

To: Jim Mehl, ERU Supervisor
From: Zack Clayton, Rad Coordinator
Subject: June Monthly Report
Date: July 8, 2011

Beans

Training: 0
Drills: 0
Meetings: 5
Technical Assistance: 2
Public Assistance: 3

Web Page Views: There were 20 page views in June.

Coming Attractions

7/6 Working Group
7/11 URSB
7/28 NEPAC
8/2 Working Group
8/2 After Action
8/3 NAS-T TTX planning
8/30 RAT training at NASA Plumbrook

Facility updates

FENOC

Velan, Inc., a vendor manufacturing globe valves, made notification of a potential manufacturing defect that can cause valve failure. See Event Number: 46923

Davis-Besse Nuclear Power Station

Davis-Besse

Over the week of June 27 the circulating water screens at Davis-Besse Nuclear Power Station have had a build up of algae requiring the screens to be cleaned multiple times a day. Maintenance personnel have worked two shifts to respond to the frequent cleaning demands. On Monday diving activities were required to clean #3 and #4 secondary screens. The respective circulating water pumps were secured in order to clean each secondary screen. A conservative decision was made to reduce plant

power to 95% before securing a circulating water pump. This was to ensure that administrative limits would not be challenged. Plant power was reduced to approximately 95%, one circulating water pump was secured at a time, and the respective screen cleaned. The screens were cleaned and the plant power was returned to 100% power. The chlorination system is in service, however a Corrective Action Report has been written and the effectiveness of the plant's chlorination strategy and system performance will be evaluated.

Perry Nuclear Power Plant

Perry began June in a refueling outage. They began to power up and resynchronized to the grid on June 6.

On June 20, at 9:45 maintenance crews were working on the ventilation system of the Technical Service Center at the Perry Nuclear Power Plant. When power was restored to these systems the plant's Safety Display Parameter System (SDPS), Emergency Response Data System (ERDS), and Computer Aided Dose Assessment Program were all taken off-line. Back-up measures were in place to provide the data and information these systems normally provide. The affected systems were restored by approximately 15:05.

The cause of the failure is under investigation but is believed to have been a power spike that resulted when power was restored to the ventilation systems. See Event Number: 46974

Perry Nuclear Power notified the State June 21 of anomalous power levels at the plant. The plant unexpectedly reduced power this morning around 6:00 a.m. This was due to an unexpected valve closure and bypass valves opening in response to relieve a pressure spike. The plant is functioning normally and all systems are now responding as designed. There is no danger to the plant or public and the cause of the valve closure is under investigation.

Beaver Valley Power Station

On Saturday June 4th at approximately 3 pm the Beaver Valley Nuclear Power Station (BVPS) Initial Notification line was activated. All of the parties to this dedicated line answered the call and established communications except for BVPS. Subsequent investigation has revealed that an employee inadvertently activated the back-up Initial Notification system while attempting to listen to the automated message. The employee did not maintain the connection because he believed the line had been disconnected. At no time did an emergency situation exist at BVPS. The employee has been reprimanded.

Beaver Valley Unit I

Unit I operated at full power for June.

Beaver Valley Unit II

Unit II operated at full power for June.

Fermi II

Fermi II operated at full power for June.

Portsmouth Enrichment Plant

There were no reports for Portsmouth in June. However, there was a ventilation system power failure in one of the battery rooms that was analyzed and later found that it should have been reported. Portsmouth is preparing a report to NRC on this event for submission in July.

Activity

- 6/1 Working Group/After Action – plant and agency updates were normal. The exit interview for the Davis-Besse exercise indicated an issue for the State involving notification for the waterway. There is no clear authority indicated in the message. NRC may issue a white finding for the work involving the instrument cable jam in the reactor. The preliminary data fields for WebEOC were demoed.
- 6/8 IZRRAG Planning - IZRRAG member agencies met for a refresher session on what the IZRRAG is to accomplish and to look at what changes the Group would need to comply with NIMS and ICS structure.
- 6/16 IZRRAG Procedures – IZRRAG member agencies met to address concerns that some supervisors had with the tentative reorganization of the Group function. These were addressed and those present agreed that USFDA and OSU Extension were support agencies for ODA and not actual Group members.
- 6/27 NAS-T TTX planning at Columbus Department of Health.

Office Issues

Work on the Agency SOPs for the emergency phase and intermediate phase of an accident continue.

News, NRC Reports, and Statistics

Operating Power Levels

Date	BV1	BV2	DB	Perry	Fermi2
1	100	100	100	0	100
6	100	100	100	1	100
13	100	100	100	79	100
20	100	100	100	100	100
27	100	100	100	100	100
30	100	100	100	100	100

Information Notices

The 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/2010/>.

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

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

NUREG/CR-1429 Seismic Review Table

ML 110880747

NUREG/CR-6126 Cognitive skill training for nuclear power plant operational decision making

ML 11151A201

LTR-11-0175 Concerning investigation of the decision making process related to the pending license application for construction of a high-level waste repository at Yucca Mountain.

ML 11095A019

LTR-11-0175 Response: Concerning investigation of the decision making process related to the pending license application for construction of a high-level waste repository at Yucca Mountain.

