

To: Jim Mehl, ERU Supervisor
From: Zack Clayton, Rad Coordinator
Subject: March Monthly Report
Date: April 10, 2013

Beans

Training: 2
Drills: 0
Meetings: 2
Technical Assistance: 2
Public Assistance: 1

Web Page Views: There were 40 page views in March.

Coming Attractions

4/1 BV HAB Dry Run
4/2 Working Group
4/16 URSB
4/24 NEPAC
4/29 Fermi Exercise observation
5/7 Working Group
6/3 BV 2nd dry run if needed
6/4 Working Group
6/17 BV HAB Exercise

Facility updates

Davis-Besse Nuclear Power Station

Davis-Besse was in a refueling outage for the month of March.

Perry Nuclear Power Plant

Perry operated for most of March at full power. The plant was at reduced power from March 3 to 8 for work on Feed Water Heaters and control rod sequence exchange.

Beaver Valley Power Station

For the statewide tornado awareness day the Columbiana Co Sheriff's Office accidentally activated the emergency sirens for the 10 mile EPZ instead of the weather alert sirens. There was no emergency at Beaver Valley. See Event No. 49874.

Beaver Valley Unit I

Unit I operated at full power for the month.

At 9:20 pm on Saturday March 1, 2014 a containment building smoke alarm activated after indications that a relief valve had lifted during a safety injection accumulator fill evolution. Other containment instrumentation was checked that indicated a fog or mist that could cause the smoke detector to alarm without the presence of smoke due to the relief valve lift. The alarm was reset and did not come back in. This was not initially reported but after management discussion it was reported as a fire alarm in containment at 12:13am on March 2, 2014. , A containment entry verified that there was no fire, and the Unusual Event was terminated at 2:05am. See Event No. 49865

Beaver Valley Unit II

Unit II operated for March at 100% power.

DTE

Fermi II

Fermi II Started March in a refueling outage.

At 1405 EDT on 3/20/14, Fermi Nuclear Station declared an Alert due to a fire in the lagging of an Emergency Diesel Generator Turbo Charger. The diesel generator supplies plant safety systems required to establish or maintain safe shutdown. The fire occurred during testing. The fire was extinguished using handheld CO2 fire extinguishers and damage is minimal. See Event No. 49937.

Fermi III

Fermi III continues as a documentation evaluation.

Portsmouth Enrichment Plant

There were no event reports for the sites at Portsmouth for March. But there were ADAMS documents submitted.

USEC filed for Chapter 11 bankruptcy and proposed a restructuring plan that will allow continued work at the \$5 billion uranium-enriching American Centrifuge Project in Piketon, Ohio.

Activity

- 3/4-5 FRMAC LN-100 Liaison Fundamentals course.
- 3/5 URSB Working Group. OEPA Presented the USEPA proposed Radiological rule changes for member agency comment. The members affected, OEPA and ODH, will prepare and present comments for the Board meeting April 16.
- 3/19 Beaver Valley systems Training Annual - review of plant systems and New EALs, the afternoon was devoted to Midas.

Office Issues

Centerline Plume sampling considerations have been drafted for the REP Plan. Specific items for an IND SOP are being developed. A copy of RASCAL 4.3 has been received. Installation is pending migration to Win7.

Statistics, NRC Reports, News, and ADAMS References

Operating Power Levels

March

Date	BV1	BV2	DB	Perry	Fermi2	
1	100	100	0	100	0	
3	100	100	0	100	0	
8	100	100	0	55	0	Perry - FW heater work and control rod sequencing
10	100	100	0	80	0	
11	100	100	0	92	0	
12	100	100	0	78	0	
13	100	100	0	100	0	
17	100	100	0	100	0	
24	100	100	0	100	0	
31	100	100	0	100	18	Fermi2 – end of refueling outage

Plant Reports

Power Reactor	Event Number: 49865
Facility: BEAVER VALLEY Region: 1 State: PA Unit: [1] [] [] RX Type: [1] W-3-LP,[2] W-3-LP NRC Notified By: ANDREW DOBY HQ OPS Officer: HOWIE CROUCH	Notification Date: 03/02/2014 Notification Time: 00:45 [ET] Event Date: 03/02/2014 Event Time: 00:13 [EST] Last Update Date: 03/02/2014
Emergency Class: UNUSUAL EVENT 10 CFR Section: 50.72(a) (1) (i) - EMERGENCY DECLARED	Person (Organization): ANNE DeFRANCISCO (R1DO) HO NIEH (NRR) JENNIFER UHLE (NRR) WILLIAM DEAN (R1RA) JEFFERY GRANT (IRD)

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 A FIRE ALARM IN THE CONTAINMENT BUILDING

"An Unusual Event (NOUE) was declared at 0013 EST on 3/2/2014 due to a possible fire in the protected area inside containment which could not be verified within 15 minutes (EAL HU4). A containment building smoke alarm was received at 2120 on 3/1/14 after indications that a relief valve lifted during a safety injection accumulator fill evolution. Diverse containment instrumentation was checked and showed that containment dew point was elevated while containment temperature and pressure remained steady. The fire alarm was reset and did not reflash. A containment entry will be made to investigate the alarm. There are no requests for the local fire department to respond and there are no indications of a radiological release to the environment.

