NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMD NO. 3150-0104
EXPIRES: 04/30/98
ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Oconee Nuclear Station, Unit 1	05000 269	1 of 8

TITLE (4) Missed Surveillances Due to Non-Literal Interpretation of Technical Specifications

EVENT DATE (5)			LER NUMBER (6)					REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR		SEQUENTIAL NUMBER		REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER(S)
											Unit 2	05000270
01	30	98	98	-	03	-	0	03	02	98	Unit 3	05000 287

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR (Check one or more of the following) (11)											
POWER LEVEL (10)	0		20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)				
			20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)				
			20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER (Specify in				
			20.405(a)(1)(iii)	X	50.73(a)(2)(i)(B)		50.73(a)(2)(viii)(A)		Abstract below and				
			20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		in Text, NRC Form				
			20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)		366A)				

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER	
	AREA CODE	
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
	YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single-space typewritten lines) (16)

On January 29, 1998, Oconee was informed that the NRC staff's interpretation of Oconee's Technical Specifications (TS) was that any surveillance with a refueling outage frequency must literally be performed during a refueling outage only. Thus, some surveillances performed at power or in past outages would not satisfy the TS requirements. After a review, several Oconee surveillance tests were technically invalidated since they had not been performed during refueling outages. Oconee Unit 1 was in an outage and Units 2 and 3 were at 100% full power when Oconee entered into TS 3.0 on Units 2 and 3 at 1245 hours on January 30, 1998. This required both operating units to be in hot shutdown by 0045 hours on January 31, 1998. At 1500 hours on January 30, 1998, Oconee requested enforcement discretion to apply to all three units. At 1530 hours, the NRC granted the requested enforcement discretion. The root cause of this event was inadequate Management Policy, in that a Technical Specification Interpretation did not comply with a literal interpretation of the associated TS. Corrective actions included a TS change request and a planned review of TS interpretations for other "literal compliance" issues.

EVALUATION:

Background

Section 4 of the Oconee Technical Specifications (TS) lists required surveillances for structures, systems, and components. TS 4.0.2 defines the maximum allowable interval between surveillances. One frequency listed is "Refueling Outage", with a maximum allowed interval of 22 months and 15 days.

Several other Technical Specifications use wording referring to refueling conditions or refueling activities. Some, including TS 4.5.1.2, specifically state that "during each refueling outage..." the surveillance will be performed.

From time to time, Oconee has issued "Technical Specification Interpretation" documents to provide clarification, guidance, and policy for selected provisions of TS where experience indicates guidance is needed. After review and approval by site management, they are filed in the control copies of TS for reference.

Description of Event

In January 1998, in preparation for the upcoming Oconee Unit 2 EOC-16 Refueling Outage, Electrical Engineering personnel were reviewing testing and calibration requirements to assure that all Technical Specification (TS) requirements would be met. Their review identified several calibrations which would exceed their maximum frequency prior to the March 13, 1998 scheduled start for the outage.

On January 15, 1998, Duke submitted a TS change to the NRC to request a one time extension of these surveillances to support the scheduled refueling outage date of March 13, 1998. Subsequently, the site evaluated other surveillances, and, on January 19, 1998, the Mechanical Systems Engineering section and the Operations Test section recognized that several valve and heat exchanger Periodic Tests (PTs) would also exceed their allowed interval prior to the scheduled outage start. These tests had due dates as early as February 18, 1998. At the time of discovery of these additional tests, there was less than 30 days remaining until the TS

interval would be exceeded, therefore there was insufficient time remaining for a public comment period as required by NRC procedures for a normal TS change. Through discussions with the NRC, Oconee confirmed that these additional items did not meet the criteria for processing as exigent TS changes.

Therefore, Oconee management began investigating available options. One of the TS requirements was a manual stroke of valves including 2LP-17 and 2LP-18. This TS requirement is normally documented using a PT which strokes the valves manually during refueling outages. A review of maintenance activities found that these valves had been manually stroked as part of functional tests following a Periodic Maintenance (PM) procedure performed during a forced outage at a time after their last test per the PT.

