

**FY 2016**

**URSB of Ohio Annual Report**



**BEAVER VALLEY POWER STATION**

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## **REPORT FROM THE CHAIRMAN**





## Utility Radiological Safety Board of Ohio

### REPORT TO THE GOVERNOR AND GENERAL ASSEMBLY

Governor Kasich and Members of the Ohio General Assembly:

The member agencies of the Utility Radiological Safety Board (URSB) of Ohio - the Departments of Agriculture, Health and Commerce, the Emergency Management and Environmental Protection Agencies, and the Public Utilities Commission are pleased to present the 2016 annual report of major Board activities.

The URSB was established in July 1989 (ORC Section 4937) to coordinate the nuclear power plant responsibilities of its member agencies. The Board is also charged with the responsibility of enhancing the quality of the State's response to nuclear power safety issues in the areas surrounding our nuclear power plants. This report details the actions of the Board toward the accomplishment of these goals.

- During SFY2016, the URSB held four statutory meetings. The URSB board meetings were held at the Ohio Emergency Management Agency offices in Columbus on: July 6, 2015, October 5, 2015, January 11, 2016 and April 11, 2016.

There were two classifiable events in SFY2016 for nuclear power plants affecting Ohio.

- Davis Besse Nuclear Power Station declared an Unusual Event under Emergency Action Level HU1 at 2106 EDT on October 20, 2015 due to a suspicious vehicle parked outside the protected area. The State was notified through the OSHP Dispatch, who notified the Radiological Branch Chief and the Department of Public Safety (DPS) HUB per procedures. The event was terminated at 2229 EDT once the vehicle had been inspected and was determined not to be a threat.
- Beaver Valley Power Station declared an Unusual Event under Emergency Action Level HU4 for Unit 1 on January 1, 2016 at 1719 EDT due to a fire alarm in containment which could not be verified extinguished within 15 minutes. All other containment parameters did not indicate fire. OSHP dispatch contacted the Radiological Branch Chief, who contacted the Operations Administrator. The Operations Administrator performed notifications of Ohio EMA and DPS leadership while the Radiological Branch Chief performed courtesy notifications to the Ohio Department of Health and Ohio Environmental Protections Agency. The Unusual Event was terminated at 2015 EDT after a containment entry and visual inspection determined no fire or indications of fire existed.

There was one Federal Emergency Management Agency (FEMA) evaluated exercises in SFY2016.

- During the week of June 13, 2016, a Radiological Emergency Preparedness (REP), Full Participation, Plume Exposure Pathway Exercise was conducted in the 10-mile Emergency Planning Zone (EPZ) around the Beaver Valley Power Station (BVPS), with activities in Columbus and Columbiana County. On

Tuesday June 14, personnel responded to the State Emergency Operations Center in response to a simulated incident at the Beaver Valley Power Station Unit 1. State Field Monitoring Team (FMT) activities were conducted including; plume location traversals, air sampling, and the transfer of radiological samples from the monitoring team, to a courier, to a State Sample Screening Point, which collects the samples then ships them to radiological labs for analysis. Columbiana County participated in the activities on the 13<sup>th</sup> with local response to the Columbiana County Emergency Operations Center. Columbiana County also facilitated numerous out of sequence activities at multiple locations throughout the week.

- Results from the FEMA draft report were the exercise resulted in two Level 2 Findings in the State Emergency Operations Center, and three Plan Issues for the State of Ohio. There were no Findings or Plan Issues for Columbiana County. All findings and planning issues will be resolved in the After Action Process.

The URSB continues to closely monitor nuclear power issues that could have a direct effect on Ohio's nuclear utilities and the safety of Ohio's citizens.

I encourage your review of the many specific activities of the URSB and its member agencies contained in the enclosed overviews.

Sincerely,



SIMA S. MERICK  
Chair

SSM/pwh

## 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 of 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 Nuclear Regulatory Commission (NRC) 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.

