMA/ODH/EPA/ODA)**

A full participation exercise was conducted on May 15<sup>th</sup>, 2007 with a dry run on April 17<sup>th</sup>. There were no Areas Requiring Corrective Action (ARCAs) identified for the state of Ohio and Lucas County. There were two ARCAs identified for Ottawa County, one remains unresolved and one was successfully redemonstrated.

2. **REACTOR OVERSIGHT PROGRAM (EMA/ODH)**

This is an NRC program used to provide continuous oversight of nuclear power plants to verify that each plant is operated in accordance with NRC rules and regulations. Key features of the program are a risk-informed regulatory framework, risk-informed inspections, a significance determination process to evaluate inspection findings, performance indicators, a streamlined assessment process, and more clearly defined actions the NRC will take for plants based on their performance. The URSB will continue to monitor this program especially as it relates to emergency preparedness. The findings are shown on the attached matrix.

3. **AFTER ACTION PLAN ACTIVITIES (EMA/ODA/ODH/EPA)**

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. Items pertaining to the Davis-Besse exercise have been included in the After Action Matrix.

5. **IZRRAG PLANNING (EMA)**

The IZRRAG will meet in the fall of 2007 to continue to review and revise the Ingestion Zone Recovery/Reentry Advisory (IZRRAG) procedures, the advisories, Field Team Center (FTC) procedures.

6. **PLANT OVERSIGHT (EMA/ODH)**

a. **DAVIS-BESSE NUCLEAR POWER STATION (DBNPS):**

First Energy is required to complete four independent assessments as part of the authorization to resume operations at Davis-Besse. The plant is in year 5 of a 5 year commitment which includes operational performance, corrective action program, engineering program effectiveness, and organizational safety culture.

A Demand for Information (DFI) was issued to FENOC regarding the Exponent Report, and subsequent related reports, on May 14<sup>th</sup>. FENOC responded to the DFI on June 14<sup>th</sup>. ODH and EMA monitored a public meeting on June 27<sup>th</sup>, between the NRC and FENOC. The NRC is currently evaluating FENOC's response.

b. BEAVER VALLEY NUCLEAR POWER STATION

Effective December 12<sup>th</sup>, 2006, BVNPS received a white finding in emergency preparedness. The finding resulted from inadequate dose assessment procedures.

c. PERRY NUCLEAR POWER PLANT

As of May 2007 the Perry plant has been placed in column 2 of the NRC Reactor Oversight Matrix due to emergency diesel generator performance issues. An NRC supplemental inspection will be conducted and the URSB will be participating in the inspection.

7. TECHNOLOGY (EMA/ODH/EPA)

A review is in progress of current equipment. Recommendations are being considered for any needed new equipment to support a nuclear power plant emergency. These items are documented via the After Action Plan.

The Working Group has assessed the need for consistent plant data in the Assessment Room. FENOC attended the Beaver Valley 2006 exercise to evaluate state dose assessment needs. Currently there is no plant data link from Beaver Valley to the state EOC. Ohio is currently pursuing resolution of this issue with West Virginia and Pennsylvania. PNPP identified connection problems with CADAP on September 20<sup>th</sup>. Ohio EMA is in the process of establishing a new type of connection to obtain CADAP data. The agreement between Ohio EMA and FENOC has been finalized and awaiting implementation by FENOC.

Teletrix equipment has been purchased for training of first responders. Plume Tracker, which is a software training program for the Field Monitoring, has been recommended by State personnel and agreed to by FENOC.

Ohio has contracted with Global Dosimetry, who is NVLAP accredited to process TLD's, to supply TLDs for state emergency workers.

8. NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS) (EMA)

The State Radiological Emergency Preparedness (REP) Plan for Nuclear Power Plants requires modification to become NIMS compliant by January 2008. Ohio EMA will continue to revise the plan in accordance with NIMS as inconsistencies are discovered. The current (2007) revision of the REP Plan has been forwarded to FEMA for review and we are awaiting comment.

9. DHS COMPREHENSIVE REVIEW (EMA/ODH)

The comprehensive reviews for Perry, Beaver Valley, and Davis-Besse were completed. The URSB Working Group will monitor the progress.

10. ALERT NOTIFICATION SYSTEM (ANS) SELF ASSESSMENT (EMA)

Davis-Besse ANS self assessment will be conducted the week of October 1<sup>st</sup>. The working group will monitor the results.

11. STATE DOSE ASSESSMENT (ODH/EMA)

The working group, along with FENOC, will begin an evaluation of available software in July of 2007. A conference call is scheduled for July 11<sup>th</sup> to discuss a common dose assessment program.

12. JIOP CLARIFICATION (ODH)

An agreement between FENOC and the State of Ohio has been finalized that includes details of the requirements for unescorted site access for the Joint Inspection Observation Program (JIOP). The next step is for the State to identify individuals that will participate in the JIOP on an unescorted basis and pursue FENOC access requirements. EMA has identified participants and has obtained unescorted access for those participants. ODH is in the process of identifying individuals and acquiring unescorted access.

13. KI (ODH/EMA)

The Ohio Department of Health has accepted from the FDA a two year extension of the expiration date for public KI. This new expiration date will be May 2009. This information is currently available on the ODH website.

ODH will package emergency worker KI on August 15<sup>th</sup> and 16<sup>th</sup> at ODH. ODH has obtained packaging configuration requirements from EMA.

14. OHIO AGRICULTURE BROCHURE (ODA)

The Ohio Agriculture Brochure has been reviewed and updated by the IZRRAG and will be distributed when completed in 2007.

15. GROUND WATER CONTAMINATION (EPA/ODH/EMA/PUCO)

A protocol has been proposed and reviewed by State agencies. Final comments have been submitted to FENOC and we are awaiting a response.

16. PERRY NUCLEAR POWER PLANT SECURITY THREAT BASED DRILL (ALL)

A threat initiated drill is currently scheduled for September the 12<sup>th</sup> at the Perry Nuclear Power Plant. Offsite participation is anticipated. A meeting is planned to determine the extent of participation and develop a scenario for the drill.

For more information on the above activities, please visit the URSB homepage at <http://www.ursb.ohio.gov> or contact the URSB Secretary at (614) 889-7160.

