To: Jim Mehl, ERU Supervisor

From: Zack Clayton, Rad Coord

Subject: January Monthly Report

Date: February 12, 2009

Beans:

Training:	0
Drills	0
Meetings:	2
Technical Assistance:	3
Public Assistance:	2

Web Page Hits: There were 79 RAD hits in January.

Coming Attractions:

Working Group	2/11
URSB	1/5
CMMRS Group	2/19
FENOC Grant	2/24

Facility Updates:

Davis Besse Nuclear Power Station

Davis Besse operated at full power or January.

Perry Nuclear Power Plant

Perry plant operated at full power for the month except for a power down for rod adjustment on the weekend of the 17th. This was to use as much fuel as possible prior to coast down for the refueling outage at the end of February. Perry resumed full power operation by Monday.

Beaver Valley Unit I

Beaver Valley Unit I operated at full power for January.

Beaver Valley Unit II

Beaver Valley Unit II operated at full power for January.

Fermi II

Fermi operated at full power for January. On the 28th the plant detected a single point failure which would have prevented a safety actuation in an accident. See Event Number: 44811

Portsmouth Gaseous Diffusion Plant

There were no reported incidents in January.

Activity:

1/5 URSB meeting at Ohio EMA. In addition to the standing reports, the NRC representative gave an overview of the survey results on strategies to protect the public. One of the main items they identified was complete and accurate information to support any recommendations to the public. The final report has been issued as NUREG 6953 in two volumes. These are available at:
Volume 1
http://www.nrc.gov/reading-rm/doc-collections/nuregs/contract/cr6953/vol1/cr6953.pdf
Volume 2
http://www.nrc.gov/reading-rm/doc-collections/nuregs/contract/cr6953/vol2/cr6953v2.pdf

1/20 CMMRS meeting at Central Ohio Poison Control. This meeting is a working subcommittee focused on response to a radiological event or attack in the central Ohio area. This meeting focused on available monitoring equipment and evaluation of portal monitors for use at local hospitals. The possibility of forming a rapid response group was broached and will be evaluated at a later meeting.

Office Issues:

The grant package for submission to FENOC is in preparation.

NRC Reports and Statistics:

January operating power levels

Date	BV1	BV2	DB	Fermi2	Perry	
1	100	100	100	100	100	
5	100	100	100	100	100	
12	100	100	100	100	100	
17	100	100	100	100	71	PNPP – power rod adjustment
26	100	100	100	100	100	
31	100	100	100	100	100	

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Beaver Valley: Summary Of December 11, 2008, Category 1 Meeting With Firstenergy Nuclear Operating Company To Discuss A Spent Fuel Pool ReRacking Pre-Application For Beaver Valley Power Station, Unit No.2 (TAC No. ME0145)

The document is 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
To access this document use ADAMS Accession: ML083640087

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Beaver Valley Power Station, Unit No.2-Request For Additional Information RE: The 2008 Steam Generator Tube Inspection Report (TAC Nos. MD9559 And ME0097)

The document is 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
To access this document use ADAMS Accession: ML090080469

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Beaver Valley Power Station, Unit No.1-Staff Evaluation RE: Steam Generator Tube Inspection Report (TAC No. MD8392)

The document is 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
To access this document use ADAMS Accession No.: ML090140395

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A PDF version of Information Notice 2009-01, National Response Framework dated January 22, 2009, (ML081130668), has been posted to the NRR GCC Web, along with the URL for Web access to generic communications files on the NRC Homepage:
http://www.nrc.gov/reading_rm/doc_collections/gen_comm/info_notices/2009/

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A PDF version of Regulatory Issue Summary 2009-02, Use of Containment Atmosphere Gaseous Radioactivity Monitors for Reactor Coolant System Leakage Detection Equipment at Nuclear Power Reactors, dated January 29, 2009 (ML090120669), has been posted to the NRR GCC Web, along with the URL for Web access to generic communications files on the NRC Homepage:
http://www.nrc.gov/reading_rm/doc_collections/gen_comm/reg_issues/2009/

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NUCLEAR SAFETY: NRC unveils tracking system for highly radioactive materials *(01/06/2009)*

