To: Jim Mehl, ERSIS Manager

From: Zack Clayton, Rad Coordinator

Subject: January Monthly Report

Date: February , 2016

Beans

Training:	0
Drills:	0
Meetings:	2
Technical Assistance:	2
Public Assistance:	0

Web Page Views: There were 32 page views in January.

Radiological Safety Program Pages: http://epa.ohio.gov/derr/ersis/er/rad.aspx

Coming Attractions

2/3	IREP Intermediate Phase
2/3	IREP NPWG
2/4	NEPAC
2/10	IREP
2/11	New User RadResponder call
2/11	Train the Trainer pre-session call
2/17	RadResponder Train the Trainer
2/24	IREP Non Power Planning
3/2	IREP Intermediate Phase
3/2	IREP NPWG
3/3	IREP Tech
3/9	IREP
3/15	Beaver Valley Systems training
3/30	IREP Non Power Planning
4/11	URSB
4/12-14	RAT Training At Lake County
4/14	NEPAC
5/17	Beaver Valley Full Scale Dry Run
6/14	Beaver Valley Full Scale Evaluated Exercise

Facility updates

Davis-Besse Nuclear Power Station

Davis-Besse operated at full power until January 29.

On January 7 Davis-Besse Nuclear Power Station (DBNPS) provided an update on the elevated levels of tritium in ground water (first detected on February 3, 2015). The sample results for December report 7 of 9 samples above the reporting agreement of 2000 pCi/L. The sample results on the east side of the facility show decreasing amounts of tritium. Samples from the west and north sides of the facility are remaining relatively steady. The highest sample result was 4462 pCi/L. As a reminder the limit for tritium in drinking water is 20,000 pCi/L. Plant personnel have concluded the most likely source of the tritium was past construction activities which occurred on the west side of the plant. Based on the downward trends, DBNPS is transitioning to quarterly sampling with the next samples to be collected in March of 2016. Quarterly sampling will continue until there are two consecutive samples of wells with less than 2000 pCi/L.

At about 1:30 pm, January 29, Davis Besse shut down unexpectedly. The cause is suspected to be due to calibration work on reactor power monitoring sensors. When the shut down occurred the main steam valves opened to relieve pressure on the Secondary coolant system boundary (not radioactive). These valves did not properly reseat after the vent. NRC has been notified due to the main steam valve seating problem. See Event 51696.

Perry Nuclear Power Plant

Perry operated at full power until January 23.

On January 23, PNPP advised Ohio an ongoing issue of a slight leak in the drywell showed a slight increase. As both a preventive and corrective measure the decision was made to shut down the plant, enter the drywell, assess the leak and repair as necessary.
The schedule of events for PNPP is as follows:

Shutdown commences:	2100 January 23, 2016.
Open the turbine breaker:	0600 January 24, 2016.
Enter the drywell:	Investigate and effect repairs as necessary.
Planned pant back on line:	0100 Monday January 25, 2016.

The source of the leak in the dry well was a valve. The plant is taking advantage of the shutdown to complete other maintenance tasks that cannot be done at power.

At approximately 1007 January 24 the PNPP reactor automatically shut down (scrammed) due to a high water level signal in the reactor. This was caused by the shutdown which was in progress for the dry well leakage. The reactor scram required the plant to recalibrate the sensors used monitor power levels within the reactor. Both the reactor scram and recalibration are NRC reportable events. See Event Nos. 51679 and 51681.

Beaver Valley Power Station

Beaver Valley Unit I

Unit I operated at full power for the month.

Unit 1 declared an UE at 1634 1/1/16 due to an unverified fire alarm in containment. There was no other indication of a fire. A containment entry was made and alarm re-set and no fire observed. The UE was cancelled at 2035. Alternate fire detection measures have been put I place and the alarm is being monitored. See IPIR # 160001and Event Report 51631.

Beaver Valley Unit II

Unit II operated at full power for the month.

DTE

Fermi II

Fermi II operated at full power for the month.

On January 23, at 1935 EST, personnel were testing the Low Pressure Coolant Injection (LPCI) pump and valve. The Division 1 LPCI outboard Isolation Valve E1150F017A was closed for stroke time testing and would not reopen. This rendered the LPCI Loop Select function inoperable. This inoperability of LPCI loop Select put Fermi II into Technical Specification 3.0.3. The issue was resolved prior to shut down. There was a loose screw found preventing the close contactor from fully releasing and allowing the open contactor to engage. No other abnormalities were found during this investigation. This screw was removed and the close contactor functioned normally and the valve was opened. The valve was retested satisfactorily. See Event 51676.

Portsmouth Enrichment Plant

There was no activity reported for the Portsmouth site.

Activity

1/6	IREP Nuclear Power Working Group - Agency REP related updates, Ohio EPA will be running RAT training this April at Lake County EMA. The Farm brochure is at the printers and will be distributed as soon as it is finished. OEMA reported the status of the Beaver Valley Exercise planning.

1/6 IREP Intermediate Phase examined what is current and discussed preparation for next meeting.

1/7 IREP Technology committee - Debrief of the National Drill and current implementation plans. Confirmation of date for the RadResponder training and pre-classroom teleconference sessions.

1/11 URSB meeting – Agency updates and Utility reports. FEMA and NRC representatives were unable to attend due to weather.

1/13 IREP – Agency updates on REP, non-power planning, tech group, and intermediate activities. Some discussion of the overlap in Rep and non-power planning. Pitch for getting more involvement with the RadResponder Train the Trainer class.