## URSB RESOLUTIONS LOG

Resolution Number	Description of Action	Date Signed
07-01	Resolution for the Utility Radiological Safety Board Requesting FENOC Consider Comments as appropriate revisions to NORM-LP-5002, FENOC Position on Release In Progress.	April 9, 2007
05-02	Resolution for the Utility Radiological Safety Board Requesting FENOC Provide Unescorted Access for the State of Ohio Observation Program.	July 11, 2005
05-01	Resolution Thanking Dale W. Shipley for His Service as Chair of the Utility Radiological Safety Board of Ohio	January 10, 2005
03-04	Resolution for Utility Radiological Safety Board Removal of Inactive Member from the Citizen Advisory Council	July 7, 2003
03-03	Resolution Appointing Citizens to Serve on the URSB Citizen Advisory Council on Nuclear Safety	July 7, 2003
03-02	Resolution Issuing Utility Radiological Safety Board Proclamations to Members of the URSB Citizen Advisory Council on Nuclear Safety	July 7, 2003
03-01	Resolution for Utility Radiological Safety Board Appointments Commencing January 6, 2003 for Medical Expert on the URSB Citizen Advisory Council on Nuclear Power Safety	January 6, 2003
02-03	Resolution for Utility Radiological Safety Board Appointments Commencing July 1, 2002 for Student Membership on the URSB Citizen Advisory Council on Nuclear Power Safety	October 7, 2002
02-02	Resolution for Utility Radiological Safety Board Appointments Commencing July 1, 2002 to Membership on the URSB Citizen Advisory Council on Nuclear Power Safety	July 8, 2002
02-01	Resolution Issuing Utility Radiological Safety Board Proclamations to Members of the URSB Citizen Advisory Council on Nuclear Safety	July 8, 2002

# URSB JOINT INSPECTION OBSERVATION PROGRAM



## **URSB JOINT INSPECTION OBSERVATION PROGRAM**

The Joint Inspection Observation Program (JIOP) was implemented by the Board in April 1991 by adopting URSB Resolution 91-002, "Resolution Adopting General Agreement Between the U.S. Nuclear Regulatory Commission and Ohio's State Liaison Officer for State Observations of NRC Inspections of Nuclear Power Plants". The agreement allows URSB JIOP members to observe NRC inspections of the Perry and Davis-Besse nuclear power plants. Under "adjacent state observation" status, a second agreement with NRC Region I allows JIOP participants to observe NRC inspections at the Beaver Valley Power Station. A "guidelines document" has been developed setting the conditions and procedures for member agencies' participation in the program. This document includes the goals and objectives of the Joint Inspection Observation Program. The URSB JIOP Goals and Objectives are delineated below.

In SFY07 the URSB JIOP participants observed nine NRC inspections. For each observation a report is generated and forwarded to the NRC for its review and comment. The table at the end of this section lists these reports for the past five years. All JIOP reports are available to the public by request to the URSB Secretary. Requests may be made by telephone at (614) 889-7160 or in writing to:

URSB Secretary  
The Utility Radiological Safety Board  
2855 West Dublin Granville Road  
Columbus, Ohio 43235-2206

### **URSB JIOP Goals and Objectives**

To observe Nuclear Regulatory Commission inspections at Ohio nuclear power facilities and the Beaver Valley Power Station...

- To participate with the NRC to observe inspections.
- To communicate to the public, URSB member agencies, and interested parties first-hand information obtained by observing inspections, in accordance with NRC protocol.
- To communicate with the NRC resident, regional, and national inspectors.

To raise issues of health, safety, and economic concerns with the Board...

- To observe NRC inspections and obtain timely, first-hand information which will assist in formulating state positions on public health, safety, performance, and/or cost issues.
- To maintain a historical database to monitor the economical production and safe operation of nuclear energy.

To provide the URSB with reports that identify the number of inspections observed during the quarter, summarize observation results and recommendation, and address comments made by the NRC and the public.

## JOINT INSPECTION OBSERVATION PROGRAM REPORTS

<b>JIOP REPORT NO.</b>	<b>DATE(S) OF INSPECTION</b>	<b>PLANT</b>	<b>AREA(S) OF INSPECTION</b>	<b>OBSERVING AGENCY</b>
07-05	6/18-6/22/2007	DBNPS	Radiation Monitoring Instrumentation and Protective Equipment	ODH
07-03	4/09-4/13/2007	PNPP	Access Controls to Radiologically Significant Areas	ODH
07-02	1/22-1/26/2007	DBNPS	Effluents	ODH
07-01	2/05-2/09/2007	BVPS	NRC Emergency Preparedness	EMA
06-10	11/1-12/15/2006	BVPS	Mitigating Systems Performance Index Verification	EMA
06-09	11/06-11/10/2006	PNPP	Access Controls to Radiologically Significant Areas	ODH
06-08	10/23-11/03/2006	PNPP	Human Performance Action Item	ODH
06-07	7/17-7/28/2006	PNPP	Action Item Review	EMA
06-06	6/5-9/06	PNPP	Access Control to RAD Areas	EMA
06-05	6/12-16/06	PNPP	Human Performance & Action Items	EMA
06-04	3/9-16/06	PNPP	Access Control & ALARA	EMA
06-03	2/13-17/06	DBNPS	Corrective Action Item Review	EMA
06-02	2/3-17/06	PNPP	EP Program	EMA
06-01	1/19-13 1/17-20/06	PNPP	Action Item Review	EMA
05-03	Jan-May 2005	PNPP	Supplemental Inspection 95003	EMA
05-02	1/10/05	PNPP	Special Inspection 93812	EMA
05-01	2/7/05	BVPS	Emergency Preparedness Program	EMA
04-03	5/24/04	PNPP	Evaluation of White Finding	EMA
04-02	1/12/04	DBNPS	Human Performance Assessment	ODH
04-01	2/9/04	DBNPS	Emergency Preparedness Program	EMA

Note: Reports will not be made public until after the NRC has released their report, per NRC protocol