ML 111450754

Beaver Valley Power Station, Unit Nos.1 and 2; Davis-Besse Nuclear Power Station: and Perry Nuclear Power Plant – Request for additional information regarding the decommissioning funding status reports (TAC Nos. ME5451, ME5452, and ME 5518)

ML 111460042

Summary of meeting with the Nuclear Energy Institute, industry representatives, and licensees on transitioning to National Fire Protection Association Standard 805

ML 111450653

Davis-Besse, Unit 1, License amendment request to modify the special visual inspection requirements of Technical Specification 5.5.8, "Steam generator (SG) Program"
ML11144A289

Fermi 3, Detroit Edison Company supplemental response to NRC request for additional information (RAI) Letter No. 51
ML11153A026

NRC staff letter providing notice of the availability of an update to the FERMI COL hearing file update 19 with attachments
ML 111520337

2011/05/02 Fermi COL – Fermi overview ACRS.pptx
ML 11140A070

2011/05/03 Fermi COL – Chapter 12 draft RAIs 5633 and 5634
ML 11140A068

2011/05/03 Fermi COL – Fw: ACRS presentations
ML 11140A069

2011/05/11 Fermi COL – FW: Draft SER reviews
ML 11140A067

2011/05/16 Fermi COL – Chapter 12 draft RAIs 5633 and 5634
ML 11140A066

2011/05/16 Fermi COL – Fermi 3 COLA Environmental Review – DEIS kickoff meeting Agenda
ML 11140A064

2011/05/17 Fermi COL – FW: Fermi 3 COLA Environmental Review – DEIS kickoff meeting Agenda
ML 11140A065

2011/05/17 Fermi COL – Michigan SHPO consultation on the Fermi 1 demolition
ML 11140A063

2011/05/18 Fermi COL – Fw: ACRS Slides
ML 11140A060

Fermi 2, Submittal of Nuclear Liability Insurance Endorsement
ML 11145A110

LER 11-001-00, for Beaver Valley, Unit 2, regarding defective fuel injection pump supply lines provided by the diesel engine manufacturer results in an emergency diesel generator being inoperable.

ML 11145A171

Submittal of request for renewal of materials license for the American Centrifuge Lead Cascade Facility

ML 11153A023

Request for list of federally protected species and important habitats within the area under evaluation for the Davis-Besse Nuclear Power Station license renewal application review.

ML 11131A176

Audit report regarding the Davis-Besse Nuclear Power Station license renewal application

ML 11122A014

06/21/2011 – Notice of significant licensee meeting, Beaver Valley, Perry, & Davis-Besse Nuclear Generating Stations to discuss FirstEnergy Nuclear Operating Company fleet wide performance with FENOC management.

ML 111540131

Transcript of First Energy Nuclear Operating Co., Davis-Besse Nuclear Power Station, telephone conference on Thursday, May 19, 2011, pages 240-274.

ML 11146A066

Letter re: Summary of May 19, 2011, Category III public meeting regarding Part 76 Certificate termination of the Portsmouth Gaseous Diffusion Plant

ML 111470332

Summary of site audit related to the review of the license renewal application for Davis-Besse Nuclear Power Station, Unit 1 (TAC No. ME4613).

ML 110820276

Agreement of the parties regarding mandatory discovery disclosures in the matter of Davis-Besse, Unit 1.

ML 111570426

Davis-Besse, Unit 1, Reply to requests for additional information for the review of license renewal application, batch 2 and batch 1, and license renewal application amendment no. 7.

ML 11151A090

Fermi 3, Response to NRC request for additional information letter no. 56.

ML 11151A065

Beaver Valley, Units 1 and 2, License amendment request no. 10-021, replacement of Beaver Valley Power Station Unit 1 spray additive system by Containment Sump pH Control System.

ML 111510646

Davis-Besse, Unit 1, 10 CFR 50.46 report of changes or errors in ECCS evaluation models, for the period of January 1, 2010 to December 31, 2010.

ML111510642

Davis-Besse, Unit 1, Response to request for additional information – 2010 Steam Generator Tube inspection report.

ML111510643

Fermi 3 schedule for the submittal of site-specific soil-structure interaction analysis and response to NRC request for additional information letter no. 55.

ML11151A199

Ltr. 06/01/2011 Fermi re confirmation of initial Operator License examinations.

ML11154A096

Ltr. 06/01/2011 Perry re confirmation of initial Operator License examinations.

ML11153A156

Ltr. 06/01/2011 Confirmation of initial Operator License examinations – Davis Besse Nuclear Power Station.

ML11157A118

Beaver Vally, submittal of discharge monitoring report for April 2011.

ML11152A047

Davis-Besse: Project Manager Change For The License Renewal Project (Safety) For Davis-Besse Nuclear Power Station (TAC NO. ME4640)

ML11154A001

Draft RIS (ML110950593), has been posted with the Comment Period Ending Date of June 20, 2011

ML110950593

Beaver Valley Power Station, Unit Nos. 1 and 2 – Closeout of Generic Letter 2008-01 “Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems” (TAC Nos. MD7795 and MD7796)

ADAMS Accession No.: ML100840775

Beaver Valley Power Station, Unit No. 2 (BVPS-2) – Summary of Conference Call Regarding the Spring 2011 Steam Generator Tube Inspection Results (TAC No. ME5882)

ADAMS Accession No.: ML111580515

Perry Nuclear Power Plant, Unit No. 1 - Correction Letter re: License amendment No. 157 – ADAMS Accession no. ML111660815

Davis Besse: Request For Additional Information For The Review Of The Davis-Besse Nuclear Power Station (TAC No.: ME4640)

ML11167A171

Information Notice 2011-12, Reactor Trips Resulting From Water Intrusion Into Electrical Equipment

ML110450487

Summary of June 8, 2011, Meeting with the Beyond Nuclear Petitioners Regarding their 2.206 Petition to Suspend Operating Licenses (OLs) of General Electric (GE) Boiling Water reactors (BWRs) Mark I Units (TAC NO. ME6040)

ML11166A134

Davis-Besse: NRC Security Baseline Inspection Report 2011405 - Cover Letter Only
ADAMS Accession No. ML11173A292

Davis-Besse Summary of June 15, 2011, Public Meeting to Discuss the Unit 1 End-of-Cycle Plant Performance Assessment –

ML111740256

Davis-Besse Nuclear Power Station, Unit 1 - Steam Generator Tube Integrity During a Large-Break Loss-of-Coolant Accident –

