

JAFP-19-0050  
May 10, 2019

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United States Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

James A. FitzPatrick Nuclear Power Plant  
Renewed Facility Operating License No. DPR-59  
NRC Docket No. 50-333

**Subject:** Summary of Plant and Independent Spent Fuel Storage Installation Changes, Tests, and Experiments as required by 10 CFR 50.59 and 10 CFR 72.48, and Summary of Commitment Changes, for 2017 and 2018

Dear Sir or Madam:

This letter transmits the summary of changes, tests and experiments implemented at the James A. FitzPatrick Nuclear Power Plant (JAF) that required performance of a 10 CFR 50.59 or 10 CFR 72.48 Evaluation, for the years 2017 and 2018, as required by 10 CFR 50.59(d)(2) and 10 CFR 72.48(d)(2). Attachment 1 provides the summary of each 10 CFR 50.59 report. During this period there were no changes to the Independent Spent fuel Storage Installation requiring a 10 CFR 72.48 Evaluation.

Also, included is the summary of revised regulatory commitments as required by Nuclear Energy Institute Guideline NEI 99-04, "Guidelines For Managing NRC Commitment Changes," endorsed by the Commission in NRC Regulatory Issue Summary 2000-17, "Managing Regulatory Commitments Made by Power Reactor Licensees to the NRC Staff." Attachment 2 provides the summary of each regulatory commitment change requiring NRC notification.

There are no new regulatory commitments made in this letter. Should you have any questions concerning this report, please direct them to Mr. William C. Drews, Regulatory Assurance Manager, at (315) 349-6562.

Sincerely,



William C. Drews  
Regulatory Assurance Manager

WCD/mh

**Attachments:** 1. Summary of 10 CFR 50.59 Reports for 2017 and 2018  
2. Summary of Regulatory Commitment Changes for 2017 and 2018

**cc:** NRC Regional Administrator, Region 1  
NRC Resident Inspector  
NRC Project Manager  
New York State Department of Public Service  
NYSERDA President and CEO

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**Attachment 1**

**Summary of 10 CFR 50.59 Reports for 2017 and 2018**

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## Summary of 10 CFR 50.59 Reports for 2017 and 2018

### JAF-SE-2017-001, Rev. 0: Main Turbine Steam Valve Testing Interval

**ACTIVITY TYPE:** Design Change

**Description of Change:**

Update FSAR, Section 10.2.4, "Power Generation Safety Evaluation" to reflect changes in the Main Turbine Steam Valve Testing intervals from Quarterly (92 days) to 174 days based on an analysis performed by MPR Associates INC which evaluates the reliability of the Main Turbine Valves (Main Stop, Control, and Intercept Valves) for the General Electric (GE) Main Steam Turbine installed at JAF.

**Summary of Evaluation:**

The activity screened into the 50.59 Evaluation process by concluding the design function of the Overspeed Protection System (OPS) is adversely affected by changing the turbine valve testing interval. Changing to a greater than quarterly test frequency increases the probability of an overspeed event and therefore decreases the reliability of the OPS. Per NEI 96-07, a change that decreases the reliability of a function that could initiate an accident is considered an adverse effect to a design function.

FSAR Section 10.2.4 states a value for the probability of turbine missile generation based on certain test intervals for turbine valves and components in the control system. The proposed activity extends the turbine valve testing interval, which is an input into the turbine missile analysis. Analysis determined JAF remains below the acceptable turbine missile generation value of  $1.0E-4$  with a turbine valve testing interval of 174 days. There are no new malfunctions or accidents introduced by this change in testing frequency, nor are the consequences of previously evaluated events affected. All the design basis limits for fission products are unaffected since there is no change to any assumed failures of mitigating systems. The turbine missile generation description in the FSAR does not contain specifics of the methodology therefore there are no previously approved methods in the FSAR.

### JAF-SE-2017-002, Rev. 0: Removal of Existing Intake Structure Bar-Racks / EC 621217

**ACTIVITY TYPE:** Design Change

**Description of Change:**

EC 621217 removes two of the eight bar rack sections at the inlet to the plant's lake water intake structure and their associated heating elements (11 bars/heaters per rack section). This will provide an opening to the structure that will not be significantly obstructed in the event of frazil ice buildup on the remaining bar racks. Frazil ice is a form of ice that occurs under limited environmental conditions and is readily transported below the surface of the lake. There have been past instances when accumulation of frazil ice on intake bar racks has severely limited flow to the screenwell and circulating water pumps with the necessity of shutting the plant down to mitigate the event. Removal of bar rack sections will create a clear opening of sufficient dimensions that frazil ice adherence on the surface of the opening will not significantly affect flow through the removed sections.

