



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

March 2, 2017

To Those on the Attached List

**SUBJECT: CLOSEOUT OF GENERIC LETTER 2016-01, "MONITORING OF
NEUTRON-ABSORBING MATERIALS IN SPENT FUEL POOLS"**

On April 7, 2016, the U.S. Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2016-01, "Monitoring of Neutron-Absorbing Materials in Spent Fuel Pools" (Agencywide Documents Access and Management System Accession No. ML16097A169), to address the degradation of neutron-absorbing materials in wet storage systems for reactor fuel at power and non-power reactors.

GL 2016-01 requested that licensees provide information to allow the NRC staff to verify continued compliance through effective monitoring to identify and mitigate any degradation or deformation of neutron-absorbing materials credited for criticality control in spent fuel pools.

To facilitate each licensee's response, GL 2016-01 established four categories (Category 1, Category 2, Category 3, and Category 4). The categories were established to identify situations where a detailed response to the GL 2016-01 would not be required. The categorization criteria were generally based on if a licensee does not credit neutron-absorbing materials for criticality control, or if a licensee has an approved monitoring program for neutron-absorbing materials in the plant technical specifications or as a license condition. A full description of the categories can be found in Enclosure 1.

Enclosure 2 provides a list of GL 2016-01 responses by plant. The NRC staff has completed its review of the responses associated with GL 2016-01 for the plants referenced in Enclosure 2. The NRC staff performed a thorough review of each licensee's response, any documents referenced therein, and other applicable licensing basis documents. Based on the review, the NRC staff concludes that the licensees have correctly identified that the plant licensing basis is consistent with the criteria for the category referenced in Enclosure 2, as defined in GL 2016-01.

Based upon the information submitted by the licensees in response to GL 2016-01, the NRC staff has determined that the submissions appear to address the information requested in GL 2016-01, and no further information or action is requested regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Douglas A. Broaddus". The signature is fluid and cursive, with a large initial "D" and a long, sweeping underline.

Douglas A. Broaddus, Chief
Special Projects and Process Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Enclosures:

1. List of GL 2016-01 Categories
2. List of Plants, Categories, Incoming Letters, and CAC numbers

cc: Listserv

SUBJECT: CLOSEOUT OF GENERIC LETTER 2016-01, "MONITORING OF NEUTRON-ABSORBING MATERIALS IN SPENT FUEL POOLS" DATED MARCH 2, 2017

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RidsNrrPMANO Resource

RidsNrrPMCatawba Resource

RidsNrrPMComanchePeak Resource

RidsNrrPMDiabloCanyon Resource

RidsNrrPMDresden Resource

RidsNrrPMFarley Resource

RidsNrrPMFortCalhoun Resource

RidsNrrPMMonticello Resource

RidsNrrPMNorthAnna Resource

RidsNrrPMOconee Resource

RidsNrrPMPaloVerde Resource

RidsNrrPMPointBeach Resource

RidsNrrPMPrairieIsland Resource

RidsNrrPMQuadCities Resource

RidsNrrPMRobinson Resource

RidsNrrPMSouthTexas Resource

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TMensah, NRR

SStuchell, NRR

RTaylor, NRR

SKrepel, NRR

ADAMS Accession No. ML17039A893

***via email**

OFFICE	NRR/DORL/LSPB/PM	NRR/DORL/LSPB/LA	NRR/DE/ESGB/BC(A)*
NAME	JLamb	JBurkhardt	EWong
DATE	02/15/17	02/14/17	02/13/17
OFFICE	NRR/DPR/PGCB/BC*	NRR/DSS/SNPB/BC*	NRR/DORL/LSPB/BC
NAME	SStuchell	RLukes	DBroaddus
DATE	02/10/17	02/13/17	03/02/17

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LETTER TO THOSE ON THE ATTACHED LIST DATED MARCH 2, 2017

SUBJECT: CLOSEOUT OF GENERIC LETTER 2016-01, "MONITORING OF NEUTRON-ABSORBING MATERIALS IN SPENT FUEL POOLS"

Arkansas Nuclear One, Units 1 and 2
Entergy Operations, Inc.
Docket Nos. 50-313 and 50-368
License Nos. DPR-51 and NPF-6

ANO Site Vice President
Arkansas Nuclear One
Entergy Operations, Inc.
1448 S.R. 333
Russellville, AR 72802

Catawba Nuclear Station, Units 1 and 2
Duke Energy Carolinas, LLC
Docket Nos. 50-413 and 50-414
License Nos. NPF-35 and NPF-52

Mr. Robert T. Simril
Site Vice President
Duke Energy Carolinas, LLC
Catawba Nuclear Station
4800 Concord Road
York, SC 29745