Katherine Ling, E&E reporter
The Nuclear Regulatory Commission announced yesterday that it has launched a "cradle to grave" national tracking system to account for certain high-risk radioactive

materials in the United States.
The National Source Tracking System will continually monitor the location, use and disposal of radioactive materials employed by industry, medicine and research that have radioactive levels that are at least 10 times the amount needed to cause permanent injury, defined as categories 1 and 2 by the International Atomic Energy Agency. NRC said it hopes to expand the program to include category 3 and some category 4 sources by next year.
NRC said the tracking system, as well as a Web-based licensing and license verification system to be implemented in 2010, will help it regulate and secure high-risk materials that could be used as a radioactive weapon if accumulated from several sources. Congress mandated the tracking system in the 2005 energy bill, but NRC has had trouble preparing the program, resulting in a year-and-a-half delay from its initially slated launch date.
NRC put an interim database in place in 2003 that provided an annual update of these sources, but it did not track any changes made between updates or the exact location of the material, according to a report by the Government Accountability Office report in June (*Greenwire*, June 14, 2008).
Congress has criticized the agency for the delays, especially after GAO in 2006 successfully forged NRC documents to transport nuclear materials across the border in an undercover operation. In 2007, GAO investigators altered a license to obtain enough radioactive material to make a "dirty bomb."
Licensees must provide updated material information for the tracking system by Jan. 31.

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NUCLEAR SECURITY: Report assesses risks, benefits of U.S. fuel recycling *(01/07/2009)*

Katherine Ling, E&E reporter
U.S. nuclear fuel recycling poses higher proliferation risks than the once-through fuel cycle, but it could discourage the spread of enrichment and reprocessing capabilities abroad, the National Nuclear Security Administration said

in a draft report released yesterday.

The **draft** assesses nonproliferation impacts of the Energy Department's Global Nuclear Energy Partnership (GNEP). An independent agency inside DOE, GNEP leads security, nonproliferation and cleanup efforts in the nuclear weapons program. The report accompanies DOE's programmatic environmental impact statement on GNEP, which was released last October (*Greenwire* Oct. 20, 2008).

The NNSA report weighs proliferation risks of three fuel-cycle alternatives: once-through, partial-recycle alternatives and full recycling capability that includes a fast reactor that can burn up hazardous transuranic waste, which is highly contaminated by radioactive uranium and plutonium.

The once-through process used by the United States produces waste that cannot easily be turned into a nuclear weapon, making it "preferable on purely technical grounds," but as the radioactivity of the spent fuel decreases over time, this benefit begins to decline, the report says.

Also, a once-through cycle "seriously limits the U.S. ability to participate in offering comprehensive fuel services to other countries as a tool to limit the spread of proliferation-sensitive fuel cycle technologies," the report says. The United States could mitigate this weakness by expanding the current international enrichment capacity and finding secure locations for spent fuel -- either internationally, regionally or domestically, according to the report.

"Full actinide" recycling -- using almost all the spent fuel and not just the uranium -- would separate weapon components such as plutonium into more accessible forms, but it could "dramatically" reduce the time the waste is radioactive and reuse more of the spent fuel, the report said.

The report says the shorter radioactive life of waste after full recycling could make it easier politically to accept and dispose of spent fuel, facilitating the United States' ability to offer comprehensive fuel services.

"Such comprehensive fuel services offer a potentially transformative means to discourage the spread of both enrichment and reprocessing capabilities," the report says. Partial recycling only burns some of the long-lived

radioactive components and therefore cannot offer the same benefits as full recycling, but still risks the separation of weapons materials, the report says.
NNSA said it did not identify which alternative would be preferable, as a decision would be based on how policymakers view the importance of the strengths and weaknesses of each. The report also recommends that each of the alternatives be evaluated by assessing its technical criteria to reduce certain proliferation risks, and also by exploring subsidizing economic costs for nonproliferation benefits.

Bush ratifies IAEA protocol

The State Department announced yesterday that President George W. Bush signed the ratification of the International Atomic Energy Agency's "Additional Protocol" last week and planned to submit it to the agency today, joining 89 other countries that have ratified the measure.
The protocol requires countries to provide more information and transparency to the IAEA about their nuclear programs and activities and expands the rights of the agency to access sensitive areas, including short-notice inspections and greater monitoring of environmental conditions that could reveal illegal nuclear activities.
The protocol was an effort begun by IAEA in 1993 to make sure states are complying with the Nuclear Nonproliferation Treaty after the secret nuclear activities of Iran and North Korea were discovered.

Click here to view the draft report.
Click here to view the list of nations that have ratified the Additional Protocol.

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NUCLEAR POWER: Dominion, Entergy look away from GE-Hitachi reactor design *(01/13/2009)*

Katherine Ling, E&E reporter

A number of nuclear power plant operators are considering alternatives to a GE-Hitachi advanced reactor design, the companies announced Friday, in a significant blow to the engineering company that could also lead to

delays in the review of the companies' license applications.