1/27 FRMAC teleconference – National updates from FEMA, DHS, DOE, EPA, CDC, and project initiatives. The 2016 exercise and federal participation schedule was shared. Pennsylvania will be participating in Vibrant response this year. The state will be playing from Harrisburg.

Office Issues

Need to order 6 Bluetooth kits and two 2241-3s for RAT. Preparing for the Rad Responder Train the Trainer class.

Statistics, NRC Reports, News, and ADAMS References

Operating Power Levels

January

Date	BV1	BV2	DB	Perry	Fermi2	
1	100	100	100	100	100	
4	100	100	100	100	100	
11	100	100	100	100	100	
18	100	100	100	100	100	
24	100	100	100	20	100	Perry shutdown for leakage to drywell
25	100	100	100	0	100	
30	100	100	0	0	100	DB reactor trip during monitor testing.
31	100	100	0	0	100	

Event Reports

Power Reactor	Event Number: 51631

Facility: BEAVER VALLEY Region: 1 State: PA Unit: [1] [ ] [ ] RX Type: [1] W-3-LP,[2] W-3-LP NRC Notified By: STEVEN WOOLSEY HQ OPS Officer: DONALD NORWOOD	Notification Date: 01/01/2016 Notification Time: 17:19 [ET] Event Date: 01/01/2016 Event Time: 16:34 [EST] Last Update Date: 01/01/2016
Emergency Class: UNUSUAL EVENT 10 CFR Section: 50.72(a) (1) (i) - EMERGENCY DECLARED	Person (Organization): RAY MCKINLEY (R1DO) WILLIAM DEAN (NRR) DAVID LEW (DRA) WILLIAM GOTT (IRD) SCOTT MORRIS (NRR)

Unit	SCRAM Code	RX CRIT	Initial PWR	Initial RX Mode	Current PWR	Current RX Mode
1	N	Y	100	Power Operation	100	Power Operation

Event Text

UNUSUAL EVENT DECLARED DUE TO UNVERIFIED FIRE ALARM IN CONTAINMENT

"Unusual Event declared at BVPS [Beaver Valley Power Station] Unit 1 at 1634 EST due to a fire alarm in Containment [which was] unable to be verified extinguished within 15 minutes. Current Containment parameters do not indicate an actual fire."

The licensee notified the NRC Resident Inspector and State and local government agencies.

Notified DHS SWO, FEMA Ops Center, and NICC Watch Officer. E-mailed FEMA NWC and Nuclear SSA.

* * * UPDATE FROM SAMANTHA BALDWIN TO DONALD NORWOOD AT 2057 EST ON 1/1/2015 * * *

"At 1655 the fire alarm was reset.

"The Unusual Event has been terminated at 2035 EST after a containment entry and visual inspection determined no fire or indications of fire exist."

The licensee notified the NRC Resident Inspector and State and local government agencies.

Notified R1DO (McKinley), NRR EO (Morris), and IRD MOC (Gott).

Notified DHS SWO, FEMA Ops Center, and NICC Watch Officer. E-mailed FEMA NWC and Nuclear SSA.

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!!!!! THIS EVENT HAS BEEN RETRACTED. THIS EVENT HAS BEEN RETRACTED !!!!!	
Power Reactor	Event Number: 51584

Facility: BEAVER VALLEY Region: 1 State: PA Unit: [1] [2] [ ] RX Type: [1] W-3-LP,[2] W-3-LP NRC Notified By: SAMANTHA BALDWIN HQ OPS Officer: MARK ABRAMOVITZ	Notification Date: 12/04/2015 Notification Time: 01:33 [ET] Event Date: 12/03/2015 Event Time: 21:07 [EST] Last Update Date: 01/07/2016
Emergency Class: NON EMERGENCY 10 CFR Section: 50.72(b)(3)(v)(D) - ACCIDENT MITIGATION	Person (Organization): WILLIAM COOK (R1DO)

Unit	SCRAM Code	RX CRIT	Initial PWR	Initial RX Mode	Current PWR	Current RX Mode
1	N	Y	100	Power Operation	100	Power Operation
2	N	Y	100	Power Operation	100	Power Operation

Event Text

EXCESSIVE CONTROL ROOM IN-LEAKAGE IDENTIFIED

"On December 3, 2015 at 2107 [EST], the Control Room Emergency Ventilation System (CREVS) was declared inoperable due to a higher than allowed identified in-leakage rate for the Control Room Envelope (CRE) when in the Normal Operating Mode. Both Unit 1 & Unit 2 remain at 100 percent power and they share a common CRE.

"At the time of discovery, there is a reasonable expectation this condition could prevent the fulfillment of the safety function of a system that is required to mitigate the consequences of an accident, thus satisfying the reporting criteria for 10CFR50.72(b)(3)(v)(D).

"Actions to implement mitigating actions were immediately initiated in accordance with Technical Specification 3.7.10. CREVS has been placed in Recirculation Ventilation Mode, isolating the control room from outside air.

"The NRC Senior Resident Inspector has been notified of the condition."

* * * RETRACTION ON 1/7/16 AT 1110 EST FROM SHAWN SNOOK TO DONG PARK * * *

"Following the 8-hour 10CFR50.72 notification made on 12/4/2015 (EN 51584) regarding the Control Room Emergency Ventilation System (CREVS) inoperability, an engineering evaluation determined inleakage did not exceed limits described in the Beaver Valley licensing basis. Therefore, the degraded Control Room Emergency Ventilation System remained Operable with the identified air inleakage as determined by the Control Room Envelope Habitability Program. As such, the safety function was never lost and the event notification is being retracted as it is not reportable pursuant to 10CFR50.72(b)(3)(v)(D). FENOC is planning to repair the degraded components of the system.