# FINANCIAL REPORT



DESCRIPTION	SFY03	SFY04	SFY05	SFY06	SFY07
Appropriations					
Emergency Management	\$876,000	\$1,020,068	\$1,020,068	\$1,110,459	\$1,198,319
Health	\$793,000	\$799,267	\$793,000	\$793,000	\$793,000
Environmental Protection	\$243,675	\$232,000	\$232,000	\$263,449	\$276,352
Agriculture	\$71,555	\$66,550	\$66,550	\$70,286	\$73,059
Commerce					
Public Utilities Commission					
<b>Total Appropriation</b>	\$1,984,230	\$2,117,885	\$2,111,618	\$2,237,194	\$2,340,730
Expenditures					
Emergency Management	\$918,234	\$1,020,068	\$1,020,068	\$1,110,459	\$1,202,035
Health	\$751,680	\$799,267	\$541,294	\$551,674	\$721,320
Environmental Protection	\$185,854	\$182,752	\$215,137	\$204,842	\$249,540
Agriculture	\$48,000	\$66,550	\$66,550	\$70,286	\$73,016
Commerce					
Public Utilities Commission					
<b>Total Expense (Year-end Balance)</b>	\$1,903,768	\$2,068,637	\$1,843,049	1,937,261	\$2,245,911

# AGENCY OVERVIEWS



## **OHIO EMERGENCY MANAGEMENT AGENCY**

The Ohio Emergency Management Agency (Ohio EMA) was established under Ohio Revised Code Chapter 5502.22 as a division of the Department of Public Safety. The mission of the Ohio EMA is to coordinate state emergency preparedness and civil defense activities. Phases of mitigation, preparedness, response and recovery are designed to minimize effects upon the population caused by all hazards. The agency maintains the State Emergency Operation Center, the data links to nuclear power plants, and communications to subdivisions. The Ohio EMA implements federal and state policies and programs, and supports county emergency management agencies.

The Executive Director of Ohio EMA supervises the day-to-day operations of the agency's professional and technical support personnel and serves as the chair of the URSB.

The Ohio EMA is organized into three groups each consisting of several branches. The Operations Division is comprised of the Radiological; Readiness and Response; Plans; Field Operations, Training & Exercise Branches. The Grants Division is comprised of the Mitigation; Recovery and; Grants Branches. The Technical Support Division is comprised of the Communication; Data Management; and Facilities, Logistics and Calibration Branches. The Ohio EMA is responsible for Nuclear Power Plant incident response, accident assessment, instrument maintenance, training, planning, exercises and drills, utility, federal, and public interfacing and facilitation of the URSB. In addition, Ohio EMA continues to monitor activities relating to high level waste, and is coordinating the transport of spent fuel and high level radioactive materials across Ohio in the areas of training and equipping of county emergency responders.

### **Nuclear Power Plant Exercises and Drills**

Ohio EMA is responsible for the coordination of State Agency participation in nuclear power plant exercises. These exercises can take the form of small communications tests involving only State and County EMAs to major federally graded exercises. In SFY07, there were two federally graded exercises.

#### **Perry Nuclear Power Plant**

The 2006 Perry Nuclear Power Plant exercise was conducted on October 24, with the dry run taking place on October 4th. Due to 2006 being a multi-exercise year, the emergency (early) phase was conducted as a partial participation exercise for the State of Ohio. The exercise required full participation from Lake, Geauga, and Ashtabula Counties in accordance with the 6 year exercise schedule.

The Final Report includes the following for the State of Ohio: of the 14 criteria selected for demonstration, 13 were met; no Deficiencies; one Area Requiring Corrective Action (ARCA); no Planning Issues. The ARCA was received under criterion 4.c.1 – Laboratory Operations, whereby the Ohio Department of Health Laboratory could not demonstrate calibration of germanium detectors by a method traceable to standards maintained by NIST. This ARCA was corrected and cleared before the issue of the final report. Strengths for the State include: the State Assessment Room staff needs to be commended for their in-depth knowledge and

execution of their responsibilities, the JIC staff at the State Emergency Operations Center is to be commended for their diligence in ensuring that current and accurate information was provided to the PIO spokesperson at the JIC located at Lakeland Community College in as timely a manner as possible.

The Final Report includes the following for Lake County: Of the 21 criteria selected for demonstration, all were met; no Deficiencies, no ARCAs, and no planning issues. Strengths for Lake County include: the executive group displayed excellent leadership, commitment, teamwork, and coordination, the Lake County field monitoring teams displayed a good team effort and did an outstanding job of minimizing exposure to team members, and the van configuration and procedures for the field monitoring teams were outstanding.

For Geauga County: of the 17 criteria selected for demonstration, all were met; no Deficiencies; no ARCAs; no Planning Issues. Strengths for Geauga County include: the executive group conducted themselves in a very realistic manner and displayed a “what can we do” attitude which made a very positive contribution to the exercise, excellent coordination was observed between Geauga County, the State, and other affected counties.

For Ashtabula County: of the 17 criteria selected for demonstration, all were met; no Deficiencies; no ARCAs; no Planning Issues. Strengths for Ashtabula County include: the Emergency Operations Center staff conducted themselves in a very professional and enthusiastic manner which positively contributed to the outcome of the exercise, the executive group exercised excellent direction and control, Conneaut Fire were noted as being very knowledgeable and professional, Geneva on the Lake Fire conducted an outstanding briefing, the Dosimeter Coordinator at Conneaut School performed an exemplary monitoring and decontamination briefing.

Overall, the 2006 Perry Nuclear Power Plant exercise was very successful for the State of Ohio, Lake, Geauga, and Ashtabula Counties.

#### Davis-Besse Nuclear Power Plant

The 2007 Davis-Besse exercise was conducted on May 15<sup>th</sup>, with a dry run taking place on April 17<sup>th</sup> 2007. This exercise was conducted as a full participation exercise for the State of Ohio and included the ingestion phase objectives (relocation, re-entry, and return) for Ottawa and Lucas County.