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 URSB and its members, please refer to the URSB homepage at <http://www.ursb.ohio.gov/index.stm> or contact the URSB Secretary at (614) 889-7150. The Board members for SFY15 and their respective designees are listed below:

Ohio Department of Agriculture  
Mr. David T. Daniels, Director  
Ms. Terri Gerhardt, Designee

Ohio Emergency Management Agency  
Ms. Sima Merick, Director  
Mr. Michael Bear, Designee

Ohio Department of Commerce  
Ms. Jacqueline T. Williams, Director  
Mr. John Sharier, Designee

Ohio Environmental Protection Agency  
Mr. Craig W. Butler, Director  
Mr. Marcus Glasgow, Designee

Ohio Department of Health  
Mr. Richard Hodges, Director  
Mr. Michael J. Snee, Designee

Public Utilities Commission of Ohio  
Mr. Andre T. Porter, Chairman  
Mr. Daniel Fisher, Designee

## URSB ACTIONS AND ACTIVITIES



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**SUMMARY OF URSB ACTIONS AND ACTIVITIES:****Statutory Meetings:**

During SFY2016, the URSB held four statutory meetings. The URSB board meetings were held at the Ohio Emergency Management Agency offices in Columbus on: July 6, 2015, October 5, 2015, January 11, 2016 and April 11, 2016.

At each meeting member agencies report on; planning, training, drills, and exercises which have been conducted in support of Radiological Emergency Preparedness for response to incidents at a nuclear power facility that could impact Ohio.

The Nuclear Regulatory Commission state liaison attends, and will make a report on any inspections conducted by their resident inspectors, and by inspection teams through the NRC nuclear power oversight program. The liaison also reports any findings and any additional inspections required as a result of those findings.

A member of the FirstEnergy Nuclear Operations group (FENOC) also reports on any activities and incidents that occurred at the power plants affecting Ohio, and any future inspection and maintenance evolutions which the URSB may wish to observe or ask questions about.

Additional details from these meetings are available by contacting the URSB Secretary at 614-889-7150, or on the Utility Radiological Safety Board website at <http://www.ursb.ohio.gov/index.stm>

**Recommendations Received by the Board:**

There were no recommendations received for action by the board in state fiscal year 2016.

**Board Resolutions:**

There were no resolutions made by the board in state fiscal year 2016.

**Board Requested Testimony:**

The board did not request any specific testimony by any individual, or the utility in state fiscal year 2016.

**Questions from the Public:**

There were no questions from the public in state fiscal year 2016.

# 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 PNPP and DBNPS. Under “adjacent state observation” status, a second agreement with NRC Region I allow JIOP participants to observe NRC inspections at the BVPS. A “guideline 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 JIOP. The URSB JIOP Goals and Objectives are delineated below.

In FY16 the URSB JIOP participants observed three NRC inspections.

### *URSB JIOP Goals and Objectives*

1. To observe NRC inspections at Ohio nuclear power facilities and BVPS.
  - 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.
2. 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.
3. To inform the URSB about which inspections were observed during each quarter.

**JIOP INSPECTIONS FY2016 (July 1, 2015 to June 30, 2016)**

<b>JIOP Number</b>	<b>Date(s)</b>	<b>Inspection</b>	<b>Agency</b>
2016-Perry-001	August 31 - September 4, 2015	Radiation Monitoring Instrumentation; Radiological Environmental Monitoring Program (REMP)	ODH
2016-Perry-002	September 21 - 25, 2015	Radioactive Gaseous & Liquid Effluent Treatment	ODH
2016-DBNPS-001	November 16 - 20, 2015	Radiological Hazard Assessment & Exposure Control; Radiation Monitoring Instrumentation; Performance Indicator Verification	ODH

## **FINANCIAL REPORT**



DESCRIPTION	SFY12	SFY13	SFY14	SFY15	SFY16
<i>Appropriations</i>					
Emergency Management	\$1,329,226	\$1,415,945	\$1,415,945	\$1,415,945	\$1,415,945
Health	\$988,079	\$984,700	\$1,012,671	\$1,009,157	\$1,041,179
Environmental Protection	\$307,031	\$300,571	\$298,820	\$301,552	\$300,531
Agriculture	\$123,570	\$116,988	\$117,826	\$119,672	\$125,000
Commerce♦					
Public Utilities Commission♦					
<i>Total Appropriation</i>	\$2,747,906	\$2,818,204	\$2,845,262	\$2,846,326	\$2,882,655
<i>Expenditures</i>					
Emergency Management	\$1,237,811	\$1,154,488	\$1,066,648	\$1,020,904	\$1,149,214
Health	\$988,080	\$984,700	\$984,761	\$1,009,157	\$1,033,681
Environmental Protection	\$268,363	\$279,826	\$270,598	\$283,016	\$312,561
Agriculture	\$120,674	\$115,069	\$117,790	\$119,266	\$121,756
Commerce♦					
Public Utilities Commission♦					
<b>Total Expense (Year-end Balance)</b>	\$2,614,928	\$2,534,083	\$2,414,797	\$2,432,343	\$2,617,212