"The NRC Resident [Inspector] has been notified." Notified R1DO (Dimitriadis).

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Power Reactor	Event Number: 51676

Facility: FERMI Region: 3 State: MI Unit: [2] [ ] [ ] RX Type: [2] GE-4 NRC Notified By: DEREK ETUE HQ OPS Officer: JEFF HERRERA	Notification Date: 01/23/2016 Notification Time: 00:20 [ET] Event Date: 01/22/2016 Event Time: 19:35 [EST] Last Update Date: 01/23/2016
Emergency Class: NON EMERGENCY 10 CFR Section: 50.72(b)(3)(v)(D) - ACCIDENT MITIGATION	Person (Organization): JAMNES CAMERON (R3DO)

Unit	SCRAM Code	RX CRIT	Initial PWR	Initial RX Mode	Current PWR	Current RX Mode
2	N	Y	100	Power Operation	100	Power Operation

Event Text

LOW PRESSURE COOLANT INJECTION PUMP ISOLATION VALVE WOULD NOT REOPEN

"While performing a Technical Specification surveillance functional test of the Low Pressure Coolant Injection (LPCI) pump and valve surveillance, the Division 1 LPCI outboard Isolation Valve E1150F017A was closed for stroke time testing and would not reopen. Not being able to be open this valve renders the LPCI Loop Select function inoperable. Time of the event was 1935 [EST]. This inoperability of LPCI loop Select results in entry into Technical Specification 3.0.3.

"Power reduction activities were briefed at time 2020, however, no power reduction commenced due to resolving the issue with the LPCI outboard Isolation Valve E1150F017A. During the investigation there was a loose screw found preventing the close contactor from fully releasing and allowing the open contactor to engage. No other abnormalities were found during this investigation. This screw was removed and the close contactor functioned normally and the valve was opened. The valve was retested satisfactory and the station exited Technical Specification 3.0.3 at 2145.

"This report is made pursuant to 10 CFR 50.72(b)(3)(v)(D), an event or condition that could have prevented the fulfillment of the safety function of systems needed to mitigate the consequences of an accident.

"The NRC Resident Inspector was notified."

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Power Reactor	Event Number: 51679
Facility: PERRY Region: 3 State: OH Unit: [1] [ ] [ ] RX Type: [1] GE-6 NRC Notified By: DAVID O'DONNELL HQ OPS Officer: DANIEL MILLS	Notification Date: 01/24/2016 Notification Time: 00:56 [ET] Event Date: 01/23/2016 Event Time: 21:22 [EST] Last Update Date: 01/24/2016
Emergency Class: NON EMERGENCY	Person (Organization):

10 CFR Section:	JAMNES CAMERON (R3DO)
50.72(b)(2)(i) - PLANT S/D REQD BY TS	SCOTT MORRIS (NRR)
50.72(b)(2)(iv)(B) - RPS ACTUATION - CRITICAL	WILLIAM GOTT (IRD)

Unit	SCRAM Code	RX CRIT	Initial PWR	Initial RX Mode	Current PWR	Current RX Mode
1	A/R	Y	90	Power Operation	0	Hot Shutdown

Event Text

TS REQUIRED SHUTDOWN DUE TO UNIDENTIFIED LEAKAGE IN DRYWELL

"At 2100 hours [EST], on January 23, 2016, the Perry Nuclear Power Plant commenced a reactor shutdown due to unidentified leakage in the drywell. At 2122 hours, drywell unidentified leakage exceeded the Technical Specification 3.4.5.d limit of 'less than or equal to 2 gpm increase in unidentified LEAKAGE within the previous 24 hour period in Mode 1.' The unidentified leakage increased to approximately 3.8 gpm at 2122 hours. Current unidentified leakage is 3.02 gpm.

"Technical Specification 3.4.5 actions allow 4 hours to reduce the leakage within limits or be in Mode 3 within 12 hours and Mode 4 within 36 hours. The plant is required to be in Mode 3 by 1322 hours on January 24, 2016 and Mode 4 by 1322 hours on January 25, 2016.

"A drywell entry will be made in Mode 3 to identify the leak source.

"This notification is being made due to an expected inability to restore the leakage within limits prior to exceeding the LCO action time.

"Follow up question from NRC: Event times do not match (2100 versus 2122) - explained downpower was commenced at 2100 with leakage less than TS limit. When Reactor Core flow was reduced, un-identified leakage increased above the TS limit."

The Licensee has notified the NRC Resident Inspector.

* * * UPDATE FROM MIKE DOTY TO DANIEL MILLS AT 1123 EST ON 1/24/16 * * *

"At 1007 hours, on January 24, 2016 with the plant at 8% power during a feedwater shift to place the motor feed pump in service, reactor level rose to the level 8 scram set point and the Reactor Protection System (RPS) initiated, scramming the reactor. During the scram, all rods fully inserted into the core. Decay heat is being removed via turbine bypass valves to the main condenser. Reactor level control is currently being maintained via feedwater. The plant is stable with cool down and depressurization to Mode 4 to follow. The cause of the rise in feedwater level is under investigation. This notification is being made under 50.72(b)(2)(iv)(B) for a RPS initiation while critical."

All safety shutdown systems are available. The electric plant is in its normal shutdown alignment being supplied by offsite power.