ADAMS Accession no. ML111400365

Perry Nuclear Power Plant, Unit 1 - Closeout of Generic Letter 2008-01, "Managing gas accumulation in emergency core cooling, decay heat removal, and containment spray systems"

ADAMS Accession no. ML111610434

Response to 2.206 Petitioner Thomas Saporito - Seeking Enforcement Action Against Licensees of the U.S. NRC - Nuclear Power Reactors in the U.S. Located on or Near an Earthquake Fault Line

Adams Accession No. ML11137A213

Davis-Besse Nuclear Power Station, Unit 1 - Closeout of Generic Letter 2008-01 "Managing gas accumulation in emergency core cooling, decay heat removal, and containment spray systems"

ADAMS Accession no. ML111250165

FSME-11-060, Notification of Issuance of the Safety Culture Policy Statement Brochure, with the brochure, can be found at the FSME website: <http://nrc-stp.ornl.gov/>.

Perry Nuclear Power Plant, Unit No. 1 - Branch Chief Reassignment –
ADAMS Accession no. ML111670060

Davis-Besse Nuclear Power Station, Unit 1 - Branch Chief Reassignment
ADAMS Accession no. ML111680355

BEAVER VALLEY POWER STATION UNIT 2: REQUALIFICATION PROGRAM
INSPECTION

ADAMS Accession No. ML111810078

DAVIS-BESSE 2011-010 LR IR
ADAMS ACCESSION # ML11179A134

FERMI: SUMMARY OF THE JUNE 22, 2011, NON-PUBLIC MEETING TO DISCUSS
END-OF-CYCLE SECURITY PERFORMANCE OF FERMI POWER PLANT, UNIT 2
FOR CALENDAR YEAR 2010

ADAMS Accession No. ML11181A182

Perry Nuclear Power Plant Readiness for NRC Human Performance Corrective Action
Inspection –
ML111810868

Monday, June 6, 2011

Water treatment system tested

Kyodo

Workers on Sunday began checking devices that will help decontaminate the radioactive water that is flooding the Fukushima No.

1 power plant, officials said.

Tokyo Electric Power Co., which manages the badly damaged plant, is building the system and hopes to activate it in about a week so it can start cleaning the massive amounts of highly dangerous water being created at the plant in Fukushima Prefecture. The system is being set up at a facility where tainted water from reactors No. 2 and No. 3 has been transferred. It is expected to treat about 1,200 tons per day by reducing the concentration of radioactive substances in it to somewhere between one-thousandth and one-ten thousandth of what it is now.

The system includes an oil separator, a device to absorb radioactive cesium, decontamination equipment for cesium and strontium, and a desalination apparatus, the officials said. Some of the devices were made with technical cooperation from Kurion Inc. of the United States and Areva SA of France.

Workers held trial runs Sunday and are to test the equipment further to make sure it is all operating properly, they said.

The plant lost the ability to cool its six reactors when the March 11 quake and tsunami knocked out all power and ruined its backup generators.

Reactors 1 to 4 need perpetual injections of water from outside to keep the fuel rods and spent fuel from overheating. But vast pools of water are accumulating.

News

June 9 - 4:15 p.m. EDT - CNSC information update regarding the Japanese nuclear facilities

Tokyo Electric Power Company (TEPCO) is making final preparations to activate special purification equipment to treat radioactive waste water at the Fukushima Daiichi NPP. TEPCO recently tested equipment that will remove radioactive substances from water. TEPCO expects the system to decontaminate about 1,200 tons of water daily before it is transferred to temporary storage tanks on the Daiichi site.

TEPCO workers have completed removal of radioactive debris outside the Unit 3 reactor building as part of a clean-up and stabilization plan started last month. TEPCO plans to inject nitrogen gas into the Unit 3 reactor containment vessel to prevent additional hydrogen explosions. The utility will also install a circulatory cooling system at the Unit 3 reactor. High radiation levels detected near the entrance to the Unit delayed this work last month. TEPCO personnel will soon enter the building to check for debris inside and monitor radiation levels.

CNN reports that Japan's Nuclear Emergency Response Headquarters said June 6 that the organization's latest evaluation indicates that reactor units 1, 2 and 3 at the Fukushima Daiichi nuclear Power station had experienced full meltdowns in the wake of the March 11 earthquake and tsunami.

Energy officials and ministers from over 30 countries attended talks on nuclear safety hosted by the French government in Paris this week. The officials have agreed to strengthen cooperation in the case of a nuclear accident through the creation of cross-border response teams, on the grounds that radiation crosses borders when an accident occurs. Participants were split, however, over the extent to which countries could inspect neighbour's nuclear safety measures. Countries abandoning nuclear energy, like Switzerland, advocated scrutiny into neighbouring countries' safety systems. Pro-nuclear countries, such as India, are opposed to a mandatory inspection system. The Paris talks are being held in advance of a high-level International Atomic Energy Agency (IAEA) conference that starts in Vienna on June 20.

The Government of Japan's report to the IAEA Ministerial Conference on Nuclear Safety – "The Accident at TEPCO's Fukushima Nuclear Power Stations" can be accessed at the following link:

(http://www.kantei.go.jp/foreign/kan/topics/201106/iaea_houkokusho_e.html) Please note that the report is available only in English.

The IAEA board has agreed that the Agency will study the long-term effects of the spillage of radioactive water from the Fukushima Daiichi site on the maritime environment in the Pacific. Australia, South Korea and Indonesia will lead the study into possible sea pollution in the Pacific Ocean and the East China Sea. The survey team will collect samples of radioactive substances in sea water and compare them to data collected before the nuclear accident in Fukushima. The study begins in July and will last four years.