♦ Denotes agency does not receive funding from FENOC

## AGENCY OVERVIEWS



## 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, crops, and 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 attends monthly Interagency Radiological Preparedness (IREP) meetings, Nuclear Emergency Planning Advisory Committee (NEPAC) meetings and After Action Group meetings.

ODA continues to participate in the scheduled IZRRAG meetings to review and revise the Ohio Plan for “Response to Radiation Emergencies at Commercial Nuclear Power Plants” procedures and advisories in preparation for nuclear power plant training, exercises or related emergencies.

### **Other Related Items**

The Ohio Agriculture Brochure was reviewed and updated in 2015, and was distributed by ODA in February 2016. The brochure is distributed to Ohio food producers, processors and distributors located within a ten mile radius of a nuclear power plant, and the brochure is made available to counties within a fifty mile radius of those plants. The brochure is also available electronically on the Ohio Department of Agriculture website and via links on URSB member agency sites.

ODA also participated on applicable committees of the Interagency Radiological Emergency Preparedness group in support of the URSB.

## 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 SFY16, 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.

## OHIO DEPARTMENT OF HEALTH

The Ohio Department of Health (ODH) is designated the Ohio radiation control agency in accordance with Ohio Revised Code 3748.02. The Ohio Department of Health, Bureau of Environmental Health and Radiation Protection (ODH-BEHRP) provides support to the Utility Radiological Safety Board (URSB) through its statutory functions in matters of radiation protection. ODH-BEHRP serves as the lead state agency on all health physics and agreement state 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, observes the evaluation of hospitals abilities to treat contaminated injured people, ensures radiological environmental monitoring outside of commercial nuclear power plant boundaries, and provides input for working groups.

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

ODH-BEHRP staff regularly participates in nuclear power plant exercises. ODH-BEHRP participated in the June 2016 Beaver Valley Power Station (BVPS) evaluated exercise. ODH-BEHRP provided key personnel to the Executive Room, Dose Assessment Room, ESF-10 desk, Field Monitoring Teams, and Sample Screening, as well as liaison positions with the county, the utility, and the Joint Information Center. In preparation, ODH-BEHRP staff attended several training sessions as well as a web based annual training, including: plant-specific systems training, tabletop exercise, dose assessment training, and Field Monitoring Team training. ODH-BEHRP rotates staff members through different positions to broaden staff skills and allow flexibility in assigning response personnel. ODH-Office of Health Preparedness and Public Affairs helped staff the State Emergency Operations Center (SEOC) public inquiry lines and the ESF-8 desk.

Medical Service (MS-1) exercises are routinely observed by ODH-BEHRP staff at designated hospitals inside the 10-mile Emergency Planning Zone. In this fiscal year, ODH-BEHRP staff observed multiple MS-1 exercises the week of September 21, 2015. The two Perry Nuclear Power Plant MS-1 hospitals were observed September 23, 2015. The Davis-Besse Nuclear Power Station MS-1 hospital was observed September 24, 2015. The Columbiana County MS-1 hospital exercise was conducted on September 22, 2015 however; ODH-BEHRP did not observe this MS-1 event. All four hospitals were determined to be adequately prepared to treat an injured individual contaminated with radioactive material.

### **Working Group Activities**

ODH-BEHRP staff attended each of the monthly Inter-agency Radiological Emergency Preparedness (IREP) Committee meetings, the monthly Nuclear Power Plant subcommittee meetings, and the quarterly Nuclear Emergency Planning Advisory Committee (NEPAC) meetings. These meetings provide an opportunity to collaborate with URSB member agencies, as

well as utility and local government representatives for planning purposes, resolution of common issues, and identification and tracking of corrective actions documented during exercise activities.