The licensee has notified the NRC Resident Inspector. Notified R3DO (Cameron). NRR (Morris) and IRD (Gott) were notified via email.

* * * UPDATE FROM DAVID O'DONNELL TO HOWIE CROUCH AT 1915 EST ON 1/24/16 * * *

"Following a shutdown required by plant Technical Specifications a small leak was identified coming from the Reactor Recirculation Loop A Pump Discharge Valve vent line. The Recirculation Loop is part of the reactor coolant system making this reportable under 50.72(b)(3)(ii)(A) as a degraded condition. It was subsequently determined to require a plant cool down in accordance with Technical Specification 3.4.5, Action C which requires the plant to be in MODE 4 within 36 hours. Technical Specification 3.4.5 was previously entered for increased unidentified leakage in the drywell. The plant is required to be in Mode 4 by 1322 hours on January 25, 2016."

The licensee has notified the NRC Resident Inspector. Notified R3DO (Cameron). NRR (Morris) and IRD (Gott) were notified via email.

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Power Reactor	Event Number: 51681
Facility: PERRY Region: 3 State: OH Unit: [1] [ ] [ ] RX Type: [1] GE-6 NRC Notified By: MIKE DOTY HQ OPS Officer: DANIEL MILLS	Notification Date: 01/24/2016 Notification Time: 11:23 [ET] Event Date: 01/24/2016 Event Time: 03:57 [EST] Last Update Date: 01/24/2016
Emergency Class: NON EMERGENCY 10 CFR Section: 50.72(b)(3)(v)(A) - POT UNABLE TO SAFE SD	Person (Organization): JAMNES CAMERON (R3DO) SCOTT MORRIS (NRR) WILLIAM GOTT (IRD)

Unit	SCRAM Code	RX CRIT	Initial PWR	Initial RX Mode	Current PWR	Current RX Mode
1	A/R	Y	52	Power Operation	52	Power Operation

Event Text

AVERAGE POWER RANGE MONITORING SYSTEM INOPERABLE

"At 0357 hours [EST] on January 24, 2016, during a shut down required by plant Technical Specifications (see EN#51679), the 3A Feedwater heater isolated while performing a Reactor Recirculation Pump downshift. A consequence of this Feedwater heater isolation was that all 8 of the Average Power Range Monitors (APRM) became inoperable due to a calibration set point being out of tolerance. The APRM's are relied upon for the reactors high neutron flux trips. The inoperable APRM's resulted in a loss of RPS Trip Capability and a loss of safety function. The manual reactor trip function and other RPS functions remained available. RPS Trip capability for the APRM's was restored at 0445 hours on January 24, 2016. This notification is being made under [10 CFR] 50.72(b)(3)(v)(A) for an event or condition that could have prevented the fulfillment of a safety function affecting the ability to shut down the reactor."

The licensee has notified the NRC Resident Inspector.

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Power Reactor	Event Number: 51696
Facility: DAVIS BESSE Region: 3 State: OH Unit: [1] [ ] [ ] RX Type: [1] B&W-R-LP NRC Notified By: THOMAS PHILIPS HQ OPS Officer: DONG HWA PARK	Notification Date: 01/29/2016 Notification Time: 16:43 [ET] Event Date: 01/29/2016 Event Time: 13:22 [EST] Last Update Date: 01/29/2016
Emergency Class: NON EMERGENCY 10 CFR Section: 50.72(b)(2)(iv)(B) - RPS ACTUATION - CRITICAL 50.72(b)(3)(iv)(A) - VALID SPECIF SYS ACTUATION	Person (Organization): BILLY DICKSON (R3DO) SCOTT MORRIS (NRR) JEFFERY GRANT (IRD)

Unit	SCRAM Code	RX CRIT	Initial PWR	Initial RX Mode	Current PWR	Current RX Mode
1	A/R	Y	100	Power Operation	0	Hot Standby

Event Text

AUTOMATIC REACTOR TRIP DUE TO REACTOR PROTECTION SYSTEM ACTUATION

"At 1322 EST, with the unit operating at approximately 100% full power, an automatic reactor trip occurred due to actuation of Reactor Protection System (RPS) Channel 4. The cause of the RPS actuation is being investigated at this time. Nuclear Instrumentation calibration for RPS Channel 2 was in progress at the time of the trip, with Channel 2 in bypass and Channel 1 in trip. All control rods fully inserted. Immediately post trip, the Steam Feedwater Rupture Control System actuated due to high Steam Generator 1 level due to unknown causes. The Main Steam Isolation Valves closed and Auxiliary Feedwater started as expected. Secondary side relief valves lifted in response to the trip, with two of the relief valves (one on each header) not properly reseating until operators manually lowered Main Steam Header pressure. The Bayshore 345 kV Offsite Electrical Distribution Circuit automatically isolated at the time of the unit trip. This was unexpected. The remaining offsite circuits remain in service.

"The unit is currently in Mode 3 (Hot Standby) and stable, at approximately 550 degrees F and 2155 psig. Steam is being discharged through the Atmospheric Vent Valves for decay heat removal. There is no known primary to secondary leakage, and all safety systems functioned as expected.

"Both primary Source Range nuclear instruments automatically energized, however, they were previously declared inoperable due to an administrative issue. Both Source Range instruments are functional and indicating properly. Both alternate Source Range instruments are operable, and all required Technical Specification actions have been completed.

"The NRC Resident Inspector has been notified of the event."