"The NRC Resident Inspector has been notified."

The licensee notified the Commonwealth of Pennsylvania Emergency Management Agency, Beaver County in Pennsylvania, the State of Ohio, Columbiana County in Ohio, the State of West Virginia and Hancock County in West Virginia.

Notified DHS SWO, FEMA, NICC and Nuclear SSA (via email).

* * * UPDATE FROM BRIAN STROBEL TO HOWIE CROUCH AT 0211 EST ON 3/2/14 * * *

The licensee terminated the NOUE at 0205 EST after a containment entry determined no fire or indications of fire existed.

Notified R1DO (DeFrancisco) IRD (Grant), NRR EO (Nieh), DHS SWO, FEMA, DHS NICC, and Nuclear SSA (via email).

Power Reactor	Event Number: 49874
Facility: BEAVER VALLEY Region: 1 State: PA Unit: [1] [2] [] RX Type: [1] W-3-LP,[2] W-3-LP NRC Notified By: JIM SCHWER HQ OPS Officer: CHARLES TEAL	Notification Date: 03/05/2014 Notification Time: 13:20 [ET] Event Date: 03/05/2014 Event Time: 09:58 [EST] Last Update Date: 03/05/2014
Emergency Class: NON EMERGENCY 10 CFR Section: 50.72(b)(2)(xi) - OFFSITE NOTIFICATION	Person (Organization): FRED BOWER (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

INADVERTENT ACTUATION OF THE EMERGENCY NOTIFICATION SYSTEM

"A planned actuation of the emergency sirens across the state of Ohio was scheduled as part of a Severe Weather Awareness activity. When Columbiana County, Ohio, was activating their county sirens at 0958 EST, they inadvertently depressed the button which activated all 120 sirens within the Beaver Valley Emergency Planning Zone, which included Beaver County, Pennsylvania and Hancock County, West Virginia sirens.

"This event is reportable as a 4-hour Non-Emergency Notification 10 CFR 50.72(b)(2)(xi) as 'A News Release or Notification of Other Government Agency.'

"The NRC Resident Inspector has been informed."

Part 21	Event Number: 49908
Rep Org: GE HITACHI NUCLEAR ENERGY Licensee: ASCO VALVE, INC. Region: 1 City: WILMINGTON State: NC County: License #: Agreement: Y Docket: NRC Notified By: LISA SCHICHLIN HQ OPS Officer: DONG HWA PARK	Notification Date: 03/13/2014 Notification Time: 13:05 [ET] Event Date: 01/16/2014 Event Time: [EDT] Last Update Date: 03/13/2014
Emergency Class: NON EMERGENCY 10 CFR Section: 21.21(a)(2) - INTERIM EVAL OF DEVIATION	Person (Organization): MARC FERDAS (R1DO) KATHLEEN O'DONOHUE (R2DO) DAVE PASSEHL (R3DO) THOMAS FARNHOLTZ (R4DO) PART 21 GROUP (EMAI)

Event Text

PART 21 - UNSEATING OF VALVE SPRING ON SCRAM SOLENOID PILOT VALVE

"This concerns an evaluation being performed by GE Hitachi Nuclear Energy (GEH) regarding a malfunction of a Scram Solenoid Pilot Valve (SSPV), which has been observed to impair control rod scram performance. As stated herein, GEH has not concluded that this is a reportable condition in accordance with the requirements of 10CFR 21.21(d). The SSPV manufacturer (ASCO Valve, Inc.) has not yet concluded its own investigation under 10CFR 21, and the results of that investigation are needed as input for the GEH evaluation. The manufacturer has issued an Interim Report, which provides confidence that this condition is limited to a very small portion of the suspect population.

"A malfunction of a Scram Solenoid Pilot Valve was attributed to the disengagement of the valve spring from the valve plunger. The effect of the malfunction is to degrade scram performance of an affected control rod. The safety significance of this condition cannot be determined at this time, but several mitigating and compensatory functions have been identified."

This evaluation affects **Fermi 2**, Columbia, Dresden 2-3, Oyster Creek, Peach Bottom 2-3, Quad Cities 1-2, and Browns Ferry 1-3.