Find out more:

<http://www.nuclearsafety.gc.ca/eng/mediacentre/updates/march-11-2011-japan-earthquake.cfm>

For all the latest CNSC news, visit the CNSC's homepage at

<http://www.nuclearsafety.gc.ca/eng/>

**UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001**

June 21, 2011

*****FOR THE RECORD*****

**NRC ENSURES PUBLIC SAFETY THROUGH RIGOROUS OVERSIGHT
OF NUCLEAR POWER PLANT SAFETY STANDARDS**

A recent Associated Press (AP) article focused on federal regulation and oversight of the nuclear power industry in the United States. Although we disagree with many of their observations and conclusions, we welcome the additional attention their article brings to the critical importance of nuclear safety and security. It is this type of dialogue that helps us to engage the public and our other stakeholders, and to continue to be vigilant in all aspects of our safety mission. And, we are always committed to doing better and doing it right.

As an independent regulatory agency, the NRC has a robust and comprehensive approach to holding U.S. nuclear power plants to strict safety standards. The AP article fails to recognize that the NRC's own inspection and maintenance requirements have led plants to detect and repair, replace or otherwise fix the equipment, systems or other issues that were described in the article and in other instances which were not highlighted. For example, the NRC's inspections last year at the Fort Calhoun plant in Nebraska showed the plant needed to correct deficiencies in its flood response plan. The NRC increased its oversight of Fort Calhoun while the plant responded, and today the plant is very well positioned to ride out the current extreme Missouri River flooding while keeping the public safe. The NRC has also ensured Westinghouse meets existing, stringent safety requirements in that company's attempt to get its AP1000 new reactor design approved.

The NRC never wavers from its primary mission – ensuring that the public remains safe during the civilian use of radioactive materials in the United States. The NRC carries out

that mission by requiring all 104 U.S. nuclear power reactors to meet safety requirements, which in many cases are based on standards created and maintained by national professional organizations. For instance, the American Society of Mechanical Engineers' standards have been incorporated into requirements for reactor vessels and reactor coolant piping, while the Institute of Electrical and Electronics Engineers' standards apply to computer systems.

These professional groups, along with researchers from the NRC and the industry, regularly examine new information, including experience gathered from operating nuclear power plants, to determine if the standards should change. The NRC only endorses changes when they maintain acceptable levels of public safety; this can include adding or strengthening requirements. Even after a standard is changed, the NRC requires nuclear power plants to provide information that justifies continued safe operation during the period of time before plants can comply with the updated requirements.

The agency operates in an open and transparent manner, reaching decisions based on the best available information and analysis; safety-significant decisions are reached without regard for potential economic impacts on plant operators.

The NRC takes as much time as necessary, in some cases years, to ensure requirements are met. For example, U.S. nuclear plants have long sought approval to install digital computer control systems to replace 1970s-era controls. The NRC spent most of the past decade examining issues such as cybersecurity, software validation and system reliability, first on a generic basis and then in a plant-specific application, prior to approving a digital system last year for the Oconee plant in South Carolina. The NRC continues to inspect and oversee Oconee's installation of the new system to ensure it complies with our requirements.

The NRC also maintains its focus on existing issues, such as how materials can degrade during exposure to the conditions inside a nuclear power plant. Research and experience has shown some metal alloys can slowly develop minute cracks, and NRC-required inspections and maintenance (based on existing performance standards) help ensure this issue doesn't compromise public safety. The NRC continues its research and information-gathering on issues such as this to ensure the relevant safety requirements are based on the most up-to-date information.

The AP article fails to properly describe the sequence of events following the severe corrosion incident at the **Davis-Besse nuclear power plant** – a case where the licensee, FirstEnergy, was fined \$5.5 million for lying to the NRC and failing to follow critical agency requirements. The NRC kept Davis-Besse shut down for several years until the plant's damaged reactor vessel head was replaced and other required repairs were done. When later inspections revealed that the replacement head was also showing degradation, the NRC then ensured FirstEnergy accelerated its plans to install a brand-new reactor vessel head that utilizes a more corrosion-resistant alloy.

The bottom line remains the same – the NRC sets appropriate technical requirements using impartial professional standards, expertise and analysis; we have inspectors stationed at every nuclear power plant in the country, who inspect plants every day; and we enforce our requirements to ensure the public remains safe.

Again, we appreciate the diligence and the time the AP spent in preparing and publishing this article. A heightened understanding of the importance of the NRC's role in ensuring nuclear safety and security is a positive development for the agency and for the American people.

NUCLEAR CRISIS: NRC chief defends evacuation recommendation (06/24/2011)

Hannah Northey, E&E reporter

Nuclear Regulatory Commission Chairman Gregory Jaczko defended his recommendation to evacuate Americans 50 miles from a crippled Japanese nuclear reactor in a [letter](#) to Sen. Jim Webb (D-Va.) last week.

House Republicans have criticized the chairman's recommendation for all Americans within 50 miles of the Fukushima Daiichi nuclear plant to be evacuated after the complex was hit by a powerful earthquake and tsunami on March 11.

His recommendation raised questions because NRC only evacuates Americans within 10 miles of damaged U.S. nuclear plants, and Japanese officials were evacuating individuals within 12 miles of the Fukushima plant.

Jaczko said in his June 17 letter that the recommendation came amid confusion and sparse information from Japan and that it was made based on the assessment of conditions at the site as they were understood at the time.

"Since communications with knowledgeable Japanese officials were limited and there was a large degree of uncertainty about plant conditions at the time, it was difficult to accurately assess the potential radiological hazard," Jaczko said. "The U.S. emergency preparedness framework provides for the expansion of emergency planning zones as conditions require."

NRC considered two scenarios based on computer models that assessed possible offsite consequences, Jaczko said in the letter.