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BEIJING, Jan. 27-- Following is the full text of China's Nuclear Emergency Preparedness published by the State Council Information Office of the People's Republic of China in January 2016.

China's Nuclear Emergency Preparedness The State Council Information Office of the People's Republic of China January 2016 First Edition 2016
(14 pages)
Full text: http://en.people.cn/n3/2016/0127/c90785-9010095.html
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E-learning for Nuclear Newcomers
Is your country considering nuclear power?
The IAEA is here to help!
We have created an interactive e-learning series explaining the IAEA's Milestones Approach to introducing a nuclear power programme. This approach is based on three phases and covers the 19 infrastructure issues that need to be addressed, and brings decades of expertise to life. Both newcomers and those expanding their nuclear power programmes may benefit from the e-learning series. (Currently 13 Modules)
Home page: https://www.iaea.org/NuclearPower/Infrastructure/elearning/
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News

China to build 40 new plants by 2020

Published: Tuesday, January 5, 2016
The Chinese government plans for the country to build about 40 new domestic nuclear power plants over the next five years, tripling its generating capacity.
The country's 13th five-year plan includes the construction of six to eight nuclear power plants a year from 2016 to 2020. After that, the government will aim to increase output to 10 plants a year.
Currently, the country has 30 nuclear power reactors in operation and 22 under construction, according to the World Nuclear Association.
The expansion of nuclear power fits inside the country's strategy to reduce its reliance on coal and the air pollution it causes (Jon Stone, London *Independent*, Jan. 4). **-- CVK**
Source: http://www.eenews.net/climatewire/2016/01/05/stories/1060030092
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Exelon launches power play to derail FirstEnergy proposal in Ohio

Jeffrey Tomich, E&E reporter
Published: Tuesday, January 5, 2016
The nation's largest nuclear operator, Exelon Corp., thinks a revised plan proposed by FirstEnergy Corp. in Ohio is "grossly lopsided" and a raw deal for consumers.
But in case state regulators disagree, Exelon, which owns no power plants in Ohio, is willing to "put its money where its mouth is" and agree to a similar, eight-year agreement. The kicker: It claims it can undercut FirstEnergy's proposal by $2 billion and deliver emissions-free power.
In testimony filed Dec. 30 with the Public Utilities Commission of Ohio, Lael Campbell, Exelon's director regulatory and government affairs, said the company is taking an unprecedented step of offering up to 3,000 megawatts of emissions-free generation to consumers in Ohio, a state where the retail electricity market is deregulated.
Exelon said it is making the offer "so that no one can misunderstand the gravity of the harm that would occur to Ohio customers" if the FirstEnergy agreement is accepted without a "competitive process."

The filing comes two weeks before a scheduled hearing in the case before the commission and figures to further fuel an already contentious debate. Already, the chief executive of another rival generator, Houston-based Dynegy Inc., has threatened to file a lawsuit if the FirstEnergy proposal is approved.

Dynegy has also threatened to sue to stop a similar income-guarantee proposal by American Electric Power Co. Hearings in the AEP case began yesterday in Columbus.

FirstEnergy filed an updated plan on Dec. 1 that was supported by the commission staff and more than a dozen other parties. The plan would guarantee income for the 908-MW Davis-Besse nuclear plant and 2,200-MW W.H. Sammis coal plant and a share of output from plants in Ohio and Indiana through mid-2024 (*EnergyWire*, Dec. 2, 2015).

The term of last month's agreement is about half the original 15-year proposal and included pledges to slash emissions, fund low-income programs, and support energy efficiency and renewable energy development.

FirstEnergy, which operates three electric utilities in northern and central Ohio, insists the revised agreement would ensure more predictable, stable pricing and preserve thousands of jobs and millions of dollars in local taxes. But environmental groups and consumer advocates have called it a bailout that would merely pad company profits. They also criticized the private meetings that led to the agreement as "backroom dealing."

The Office of the Ohio Consumers' Counsel filed testimony on Dec. 30 predicting that FirstEnergy's 1.9 million consumers will pay an average of $800 more in electricity costs annually over the next eight years to fund the utility "bailout."

Under the income-guarantee proposals offered by FirstEnergy and AEP, the utilities would enter agreements to buy all of the output from the plants and sell it through the wholesale market run by regional grid manager PJM Interconnection LLC. The difference between costs and revenues would be a charge or credit to customers.

FirstEnergy said its plan would initially cost consumers. But, contrary to the consumer advocate's estimate, the company said it customers would save an estimated $560 million over the life of the agreement based on projected power price increases.

Competition

Exelon, meanwhile, makes clear in its filing that it wants the PUC to reject the idea. But, if regulators disagree, the process of choosing an energy provider should be competitive, Campbell said in the Dec. 30 testimony.

A competitive process, Campbell said, would "wash away the stain of this affiliate backroom deal where FirstEnergy has positioned its regulated utility to benefit its affiliate ... exclusively by coupling the proposed power purchase agreement with settlement 'goodies.'"

Among the "goodies" referenced is carbon reduction goals that, according to Exelon, are not enforceable for more than 25 years. "In short, these concessions are nothing more than window dressing designed to hide from the public an out-of-market contract between FirstEnergy and its affiliated merchant generation company," Campbell said.

FirstEnergy spokesman Doug Colafella disagreed with Exelon's statements. He said the Exelon counter proposal would only make the state more reliant on out-of-state energy sources and would do nothing to preserve the jobs and tax base at the affected plants -- part of the core of what FirstEnergy is offering.

"We believe our plan offers the most benefits for Ohioans," he said.