Power Reactor	Event Number: 49851
Facility: FERMI Region: 3 State: MI Unit: [2] [] [] RX Type: [2] GE-4 NRC Notified By: PAUL GRESH HQ OPS Officer: HOWIE CROUCH	Notification Date: 02/23/2014 Notification Time: 12:23 [ET] Event Date: 02/23/2014 Event Time: 12:00 [EST] Last Update Date: 03/15/2014
Emergency Class: NON EMERGENCY 10 CFR Section: 50.72(b)(3)(xiii) - LOSS COMM/ASMT/RESPONSE	Person (Organization): HIRONORI PETERSON (R3DO)

Unit	SCRAM Code	RX CRIT	Initial PWR	Initial RX Mode	Current PWR	Current RX Mode
2	N	N	0	Refueling	0	Refueling

Event Text

INTEGRATED PLANT COMPUTER SYSTEM REMOVED FROM SERVICE FOR PLANNED MAINTENANCE

"[On] February 23, 2014, at approximately 1200 [EST], the Fermi 2 Integrated Plant Computer System (IPCS) was removed from service outside of the Control Room to support planned system maintenance. The Safety Parameters Display System (SPDS) and Emergency Response Data System (ERDS) reside on the IPCS platform and [was rendered] out of service when the IPCS [was] removed from Emergency Response Facilities (ERFs). These systems will be unavailable to all Emergency Response Facilities (ERFs) for approximately 50 hours. During this time, dose assessment (Raddose) capability will only be available in the manual data input mode. The SPDS indications and Raddose remain available to the plant

staff in the Control Room, and will be used for emergency response, if needed. Information will be communicated to the NRC using other available communication systems as needed. A follow-up notification will be submitted when the IPCS is completely restored, including SPDS and ERDS, to the Operational Support Center, the Technical Support Center, and alternate facilities. This 8-hour non-emergency notification is being made per the requirements of 10 CFR 50.72(b)(3)(xiii), as an event that results in a major loss of emergency assessment capability."

The licensee has notified the NRC Resident Inspector.

* * * UPDATE AT 0905 EDT ON 03/15/14 FROM PAUL GRESH TO S. SANDIN * * *

The following update was received from the licensee:

"On February 23, 2014, at approximately 1200 [EST], the Fermi 2 Integrated Plant Computer System (IPCS) was removed from service to support planned system maintenance. The Safety Parameters Display System (SPDS) and Emergency Response Data System (ERDS) reside on the IPCS platform and were out of service when IPCS was removed from service.

"On March 15, 2014 at approximately 0800 [EDT], planned maintenance on ERDS, SPDS, and IPCS is complete, restoring full Emergency assessment capabilities to the control room and all onsite emergency response facilities."

The licensee informed the NRC Resident Inspector. Notified R3DO (Passehl).

Part 21	Event Number: 49923
Rep Org: DRESSER-RAND COMPANY Licensee: DRESSER-RAND COMPANY Region: 1 City: WELLSVILLE State: NY County: License #: Agreement: Y Docket: NRC Notified By: ED GRANDUSKY HQ OPS Officer: DANIEL MILLS	Notification Date: 03/17/2014 Notification Time: 13:53 [ET] Event Date: 02/17/2014 Event Time: [EDT] Last Update Date: 03/17/2014
Emergency Class: NON EMERGENCY 10 CFR Section: 21.21(d)(3)(i) - DEFECTS AND NONCOMPLIANCE	Person (Organization): BLAKE WELLING (R1DO) KATHLEEN O'DONOHUE (R2DO) JULIO LARA (R3DO) PART 21 GROUP (EMAI)

Event Text

PART 21 - BEARING DEFECT

The following was received via email:

"On Dresser-Rand Drawing 75439A part number 07 is identified as a Heim LSS-8 bearing that has an Aluminum Bronze insert to accommodate a non-lubricated application. Dresser-Rand

shipped 10 bearings part number 75439A07 to Dominion Nuclear in 2006 that were Seal Master Com 8 bearings that do not have an Aluminum Bronze insert.

"This bearing is used on turbines that have a PG type mechanical governor with the cam plate linkage. Extended operation without lubrication will result in the Seal Master Com 8 bearing seizing. The customer should visually inspect this bearing for the bronze insert. If no insert is visible then the bearing should be replaced at the first opportunity."

Licensees potentially affected (turbine serial numbers): Calvert Cliffs (T36674A, T36674B, T36674C, T36674D), DC Cook (T36700A, T36700B), Salem (T36988A, T36988B), Crystal River (T37009A), **Davis Besse** (T37686A, T37686B), Millstone (F37273A, T38587A), Summer (T38765A).

International sites potentially affected: Bugey (T38498A, T38498B, T38880A, T38880B).

Power Reactor	Event Number: 49937
Facility: FERMI Region: 3 State: MI Unit: [2] [] [] RX Type: [2] GE-4 NRC Notified By: PAUL GRESH HQ OPS Officer: JOHN SHOEMAKER	Notification Date: 03/20/2014 Notification Time: 14:15 [ET] Event Date: 03/20/2014 Event Time: 14:05 [EDT] Last Update Date: 03/20/2014
Emergency Class: ALERT 10 CFR Section: 50.72(a) (1) (i) - EMERGENCY DECLARED	Person (Organization): JULIO LARA (R3DO) CYNTHIA PEDERSON (RA) DAN DORMAN (NRR) SCOTT MORRIS (IRD)

Unit	SCRAM Code	RX CRIT	Initial PWR	Initial RX Mode	Current PWR	Current RX Mode
2	N	N	0	Cold Shutdown	0	Cold Shutdown

Event Text

FERMI DECLARES ALERT DUE TO A FIRE IN AN EMERGENCY DIESEL GENERATOR TURBO CHARGER LAGGING

At 1405 EDT on 3/20/14, Fermi Nuclear Station declared an Alert due to a fire in the lagging of an Emergency Diesel Generator Turbo Charger. The Alert notification was based on EAL HA02, fire or explosion affecting the operability of plant safety systems required to establish or maintain safe shutdown.