The Final Report includes the following for the State of Ohio: of the 16 criteria selected for demonstration, all were met; no Deficiencies; no ARCAs; and no Planning Issues. Strengths for the State include: The Ohio Emergency Management Agency Executive Director did a superb job of guiding the decision making process in the Executive Room, Ohio Emergency Management Agency, Ohio Department of Health, Ohio Environmental Protection Agency, and FENOC personnel worked as a cohesive team obtaining and supplying information and developing protective action recommendations, Assessment Room Staff were very experienced and proficient in performing their duties supporting dose assessment and obtaining data by alternate means, the Operations Room Message Unit demonstrated excellent control over prioritizing messages and tracking missions, The State Joint Information Center did an outstanding job of keeping the Toledo Joint Information Center informed by generating timely

press releases, The Public Inquiry Hotline staff did an outstanding job using a unique system to track and disseminate public inquiries.

The Final Report includes the following for Ottawa County: of the 23 criteria selected for demonstration, 22 were met; no Deficiencies; one ARCA; and no Planning Issues. The ARCA was received under the criterion 1.e.1, Equipment and Supplies to Support Operations, whereby a survey meter had no calibration label indicating the date the meter was last calibrated, and the due date. This ARCA will be demonstrated at the next regularly scheduled exercise. Strengths for Ottawa County include: the Sheriff's 9-1-1 Dispatcher was able to handle both the exercise initial notification and an actual bomb threat simultaneously in a very efficient, professional manner, the dosimetry control activities and briefings on the part of the County Radiological Officer were thorough and demonstrated a high degree of subject matter knowledge and concern for the health and safety of county personnel, The Superintendent of the Genoa Area Schools exhibited an excellent grasp of the district's emergency response missions and how each was to be carried out.

The Final Report includes the following for Lucas County: of the 22 Criteria selected for demonstration, all were met; no Deficiencies; no ARCAs; and no Planning Issues. Strengths for Lucas County include: the County Administrator and Emergency Management Director demonstrated strong leadership, direction, and control of emergency operations, The Emergency Operations Center staff performed their response functions in a highly professional manner, the Greater Toledo Chapter of the American Red Cross fielded a robust staff of highly motivated individuals, Of the fifteen members, fourteen were volunteers, including the Congregate Care Center Manager.

### **Nuclear Power Plant Incidents**

There were no classified events in FY07 for FENOC plants.

### **Emergency Planning**

Ohio EMA completed the annual revision of The Ohio Plan for Response to Radiation Emergencies at Commercial Nuclear Power Plants in March 2007. Minor revisions included changes to the default Emergency Worker Dosimetry Limits and updates to Protective Action Recommendation Forms.

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## **OHIO DEPARTMENT OF HEALTH**

The Ohio Department of Health (ODH) provides support to the URSB through its statutory functions in matters of radiation protection. ODH serves as the lead state agency on all health physics issues within Ohio, monitors the radiological performance of the nuclear power plants, provides emergency response personnel and dose assessment team leadership in the event of a radiological emergency, evaluates the ability of hospitals to treat contaminated injured people, ensures radiological environmental monitoring outside of commercial nuclear power plant boundaries and provides input on URSB Working Group initiatives.

## **Nuclear Power Plant Emergency Response Exercises**

ODH staff participates in nuclear power plant exercises. ODH staffed personnel in the Dose Assessment room for the Perry Nuclear Power Plant (PNPP) evaluated partial participation exercise. Although Field Teams were not evaluated during this drill, ODH took the opportunity to exercise them as well. In preparation for this exercise ODH staff attended several training sessions including: in-house procedure training, PNPP Systems Training, Tabletop Training, and Field Monitoring Team Training. ODH staff also participated in the Davis-Besse Nuclear Power Station (DBNPS) full participation emergency preparedness exercise. To prepare for this exercise, ODH personnel attended various training sessions including: Ops Center Training, Systems Training, Tabletop Training, Field Monitoring Team Training, MARCS Radio Training, Controller Training and Dosimeter Training. ODH participated in the Davis-Besse Full Participation Exercise dry run and successfully completed the graded exercise with personnel in the Executive Room, Dose Assessment Room and in various Liaison positions with the County, the Utility, the JIC and Field Monitoring and Sample Screening Teams. ODH attended the exercise debriefing held by FEMA that took place at the Ottawa County EOC.

ODH staff also evaluates MS-1 medical drills at designated hospitals inside the 10-mile Emergency Planning Zone. These exercises are designed to ensure medical facility capabilities in a radiological emergency and satisfy the requirements identified in the Federal Emergency Management Agency's Guidance Memorandum MS-1, "Medical Services". In this past year ODH participated in an MS-1 drill at Lake West Hospital in support of the Perry partial participation exercise, and Freemont Memorial Hospital in support of the Davis-Besse full participation exercise.

## **Utility Radiological Safety Board (URSB) Working Group Activities**

ODH participates in the URSB Working Group and works with other member agencies on the working group initiatives. Some of these initiatives are also being addressed through the Nuclear Emergency Planning Advisory Committee (NEPAC) meetings which ODH attends quarterly. ODH, participating in the URSB, along with other State Agencies reviewed the *Ohio Plan for Response to Radiation Emergencies at Commercial Nuclear Power Plants* and made appropriate revisions.

ODH sent a representative to the National Radiological Emergency Preparedness Conference that took place the first week in May. Draft copies of the revised USEPA 400 manual were obtained and are being integrated into the ODH lab procedures and program files.

ODH attended the quarterly Tri-State Meetings held at Beaver Valley Power Station (BVPS) for stakeholders from Pennsylvania, West Virginia, and Ohio.

ODH attended Mini-drills for all three nuclear plants which are intended to test the communications systems used for plant notifications.

ODH personnel also participate in the URSB After-Action Group meetings which incorporate lessons learned from past exercises in preparation for upcoming exercises.

ODH participated in a teleconference conducted by the NRC on February 15, 2007 the purpose of which was to update state officials on an NRC effort to review Protective Action Recommendation guidance and obtain information on Protective Action Recommendation effectiveness.

ODH attended the public teleconference meeting held between NRC and FENOC in Rockville, MD on June 27 concerning the Demand for Information Notice issued to FENOC on May 14.

### **Nuclear Power Plant Inspections**

ODH attended a number of joint NRC/FENOC public meetings designed to inform the public on the status of corrective actions and plant conditions. Meetings were attended for the Davis-Besse, Perry and Beaver Valley nuclear power plants.