Entergy Corp. asked the Nuclear Regulatory Commission on Friday to stop review of the GE-Hitachi "economic simplified boiling water reactor" (ESBWR) portion of the construction and operation license application for its proposed River Bend site in Louisiana and Grand Gulf site in Texas. NRC should continue to review other generic work that could be transferred to any reactor technology, Entergy said.

The Grand Gulf site involves a consortium of companies, including Entergy, known as NuStart. It is part of the Energy Department's Nuclear Power 2010 program, which partially funds certain nuclear reactor projects to demonstrate the department's new licensing process.

Separately, Dominion announced that it is opening up an ongoing engineering, procurement and construction proposal to a competitive process after it was unable to reach an agreement with GE-Hitachi on the ESBWR design. NRC will continue to review Dominion's application as it now stands until a new vendor or reactor technology is chosen, Dominion said.

These two announcements come on top of one made by Exelon Corp. in late November, in which it said it would seek a reactor of "greater commercial and schedule certainty" instead of the ESBWR for its Victoria County site in Texas. Exelon said it decided to change designs in order to boost its chances for a federal loan guarantee, which the untested ESBWR technology could imperil. Exelon said it will revise its application once it has decided on a new reactor technology "early in 2009."

Now only the Detroit Edison Co. Fermi site in Monroe County, Mich., remains committed to the ESBWR design. The GE-Hitachi ESBWR is a "Generation III" reactor and is one of the most advanced reactors to date. It includes many passive engineering features that require less human interaction to activate and fewer backup systems. NRC has not yet certified the design, though that process is under way, and it has never been built.

Dominion said the new competitive process will not affect its timeline for a power plant at North Anna, Va. "We believe we can license, build and begin operating a new nuclear unit at North Anna by 2017," said David Christian, president and chief nuclear officer of Dominion Nuclear, in

a letter to Dominion employees. "However, this date is dependent on achieving commercial and schedule certainty under contractual terms that are acceptable to the company."

All three companies continue to emphasize that they have not committed to building any new power plant.

Adrian Heymer, senior director of strategic programs at the Nuclear Energy Institute, said the companies are continuing to move forward with preparations for new nuclear plants despite the reactor uncertainty.

"It is a little bit of a bump in the road," Heymer said. "This is really a commercial decision based on the interactions of GE and the companies."

Heymer added that while the ESBWR is certainly among the more advanced new reactor technologies, all of the reactors currently submitted for license applications have safety and operational improvements over current reactor designs.

The ESBWR is among five reactor designs that nuclear companies are currently considering for new power plants, of which only two are certified: GE-Hitachi's advanced boiling water reactor and Westinghouse's AP-1000 pressurized water reactor. Areva's U.S. evolutionary pressurized water reactor, Mitsubishi's U.S. advanced pressurized water reactor and an alternate version of the AP-1000 are also currently undergoing NRC's design certification process.

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ENERGY MARKETS: Tax subsidies most generous for wind, solar, nuclear -- report *(01/13/2009)*

Katherine Ling, E&E reporter

Renewable energy investment today receives a more than 150 percent return after taxes, followed closely by nuclear energy's 100 percent, said the Manhattan Institute for Policy Research in a report released yesterday.

The **report** examined tax subsidies for each fuel and how investors respond to tax mechanisms.

"As we are moving forward with the 'green' stimulus and tax policies it is important to see how the tax code works," said Gilbert Metcalf, the report's author. Metcalf is

a professor of economics at Tufts University and a research associate at the National Bureau of Economic Research.

U.S. fuel-tax subsidies totaled slightly more than $10 billion in 2007, with subsidies for biofuels as the single largest capital expenditure, the report says. The distribution of tax subsidies between renewable and fossil fuel energy has shifted significantly from 1997 to 2007, with the share of tax expenditures for fossil fuels dropping from 60 percent to under 50 percent, while renewable energy and conservation expenditures have risen more than 50 percent in this time period, it says.

But within these subsidies, there are a wide range of impacts on investment, as shown by the report's analysis of an "effective tax rate," Metcalf told reporters in a conference call yesterday. After taxes, companies investing in solar thermal gain a tax subsidy of 245 percent, wind investments a 164 percent subsidy, nuclear a 100 percent subsidy and integrated gasification combined cycle coal investments a 12 percent subsidy, according to the report.

Metcalf said these subsidies clearly had an impact last year, as there were 17 new nuclear reactor applications filed at the Nuclear Regulatory Commission and new wind generation accounted for one-third of all new electricity sources.

Meanwhile, pulverized coal, natural gas, and transmission and distribution lines face about a 35 percent "positive tax," in which companies must pay additional capital taxes on their investment. In particular, Metcalf highlighted the investment tax disadvantages faced by companies that want to invest in transmission and distribution lines.