The fire in the EDG-11 turbocharger lagging occurred during testing. The fire was extinguished using handheld CO2 fire extinguishers and a reflash watch was set. EDG-11 has been removed from service and damage is minimal. The plant is shutdown in Mode 4 for Refueling Outage 16. All parameters associated with the reactor are stable. RHR Pump D remains in service in Shutdown Cooling and is unaffected by the EDG-11 fire.

There has been no other impact on the plant electrical systems or shutdown cooling and

Fermi Nuclear Station remains in an Alert pending further evaluation. The NRC remained in Normal Mode.

The licensee has informed the NRC Resident Inspector.

Notified DHS SWO, DOE, FEMA, HHS, NICC, USDA, EPA, and FDA. Notified NuclearSSA via email only.

* * * UPDATE FROM SAM HASSOUN TO JOHN SHOEMAKER AT 1535 EDT ON 3/20/13 * *

"At 1359 [EDT on 3/20/14], with the plant in Mode 4, a fire was confirmed on Emergency Diesel Generator (EDG)-11 turbocharger. At 1402, the fire was extinguished with a CO2 extinguisher. An ALERT was declared at 1405 and Assembly and Accountability was ordered by the Emergency Director. The Assembly and Accountability was completed satisfactorily by 1441. The fire was from oil soaked lagging on the engine turbocharger. The insulation was removed and the engine exhaust header was inspected. The damage was limited to only the lagging. The room has been ventilated using the Engine room fans and has been cleared of all of the smoke. The Emergency Director terminated the event at 1532 [EDT on 3/20/14]. The Resident Inspector has been notified."

Notified R3RA (Pederson), NRR (Dorman), R3DO (Lara), IRD (Grant), IRD (Morris), DHS SWO, DOE, FEMA, HHS, NICC, USDA, EPA, FDA, and Canadian Nuclear Safety Commission (Tennant). Notified NuclearSSA via email only.

News

USEC files for bankruptcy

Hannah Northey, E&E reporter

Published: Wednesday, March 5, 2014

USEC Inc., the country's only domestically owned uranium enrichment company and a topic of controversy on Capitol Hill, filed for bankruptcy today, blaming waning demand for reactor fuel following the 2011 tsunami and earthquake that prompted reactor closures in Japan and Germany.

The Maryland-based firm [filed](#) for Chapter 11 bankruptcy and proposed a restructuring plan that will allow continued work at the \$5 billion uranium-enriching American Centrifuge Project in Piketon, Ohio. USEC's major investors Toshiba Corp. and Babcock & Wilcox Co. signed off on the plan.

"The restructuring will strengthen USEC's balance sheet and enhance the company's ability to sponsor the American Centrifuge project," USEC President and CEO John Welch said in a statement. "Throughout this process our operations will continue."

The move was expected for USEC, or the U.S. Enrichment Corp., a company spun off from the Energy Department in the 1990s that has been mired in a contentious loan

guarantee application and has received millions of federal dollars through DOE deals despite opposition from some lawmakers.

The company in bankruptcy filings reported assets of about \$70 million and liabilities that surpassed \$1 billion.

Demand for reactor fuel is weak following the 2011 disaster in Japan, and USEC's Ohio plant has been beset with technical and financial challenges. USEC has also repeatedly pointed to difficult market conditions, the closure of its costly 60-year-old gaseous diffusion plant in Paducah, Ky., in May, and the end of the Megatons to Megawatts Program, through which USEC received high-enriched uranium from Russian warheads.

The company said today that it expects to receive approval from the U.S. Bankruptcy Court for the District of Delaware, where the plan was filed, and should emerge from bankruptcy in 90 to 120 days.

USEC said the bankruptcy will not affect its ongoing research, development and demonstration -- partially funded by DOE -- of its uranium enrichment gas centrifuge technology at the Ohio facility.

Taxpayer advocates said today's development is another sign that the government should step back from financially supporting USEC.

Tyson Slocum, director of the energy program at the watchdog group Public Citizen, said the company is too unstable to be a good taxpayer investment.

"I don't think they are, at this point, financially sound enough to be the recipient of the kind of federal funds or proposed federal funding that's on the table," he said.