ODH Bureau of Radiation Protection staff participates with the U.S. NRC in the Joint Inspection Observation Program (JIOP) inspections. JIOP inspections include: Access Control to Radiologically Significant Areas, ALARA Planning and Controls, Radiological Gas and Liquid Effluent Treatment and Monitoring Systems, Radiological Monitoring Instruments and Personnel Protective Equipment, and Radioactive Material Processing and Transportation. This year observations took place at Davis-Besse and Perry nuclear power plants. The JIOP report numbers are as follows: Davis-Besse JIOP Report Number 2007-02; Perry JIOP Report Numbers 2006-08 and 2006-09. Efforts are ongoing in trying to obtain unescorted access for ODH personnel for JIOP inspections.

### **DHS, FEMA, FBI, NRC: Comprehensive Review**

ODH participated in the dry runs and actual Comprehensive Reviews at all three commercial nuclear power plants. These meetings were in support of the Department of Homeland Security's initiative to reduce the nation's exposure to terrorism and protect Critical Infrastructure Key Resources and to deny their use as a weapon. These meetings identified which organizations (federal, state, local, and utility) are to weigh in on capabilities for each category identified.

### **Midwestern Radioactive Material Transportation Committee**

Robert Owen, Chief of the Bureau of Radiation Protection, Ohio Department of Health, is the gubernatorial appointee to the committee. Each state has both a gubernatorial and legislative appointee to the committee, which acts as a forum for the states with DOE in developing policies and procedures for the safe transportation of radioactive material, including spent nuclear fuel, transuranic waste, low-level radioactive waste, and highway route controlled quantities (HRCQ) of radioactive material. ODH works with OEMA and PUCO in presenting Ohio's position on transportation issues. Rep. Michael Skindell is the legislative appointee for Ohio.

### **Potassium Iodide (KI) Distribution**

KI for the general public, which was due to expire May 31, 2007, has been extended to May 31 of 2009 if it has been properly stored. ODH participated in several teleconferences with affected County EMAs and local health departments to discuss replacement and other concerns regarding this issue. ODH obtained KI (~ 82,201 pills) from the USNRC for emergency worker and institutionalized populations. ODH repackaged this KI supply into ~11,743 bags and provided them to Ohio EMA for distribution to the counties within 10 miles of the nuclear power plants. ODH worked with Ohio EMA to replace and include this KI in the emergency worker dosimetry packs.

## **Radiological Environmental Monitoring Activities**

ODH staff oversees offsite radiological environmental monitoring activities at Davis-Besse Nuclear Power Station, Perry Nuclear Power Plant, and Beaver Valley Power Station. Groundwater, lake water, potable water, bottom sediment, soil, milk, fish, vegetation and air samples are collected by local health departments (under contract with ODH) and analyzed by the ODH Laboratory. All sample results indicated that radioactivity levels are at or near the Lower Limit of Detection (LLD) and well below the NRC release criteria.

As a result of an off-site Tritium issue identified by the NRC, a number of nuclear power plants in the country have been sampling for Tritium releases to the environment through their sumps. PNPP reported that they had increased levels of Tritium in a sump sample. Due to the increased levels found, ODH through its contract with the Lake County Health Department increased its environmental surveillance for Tritium in the spring of 2006. Additional samples were taken for several months and lab results for each sample indicated no detectable levels for Tritium. These results provided enough information to conclude further sampling to be unnecessary. The samples were completed on July 13, 2006.

All three nuclear power plants are engaged in a groundwater sampling initiative which involves the drilling of additional monitoring wells. FENOC will report the sample results in their annual environmental reports for all three nuclear sites. This groundwater sampling initiative includes appropriate notifications to local and state agencies.

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## **OHIO ENVIRONMENTAL PROTECTION AGENCY**

The Ohio Environmental Protection Agency is responsible for protecting the public health, safety and environment by ensuring compliance with environmental regulations. Ohio EPA provides environmental expertise to the Ohio Utility Radiological Safety Board in its development of comprehensive policy for the State regarding nuclear power. The Agency has one full time staff member and thirty other employees who devote between 2 and 15% of their time to support the objectives of the Board. Ohio EPA response personnel train and prepare for deployment in state and county operations centers and the impacted area in an emergency, and Ohio EPA routinely monitors compliance of the Ohio nuclear plants with environmental regulations for discharges, waste generation, and disposal as well.

### **Board Activities**

Ohio EPA personnel participate in the URSB Working Group, assisting in development and resolution of the its initiatives, and the URSB After-Action Group, helping to incorporate lessons learned from past exercises into the State's plans and procedures to be better prepared for a real emergency. Ohio EPA personnel attend quarterly meetings of the Nuclear Emergency Planning Advisory Committee (NEPAC), and in cooperation with other URSB member agencies, they devote significant effort into reviewing and revising the Ohio Plan for Response to Radiation Emergencies at Commercial Nuclear Power Plants.

## **Response Activities**

While there has never been an accident involving a release of radiation from one of the nuclear power plants in or adjacent to our State, Ohio EPA maintains a high state of readiness to respond to such an event. The Division of Emergency and Remedial Response, Emergency Response Unit has experienced personnel assigned to act as environmental liaisons in the host counties, to direct and coordinate the Agency's activities from the State Emergency Operations Center (EOC), and to assist in dose assessment and direct sampling teams in the EOC Assessment Room.

Ohio EPA's Radiological Assessment Team (RAT) consists of environmental specialist from many disciplines such as geology and ground water, water quality and treatment, emergency response and remediation, waste disposal, and air pollution monitoring and control. The RAT can deploy within 24 hours of a release of radiological material from a nuclear power plant to take field measurements for radiation in the area contaminated by deposition of radiological material and collect environmental samples of soil, surface water, vegetation, or snow for laboratory analysis. The RAT can field up to six sampling teams to assist in the State's efforts to delineate the area of contamination, characterize the impact from a release, and evaluate the risk to human health over time.

Ohio EPA personnel participate in the State's Ingestion Zone Recovery and Re-entry Advisory Group (IZRRAG). If an area became contaminated from a release of radiological material, the IZRRAG would meet periodically to evaluate the results of the analysis of samples collected from the contaminated area by the RAT and other sampling teams. As the health risk from contamination diminishes through radioactive decay, the IZRRAG continues to develop recommendations on the safety for people to return to and repopulate the area.