"It is just another impediment to modernizing our transmission grid if we are taxing transmission grid investment at a very high rate," Metcalf said. Lack of transmission investment, he said, "reflects a potential bottleneck in bringing intermittent power to market and runs the risk of creating a new form of 'stranded power.'"

A policy that reduced the transmission investment recovery period from 15 years to five or seven years would be "the most effective thing" to spur transmission development, similar to what Congress did for "smart grid" technology by lowering the tax write-off from a 20-

year period to a 10-year period, Metcalf said.
Large integrated oil companies also pay about 15 percent positive tax, but independent petroleum companies receive a 13.5 percent subsidy, as they can take advantage of percentage depletion -- a fixed percentage of sales, the report said. The recent downturn in oil prices will reduce this benefit, Metcalf said.
Click here to view the report.

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NUCLEAR SAFETY: Enviros lobby to toss draft radiation exposure guide *(01/21/2009)*

Sara Goodman, E&E reporter
Environmentalists want the Obama administration to pull back a controversial draft document detailing how to handle radioactive releases, saying the proposed standards fall far short of what is needed to protect human health.
In 1992, EPA issued what it calls Protective Action Guides, or PAGs, which are radiation level standards that would trigger protective action such as an evacuation following a nuclear emergency. They describe emergency response based on short-term, intermediate and long-term phases, and each phase has different considerations for emergency planning.
Last week, Marcus Peacock, the deputy EPA administrator under outgoing President George W. Bush who had been expected to take over after President Barack Obama's inauguration, signed off on a new draft guide that proposes standards for each phase that would dramatically increase the permissible levels of exposure.
Now Granta Nakayama, another Bush administration appointee, is running U.S. EPA pending Senate confirmation of Obama's nominee for the job, and it is unclear how the agency will handle the draft (*Greenwire*, Jan. 21).
Environmentalists have criticized the new guide, saying the standards would fail to protect the public from harmful levels of radiation because they raise the threshold of what the agency has historically deemed dangerous. More than 60 public health and environmental groups wrote a letter last October urging the Bush

administration to scrap its plans for the new standards, saying they would "contradict decades of EPA policy on protection of the public and the environment."
The most controversial aspect of the new standards is limits for drinking water, according to Daniel Hirsch, president of the environmental group Committee to Bridge the Gap, one of the signatories to the letter.
"For the drinking water standard ... they relaxed the standard by orders of magnitude, not by 20 percent or 30 percent but a hundredfold, a thousandfold, sometimes even a hundred-thousandfold," said Hirsch, who wrote a **report** analyzing the draft guidance.
EPA, which did not respond to repeated requests for comment on the draft guide, included a disclaimer in the document saying it is not intended to apply to any federal or state regulatory programs such as Superfund. The agency has said the guides are intended for response to an attack involving a "dirty bomb" or an improvised nuclear device.
But the groups worry that the more relaxed standards would end up applying more broadly to situations including contamination from nuclear power plants. Because of these concerns, the groups want Obama to rescind the draft.
"This is what will be used by every emergency responder in the country," Hirsch said. "The administration can still yank it back, but it has only a day or two."
Click here to read the draft guide.
Click here to read the October letter to EPA.

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Duke scientists find radioactivity risk in Tenn. fly ash sludge *(01/29/2009)*

Duke University scientists have found that sludge from the Tennessee Valley Authority's Kingston Fossil Plant fly ash spill contains radium and arsenic at levels high enough to affect human health in the area.
But other scientists said the amount of radioactivity in the coal ash was not enough to pose a health risk. TVA said it would review the report and continue testing the site.
Avner Vengosh, an associate professor of earth and ocean sciences at Duke's Nicholas School of the Environment,

tested samples taken Jan. 9 from the sludge that spilled from a ruptured holding pond late last month, spilling 5.4 million cubic yards of fly ash and water into the Emory River and surrounding countryside. His team found radiation levels higher than normal for coal ash.
Coal contains uranium and thorium, which decay into radium. Radioactive elements become concentrated in the ash during combustion. Most bottom and fly ash contains 5 to 6 picocuries per gram. Vengosh found two isotopes of radium at 8 picocuries per gram.
But Dana Christensen, associate director for energy and engineering sciences at Oak Ridge National Laboratory, said the results found by the Duke team are neither surprising nor dangerous (Scott Barker, *Knoxville News Sentinel*, Jan. 29).