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Source: <http://www.eenews.net/greenwire/2014/03/05/stories/1059995598>

Columbus Dispatch

USEC, which wants to build Ohio uranium-enrichment plant, declares bankruptcy

By Jessica Wehrman

The Columbus Dispatch

Thursday March 6, 2014 5:52 AM

WASHINGTON

—

USEC, the Maryland-based company that wants to build a uranium-enrichment plant in southern Ohio, declared bankruptcy yesterday.

The company filed for Chapter 11 bankruptcy in the U.S. Bankruptcy Court for the District of Delaware.

Company spokesmen say they don't anticipate the bankruptcy will have an effect on plans to build a uranium centrifuge in Piketon, Ohio, nor would it have an effect on an ongoing research and development program aimed at creating new uranium-enrichment technology.

The company is in the midst of a two-year federal research and development project aimed at demonstrating the viability of the technology used at the plant.

Rather, they say, the bankruptcy is an attempt to restructure about \$530 million in debt to bondholders, replacing it with new debt totaling \$200 million.

The \$530 million in debt was in bonds that were scheduled to mature in October 2014.

The new arrangement would mature in five years.

The Bethesda, Md.-based company announced its intentions —and its agreement with investors Toshiba and Babcock & Wilcox —in December. The company expects to receive court approval for its reorganization and emerge from bankruptcy in 90 to 120 days.

USEC is the only U.S.-based producer of enriched uranium. But it has faced years of financial turmoil as it has attempted to secure government support for its Piketon plant, known as the American Centrifuge Project.

John K. Welch, USEC president and chief executive officer, said the bankruptcy will ultimately allow the company “to pursue its ongoing business objectives with greater certainty.”

“The restructuring will strengthen USEC’s balance sheet and enhance the company’s ability to sponsor the American Centrifuge Project,” he said.

jwehrman@dispatch.com

POWER Engineering

USEC files for Chapter 11 bankruptcy

03/05/2014

USEC Inc. (NYSE: USU) [filed for Chapter 11 bankruptcy](#) in the U.S. Bankruptcy Court for the District of Delaware as part of a financial restructuring plan. USEC said it expects to emerge from bankruptcy in 90 to 120 days.

USEC ended 2013 with a cash balance of \$314 million. After meeting its payables in the first quarter 2014, the company expects to have a cash balance of at least \$60 million by March 31. It’s work on the American Centrifuge uranium enrichment facility and in transitioning the Paducah Gaseous Diffusion Plant in Kentucky back to the U.S.

Department of Energy will continue during the bankruptcy. One of USEC’s biggest customers was Tokyo Electric Power Co., the operator of the [Fukushima Daiichi nuclear power plant](#) in Japan.

The restructuring calls for replacing USEC’s \$530 million debt and all of its preferred and common stock with a new debt issue totaling \$240.4 million and new common stock. Toshiba and Babcock & Wilcox (NYSE: BWC) would each receive \$20.19 million of the new debt and approximately 8 percent of the new common stock, and the noteholders would receive \$200 million of the new debt and approximately 79 percent of the common stock. Existing stockholders would receive 5 percent of the new common stock.

The restructuring plan support agreements entered into by Toshiba and Babcock & Wilcox and other materials related to the filing can be found in an 8-K filed today with the Securities and Exchange Commission.

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Source: <http://www.power-eng.com/articles/2014/03/usec-files-for-chapter-11-bankruptcy.html>

THE BLADE/AM

Y E. VOIGT

Davis-Besse's \$600 million project progressing

Work seen boosting nuclear industry

Published: Monday, 3/10/2014

-Updated: Tuesday, 3/11/2014

BY TOM HENRY

BLADE STAFF WRITER

OAK HARBOR, Ohio

Raymond A. Lieb, site vice president for the Davis-Besse nuclear power plant, said Monday he is pleased by how the plant's landmark steam generator replacement project is moving along.

The \$600 million investment by FirstEnergy Corp. of Akron provides job security for Davis-Besse's 700-member work force at a time when the nuclear industry is feeling the effects of stiff competition from natural gas.

The Nuclear Energy Institute, the nuclear industry's chief lobbying arm on Capitol Hill, says at least two plants — Vermont Yankee and the Kewaunee nuclear plant in Wisconsin — are being closed because of changing market preferences, driven by a hydraulic-fracturing boom that has made natural gas cheaper and more plentiful.

Exelon, the Chicago utility that owns the most nuclear plants in America, reportedly is considering closing some facilities early because of natural gas competition.

FirstEnergy's investment is seen by industry observers as a sign that the utility is standing firm behind its plan to keep Davis-Besse operating through April 22, 2037.

FirstEnergy is replacing the worn units as part of its plan to extend the life of the plant.

The plant is licensed through April 22, 2017, but FirstEnergy is asking the Nuclear Regulatory Commission for a 20-year extension.

Public meetings are scheduled March 25 to discuss the environmental impact statement that FirstEnergy is using to bolster its case for continued operation.

A steam generator, which creates steam from heat generated by the nuclear reactor, is ready for installation in the shield building at Davis-Besse.