Colafella also noted Exelon unsuccessfully proposed legislation in its home state of Illinois that would have subsidized money-losing nuclear plants by creating a low-carbon portfolio standard. It is a proposal that, like FirstEnergy's, was offered in the name of preserving jobs and benefiting local economies.

Just like it has pushed in Illinois, Exelon said in last week's testimony that a requirement for low-carbon energy in Ohio is the best way to preserve nuclear plants like **Davis-Besse.**

Meanwhile, the company said it doesn't matter whether the power used by Ohioans comes from inside or outside state borders, only that consumers get the lowest price possible.

Exelon doesn't say specifically where it would source the generation for Ohio. But the company said its offer is good for six months and it would agree to deliver energy from renewable energy sources and nuclear plants in PJM.

The company also pledged in its testimony to assume all capacity-performance risk under new rules established by PJM while the FirstEnergy proposal wouldn't similarly shield consumers.

Twitter: @jefftomich Email: jtomich@eenews.net

Source: http://www.eenews.net/energywire/2016/01/05/stories/1060030100

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Water woes linked to warming threaten power plants -- study

Amanda Reilly, E&E reporter

Published: Monday, January 4, 2016

Most power generation is vulnerable to changes in water resources caused by climate change, according to a study published today in *Nature Climate Change*.

Weaker water flow in rivers and warmer water will affect nuclear and fossil- and biomass-fueled plants, as well as hydropower facilities, researchers affiliated with the International Institute for Applied Systems Analysis in Austria found.

As much as 86 percent of thermoelectric plants and three-quarters of hydropower plants could experience lower capacity between 2040 and 2069 because of climate change, the study concludes.

"This is the first study of its kind to examine the linkages between climate change, water resources and electricity production on a global scale," said co-author Keywan Riahi, the institute's energy program director. "We clearly show that power plants are not only causing climate change, but they might also be affected in major ways by climate."

The study was supported by the Niels Stensen Fellowship and a grant from the Netherlands Organisation for Scientific Research.

Researchers used computer modeling to measure how climate change could affect freshwater resources in the next several decades. They used data from 24,515 hydropower plants and 1,427 thermoelectric plants -- 78 and 28 percent, respectively, of the world's installed capacity.

Together, hydropower and thermoelectric power make up 98 percent of the world's electricity generation, according to the study. Both types of power plants depend on water availability to generate power, while thermoelectric plants also depend on fresh water for cooling.

The study found that climate change will reduce fresh water in streams and rivers in the United States, southern and central Europe, Southeast Asia, southern parts of South

America, Africa, and Australia. Northern latitudes, on the other hand, are expected to experience increased stream flow.
Average freshwater temperatures around the globe are expected to increase, the study also found.
The reduced stream flow in southern latitudes will affect both hydropower and thermoelectric plants, while higher temperatures will make it more difficult for thermoelectric plants to use fresh water for cooling purposes.
"We find that climate change will reduce the existing power plant capacities of both hydropower and thermoelectric power in most regions worldwide," the researchers wrote.
Because of climate change, the study found thermoelectric plants are poised to see a drop-off of between 81 and 86 percent in plant capacity between 2040 and 2069. During that time, it says, hydropower plants will experience a reduction of 61 to 74 percent in usable capacity due to climate change.
Thermoelectric plants will see a greater effect than hydropower plants because most nuclear, fossil fuel and biomass plants are located in southern latitudes affected most by reduced stream flow, the study found.
The authors warn the problem would grow worse as energy demands increase with economic development and growing world population. They cautioned that the power sector will need to establish strategies in the early 2020s to avoid the expected water constraints in the future.
According to the study, increasing the efficiency of hydropower plants by up to 10 percent will likely completely offset the increase in water constraints. Saving thermoelectric power plant capacity, however, will instead require replacing cooling systems and switching fuel, it says.
"In order to sustain water and energy security in the next decades," said lead author Michelle van Vliet, a researcher at IIASA and Wageningen University in the Netherlands, "the electricity focus will need to increase their focus on climate change adaptation in addition to mitigation."
Twitter: @apeterka Email: areilly@eenews.net
Note: Warm Lake Erie water temperatures in summer have decreased power output sporadically at Davis-Besse and Perry by several percent in the past.
Source: http://www.eenews.net/eenewspm/2016/01/04/stories/1060030084
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Report finds potential chemical exposure at Ohio nuclear site

Published: Friday, January 8, 2016
Federal nuclear weapons workers may have seen less significant health improvements in the past 20 years than previously thought, according to a new government report.
For years, the Department of Labor's program to aid nuclear workers with health problems, called the Division of Energy Employees Occupational Illness Compensation, has assumed that conditions at federal nuclear sites have become safer since 1995.
A report last month from the National Institute for Occupational Safety and Health casts doubt on that assumption. The report, a health examination at the Portsmouth Gaseous Diffusion Plant in Scioto Township, Ohio, found that air sampling at the now-shuttered uranium enrichment plant contains a potentially lethal gas, hydrogen fluoride, at levels up to 30 times the suggested limits.