The first scenario assumed an "ex-vessel, unfiltered release" from a totally failed containment from one unit for about 10 hours. The second calculation assumed multiple units failed and 100 percent damage to the spent fuel pool at Unit 4, with a duration of about 15 hours, according to the letter. The scenarios also incorporated different wind speeds and weather patterns.

Moreover, those calculations demonstrated that U.S. EPA's protection action guidelines could be exceeded at a distance of up to 50 miles from the Fukushima site, if a large-scale release occurred from the reactors or the spent fuel pools, the chairman said.

"Even though these recommendations were made during a time of uncertainty and rapidly changing conditions during the first few days of the accident" they were appropriate, and the Japanese government significantly revised its estimate upward for the amount of radiation released from the plant in the first week of the disaster, Jaczko said.

Webb initially asked the chairman on April 15 for data that fed into his recommendation. In early April, NRC staffers were unable to tell the commission's Advisory Committee on Reactor Safeguards who vetted Jaczko's recommended evacuation ([E&ENews PM](#), April 7).

The senator was not immediately available to comment on the chairman's letter.

The chairman had repeatedly cited severe damage to the spent fuel pool at Unit 4, but NRC staff said this month that the pool never went dry ([Greenwire](#), June 15).

Jaczkowski said that the new information did not invalidate his recommendation. "The more reassuring recent assessment of the situation in the Unit 4 spent fuel pool is countered by the confirmation of significant core damage to Units 1, 2 and 3 and does not invalidate our earlier decision," he said.

[Click here](#) to read Jaczkowski's letter to Webb.

<http://www.eenews.net/EEDaily/2011/06/24/9/>

Nuclear plants run past life expectancy

Reactors engineered to last 40 years face little scrutiny for license renewals

Tuesday, June 28, 2011 03:05 AM

By Jeff Donn

ASSOCIATED PRESS

ROCKVILLE, Md. - When commercial nuclear power was getting its start in the 1960s and '70s, industry and regulators stated unequivocally that reactors were designed to operate for only 40 years. Now, they tell another story - insisting that the units were built with no inherent life span and can run for up to a century, an Associated Press investigation shows.

By rewriting history, plant owners are making it easier to extend the lives of dozens of reactors in a relicensing process that resembles nothing more than an elaborate rubber stamp.

As part of a yearlong investigation of aging issues at nuclear power plants, the AP found that the relicensing process often lacks fully independent safety reviews. Records show that paperwork of the U.S. Nuclear Regulatory Commission sometimes matches word-for-word the language used in a plant operator's application.

Also, the relicensing process relies heavily on such paperwork, with very little on-site inspection. And under relicensing rules, tighter standards are not required to compensate for decades of wear and tear.

So far, 66 of 104 reactors have been granted license renewals. Most of the 20-year extensions have been granted with scant public attention. And the NRC has yet to reject a single application to extend an original license. The process has been so routine that many in the industry already are planning for additional 20-year license extensions.

Regulators and the industry now contend that the 40-year limit was chosen for economic reasons and to satisfy antitrust concerns, not for safety issues. They contend that a nuclear plant has no technical limit on its life.

But an AP review of historical records, along with interviews with engineers who helped develop nuclear power, shows just the opposite: Reactors were made to last only 40 years. Period.

The record also shows that a design limitation on operating life was an accepted truism. In 1982, D. Clark Gibbs, chairman of the licensing and safety committee of an early industry group, wrote to the NRC that "most nuclear power plants, including those operating, under construction or planned for the future, are designed for a duty cycle which corresponds to a 40-year life."

And three years later, when Illinois Power Co. sought a license for its Clinton station, utility official D.W. Wilson told the NRC on behalf of his company's nuclear licensing

department that "all safety margins were established with the understanding of the limitations that are imposed by a 40-year design life."

Nuclear engineer Bill Corcoran, who worked for plant designer Combustion Engineering, said certain features were specifically created with 40 years in mind, like the reactor vessel, which holds the radioactive fuel. He said metals were calculated to hold up against fatigue for that long. Concrete containment buildings had to be strong enough to last that long.

No one analyzed if they could last much longer.

It's easy to forget that the nuclear industry looked as if it might be dying in the late 1990s. In 1999 and 2000, several nuclear plants sold for astounding fire-sale prices of less than \$25 million each, according to trade group data. The country's oldest, Oyster Creek near the New Jersey shore, went for \$10million - a fraction of its \$65 million inflation-adjusted construction cost.

But that was before relicensing, which changed everything.

Relicensing is a lucrative deal for operators. By the end of their original licenses, reactors are largely paid for. When they're operating, they're producing profits. They generate a fifth of the country's electricity. Solar and wind power are projected to make very limited contributions as demand for electricity rises about 30 percent by 2035. So keeping old plants operating makes good business sense.

But some watchdogs suggest the equation isn't that simple.

"The plants aren't any safer because they're needed, and they certainly aren't any safer because someone says they're needed. So that's the wrong way to regulate," said Peter Bradford, a former NRC commissioner who now sits on the board of the activist Union of Concerned Scientists.

Meanwhile, license renewals, which began in 2000, continue. The process essentially requires a government-approved plan to manage wear. These plans entail more inspection, testing and maintenance by the operator, but only of certain equipment viewed as subject to deterioration over time.

The plans focus on large systems like reactor vessels. It is assumed that existing maintenance is good enough to keep critical smaller parts - cables, controls, pumps, motors - in good working order for decades more.

During its Aging Nukes investigation, the AP conducted scores of interviews and analyzed thousands of pages of industry and government records, reports and data. The documents show that for decades compromises have been made repeatedly in safety margins, regulations and emergency planning to keep the aging units operating within the rules. The AP has reported that nuclear plants have sustained repeated equipment failures, leading critics to fear that the U.S. industry is one failure away from a disaster.

There are two thrusts to the revisionist argument that nuclear reactors can last for decades and decades: First, that they weren't really designed only for 40 years; second, that there is no technical limitation on any length of time. In theory, they could run forever.