Ohio EPA response personnel participate in the exercises and drills run by the State or the plants as part of their regular, federally evaluated exercise schedule. Ohio EPA also conducts its own sampling exercises for the RAT. Ohio EPA personnel attend mandatory training to maintain their qualifications for the RAT and support roles, and twice annually, the Agency conducts multiple-day training for RAT members, associated support staff, and liaisons. To improve coordination and readiness, Ohio EPA often involves staff from other State Agencies with which it works closely to participate in this training or provide instruction in their area of expertise.

## **Other Related Activities**

Nuclear plants have permits for stationary combustion sources such as auxiliary boilers and the emergency diesels. There were no air permit violations reported for either of the two nuclear plants located in Ohio for in SFY07. The Nuclear Regulatory Commission regulates other routine air emissions associated with the operation of a nuclear power plant.

Ohio EPA receives and evaluates monthly wastewater discharge reports submitted under National Pollutant Discharge Elimination System (NPDES) permits. These permits establish limits on discharges of; hydrocarbons, metals, treatment chemicals, dissolved oxygen, and waste heat from the plant sewer and process effluent outfalls. There were no reports of NPDES violations in SFY07 for either Ohio plant.

Any facility generating more than 200 pounds of hazardous waste, as defined in ORC 3745 Sections 50 and 51, a month must register with Ohio EPA and obtain a generator's identification number. This registration allows the plant to store and manifest hazardous waste for shipment off-site. The plants must make an annual report each calendar year and submit the report to Ohio EPA, Division of Hazardous Waste Management. These reports detail the types of waste generated and the quantities involved. These reports also list where each waste is sent for treatment, storage, or disposal. There were no known discrepancies or violations of either of the Ohio plant's permits in SFY07.

National drinking water standards have been established to ensure that our drinking water does not contain unhealthy levels of contaminants. Contamination standards for inorganic chemicals, volatile organic chemicals, pesticides, and herbicides are expressed as Maximum Contamination Limits. Public water providers must test their water regularly, and submit the results to Ohio EPA. Public water providers have to test their raw and finished water for 83 substances. There were no known radiological excursions at either Ohio plant for SFY07.

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## **OHIO DEPARTMENT OF AGRICULTURE**

The Ohio Revised Code directs the Ohio Department of Agriculture (ODA) to protect the food supply as it relates to Food Safety and Animal Health. Additionally, the Code of Federal Regulations directs ODA to promote public safety involving nuclear power plant operations. ODA, in coordination with the United States Department of Agriculture (USDA) and the Ohio State University Cooperative Extension Service, estimates damage to crops and livestock from radiation incidents.

ODA maintains emergency response plans and monitoring programs in order to respond to and mitigate the effects of nuclear incidents. ODA coordinates procedures for the protection and recovery of livestock, poultry, forage and browse plants from radiation effects. ODA reviews and maintains embargo and quarantine procedures for all affected food, agricultural commodities, and livestock within an affected area and for possible outlets for contaminated products.

If an incident occurs, ODA assesses and deals with problems impacting agriculture and its related industries. ODA, in coordination with the Ingestion Zone Recovery and Re-entry Advisory Group (IZRRAG) and the counties involved, determines affected target groups including farmers, food producers, distributors and processors in the ingestion exposure pathway and gives them emergency response information.

### **Nuclear Power Plant Emergency Planning**

ODA participated in the scheduled IZRRAG monthly meetings to review and revise procedures and advisories in preparation for the 2006 Perry Nuclear Power Plant partial participation graded exercise, conducted on October 24, with the dry run taking place on October 4<sup>th</sup>. ODA included EOC agency representatives and JIC participation.

ODA staff also participated in the 2007 Davis-Besse Nuclear Power Station (DBNPS) full participation emergency preparedness exercise, which was conducted on May 15<sup>th</sup>, with a dry run taking place on April 17<sup>th</sup> 2007. This exercise was conducted as a full participation exercise and included the ingestion phase, with activation of ODA's EOC, JIC and field sampling team members.

#### **Other Related Miscellaneous Items**

Several members of the Ohio Department of Agriculture's EOC representatives and field monitoring team leaders attended the Davis-Besse Nuclear Power Plant systems training held on March 15, 2007, and the EOC OpsCenter Training on March 13, 2007 conducted at the Emergency Management Agency.

The Ohio Department of Agriculture conducted an ICS-300 course on February 26 & 27, 2007 and an ICS-400 course on March 20 & 21, 2007, for members of ODA, USDA and OSU Extension. Also several members of ODA attended the FEMA ICS Train the Trainer course on July 24-27, 2007.

These courses prepare Field Team members and their agencies to meet and integrate the federal NIMS requirements and the ability to operate in a supervisory role, within an ICS organization, during nuclear or all hazard emergencies or disasters.

Training for field monitoring and sampling teams is being planned for ODA teams. This training will include; issuing and updating response team equipment kits, overview of response procedures and checklists, conducting dosimeter training (coordinated and conducted by EMA RAD Branch) and recalibration of current units. Dates for this training will be announced in the fall of 2007 and will be available for other URSB agencies to attend.

In January 2007, ODA's Bio-Security Manager, Mr. Anthony Mitchell, was re-appointed by the Director of Agriculture to represent ODA on the Utility Radiological Safety Board of Ohio.

The Ohio Agriculture Brochure was reviewed and updated by IZRRAG team members and will be distributed by ODA in the fall of 2007.

During SFY07, ODA attended monthly URSB Working Group meetings, quarterly URSB Board meetings, URSB After Action Working Group meetings and NEPAC meetings.

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## **OHIO DEPARTMENT OF COMMERCE DIVISION OF INDUSTRIAL COMPLIANCE**

The overall mission of the Ohio Department of Commerce (ODC), Division of Industrial Compliance is to serve Ohio by promoting the safety and soundness of our customer industries through an innovative and effective team of highly motivated employees. The Ohio Department of Commerce is one of the state's chief regulatory agencies. Commerce is different from most state agencies, since it must operate like a private business enterprise as opposed to being funded primarily by Ohio's General Revenue Fund dollars. The agency exists on the fees and assessments from the industries that it regulates.