The report found that workers at the site were concerned about their potential exposure to toxic chemicals, and five had experienced health problems they believed were the result of their jobs.
"Several employees expressed concern that they felt rushed to complete job tasks and that some managers placed production goals ahead of safety," the report said. "Employees believed these problems have led to near misses and accidents."
Under Department of Labor regulations, claims examiners are supposed to assume that nuclear workers were not exposed to harmful chemicals if the alleged exposure came after 1995. Amanda McClure, a spokeswoman for the department, said the findings didn't require that policy to change.
"We will take NIOSH's Portsmouth facility report into consideration on a case-by-case basis," McClure said (Morris/Hopkins, Center for Public Integrity, Jan. 8). **-- SP**
Source: http://www.eenews.net/greenwire/2016/01/08/stories/1060030340
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Ohio utility adds nuclear experts to board, operating company

Pamela King, E&E reporter
Published: Wednesday, January 20, 2016

FirstEnergy Corp. has elected Thomas Mitchell to its board of directors.
Mitchell brings to the Ohio-based energy firm 38 years of experience in the nuclear industry, including leadership posts with the World Association of Nuclear Operators, Institute of Nuclear Power Operations, Nuclear Energy Institute and Electric Power Research Institute.
"Tom is a well-respected leader in the nuclear industry," FirstEnergy Chairman George Smart said in a statement yesterday. "We believe his experience leading business transformations and strategy development at large organizations, together with his deep knowledge of energy issues, governance, research and implementation, will benefit FirstEnergy and its shareholders."
Prior to his retirement last year, Mitchell was president, CEO and director of Ontario Power Generation Inc. (OPG). Before that, he was chief nuclear officer and senior vice president of OPG's Pickering B station and the firm's vice president of nuclear support.
Mitchell holds a bachelor's degree from Cornell University and a master's degree from George Washington University.

New site manager

FirstEnergy also welcomed yesterday a new site supervisor within its nuclear power subsidiary.
Marty Richey will serve as site vice president of FirstEnergy Nuclear Operating Co.'s (FENOC) Beaver Valley Nuclear Power Station. In his new role, Richey will handle management and operation of the Pennsylvania plant.
"Marty brings to Beaver Valley a diverse background in all aspects of nuclear power operations, particularly outage and work management and performance improvement," FENOC Chief Nuclear Officer Sam Belcher said in a separate news release. "His leadership and experience in the industry will benefit Beaver Valley as the site continues safe operation and pursuit of industry-leading operating performance."
Richey, a graduate of Siena Heights University in Michigan, previously managed Entergy Corp.'s Waterford Nuclear Generating Station in Louisiana.

Twitter: @pamelalauren Email: pking@eenews.net
Source: http://www.eenews.net/energywire/2016/01/20/stories/1060030836
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Reliability spiked in 2015 -- industry

Arianna Skibell, E&E reporter
Published: Wednesday, January 20, 2016

Despite periods of extreme weather and an increase in national electricity demand, nuclear energy set a reliability record in 2015, according to initial estimates from the Nuclear Energy Institute.

Based on preliminary data compiled by the institute, the nation's 99 nuclear power plants generating electricity in 30 states operated at an average capacity level of 91.9 percent, besting a 2007 record by one-tenth of a percentage point.

The average capacity is measured by calculating total electricity generated as a percentage of potential generation for the entire year.

Final data for nuclear power are due within two months, NEI spokesman Tom Kauffman said, and officials expect them to remain high.

The energy produced from nuclear plants in 2015 exceeds the amount produced in 2014, despite the closing of the Vermont Yankee plant.

The most recent data reinforce how valuable nuclear energy is to the U.S. electric grid, the institute's chief nuclear officer, Anthony Pietrangelo, said in a statement.

"U.S. nuclear power plants continue to operate at exceptional levels of safety and reliability, while generating affordable electricity that consumers and our economy rely on," he said. "This is due to the hard work and dedication of the highly skilled men and women who work at these facilities and the reactor vendors and suppliers who provide support services."

In 2014, the average capacity for geothermal energy was 68.8 percent, coal was 60.9 percent and hydropower was 37.5 percent, according to NEI records.

Email: askibell@eenews.net
Source: http://www.eenews.net/eenewspm/2016/01/20/stories/1060030910
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Scientists aim to drill into oldest rocks for storage

Published: Friday, January 22, 2016

Scientists are seeking permission to drill more than 16,000 feet into the Earth's crust in North Dakota to study the suitability of some of Earth's oldest rock for nuclear waste storage.

"This is a big-time science project. There might be a handful of penetrations into deep crystalline rock, but none to this kind of depth -- very rarely has a bore hole been attempted at these depths," said John Harju, associate research director of the Energy and Environmental Research Center, which proposed its experiment to the North Dakota state Land Board yesterday.

The U.S. Department of Energy awarded $35 million this month to the scientists for the experiment.

Harju said the experiment will take place over nine months (Larry Donovan, *Bismarck Tribune*, Jan. 21). **-- BTP**

Source: http://www.eenews.net/greenwire/2016/01/22/stories/1060031038
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Part 21 and Miscellaneous

U.S. Nuclear Regulatory Commission Analysis of Licensees' Decommissioning Funding Status Reports
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Information Notice 2016-03, "Revision to the National Institute of Standards and Technology Standard for Radkum-223 and Impact on Dose Calibration for the Medical Use of Radium-223 Dichlorids, dated January 12, 2016
ADAMS Accession No.: ML15264B095
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Regulatory Issue Summary 2015-16, Revision 1, "Planned Licensing Action Submittals for All Power Reactor Licensees," dated January 15, 2016
ADAMS Accession No.: ML16013A156
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Information Notice 2016-02, "Improper Seating of Reactor Vessel Surveillance Capsules," dated January 15, 2016
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NUREG-0750, Vol. 45, "Opinions and Decisions of the Nuclear Regulatory Commission with Selected Orders," (January 1, 1997 - June 30, 1997).
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FirstEnergy