Tony Pietrangelo, chief nuclear officer at the industry's Nuclear Energy Institute, says 40 years for the initial license was simply how long it was expected to take to pay off construction loans.

In 2007, as Entergy Nuclear Operations sought a license extension for the Pilgrim reactor in Massachusetts, it wrote: "The original 40-year license term was selected on the basis of economic and antitrust considerations rather than on technical limitations." Yet writers seemingly contradicted themselves in the same document: "During the design phase for a plant, assumptions concerning plant operating durations are incorporated into design calculations for plant systems, structures, and components." The next year, an NRC report was more emphatic about the economic rationale of a 40-year license, insisting that "this time limit was developed from utility antitrust concerns and not physically based design limitations from engineering analysis, components, or materials."

Even so, it, too, felt compelled to acknowledge, in passing, that "some individual plant and equipment designs" were engineered for 40 years of life.

What's the truth? Fifty years ago, rural electricity cooperatives, worried about competition, did object to granting indefinitely long licenses to the new nuclear industry. But that's only part of the story.

The 40-year license was created by Congress as a somewhat arbitrary political compromise - "some long period of time, because nobody in his right mind would want to operate a nuclear plant beyond that time,"

said Ivan Selin, an engineer who chaired the NRC in the early 1990s.

Instead of stopping at 40 years, or even 60, the industry began advancing the idea of even longer nuclear life in discussions with the NRC starting several years ago.

Portsmouth Daily Times

USEC deadline comes, goes

by G. Sam Piatt

8 hrs ago

With its self-imposed June 30 deadline for a commitment on a conditional loan guarantee from the U.S.

Department of Energy unmet, USEC says it is now "most likely" looking at further cutbacks and a reduction of future investment in its planned American Centrifuge Project at Piketon.

"We are reaching a critical point regarding continued funding for the American Centrifuge Project. We need to obtain a conditional commitment for the loan guarantee from DOE," the company said nearly two months ago.

At the same time it said it needed to close on the \$50 million second phase of the strategic investment by Toshiba and B&W during this second quarter of 2011 to maintain the current spending level on the ACP, while maintaining compliance with its credit facility covenant that limits its spending on the ACP.

The company did not say when asked Wednesday if it plans further layoffs of workers connected with the ACP, or if it will be stopping the Lead Cascade program.

USEC, an 18-year-old private corporation, has invested more than \$1.9 billion in the ACP and has operated centrifuges as part of its Lead Cascade test program for more

than 500,000 machine hours. That is sufficient, company officials say, to demonstrate that the machines can be successfully manufactured and installed for commercial use. It needs additional financing to complete plan construction and has significantly demobilized construction and machine manufacturing activities for the project until it has that financing.

Officials said the company's ability to continue spending will be subject to its cash flow from operations and liquidity, including restrictions in its credit facility for ACP spending. "We are mindful of our liquidity and credit facility limitations," USEC CEO John Welch said in the May 4 conference call.

The company needs to see action toward the conditional commitment in the very near term, he said.

"We haven't said that they will pull out, nor have we said that we will stop work on the centrifuge project on June 30," said Angie Duduit, American Centrifuge public affairs manager Wednesday. "We also noted our credit facility limitations and, absent the clear path provided by a conditional commitment, we cannot go on spending indefinitely. We do not expect that work will stop on June 30, but the situation remains urgent."

As part of the determination on whether DOE will issue the \$2 billion loan guarantee to USEC, the Nuclear Regulatory Commission is investigating the corporation's economic viability, in particular whether it is using its free cash flow to buy back outstanding shares of stock, according to a report on hearings in Congress in a House Subcommittee on Energy and Power.

The subcommittee is hearing testimony on bills cosponsored in the Senate by Kentucky's Republican Senators Mitch McConnell and Rand Paul. They seek to initiate a pilot program to re-enrich depleted uranium "tails" that would keep the Paducah, Ky., gaseous diffusion plant operating beyond 2012 and help pay for cleanup work at Piketon.

G. SAM PIATT can be reached at (740) 353-3101, ext. 236, or spiatt@heartlandpublications.com.

Read more: Portsmouth Daily Times - USEC deadline comes goes
http://www.portsmouth-dailytimes.com/view/full_story/14518454/article-USEC-deadline-comes--goes?instance=secondary_stories_left_column#ixzz1QILCDDGy

Columbus Dispatch

Passed deadline won't halt nuke-plant work

Loan guarantee still essential for Pike County project expected to create 4,000 jobs in Ohio

Thursday, June 30, 2011 03:06 AM

By Jessica Wehrman

THE COLUMBUS DISPATCH

A Maryland company building a uranium-centrifuge project in Pike County will not slow or stop work on the plant despite missing a self-imposed June 30 deadline for securing a federal loan guarantee.

Officials of USEC, based in Bethesda, Md., said their American Centrifuge Plant could create 4,000 jobs in Ohio and 8,000 nationally. When completed, it is hoped that the

project will become a source of fuel for nuclear reactors in the United States and abroad.

In SEC filings in late May, the company indicated that, if it had not received a federal loan guarantee by June 30, its strategic investors, Toshiba and Babcock & Wilcox, would have the option to withdraw from the project. Despite that deadline, neither investor has indicated it will do so, said Paul Jacobson, vice president of corporate communications for USEC. Still, both investors will withhold a promised \$50 million from the project if USEC does not eventually obtain conditional commitment of a federal loan guarantee, he said.

The project's application for a federal loan guarantee has been pending with the U.S. Department of Energy for three years.

USEC officials have also worked with lenders to modify their existing credit to have flexibility to continue the project on a short-term basis, he said. In all, the undertaking near Piketon is expected to cost about \$5billion.