## **URSB Involvement**

ODC is a member of the Ohio Utility Radiological Safety Board (URSB). ODC is committed to help ensure nuclear safety for the citizens of Ohio by monitoring the Davis-Besse and Perry Nuclear Power Plants quality assurance programs.

## **Agency Specific Activities**

During SFY07, ODC continually monitored the Davis-Besse and Perry Nuclear Power Plants In-service Inspection Program of Nuclear Power Plant Components. Chapter 4101:4-5 of the Ohio Administrative Code mandates this monitoring. In this chapter it refers to Section XI, Rules for In-service Inspection of Nuclear Power Plant Components, of the ASME Boiler and Pressure Vessel Code. This Section provides rules for the examination, testing, and inspection of components and systems in a nuclear power plant.

The rules of this Section constitute requirements to maintain the nuclear power plant and to return the plant to service, following plant outages, in a safe and expeditious manner. The rules require a mandatory program of examinations, testing, and inspections to evidence adequate safety. The rules also stipulate duties of the Authorized Nuclear In-service Inspector to verify that the mandatory program has been completed, permitting the plant to return to service in an expeditious manner.

The Owner of the nuclear power plant is assigned the responsibilities to develop a program, which will demonstrate conformance to the requirements of this Section. These responsibilities include: (a) Provision of access in the design and arrangement of the plant to conduct the examination and tests; (b) development of plans and schedules, including detailed examination and testing procedures for filing with the enforcement and regulatory authorities having jurisdiction at the plant site; (c) conduct of the program of examination and tests, system leakage and hydrostatic pressure tests, as well as in-service tests of pumps and valves; (d) recording of the results of the examinations and tests, including corrective actions required and the actions taken.

Duties of the Authorized Nuclear In-service Inspector are assigned by Section XI to verify that the responsibilities of the Owner and the mandatory requirements of this Section are met. Duties performed this past fiscal year by the Authorized Nuclear In-service Inspectors included: (a) witnessing of pressure tests; (b) reviewed nondestructive examination procedures and repair programs; (c) verified that the visual examinations and tests on pumps and valves had been completed and the results recorded.

## **Future Activities**

The Department Staff will continue to monitor the In-service Inspection Programs of Davis-Besse and Perry Nuclear Power Plants, and will provide technical assistance to the URSB when questions arise regarding the requirements of ASME Section XI.

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## **PUBLIC UTILITIES COMMISSION OF OHIO**

### **The Public Utilities Commission of Ohio**

The Public Utilities Commission of Ohio (PUCO) works to assure all residential and business consumers access to adequate, safe and reliable utility services at fair prices, while facilitating an environment that provides competitive choices. The PUCO regulates electric, natural gas, telecommunications, water/wastewater and transportation companies operating in the State of Ohio.

### **The PUCO Transportation Department**

The PUCO Transportation Department works to facilitate safe and secure commercial transportation on public highways, railroads, and at transportation facilities as well as promote quality and equitable service in a proactive manner for the public and commercial carriers in the household goods, bus, and ferryboat industries.

The PUCO Transportation Department is responsible for enforcing state and federal motor carrier and rail safety requirements within the state of Ohio.

### Transport of Radioactive Materials – PUCO Regulatory Responsibilities & Capabilities

The Governor has designated the PUCO as the state's routing agency for radioactive materials and spent nuclear fuel. The PUCO Transportation Department is responsible for the enforcement of federal and state regulations governing the highway and rail road transport of hazardous materials, including radioactive materials. The Transportation Department staff includes 17 Hazardous Materials Specialists trained to standards prescribed by the United States Department of Transportation (US DOT), the Federal Motor Carrier Safety Administration (FMCSA) and the Commercial Vehicle Safety Alliance (CVSA). These personnel are certified to conduct inspections of highway radioactive materials shipments using the CVSA Level VI, Enhanced North American Standard (NAS) Inspection for Radioactive Shipments. The Level VI inspection procedure is limited to radiological shipments and includes inspection procedures of the US DOT/CVSA NAS Level I inspection. The Level VI inspection procedures include US DOT radiological requirements and stringent "out-of-service criteria" for trucks transporting the materials. CVSA Level VI inspections include close examination of the driver, the vehicle, and the radioactive materials packaging and cargo. Radioactive materials shipments that are not examined under the Level VI process are inspected using the North American Standard Level I procedures. Also, several PUCO Transportation Department personnel are certified by the US DOT Federal Railroad Administration (FRA) to inspect rail shipments of radioactive materials. Along with checking for compliance with the US DOT Hazardous Materials Regulations, these PUCO personnel are also FRA certified to inspect rail equipment, track, and operating practices.

When encountered in transportation, PUCO HM Specialists regularly inspect packaging of Class 7 materials that are not subject to the CVSA Level VI inspection criteria. These inspections include a radiological survey. These personnel are also trained in radiological decontamination and control procedures found in 49 CFR 173.443.

PUCO personnel often work very closely with the staffs of the Ohio Emergency Management Agency and Ohio Department of Health to coordinate and conduct inspections of high level and special interest radioactive materials shipments. This includes radioactive industrial sources, shipments of radioactive waste from the de-commissioning of the US DOE Fernald and Mound facilities as well as containers of depleted Uranium Hexafluoride (UF<sup>6</sup>) in transit from Oak Ridge, KY to the US DOE Piketon, OH facility.

During the previous year PUCO personnel inspected highway route controlled quantity (HRCQ) shipments and non-HRCQ shipments of Cobalt <sup>60</sup> originating in Canada, In addition a PUCO Transportation Department staff person attended a Davis-Besse Systems Training Course at the Ohio EMA on March 15, 2007.

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# NUCLEAR POWER PLANT ACTIVITIES



## NUCLEAR POWER PLANT ACTIVITIES

Two nuclear power plants are located in Ohio, the Davis-Besse Nuclear Power Station and the Perry Nuclear Power Plant. A third nuclear power plant, the Beaver Valley Power Station, is located in Pennsylvania within 5 miles of the Ohio border. The following three sections describe the plants in more detail and activities of SFY07.