ODH-BEHRP regularly joins with other state agencies and First Energy Nuclear Operating Company (FENOC) in development and training activities. This fiscal year included attendance at the BVPS Offsite Agency Training Session (OATS).

### **Joint Inspection Observation Program (JIOP)**

ODH-BEHRP staff participates with the United States Nuclear Regulatory Commission (NRC) in the Joint Inspection Observation Program (JIOP) inspections. Three JIOPs covering six topic areas were completed by ODH staff in the last 12 months. The details of the topics can be found in the URSB Joint Inspection Observation Program section of this annual report. Findings from these inspections may be found on the NRC website.

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

An audit for general public KI was conducted from January 2016 to April 2016. KI was distributed in 2014 to the 10-mile Emergency Planning Zone (EPZ) health departments and some has since been supplied to schools, businesses, and some individuals that live in the EPZ. The audit confirmed the presence and amounts of KI at the facilities as originally distributed. The audit also confirmed that ample amounts remain for dispensing at reception centers in case of a nuclear power plant incident.

### **Dose Assessment Activities**

There was an issue with the state not matching the utility's dose projection within a factor of 10 during the Beaver Valley exercise in June 2016. The use of an alternate dose assessment software for independent confirmation and additional training on the use of both software's would improve the quality of the dose assessment calculations.

### **Radiological Environmental Monitoring Activities**

ODH-BEHRP staff performs offsite radiological environmental monitoring activities at the Davis-Besse Nuclear Power Station, Perry Nuclear Power Plant, and Beaver Valley Power Station. Surface water, potable water, bottom sediment, milk, fish, fruit, vegetable 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.

During the past four quarters calibration verifications of the 7 dry gas meters used for air sampling was performed. Equipment replacement in Fiscal Year 2016 was minimal as only one dry gas meter in Lake County at the Auburn Road location was replaced. Routine maintenance continued

to be performed on the rotary pumps in service. The inventory needs of each contractor continued to be met throughout the year as supplies necessary for the continued collection of samples were provided to the contractors. Environmental contractor audits for calendar year 2015 were completed.

### **Other Related Items**

A member of the ODH-BEHRP staff attended the FEMA Region V Scheduling Conference in November 2015. The conference featured speakers from FEMA Region V, FEMA Headquarters, NRC, and various states.

A member of the ODH-BEHRP staff attended the National Radiological Emergency Preparedness (NREP) Conference held in N. Charleston, SC in May 2016. The conference featured speakers from Federal Emergency Management Agency (FEMA), Nuclear Regulatory Commission (NRC), Conference of Radiation Control Program Directors (CRCPD), Federal Drug Administration (FDA), Department of Defense/Department of Energy (DOD/DOE) and various states.

## 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 activities to mitigate, prepare for, respond to and recover from disasters. 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 (State EOC), data links to nuclear power plants, and multiple communications links to federal, state, and county organizations. 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 Divisions; Operations, Administration, and Regional Operations which work together to accomplish its mission. The Operations Division consists of the Radiological and Preparedness Branches. The Administration Division consists of: Fiscal, Preparedness Grants, Mitigation, Recovery, and Communications 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 radioactive waste, and coordinates the transport of spent fuel and high level radioactive materials across Ohio.

### **Nuclear Power Plant Incidents**

There were two classifiable events in SFY2016 for nuclear power plants affecting Ohio.

- Davis Besse Nuclear Power Station declared an Unusual Event under Emergency Action Level HU1 at 2106 EDT on October 20, 2015 due to a suspicious vehicle parked outside the protected area. The State was notified through the OSHP Dispatch, who notified the Radiological Branch Chief and the Department of Public Safety (DPS) HUB per procedures. The event was terminated at 2229 EDT once the vehicle had been inspected and was determined not to be a threat.

- Beaver Valley Power Station declared an Unusual Event under Emergency Action Level HU4 for Unit 1 on January 1, 2016 at 1719 EDT due to a fire alarm in containment which could not be verified extinguished within 15 minutes. All other containment parameters did not indicate fire. OSHP dispatch contacted the Radiological Branch Chief, who contacted the Operations Administrator. The Operations Administrator performed notifications of Ohio EMA and DPS leadership while the Radiological Branch Chief performed courtesy notifications to the Ohio Department of Health and Ohio Environmental Protections Agency. The Unusual Event was terminated at 2015 EDT after a containment entry and visual inspection determined no fire or indications of fire existed.