The two sessions will be from 2 to 4 p.m. and 7 to 9 p.m. at the Camp Perry clubhouse off State Rt. 2, Port Clinton, said Jennifer Young, a utility spokesman.

Mr. Lieb, formerly assigned to FirstEnergy's twin-reactor Beaver Valley complex west of Pittsburgh, joined Davis-Besse about 18 months ago.

On Monday, he gave The Blade an update of the steam-generator project, starting in the plant's protected area.

The newspaper was not allowed into the containment area, where the reactor and steam generators are housed; that area generally has been off-limits to visitors at any U.S. nuclear plant since the terrorist attacks of Sept. 11, 2001.

But Mr. Lieb described the 467-ton parts while standing next to the shield building, where the back of one of the steam generators was visible.

The new steam generators are lighter than the originals that were removed about 10 days ago. They weigh about 500 tons and are being stored indefinitely, along with the old reactor head, in a newly constructed building.

The parts are radioactive and will likely be there for years, Mr. Lieb said.

"It's really been a big effort," Mr. Lieb said, noting how the site has become a center of bustling activity with 3,000 outside contractors augmenting plant employees. Up to 2,400 contract workers have been on site at one time, Mr. Lieb said.

Hundreds of tasks remain to be completed, including a biennial refueling of the reactor core.

Steam generators are massive pieces of equipment that act like heat exchangers, producing high-pressure steam used to spin the turbine generator to produce electricity. The project marks what is hoped will be the last time FirstEnergy needs to cut a hole through the reactor's shield building and its containment vessel.

The building, the second-tallest next to the cooling tower, encapsulates the containment vessel, designed with a four-foot space in between.

The utility discovered a large gap in concrete near the top of the 2011 cut a few weeks ago when it re-entered the shield building for the first time since 2011. The opening was created to replace the defective reactor head.

Company scientists are working on a formal report on the problem, which Mr. Lieb said is likely to be completed by mid-April.

The preliminary indication, he said, was that the shield building had improper venting in 2011.

"We need to do a better job of venting," Mr. Lieb said. "They would have poured enough concrete. But if they didn't have proper venting, they would have had some air pocket." Mr. Lieb declined to say when restart is expected, saying that's considered proprietary information.

But with the steam generators about to be anchored into place, he said the outage should be halfway over now.

Bechtel Power Co. of San Francisco, which is overseeing most of the contractors, recently filed a notice with the Ohio Department of Job and Family Services, as required by the Worker Adjustment Retraining Notification Act, that it expected to send home 155 contract workers between April 1 and April 24 as the project winds down.

Contact Tom Henry at:

thenry@theblade.com or 419-724-6079.

World Nuclear News

Novel study puts Fukushima doses into perspective

25 February 2014

A newly published study of the radiation doses received by Fukushima residents has concluded that most people in the prefecture are unlikely to receive doses significantly different to normal background radiation levels as a result of the accident.

The study, by Japanese researchers led by Akio Koizumi of the Kyoto University Graduate School of Medicine, has been published in the *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*. It evaluates radiation dose rates from deposited radiocesium in three areas within 20-50 km of the Fukushima Daiichi plant. It took into account external doses, measured by dosimeters worn by 458 participants, as well as estimating doses from inhalation and dietary intake.

Measurements were recorded in August-September 2012, just over a year on from the accident of March 2011. All three of the study areas - Tamano, Haramachi and Kawauchi village - neighbour regions which are still evacuated or have only limited access.

Most of the Fukushima-related radiation received by the study subjects was found to be from external sources - deposited radiocaesium, referred to as "groundshine" - rather than diet or inhalation. The study found that in 2012, the mean annual radiation dose rate associated with the Fukushima event was 0.89-2.51 mSv per year – close to Japan's average annual background radiation exposure of 2 mSv/yr.

The researchers employed the linear no-threshold (LNT) dose-response model, which assumes that health risk is directly proportional to radiation exposure and that even the smallest radiation exposure carries some risk. From their observations, the researchers concluded that in 2022, mean doses will be comparable with variations in the background dose across Japan. "The extra lifetime integrated doses after 2012 is estimated to elevate lifetime cancer risk by a factor of 1.03-1.05 at most," the researchers say. At these levels, increases in cancer rates are not likely to be epidemiologically detectable. "The simple and conservative estimates are comparable with variations in the background dose, and unlikely to exceed the ordinary permissible dose rate (1 mSv/y) for the majority of the Fukushima population," the authors note. The authors acknowledge that the short-term nature of the study does lead to some uncertainties - for example, previous studies in the region have found that snowfall can offer a shielding effect, effectively lowering doses from terrestrial radiation in the winter months. Neither does the current study evaluate the dose received during the first year after the accident. Nevertheless, they say, the work provides "perspective on the long-term radiation exposure levels" in the three regions.