Removal of intake structure bar rack sections adversely affects the ability of the structure to prevent the entrance of large debris into the intake tunnel and screenwell as described in section 12.3.7 of the UFSAR. Removal of the bars may also have an adverse effect on deterring fish entry into the intake by lessening the associated upstream pressure wave that signals fish of an increasing current into the structure as described in UFSAR section 2.3.4.1.

## Summary of 10 CFR 50.59 Reports for 2017 and 2018

### Summary of Evaluation:

The primary concern with bar rack removal is an increase in large debris induction into the intake causing a lowering of condenser vacuum at a rate precluding operator action to trip the reactor prior to turbine trip with a consequent increase in frequency of increasing reactor pressure transients. This evaluation demonstrates that the effect of this change on the frequency of this event is no more than minimal.

Another concern with the change is the potential that large debris in the intake tunnel or screenwell could adversely affect emergency pump (ESW, RHRSW, and fire protection) pump flow. The evaluation demonstrates that the effect of the change on these flows is negligible. Even if debris reaches the tunnel or screenwell in significant quantities, it will be necessary to trip the circulating water and/or normal service water pumps prior to the obstruction being of a magnitude that will effect emergency pump operation (i.e., the effect on ESW, RHRSW, and fire pump operation of a large debris incursion is negligible).

This evaluation demonstrates that fish deterrence is not significantly affected by removal of intake bar rack sections.

**JAF-SE-2018-001 – Number not used**

**JAF-SE-2018-002 – Number not used**

**JAF-SE-2018-003, Rev. 0: Abandonment of Steam Reboiler and Associated Annunciator /  
EC 622832**

**ACTIVITY TYPE: Design Change**

### Description of Change:

The Steam Reboiler 31E-1 is no longer in-use at JAF and tagged out of service. EC 622832 evaluates Abandonment of the Steam Reboiler, 31E-1, and three associated annunciators on the 09-43 panel. The leads have been lifted on the three associated annunciators therefore abandonment of the Steam Reboiler will remove them from the disabled annunciators list.

### Summary of Evaluation:

Abandoning the Steam Reboiler and associated annunciators removes one of the sources of sealing steam for the Turbine Gland Sealing System and reduces existing redundancy, therefore constituting an adverse change to an FSAR described design function. Removing the Steam Reboiler as a method available to depressurize the RPV involves a change to a procedure that adversely affects how FSAR described design functions are performed and requires evaluation under 50.59 as well. The Steam Reboiler is not an initiator of any accident and no new failure modes are introduced. Therefore, abandoning the Steam Reboiler and associated annunciators does not increase the frequency or consequences of any accident or transient nor does it create any accidents of a different type than those previously evaluated in the FSAR. The Steam Reboiler is not an initiator of any new malfunctions of SSCs important to safety and no new failure modes are introduced therefore the likelihood or consequences of a malfunction are not increased. Finally, there are no changes in methods of evaluation associated with this activity.

In conclusion, abandoning the Steam Reboiler and associated annunciators does not meet the applicable criteria of 10 CFR 50.59(c)(2) therefore a license amendment is not required.

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**Attachment 2**

**Summary of Regulatory Commitment Changes for 2017 and 2018  
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Summary of Regulatory Commitment Changes for 2017 and 2018