### **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 evaluated exercises.

There was one Federal Emergency Management Agency (FEMA) evaluated exercises in SFY2016.

- During the week of June 13, 2016, a Radiological Emergency Preparedness (REP), Full Participation, Plume Exposure Pathway Exercise was conducted in the 10-mile Emergency Planning Zone (EPZ) around the Beaver Valley Power Station (BVPS), with activities in Columbus and Columbiana County. On Tuesday June 14, personnel responded to the State Emergency Operations Center in response to a simulated incident at the Beaver Valley Power Station Unit 1. State Field Monitoring Team (FMT) activities were conducted including; plume location traversals, air sampling, and the transfer of radiological samples from the monitoring team, to a courier, to a State Sample Screening Point, which collects the samples then ships them to radiological labs for analysis. Columbiana County participated in the activities on the 13<sup>th</sup> with local response to the Columbiana County Emergency Operations Center. Columbiana County also facilitated numerous out of sequence activities at multiple locations throughout the week.
  - Results from the FEMA draft report were the exercise resulted in two Level 2 Findings (require successful re-demonstration) in the State Emergency Operations Center, and three Plan Issues for the State of Ohio. There were no Findings or Plan Issues for Columbiana County. All findings and planning issues will be resolved in the After Action Process.

## Drills

Ohio EMA participated with applicable counties in the following integrated drills:

- Perry Nuclear Power Plant:
  - August 5, 2015
  - November 18, 2015
  - March 16, 2016
- Beaver Valley Power Station:
  - July 23, 2015
  - August 6, 2015
  - August 27, 2015
  - March 10, 2016
  - April 21, 2016
  - May 17, 2016 Dry Run
- Davis-Besse Nuclear Power Station
  - September 29, 2015
  - October 27, 2015
- Field Monitoring Team Drills
  - November 12, 2015

## Radiological Instrumentation Maintenance and Calibration

The details of the Lease and Cooperative Agreement between Ohio EMA the Ohio State University (OSU) in regards to the Radiological Maintenance and Calibration Laboratory (RIMC) have been finalized.

## National Radiological Emergency Preparedness Conference (NREP)

Chris Salz and Cheryl Chubb attended the National REP Conference May 2-5, 2016 in Charleston, South Carolina.

## Emergency Planning

The 2016 State REP Plan revision was submitted to FEMA for review in January 2016, and was given FEMA approval in April. Cheryl Chubb completed a total re-write utilizing a new formatting tool that helps to organize information making it quicker and more logical to access. In addition to the state plan, the plans for counties were submitted along with their supporting Standard Operating Procedures. Ohio EMA Radiological branch is currently revising procedures and forms utilizing this same format.

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### **Common Dose Assessment**

Peter Hill and Cheryl Chubb continued their training as FRMAC Assessment Scientists with continuing education quarterly with the Department of Energy's Emergency Operations Training Academy. Maintaining TurboFRMAC certification will enable the State of Ohio to integrate with the FRMAC scientists in the event of an incident.

### **Personnel Changes**

On September 21, 2015 Christopher Salz joined the Radiological Branch as the Radiological Analyst Supervisor. Mr. Salz has a background in the Navy nuclear program. He comes to Ohio EMA from Ohio Department of Rehabilitation and Corrections.

On November 30, 2015 Bart Ray joined the Radiological Branch as a Radiological Analyst in Columbiana County. Mr. Ray comes to Ohio EMA from Ohio EPA and has experience evaluating Radiological Emergency Preparedness (REP) exercises as a private contractor. Mr. Ray will be mentored by Mr. Rudy Sacchet who currently holds this position until he retires in June of 2016.

Also on November 30, 2015 Tom Breckenridge retired after 32 years of service. His position was re-posted as a Radiological Analyst position and interviews were conducted on January 7, 2016.