"We're not going to stop work on the centrifuge June 30, but the situation is still really urgent," Jacobson said. "We need a timely decision from the government, if not June 30, then soon thereafter, so we can decide to keep this project on track."

In May, USEC CEO John Welch warned investors that the loan guarantee was vital to the project's future.

"Our spending on the project is not open-ended, and we need to see action towards the conditional commitment in the very near term," he said.

Jacobson said USEC has invested \$2billion in the project so far.

The project has received support from members of the Ohio delegation. This year, Sens. Sherrod Brown, a Democrat, and Rob Portman, a Republican, joined 14 members of the Ohio congressional delegation in a letter to Energy Secretary Steven Chu urging the Obama administration to approve the loan guarantee.

Portman and Brown also have individually pushed for the guarantee with representatives of the Obama administration.

jwehrman@dispatch.com

NUCLEAR: NRC releases annual inspection report (06/29/2011)

Hannah Northey, E&E reporter

The Nuclear Regulatory Commission released its annual inspection report today for 197 security inspections conducted at reactors and fuel-cycle facilities last year.

The agency cited 121 inspection findings -- 112 deemed to be of very low significance and six of "greater security significance." Three of the violations involved noncompliance with NRC requirements and were not considered significant security risks.

NRC said all findings were corrected immediately but that further details would not be released because the information is sensitive. In comparison, there were 142 security inspections in 2009, which resulted in 135 findings, NRC said.

The inspections included 25 mock "force-on-force inspections" resulting in 23 findings, including two from failure of the plant's security personnel to effectively protect equipment targeted by the "mock adversary force" during the NRC-evaluated exercises. Those plants will be subject to reinspection in the future, NRC said.

During "force on force" inspections, the adversary force tries to either steal special nuclear material or damage components and systems that protect the reactor's core or the spent fuel pool, which could cause dangerous radioactive releases ([E&ENews PM](#), Sept. 14, 2007).

In 2009, 22 such inspections resulted in 29 findings and three instances where targets were not effectively protected from the mock adversary force, the commission said. The Energy Policy Act of 2005 requires NRC to submit an annual security inspection report to Congress in classified and unclassified forms.

"This report underscores the NRC's commitment to ensuring nuclear power facilities are meeting our stringent security regulations," NRC Chairman Gregory Jaczko said in a statement. "We are pleased to share the results of those efforts with Congress and the American public."

[Click here](#) to read the report.

<http://www.eenews.net/eenewspm/2011/06/29/12/>

Plant Reports

Part 21	Event Number: 46923
Rep Org: VELAN INC Licensee: VELAN INC Region: City: QUEBEC State: County: CANADA License #: Agreement: N Docket: NRC Notified By: VICTOR APOSTOLESCU HQ OPS Officer: BILL HUFFMAN	Notification Date: 06/03/2011 Notification Time: 16:30 [ET] Event Date: 04/12/2011 Event Time: [EST] Last Update Date: 06/03/2011
Emergency Class: NON EMERGENCY 10 CFR Section: 21.21 - UNSPECIFIED PARAGRAPH	Person (Organization): RICHARD CONTE (R1DO) JOSELITO CALLE (R2DO) ROBERT DALEY (R3DO) BLAIR SPITZBERG (R4DO) PT 21 GRP VIA E-MAIL ()

Event Text

POTENTIAL DEFECT IN CERTAIN VELAN SUPPLIED GLOBE VALVES

The following is a summary of a Part 21 e-mail notification received from Velan Inc:

Velan Inc., a valve vendor, has identified a potential defect in certain lots of 0.5, 0.75 and 1 inch NPS globe valves sold to Areva and Fenoc. The failure could result in the valve travelling into the bonnet cavity and became jammed between body and bonnet. The analysis revealed that the failure was caused by the wrong bonnet being installed

on the valve which ultimately allowed the disc to travel too far into the bonnet cavity and consequently the disc dropped into the body-bonnet gap. This prevented the valve from being closed during manual operation.

Internal analysis also determined that this failure mode is very plausible in valves installed with the stem in a horizontal orientation. Valves installed with the stem in vertical orientation are far less likely to fail but we cannot guarantee that; on valves that are normally fully open certain flow conditions may cause the disc to tilt and jam between body and bonnet. Nevertheless, operational history seems to suggest that valves installed with the stem in vertical orientation have not experienced this type of failure.

Velan has requested that each affected utility reviews the individual applications for the specific valves identified in this notification; in the event of any application where the valves inability to close will impact significantly the safe operation of the plant. Velan will work with the utility towards reaching a suitable solution.

Velan does not have specific information concerning the specific system and function applicable to these globe valves and therefore we cannot assess whether a substantial safety hazard exists as a result of their inability to close after falling as described above.

Velan's investigation and review of the available manufacturing records revealed that the same bonnet, with an oversized lift, was installed in all valves identified hereunder.

CUSTOMER ORDER QTY. VALVE FIGURE No. VALVE SERIAL No.

AREVA NP 8 W04-2074B-02AA 971022-1 to-8
AREVA NP 12 W03-2074B-02AA 971042-1 to -12
AREVA NP 27 W04-2074B-02AA 971048-1 to -27
AREVA NP 5 W03-2074B-02AA 981028-1 to-5
AREVA NP 5 W03-20748-02AA 981030-1 to-5
AREVA NP 10 W05-20748-02AA 001012-1 to-10
AREVA NP 13 W03-20748-02AA 001029 -1 to -13
AREVA NP 26 W04 20748-02AA 001056 -1 to -26
ARE VA NP 10 W04-20748-02AA 011035-1 to-10
FENOC 4 W05-2074B 02AA 001033 -1 to-4

!!!! THIS EVENT HAS BEEN RETRACTED. THIS EVENT HAS BEEN RETRACTED
!!!!