Commitment Number	Date of Original Commitment	Date Changed	Description
AR 03848118 (EA-10-090)	01/26/2012	02/28/2018	<p><b>Original Text:</b> Entergy will maintain the Safety Culture Monitoring processes, as described in NEI 09-27, Fostering a Strong Nuclear Safety Culture, (or similar processes) at its nine nuclear commercial nuclear power plants. Per direction from the VP, Nuclear Safety, EP and Licensing, any determination of (similar processes) must be made by the VP, Oversight.</p> <p><b>Revised Text:</b> JAF will maintain the Safety culture Monitoring processes, as described in NEI 09-07, Fostering a Strong Nuclear Safety Culture, (or similar processes). Changes to this process which would deviate from NEI 09-07 must be approved by the director responsible for oversight of the Safety Culture Monitoring Program.</p> <p><b>Summary of Justification:</b> This commitment was implemented as a Fleet Commitment for Entergy sites when JAF was an Entergy site. This commitment remains applicable to JAF but as station commitment only. Additionally, the position specified in the original commitment does not exist in the Exelon Management Model. Oversight of the SCM Process in the Exelon Management is currently maintained by the Fleet Performance Improvement organization. The revised wording does not alter the intent of the commitment.</p>
AR 03846127 (JPN-90-065)	09/28/1990	06/21/2018	<p><b>Original Text:</b> The Authority has evaluated the FitzPatrick Vendor Interface Program to assure that it includes the essential elements described in Generic Letter 90-03. As a result of this evaluation, it was determined that the existing vendor interface program procedures must be revised to fully incorporate all elements with the implementation of these minor changes, the program will include all essential elements.</p> <p>The Authority will revise the VETIP (Vendor Equipment Technical Information Program) procedures to (1) include provisions to assure the receipt of all NSS vendor supplied information and (2) require periodic contact with non NSSS vendors of key safety related equipment.</p> <p>The authority will amend the existing Vendor Interface Program to include appropriate provisions to assure receipt of all General Electric supplied information not later than October 31, 1990.</p> <p>The Authority has already identified non NSSS, key safety related equipment. The first series of vendor contacts were completed in 1989 as part of a program to update and verify</p>

Summary of Regulatory Commitment Changes for 2017 and 2018

Commitment Number	Date of Original Commitment	Date Changed	Description
			<p>manuals for key safety related equipment.</p> <p>Entergy will revise and implement changes to the Vendor Manual Control procedures to require Vendor Recontact on a recurring 3-year cycle with vendors of key, safety related non NSSS equipment not later than October 31, 1990.</p> <p><b>Revised Text:</b></p> <p>Exelon FitzPatrick will implement a Vendor Manual Control program (VETIP) which covers all safety-related components within the NSSS scope of supply. This program shall include provisions for assuring receipt of all technical information provided by the NSSS vendor.</p> <p>Vendor contacts and Manuals for Safety-related Non-NSSS components will be updated, as needed, through Preventative Maintenance, Industry Operating Experience, and vendor supply.</p> <p><b>Summary of Justification:</b></p> <p>This commitment change shall modify the 'periodic' portion of the non-NSSS periodic vendor contact program such that vendor contact is as-needed through other processes. In addition, this is an editorial change: Excess detail is being reduced to better represent the current Regulatory Commitment.</p> <p>The VETIP re-contact actions have not been necessary. Over the past re-contact cycles (3 year re-contact period each), no safety significant updates were received due solely to the re-contact process, resulting in no changes to preventative maintenance practices/processes. This demonstrates that the VETIP re-contact process is redundant.</p>
AR 03847496 (JPN-94-015)	03/16/2016	12/04/2018	<p><b>Original Text:</b></p> <p>Water column veliger sampling is performed weekly when the lake temperature is greater than 50 degrees Fahrenheit.</p> <p><b>Revised Text:</b></p> <p>Canceled. Water column veliger sampling is no longer performed.</p> <p><b>Summary of Justification:</b></p> <p>This commitment originated from NRC Generic Letters 89-13 and JPN-93-015. It was meant to detect for the growth and impact of zebra mussels by counting zebra mussel larval phase also known as veliger.</p> <p>When zebra mussels were first discovered in the Great Lakes in 1988 their impacts were unknown. GL 89-13 put programs into place to attempt to address potential impacts of zebra mussels. One of these programs was zebra mussel</p>

**Summary of Regulatory Commitment Changes for 2017 and 2018**

<b>Commitment Number</b>	<b>Date of Original Commitment</b>	<b>Date Changed</b>	<b>Description</b>
			veliger monitoring. The operations of FitzPatrick have not been negatively affected by the presence of zebra mussels and current cleaning methods have proven effective, tracked by Commitment AR 03846423). Based on 30 plus years of co-existence with zebra mussels in Lake Ontario it has been determined that the zebra mussel veliger monitoring program is no longer needed and should be discontinued.