Comanche Peak Nuclear Power Plant, Units 1 and 2
TEX Operations Company, LLC
Docket Nos. 50-445 and 50-446
License Nos. NPF-87 and NPF-89

Mr. Ken J. Peters
Senior Vice President & Chief
Nuclear Officer
Attention: Regulatory Affairs
TEX Operations Company, LLC
Comanche Peak Nuclear Power Plant
P.O. Box 1002
Glen Rose, TX 76043

Diablo Canyon Power Plant, Units 1 and 2
Pacific Gas and Electric Company
Docket Nos. 50-275 and 50-323
License Nos. DPR-80 and DPR-82

Mr. Edward D. Halpin
Senior Vice President, Generation
and Chief Nuclear Officer
Pacific Gas and Electric Company
Diablo Canyon Power Plant
P.O. Box 56, Mail Code 104/6
Avila Beach, CA 93424

Dresden Nuclear Power Station, Units 2 and 3
Exelon Generation Company, LLC
Docket Nos. 50-237 and 50-249
License Nos. DPR-19 and DPR-25

Mr. Bryan C. Hanson
Senior Vice President
Exelon Generation Company, LLC
President and Chief Nuclear Officer (CNO)
Exelon Nuclear
Dresden Nuclear Power Station
4300 Winfield Road
Warrenville, IL 60555

Fort Calhoun Station, Unit-1
Omaha Public Power District
Docket No. 50-285
License No. DPR-40

Ms. Mary J. Fisher
Senior Director Fort Calhoun
Station Decommissioning
Omaha Public Power District
Fort Calhoun Station
9610 Power Lane, Mail Stop FC-2-4
Blair, NE 68008

H. B. Robinson Steam Electric Plant, Unit-2
Duke Energy Progress, LLC
Docket No. 50-261
License No. DPR-23

Mr. Ernest J. Kapopoulos, Jr.
Site Vice President
H. B. Robinson Steam Electric Plant
Duke Energy Progress, LLC
3581 West Entrance Road, RNPA01
Hartsville, SC 29550

Joseph M. Farley Nuclear Plant, Units 1 and 2
Southern Nuclear Operating Company, Inc.
Docket Nos. 50-348 and 50-364
License Nos. NPF-2 and NPF-8

Mr. C. R. Pierce
Regulatory Affairs Director
Southern Nuclear Operating Company, Inc.
Joseph M. Farley Nuclear Plant
P.O. Box 1295 / Bin 038
Birmingham, AL 35242

Monticello Nuclear Generating Plant
Northern States Power Company
Docket No. 50-263
License No. DPR-22

Mr. Peter A. Gardner
Site Vice President
Northern States Power Company - Minnesota
Monticello Nuclear Generating Plant
2807 West County Road 75
Monticello, MN 55362-9637

North Anna Power Station, Units 1 and 2
Virginia Electric and Power Company
Docket Nos. 50-338 and 50-339
License Nos. NPF-4 and NPF-7

Mr. David A. Heacock, President
and Chief Nuclear Officer
Virginia Electric and Power Company
North Anna Power Station
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060

Oconee Nuclear Station, Units 1, 2, and 3
Duke Energy Carolinas, LLC
Docket Nos. 50-269, 50-270, and 50-287
License Nos. DPR-38, DPR-47, and DPR-55

Mr. Thomas D. Ray
Vice President
Oconee Nuclear Station
Duke Energy Corporation
7800 Rochester Highway
Seneca, SC 29672-0752

Palo Verde Nuclear Generating Station, Units 1, 2, and 3
Arizona Public Service Company
Docket Nos. STN 50-528, STN 50-529,
and STN 50-530
License Nos. NPF-41, NPF-51, and NPF-74

Mr. Robert S. Bement
Executive Vice President Nuclear/
Chief Nuclear Officer
Arizona Public Service Company
Palo Verde Nuclear Generating Station
P.O. Box 52034
Mail Station 7602
Phoenix, AZ 85072-2034

Point Beach Nuclear Plant, Units 1 and 2
NextEra Energy Point Beach, LLC
Docket Nos. 50-266 and 50-301
License Nos. DPR-24 and DPR-27

Mr. Robert Coffey
Site Vice President
NextEra Energy Point Beach, LLC
6610 Nuclear Road
Two Rivers, WI 54241-9516

Prairie Island Nuclear Generating Plant,
Units 1 and 2
Northern States Power Company - Minnesota
Docket Nos. 50-282 and 50-306
License Nos. DPR-42 and DPR-60

Mr. Scott D. Northard
Acting Vice President
Northern States Power Company - Minnesota
Prairie Island Nuclear Generating Plant
1717 Wakonade Drive East
Welch, MN 55089-9642