Power Reactor

Event Number: 46874

Facility: FERMI
Region: 3 State: MI

Notification Date: 05/23/2011
Notification Time: 17:03 [ET]

Unit: [2] [] [] RX Type: [2] GE-4 NRC Notified By: JIM KONRAD HQ OPS Officer: JOE O'HARA	Event Date: 05/22/2011 Event Time: 14:44 [EDT] Last Update Date: 06/07/2011
Emergency Class: NON EMERGENCY 10 CFR Section: 50.72(b)(3)(v)(A) - POT UNABLE TO SAFE SD	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

SAFE SHUTDOWN OPERABILITY CONCERN ASSOCIATED WITH OFFSITE POWER CIRCUITS

"On May 22, 2011, at 1444 hours, the Fermi 2 Control Room was notified by the Central System Supervisor that the switchyard voltage for both the 345kV (Division II) and 120kV (Division I) offsite power circuits following a generator trip would not be sufficient to sustain operability of the safety-related loads. Technical Specification (TS) 3.8.1 'AC-Sources Operating,' Condition E was entered at 1444 hours. At 1535, both offsite power circuit voltages were at acceptable levels and the offsite circuits were declared operable. Technical Specification (TS) 3.8.1, Condition E was exited at 1535 hours. Abnormal Operating Procedure (AOP) 20.300 GRID was entered. The Emergency Diesel Generators (EDG) remained operable during the degraded voltage condition. The ability of the EDGs to fulfill their design function was not affected by this condition.

"The event is being reported per 50.72(b)(3)(V)(A), as any event or condition that at the time of discovery could have prevented fulfillment of the safety function of structures or systems that are needed to shutdown the reactor and maintain it in a safe shutdown condition."

The NRC Resident Inspector was notified.

* * * RETRACTION FROM JEFF GROFF TO HOWIE CROUCH AT 1458 EDT ON 6/7/2011 * * *

"This event is retracted. The original report was based on calculated unit trip voltage drop results reported to Detroit Edison by ITC Transmission Company that exceeded acceptance criteria. ITC has subsequently informed Fermi 2 that this notification was in error due to a software feature of their real time contingency analyzer that resulted in inappropriately high results. Based on the results of other similar real time contingency analyzers employed at that time, without the problematic software feature, none of the acceptance criteria were exceeded and both divisions of offsite

power were capable of supporting operability of safety-related loads. Additionally, Fermi 2 has determined that even at the inappropriately high voltage drop originally reported, the Division II system could have performed its safety related functions. Therefore, there was no loss of safety function."

The licensee has notified the NRC Resident Inspector. Notified R3DO (Lara).

Power Reactor	Event Number: 46960
Facility: FERMI Region: 3 State: MI Unit: [2] [] [] RX Type: [2] GE-4 NRC Notified By: MARK EGHIGIAN HQ OPS Officer: HOWIE CROUCH	Notification Date: 06/15/2011 Notification Time: 11:10 [ET] Event Date: 06/15/2011 Event Time: 08:35 [EDT] Last Update Date: 06/15/2011
Emergency Class: NON EMERGENCY 10 CFR Section: 50.72(b)(2)(xi) - OFFSITE NOTIFICATION	Person (Organization): LAURA KOZAK (R3DO) DENNIS ALLSTON (ILTA) SCOTT MORRIS (IRD)

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

BODY DISCOVERED IN THE OWNER CONTROLLED AREA

"A deceased individual was discovered this morning along the shoreline of the Fermi-2 property, outside of the Protected Area. Specifically, at 0835 (EDT), the Main Control Room was notified by Security that a body had been found on the shoreline, north of the cooling towers. The Monroe County Sheriff and the US Coast Guard were notified and were on-site. The identity of the body has not yet been determined. The body has been removed from site by the US Coast Guard helicopter, and all local law enforcement officials have left site.

"A press release is not planned at this time."

The licensee has notified the NRC Resident Inspector.

Power Reactor	Event Number: 46974
Facility: PERRY Region: 3 State: OH Unit: [1] [] [] RX Type: [1] GE-6	Notification Date: 06/20/2011 Notification Time: 17:10 [ET] Event Date: 06/20/2011 Event Time: 09:45 [EDT]

NRC Notified By: JEFF TUFTS HQ OPS Officer: PETE SNYDER	Last Update Date: 06/20/2011
Emergency Class: NON EMERGENCY 10 CFR Section: 50.72(b)(3)(xiii) - LOSS COMM/ASMT/RESPONSE	Person (Organization): ERIC DUNCAN (R3DO)

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

UNPLANNED POWER OUTAGES AFFECT EMERGENCY RESPONSE SYSTEMS

"On June 20, 2011, at approximately 0945 hours, electrical power was lost to non-essential 120 volt busses V-1-F and V-2-F. The busses supply electrical power to the plant integrated computer system (ICS). As a result of the power loss, the Safety Parameter Display System (SPDS), the Emergency Response Data System (ERDS), and the automatic mode calculation of the Computer Aided Dose Assessment Program (CADAP) were unavailable.

"Preliminary investigation indicates the power loss was caused by receipt of a spurious high temperature alarm (greater than 95 degrees F) in the Technical Support Center (TSC) facility where the electrical busses are located. The alarm signal is believed to be invalid because the high temperature alarm came in for two minutes and reset, and the ambient temperature in the TSC remained steady at 65 degrees F. Electrical busses V-1-F and V-2-F were re-energized and restored to service at 1505 hours.

"The ICS, SPDS, ERDS, and CADAP systems were fully restored at 1652 hours on June 20, 2011. In the event of an emergency while these systems were unavailable, contingency plans were in place to transmit plant parameter data and perform the dose assessment function.

"This event is being reported in accordance with 10 CFR 50.72(b)(3)(xiii), as a condition that results in a major loss of emergency assessment and communications capability. The NRC Resident Inspector has been notified."