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### DAVIS-BESSE NUCLEAR POWER STATION



First Energy Nuclear Operating Company's Davis-Besse Nuclear Power Station, near Oak Harbor in Ottawa County. The plant is owned by First Energy Nuclear Operating Company and operated by the First Energy Nuclear Operating Company (FENOC).

The plant operated safely and reliably during the year. The plant staff did conduct two short outages during the past year to make equipment repairs. The first outage on September 6, 2006 was to repair a 1.5 inch line that was causing air in-leakage to the main condenser. The second outage was on November 18, 2006 to replace several valves associated with the pressurizer. The plant staff took the opportunity during this outage to complete a number of other corrective maintenance items and testing that required the plant to be in a shutdown condition.

Independent assessments associated with NRC confirmatory letter commitments were completed including the following:

- Operations Performance
- Corrective Action Program
- Engineering Program
- Safety Conscious Work Environment

Ratings for each of the areas were EFFECTIVE with Safety Conscious Work Environment assessment being rated HIGHLY EFFECTIVE.

The schedule for the 2007 assessments was also provided to continue the assessments in accordance with the NRC commitments.

Department of Homeland Security conducted the Comprehensive Review of the Davis-Besse plant during the week of March 6, 2007. The DHS team indicated the relationship and integration between the plant security organization and local law enforcement was among the best seen during conduct of the national review.

Davis-Besse had a successful emergency preparedness evaluated exercise on May 15, 2007. NRC rated performance of the emergency response organization from good to very good during the inspection exit. The exercise included over 600 plant and offsite response organization personnel and 35 federal evaluators from the NRC and Department of Homeland Security.

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## PERRY NUCLEAR POWER PLANT



The Perry Nuclear Power Plant (PNPP) located on the shores of Lake Erie in Lake County, approximately 35 miles northeast of Cleveland, began commercial operation in November 1987. The plant is owned by First Energy Nuclear Operating Company and operated by the First Energy Nuclear Operating Company (FENOC).

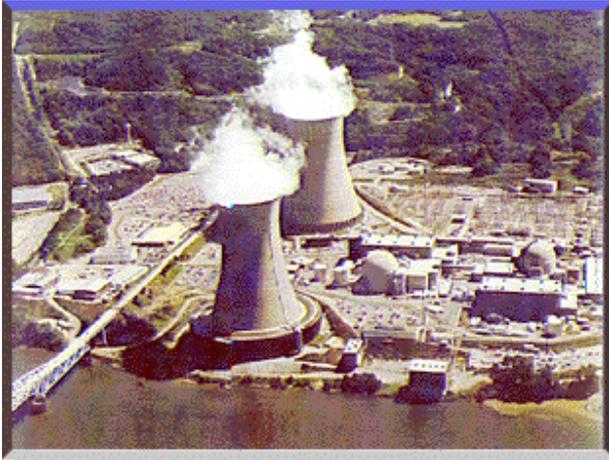
PNPP is a single unit plant that employs a General Electric boiling water reactor (BWR). A BWR is designed to use the steam that is produced inside the reactor to drive the turbine generators. Under ideal conditions, PNPP is capable of producing enough electricity to power 1,220,360 homes in an average month.

Department of Homeland Security conducted the Comprehensive Review at the Perry Plant in November 2006. Overall results were positive with good practices identified in the coordination of plant fire brigade and local fire departments as well as the security interface with local law enforcement.

The plant continued operations safely during the twelve month period with a refueling outage conducted from April 2 through May 13, 2007. Following the outage, there were several plant shutdowns due to equipment related issues including the turbine control system, feedwater control (design improvements made during the refueling outage), and the reactor recirculation water system. The June 29 plant shutdown required replacement of the reactor recirculation pump motor which was a significant undertaking since it required movement of a large piece of equipment into and out of the plant. This outage required maintaining the plant off-line into the month of July. The plant staff investigated each equipment related issue to determine the cause and to ensure steps are being taken to minimize the chances for recurrence. The plant has operated well following this outage.

Perry Plant was removed from the fourth column of the NRC Action Matrix for multiple degraded cornerstones during the past year. The remaining two White findings were closed and the NRC conducted a public meeting on March 21, 2007 to close other items associated with plant commitments to the confirmatory action letter.

## BEAVER VALLEY POWER STATION



The Beaver Valley Power Station (BVPS) is located in Shippingport, Pennsylvania on the Ohio River approximately 5 miles from the Ohio border. The plant is a two-reactor site, with Unit 1 commencing operation in October 1976 and Unit 2 in November 1987. Beaver Valley Unit 1 and Unit 2 are owned by First Energy Nuclear Operating Company and operated by First Energy Nuclear Operating Company. Together the units can produce enough power to supply electricity to 1,604,160 homes in an average month.

The plant operated safely and reliably during the year.

The staff conducted a four-day maintenance outage on Unit 1 that started on August 24, 2006. The purpose of the outage was to verify foreign material had not been introduced into one of the steam generators. Camera inspections were conducted and confirmed no evidence of foreign material. The staff took advantage of the shutdown to improve balancing of the generator exciter. Following return to service, the unit tripped on September 7 due to a faulty electronic card in one of the protection systems. This was unrelated to the work performed during the previous outage. The electronic card was replaced and the unit was returned to service.

Unit 2 entered its twelfth refueling outage on October 2. The staff conducted weld overlay to strengthen the pressurizer nozzles and increased the size of the containment sump as among the more significant work conducted during the outage. The outage successfully concluded on November 12 without any nuclear safety or human performance events or OSHA recordable injuries.

NRC had issued a White finding to the Beaver Valley staff during the 2006 evaluated exercise. The Beaver Valley staff implemented corrective actions including procedure revisions, training of the staff, and performed drills to ensure this issue was resolved during the first half of 2007. NRC conducted a follow-up inspection and closed the finding out on June 28, 2007.

Department of Homeland Security conducted the Comprehensive Review of Beaver Valley during the week of May 21, 2007. There were good overall results and good participation of offsite response organizations including the States of Ohio, Pennsylvania, and West Virginia. This completed the Comprehensive Review visits to all three FENOC plants.