Quad Cities Nuclear Power Station, Units 1
and 2

Exelon Generation Company, LLC
Docket Nos. 50-254 and 50-265
License Nos. DPR-29 and DPR-30

Mr. Bryan C. Hanson
Senior Vice President
Exelon Generation Company, LLC
President and Chief Nuclear Officer
Exelon Nuclear
Quad Cities Nuclear Power Station
4300 Winfield Road
Warrenville, IL 60555

South Texas Project, Units 1 and 2
STP Nuclear Operating Company
Docket Nos. 50-498 and 50-499
License Nos. NPF-76 and NPF-80

Mr. G. T. Powell
Executive Vice President and CNO
STP Nuclear Operating Company
South Texas Project
P.O. Box 289
Wadsworth, TX 77483

Surry Power Station, Units 1 and 2
Virginia Electric and Power Company
Docket Nos. 50-280 and 50-281
License Nos. DPR-32 and DPR-37

Mr. David A. Heacock
President and Chief Nuclear Officer
Dominion Nuclear
Virginia Electric and Power Company
Surry Power Station
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

LIST OF GL 2016-01 CATEGORIES

- Category 1: Power reactor addressees that do not credit neutron-absorbing materials other than soluble boron in the analysis of record (AOR). In some cases, no neutron-absorbing material is present in the spent fuel storage racks, and in other cases, credit for the neutron-absorbing material has been removed through a regulatory action (e.g., approved license amendment). Those addressees may submit a response letter confirming that no neutron-absorbing materials are currently credited to meet NRC subcriticality requirements in the spent fuel pool (SFP).
- Category 2: Power reactor addressees that have an approved license amendment to remove credit for existing neutron-absorbing materials and that intend to complete full implementation no later than 24 months after the issuance of this GL. Licensees may request extensions to this implementation timeframe if there are extenuating circumstances. Those addressees may submit a response letter affirming that they will implement the approved license amendment request within the specified time. However, they must still provide information equivalent to Category 3 or Category 4 for any other neutron-absorbing material credited in the SFP criticality AOR after the license amendment has been fully implemented.
- Category 3: Power reactor addressees that have incorporated their neutron-absorbing material monitoring programs into their licensing basis through an NRC-approved Technical specification (TS) change or license condition. Those addressees may submit a response letter referencing their approved TS change or license condition and affirming that no change has been made to their neutron-absorbing material monitoring program, as described in the referenced license amendment request. If a change has been made since NRC approval of the reference, the response letter should also describe any such changes. (Licensees with a monitoring program approved as part of a license amendment request or license renewal application that was not incorporated as a TS change or license condition are considered to belong in Category 4.)
- Category 4: All other power reactor addressees. The NRC seeks information in five areas depending upon the type of neutron absorber material used by the licensee in the SFP.

LIST OF PLANTS, CATEGORIES, INCOMING LETTERS, AND CAC NUMBERS

Plant	Category	Incoming Letter (ADAMS Accession No.)	CAC Nos.
Arkansas Nuclear One, Units 1 and 2	3	ML16196A116	MF8663, MF8664
Catawba Nuclear Station, Units 1 and 2	1	ML16306A036	MF8679, MF8680
Comanche Peak Nuclear Power Plant, Units 1 and 2	3	ML16258A005	MF8683, MF8684
Diablo Canyon Power Plant, Units 1 and 2	1	ML16308A335	MF8689, MF8690
Dresden Nuclear Power Station, Units 2 and 3	3	ML16308A470	MF8661, MF8662
Fort Calhoun Station, Unit-No. 1	3	ML16307A259	MF8655
H. B. Robinson Steam Electric Plant, Unit-2	1	ML16306A036	MF8614
Joseph M. Farley Nuclear Plant, Units 1 and 2	1	ML16307A293	MF8658, MF8659
Monticello Nuclear Generating Plant	3	ML16288A097	MF8638
North Anna Power Station, Units 1 and 2	1	ML16312A064	MF8634, MF8635
Oconee Nuclear Station, Units 1, 2, and 3	1	ML16306A036	MF8631, MF8632, MF8633
Palo Verde Nuclear Generating Station, Units 1, 2, and 3	1	ML16245A388	MF8626, MF8627, MF8628
Point Beach Nuclear Plant, Units 1 and 2	1	ML16312A050	MF8620, MF8621
Prairie Island Nuclear Generating Plant, Units 1 and 2	1	ML16288A097	MF8618, MF8619
Quad Cities Nuclear Power Station, Units 1 and 2	3	ML16308A470	MF8616, MF8617
South Texas Project, Units 1 and 2	1	ML16321A405	MF8605, MF8606
Surry Power Station, Units 1 and 2	1	ML16312A064	MF8602, MF8603