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General Information or Other	Event Number: 44805
Rep Org: AMETEK Licensee: AMETEK Region: 3 City: COLUMBUS State: OH County: License #: Agreement: Y Docket: NRC Notified By: ROBERT GEORGE HQ OPS Officer: GEROND GEORGE	Notification Date: 01/26/2009 Notification Time: 11:32 [ET] Event Date: 01/26/2009 Event Time: [EST] Last Update Date: 01/26/2009
Emergency Class: NON EMERGENCY 10 CFR Section: 21.21 - UNSPECIFIED PARAGRAPH	Person (Organization): PATTY PELKE (R3) WAYNE SCHMIDT (R1) CHUCK CAIN (R4) RANDY MUSSER (R2) MJ ROSS-LEE (NRR) THOMAS HARRITY (NRR)

Event Text

AMETEK PART 21 REPORT ON TYCO/POTTER & BRUMFIELD RELAYS

The following information was received from AMETEK via facsimile:

"COMPONENT DESCRIPTION: Electro-mechanical 14 pin relays, with AC voltages of 120 and 240, and DC voltages of 12, 24, 48 and 110. The Tyco/[Potter & Brumfield] relays were removed from the Approved Supplier Listing in 2006. The relays can be installed in Ametek Solidstate Controls equipment, or provided as a spare part.

"PROBLEM YOU COULD SEE: Nuisance alarming or erratic operation of the equipment.

"CAUSE: The problem appears to be an age related degradation of unknown cause. A failure analysis performed by First Energy Laboratory Services identified a potential cause as a crinkled appearance on the surface of the moving contact pads resulting in uneven contact with the opposing stationary contact pad. Over time, a layer of oxidation forms on the pads inhibiting electrical contact and increasing resistance.

"EFFECT ON SYSTEM PERFORMANCE: Potential unstable output voltage caused by intermittent high relay resistance. The relays are generally used for alarm functions but can be used in control circuitry as well.

"ACTION REQUIRED: Replace all Tyco/Potter & Brumfield relays listed below remaining in service with the approved Ametek Solidstate Controls equivalent.

"Component: Tyco/Potter & Brumfield Relays
SCI PIN 07-740001 - P&B PIN KHAU-17A18-120
SCI PIN 07-740002 - P&B PIN KHAU-17A18-240
SCI PIN 07-740005 - P&B PIN KHAU-17D18-12
SCI PIN 07-740006 - P&B PIN KHAU-17D18-24
SCI PIN 07-740007 - P&B PIN KHAU-17D18-48
SCI PIN 07-740008 - P&B PIN KHAU-17D18-110"

The faulty relays are a subcomponent of AMETEK battery chargers, inverters, and uninterruptible power supplies. These types of AMETEK equipment are installed at various reactor licensees. There was no information on which licensees are affected. The manufacturer received notification of the faulty relays from Beaver Valley Power Station. The problem was revealed through a malfunction of a battery

charger on 12/11/2008. The manufacturer does not believe that there is an immediate safety concern.

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Power Reactor	Event Number: 44811
Facility: FERMI Region: 3 State: MI Unit: [2] [ ] [ ] RX Type: [2] GE-4 NRC Notified By: GREG MILLER HQ OPS Officer: JASON KOZAL	Notification Date: 01/28/2009 Notification Time: 12:16 [ET] Event Date: 01/28/2009 Event Time: 07:30 [EST] Last Update Date: 01/28/2009
Emergency Class: NON EMERGENCY 10 CFR Section: 50.72(b)(3)(v)(D) - ACCIDENT MITIGATION	Person (Organization): PATTY PELKE (R3)

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

HIGH PRESSURE COOLANT INJECTION SYSTEM INOPERABLE

"On January 28, 2009 at 0730 the Division 2 Emergency Equipment Cooling Water System (EECW) was declared inoperable due to a blown control power fuse in the bucket for the P4400F604 - Div 2 EECW Supply to Control Rod Drive (CRD) pumps. This is a normally open valve and is required to close upon EECW initiation to remove non-essential loads. The blown control power fuse would have prevented this action from occurring. The ECCW System cools various safety related components including the High Pressure Coolant Injection (HPCI) System Area Cooler. An unplanned HPCI inoperability occurred due to the Division 2 EECW inoperability based on a loss of the HPCI System Area Cooler. A 14 day Limiting Condition for Operation (LCO) was entered for HPCI per LCO 3.5.1. The control power fuse was replaced, EECW and HPCI were declared operable, and LCO 3.5.1 exited on January 28, 2009 at 1025. This report is being made pursuant to 10CFR50.72(b)(3)(v)(D) as a condition that at the time of discovery could have prevented the fulfillment of a safety function needed to mitigate the consequences of an accident, based on loss of a single train safety system.

"The NRC Resident Inspector has been notified."