The research paper, 'Radiation dose rates now and in the future for the residents neighboring restricted areas of the Fukushima Daiichi Nuclear Power Plant', is available through PNAS's open access website.

In January 2013, the World Health Organization (WHO) said that there is only a low risk to Japan's population due to radioactivity released by the Fukushima accident. For the general population in wider Fukushima prefecture, across Japan and beyond "the predicted risks are low and no observable increases in cancer rates above baseline rates are anticipated," WHO said. However, it raised estimations of cancer risk for two towns near the Fukushima Daiichi plant - Namie and Iitate - where an unknown number of people may have remained at home for four months after the accident.

Researched and written by World Nuclear News

Related Links

- [Proceedings of the National Academy of Sciences \(PNAS\)](#)

Source: <http://www.world-nuclear-news.org/RS-Novel-study-puts-Fukushima-doses-into-perspective-2502147.html>

Information Notices

Unless otherwise noted, these are ADAMS Accession documents, are publicly available, and will be accessible via the public web site Electronic Reading Room in the Agency Document Access and Management System (ADAMS), <http://www.nrc.gov/reading-rm/adams.html>

or to access generic communications files on the NRC Homepage:

<http://www.nrc.gov/reading-rm/doc-collections/gen-comm/reg-issues/2013/>.

To access these documents use the ADAMS Accession number listed with the title.

This is in the format of : ML #####A###

Part 21 and Miscellaneous

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RIS 2014-03, Notice of 10 CFR Part 37 Implementation Deadline for NRC Licensees, dated March 13, 2014

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Davis-Besse

Notice of Availability of the Draft Supplemental Environmental Impact Statement for License Renewal of Davis-Besse Nuclear Power Station, Unit 1, for Public Comment

ADAMS Accession No. ML14051A433

Davis Besse Nuclear Power Station, Unit 1, License Renewal Application Review

ADAMS Accession No. ML14052A008

Summary of Telephone Conference Call Held on February 5, 2010, Between the U.S. Nuclear Regulatory Commission and First Energy Nuclear Operating Company Concerning Draft Request for Additional Information Pertaining to the Davis-Besse Nuclear Power Station, Unit 1, License Renewal Application

ADAMS Accession No. ML14056A152

Davis-Besse Nuclear Power Station, Unit 1, License Renewal Application Review

ADAMS Accession No. ML14050A290

ANNUAL ASSESSMENT LETTER FOR DAVIS-BESSE NUCLEAR POWER STATION (REPORT 05000346/2013001)

ADAMS Accession No. ML 14063A252

SUMMARY OF THE FEBRUARY 20, 2014, WEBINAR TO DISCUSS NRC INSPECTION ACTIVITIES ASSOCIATED WITH THE DAVIS-BESSE NUCLEAR POWER STATION INSTALLATION OF TWO NEW STEAM GENERATORS

ADAMS Accession No.: ML14080A184

FirstEnergy Nuclear Operating Company Response to Petition to Suspend Licensing Decisions Pending Completion of Rulemaking.

ADAMS Accession No.: ML14080A593

Davis-Besse Nuclear Power Station, Unit 1, Reply to Request for Additional Information for the Review of License Renewal Application (TAC NO. ME4640) and Amendment No. 49.

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Davis-Besse, FirstEnergy Nuclear Operating Co. Response to NRC Request for Information Pursuant to 10 CFR 50.54 (f) Regarding the Flooding Aspects of Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident.

ADAMS Accession No.: ML14070A108

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ADAMS Accession No.: ML14055A067

Perry

Public Meeting To Discuss the 2013 End-of-Cycle Plant Performance Assessment of Perry Nuclear Power Plant

ADAMS Accession No. ML14064A157

Annual Assessment Letter for Perry Nuclear Power Plant (Report 05000440/2013001)

ADAMS Accession No. ML14063A287

3/18/14 Summary of Public Meeting To Discuss the 2013 Perry End-of-Cycle Performance Assessment

ADAMS Accession No. ML14086A059

Subject: Perry Nuclear Power Plant, Unit No. 1 - Acceptance Review Concerning Alternative Accident Source Term Design Bases (TAC NO. MF3197)(L-13-306)

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Beaver Valley

Beaver Valley Power Station Units 1 and 2 - Annual Assessment Letter (Report 05000334/2013001 and 05000412/2013001) and Inspection Plan
ADAMS Accession No.: ML14062A090

Beaver Valley, Discharge Monitoring Report (NPDES) Permit No PA0025615
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SENIOR REACTOR AND REACTOR OPERATOR INITIAL LICENSE EXAMINATIONS –
(BEAVER VALLEY POWER STATION, UNIT 1)
ADAMS Accession No.: ML14065A333

Beaver Valley Power Station, Unit No. 2 - Request for Alternative Examination for Reactor Vessel Safe-End Welds (TAC No. MF1006)
ADAMS Accession No.: ML13255A507