On March 7, 2016 Rochelle Batdorf joined the Radiological Branch as a Radiological Analyst. Ms. Batdorf comes from the Ohio Department of Health where she worked as Health Physicist performing radioactive materials inspections of medical facilities. During her tenure at ODH she also participated in several different roles during nuclear power plant exercises.

Mr. Rudy Sacchet retired as Columbiana County Resident Radiological Analyst in June of 2016 after over 25 years of service.

### **Regulatory Review**

On June 3, 2015 FEMA and the NRC requested comments on the draft version of NUREG 0654/FEMA REP 1 Rev 2. This document is the planning basis for nuclear power plant response and this will be the first major revision of the document since its original publication in the 1980s. Members of the radiological branch reviewed this document and comments were submitted on behalf of Ohio EMA on August 27, 2015. It was noted many times that the proposed language in the new document was very broad and open to interpretations that could require increases in staff and resources to meet the planning requirements

### **NRC State Liaison Officers Conference**

The Radiological Branch Chief attended the biennial U.S. Nuclear Regulatory Commission (NRC) State Liaison Officers' Conference in Washington D.C. from October 27-29, 2015. The conference consisted of two days of speakers and panel discussion on a wide variety of issues of interest to State Liaison Officers. In addition to the lecture sessions the last day of the conference offered two optional training sessions: a Media Training Workshop and a class concerning the Response Technical Tools for Core Damage Assessment.

## OHIO ENVIRONMENTAL PROTECTION AGENCY

The Ohio Environmental Protection Agency (OEPA) regulates emissions to the environment to ensure clean air, clean water, and the proper disposal of solid and hazardous waste, and enforces management standards in order to protect Ohio citizens and the environment. With regard to the URSB and nuclear power operations, Ohio EPA is charged with applying these standards to the nuclear power plants in Ohio. As the plants are large industrial complexes, OEPA routinely monitors the permitted discharges of the nuclear power plants to ensure compliance with all regulated pollution standards.

The nuclear plants are permitted under the National Pollutant Discharge Elimination System, hazardous waste rules, Air permitting, and chemical storage. Ohio EPA divisions receive regular reports from the nuclear plants on these activities and track their performance as with other industries. In addition, OEPA also receives monitoring reports from the plants and from offsite drinking water intakes around the plant to ensure there is no contaminant migration off the plant site in the ground water.

During nuclear power plant exercises, or in the event of an actual incident involving the release of radioactive material, Ohio EPA has a Radiological Assessment Team that has trained to collect environmental samples in affected areas, and who will also take samples in non-affected areas to ensure that the full extent of any contamination is fully understood. These environmental samples, in conjunction with samples collected by other agencies will be analyzed and evaluated. Ohio EPA maintains staff at the State Emergency Operations Center who can provide technical expertise to evaluate these samples and advise local officials and state policy makers regarding the appropriate actions to be taken to protect the public health and well-being.

Ohio EPA participates in power plant evaluated exercises with other state agencies. In SFY 2016 Ohio EPA participated in one evaluated exercise for Beaver Valley. This was the first exercise in two years that involved a radioactive release. No Ingestion plan was exercised, and the Ohio EPA field teams did not deploy for the exercise. Other training activities did occur.

Ohio EPA provides safety and radiation response training for the Radiological Assessment Team several times a year. This group provides environmental sampling for the Ingestion Zone Reentry and Recovery Advisory Group

## **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 transportation, electric, natural gas, telecommunications and water/wastewater companies operating in the State of Ohio. 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 railroad transport of hazardous materials, including radioactive materials. The Transportation Department staff includes fifteen Hazardous Materials Specialists and three supervisors 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 Route Controlled Quantities of radioactive materials shipments using the CVSA Level VI, 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. The Federal Motor Carrier Safety Administration requires all Highway Route Controlled Quantities of Class 7 materials pass a CVSA Level VI inspection as specified in 49 CFR 385.415(b)(1).

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.

PUCO personnel often work closely with Ohio EMA and ODH personnel to coordinate and conduct inspections of high level and special interest radioactive materials shipments. This includes radioactive industrial sources, shipments of radioactive waste. PUCO personnel inspect and escort all US DOT regulated Highway Route Controlled Quantities (HRCQ) and as applicable Quantities of Concern (QC) shipments that enter or travel through Ohio.