Response to Request for Additional Information and Submittal of Supplemental Financial Information Related to Application for Transfer of License and Conforming License Amendment.
ADAMS Accession No.: ML16018A003
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Davis-Besse

Davis-Besse Nuclear Power Station, Unit No. 1 - Request For Additional Information Related To Amendment Request For Emergency Diesel Generator Minimum Voltage Surveillance Requirements(CAC No. MF6060)
ADAMS Accession No.: ML16019A397
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Summary Of December 17,2015 Meeting With Firstenergy Nuclear Operating Company On Its License Amendment Request To Revise The Emergency Diesel Generator Surveillance Requirements At Davis-Besse Nuclear Power Station, Unit 1 (CAC No. MF6060)
ADAMS Accession No.: ML16006A351
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EA-15-222, Davis-Besse Nuclear Power Station-Final Significance Determination for a Security-Related Greater than Green Finding, Notice of Violation and Assessment Follow-Up Letter
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Summary of January 5, 2016, Meeting with FirstEnergy Nuclear Operating Company on its Planned License Amendment Request to Revise the Emergency Action Level Scheme at Davis-Besse Nuclear Power Station, Unit No. 1 (CAC No. MF7156)
ADAMS Accession No.: ML16007A396
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Perry

Perry Nuclear Power Plant - Triennial Fire Protection Inspection Report 05000440/2015008
ADAMS Accession No: ML16005A548
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Perry Nuclear Power Plant, Unit No 1.- Branch Chief Reassignment For Plant Licensing Branch 3-1
ADAMS Accession No.: ML15362A092
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Perry Nuclear Power Plant, Unit 1 – Inspection of Temporary Instruction 2201/004, “Inspection of Implementation of Interim Cyber Security Milestones 1 – 7”; Inspection Report 05000440/2015403
ADAMS Accession No: ML16011A464
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Perry Nuclear Power Plant, Unit No. 1 - Request for Withholding Information from Public Disclosure (L-15-350)
ADAMS Accession No.: ML15352A270
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Redacted Completion of Required Action by NRC Order EA-12-049, Order Modifying Licenses With Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events.
ADAMS Accession No.: ML15362A497
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Response to Request for Additional Information and Submittal of Supplemental Financial Information Related to Application for Transfer of License and Conforming License Amendment.
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Beaver Valley

Beaver Valley, Units 1 and 2 - Discharge Monitoring Report for November 2015.
ADAMS Accession No.: ML15364A012
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Portsmouth Facilities

Updated Foreign Ownership, Control, or Influence Information for American Centrifuge Holdings, LLC.
ADAMS Accession No.: ML16014A138
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12/20/2015 Enclosure 1 Public Meeting Summary for Technical Discussion on the Proposed Cyber Security Rulemaking for Fuel Cycle Facilities.
ADAMS Accession No.: ML15356A336
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NRC Response on Review of Changes to the Emergency Plan for the ACP.
ADAMS Accession No.: ML15351A089
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American Centrifuge Operating, LLC, Lead Cascade Facility NRC Integrated IR 70-7003/2015005.
ADAMS Accession No.: ML16005A109
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Fermi 1

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Fermi 2

Fermi Power Plant, Unit 2 – NRC Security Baseline Inspection Report 05000341/2015403 (Cover Letter Only)
ADAMS Accession Number ML16006A528
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Subject: Fermi 2 -Branch Chief Reassignment For Plant Licensing Branch 3-1
ADAMS Accession No.: ML15363A143
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SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON DECEMBER 15, 2015, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND DTE ELECTRIC COMPANY CONCERNING FERMI 2 LICENSE RENEWAL APPLICATION (TAC NO. MF4222)
ADAMS Accession No: ML16005A399
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Comment (21) of Kevin Kamps Opposing Fermi 2 License Renewal.

ADAMS Accession No.: ML16011A014
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Comment (22) of Michael J Keegan Opposing Fermi 2 License Renewal Application Draft Supplemental Environmental Impact Statement.
ADAMS Accession No.: ML16011A015
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Comment (37) of David Schonberger on Behalf of Alliance to Halt Fermi 3 on DTE Electric Company; Fermi 2 Nuclear Power Plant; Issuance of Draft Environmental Impact Statement.
ADAMS Accession No.: ML16011A030
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Comment (14) of Art Myatt Opposing the Construction of Fermi 3 and The Relicensing of Fermi 2 for the 2025-2045 Timeframe.
ADAMS Accession No.: ML16011A008
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ADAMS Accession No.: ML16007A744
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Transcript of the Advisory Committee on Reactor Safeguards Structural Analysis Subcommittee Meeting - October 23, 2015 Pages 1-398.
ADAMS Accession No.: ML16007A437
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Fermi 2 - Phase 1 and Phase 2 Overall Integrated Plan for Implementation of Order EA-13-109, Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions.
ADAMS Accession No.: ML15357A289
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Safety Evaluation Report with Open Items Related to the License Renewal.
ML16027A270
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Fermi 3

Comment (37) of David Schonberger on Behalf of Alliance to Halt Fermi 3 on DTE Electric Company; Fermi 2 Nuclear Power Plant; Issuance of Draft Environmental Impact Statement.
ADAMS Accession No.: ML16011A030
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Comment (14) of Art Myatt Opposing the Construction of Fermi 3 and The Relicensing of Fermi 2 for the 2025-2045 Timeframe.
ADAMS Accession No.: ML16011A008
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