Beaver Valley Power Station, Unit No. 2 - Request for Alternative Examination for Reactor Vessel Safe-End Welds (TAC No. MF1006)
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Beaver Valley Power Station - Notice of Annual Assessment Public Meeting on April 3, 2014
ADAMS Accession No.: ML14078A066

Beaver Valley Power Station, Unit NO.1, Davis-Besse Nuclear Power Station Independent Spent Fuel Storage Installation (ISFSI), Perry Nuclear Power Plant, and Perry Nuclear Power Plant ISFSI - Annual Financial Test for First Energy Nuclear Operating Company Parent Company Guarantee (TAC NOS. MF1388 and MF1389)
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Part 2 of 22- Revised Powertech Technical Report
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Portsmouth Facilities

Supplement to Proposed Revision to the Security Program for the American Centrifuge Plant.
ADAMS Accession No.: ML14085A423

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ADAMS Accession No.: ML14069A186

Submittal of Changed Pages for the Security Program for the American Centrifuge Plant.
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Letter to Peter Miner re: Final NRC Approval of ATK-ABL Classified Service Network.
ADAMS Accession No.: ML14058A113

Fermi 1

Fermi 2

Annual Assessment Letter for Fermi Power Plant, Unit 2 (Report 05000341/2013001)
ADAMS Accession No. ML14063A272

Fermi 2 – Issuance of Amendment re: Revise the Fermi 2 Licensing Basis Concerning
Protection from Tornado-Generated Missiles

ADAMS Accession Number: ML14016A487

Fermi 2 – Correction to Safety Evaluation Supporting Amendment No. 196 re: Measurement
Uncertainty Recapture Power Uprate

ADAMS Accession Number: ML14066A410

Fermi NRC Special Inspection Report; Greater Than Green Finding 05000341/2013408

ADAMS ACCESSION NO# ML14079A093

Fermi 3

2014/02/14 Fermi COL - NRC3-14-0002 (COLA REV 6)

ADAMS Accession No.: ML14077A597

DTE Electric Company, Response to NRC Request for Additional Information Letter Number 89.

ADAMS Accession No.: ML14051A707

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- Quality Assurance through Appendix 17AA - Fermi 3 Policy Quality Assurance During
Construction and Operation

ADAMS Accession No.: ML14055A123

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Reference of Fermi 3 Emergency Plan

ADAMS Accession No.: ML14055A138

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- Site Characteristics - Subsection 02.05.03 - Surface Faulting

ADAMS Accession No.: ML14055A090

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- Site Characteristics - Subsection 02.05.01 - Geology, Seismology, and Geotechnical
Engineering - Part 01

ADAMS Accession No.: ML14055A085

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- Auxiliary Systems

ADAMS Accession No.: ML1405A113

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ADAMS Accession No.: ML14055A140

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- Site Characteristics - Section 02.03 - Meteorology and Air Quality

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- Electrical Power

ADAMS Accession No.: ML14055A112

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- Site Characteristics - Section 02.04 – Hydrology

ADAMS Accession No.: ML14055A084

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- Radioactive Waste Management

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- Radioactive Waste Management

ADAMS Accession No.: ML14055A119

DTE Energy - Detroit Edison Fermi 3 COLA (Emergency Plan), Rev. 6 - COL Part 05 -
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Fermi 3, Update to Application for Combined License.

ADAMS Accession No.: ML14055A463

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- Site Characteristics - Section 02.01 - Geography and Demography

ADAMS Accession No.: ML14055A081

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- Site Characteristics - Subsection 02.05.02 - Vibratory Ground Motion

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Evacuation Time Estimate - Part 03

ADAMS Accession No.: ML14055A136

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TECHNICAL SPECIFICATIONS AND BASES

ADAMS Accession No.: ML14055A130

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- Site Characteristics - Appendix 02.04BB - Monthly Water Level Maps

ADAMS Accession No.: ML14055A097

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- Quality Assurance - Appendix 17AA - Quality Assurance Program Description
ADAMS Accession No.: ML14055A124

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- Site Characteristics - Subsection 02.05.01 - Geology, Seismology, and Geotechnical
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ADAMS Accession No.: ML14055A107

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Emergency Plan - Certification Letters
ADAMS Accession No.: ML14055A137

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- Design of Structures, Components, Equipment, and Systems through 3.7.1
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ADAMS Accession No.: ML14055A134

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- Site Characteristics - Appendix 02.04DD - Raw Packer Test Data
ADAMS Accession No.: ML14055A099

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- Site Characteristics - Subsection 02.05.04 - Stability of Subsurface Materials and Foundations
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Tables
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- Site Characteristics - Appendix 02.04AA - Wells Within 25 Miles of Fermi 3
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- Site Characteristics - Section 02.02 - Nearby Industrial, Transportation, and Military Facilities
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- Radiation Protection

ADAMS Accession No.: ML14055A116

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Introduction and General Description of Plant

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- Initial Test Program

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- Site Characteristics - Section 02.00 – Introduction

ADAMS Accession No.: ML14055A080

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Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies
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