TS Section 1 defines the Refueling Shutdown as "a shutdown to replace or rearrange all or a portion of the fuel assemblies and/or control rods." The TS do not define "refueling outage" other than to stipulate in Specification 4.0.2 that the maximum duration for this surveillance frequency is 22 months, 15 days. Some specifications contain wording, such as "during each refueling outage", which implies that refueling conditions should exist.

Although most such surveillances have been performed during a refueling outage, in the past Oconee has not interpreted a refueling outage frequency as restricting the surveillances to be performed only during a refueling outage. As such, the site's practice has been to perform certain surveillances based on a refueling outage frequency at other times than during a refueling outage.

During a series of discussions with the NRC, Oconee personnel communicated their intent to take credit for the stroke following PM as meeting the TS requirement. In discussions with NRR on January 29, 1998, Oconee was informed that a literal compliance issue existed which would prevent Oconee from taking credit for the functional tests.

The NRC staff stated that their interpretation of Oconee's TSs is that any surveillance with a refueling outage frequency must literally be performed during a refueling outage only. Thus, any surveillances performed at

power, in past forced outages or during planned shutdowns would not satisfy the TS requirements.

Oconee immediately began to evaluate the impact of the staff's literal interpretation of the TS with respect to past surveillances done at times other than during a refueling outage.

Oconee initially identified some surveillances on Oconee Units 2 and 3 that have been performed at times other than during a refueling outage. Several surveillances that did not physically require refueling conditions to perform had been routinely performed during power operation for several years. Oconee initially confirmed that this situation applied to calibration surveillances on the Emergency Feedwater [EIIS:BA] flow instruments on Unit 2, Low Pressure Injection [EIIS:BP] flow instruments on Units 2 and 3, Borated Water Storage Tank [EIIS:BG,BP,TK] level instruments on Units 2 and 3, and high range radiation monitors [EIIS:IL] on Unit 2. Subsequent review indicated that the equivalent instruments on Unit 1 had been similarly treated.

Application of the staff's literal interpretation of Oconee's surveillance specifications to these surveillances would mean that the maximum frequency had been exceeded because it had been more than 22 months 15 days since the last time they were performed during a refueling outage. It should be emphasized that all required surveillances had been performed within the last 22 months 15 days on all three units. However, as stated previously, some surveillances had been performed at times other than during a refueling outage. By the staff's literal interpretation of Oconee's TS, Units 2 and 3 were operating with surveillances not in literal compliance with the TS and Unit 1 had operated similarly in the past.

Oconee discussed these findings with NRR on January 30, 1998. The staff agreed that developing a comprehensive list of all surveillances that may have been performed at conditions other than during a refueling outage was not warranted. Oconee stated that all surveillances for all three units had been performed within the maximum surveillance frequency of 22 months, 15 days established by TS. The only compliance issue was the fact that some surveillances with a refueling outage frequency were performed at conditions other than during a refueling outage.

Based on these discussions with NRR regarding literal interpretation of the refueling outage surveillances, Oconee entered into Technical Specification 3.0 on Oconee Units 2 and 3 at 1245 hours on January 30, 1998. This required both units to be in hot shutdown by 0045 hours on January 31, 1998.

At 1500 hours on January 30, 1998, Oconee requested enforcement discretion to apply to all three units. Because Oconee Unit 1 was in an outage at the time, Oconee specifically requested that restart of Oconee Unit 1 not be impacted by this literal compliance issue. At 1530 hours, the NRC granted the requested enforcement discretion, to be effective until approval of a TS revision to address the issue.

Oconee submitted a proposed TS revision to the staff on February 2, 1998 to address this issue by revising the stated frequency of the affected TS from a refueling outage frequency to an 18 month frequency with the same maximum interval of 22 months, 15 days. This change also deleted such statements as "during each refueling outage" to better clarify that that refueling outages were not specifically necessary for these surveillances.

A review of previous TS changes found that the original TS for Oconee required certain surveillances to be performed annually. Thus, the original TS did not constrain performance of these annual surveillances to refueling outage conditions. When the site transitioned from annual to 18 month refueling cycles, TS revisions replaced the word "annual" with "refueling outage". The intent of the change was to reflect the increased surveillance period and it was not intended to constrain refueling outage surveillances to refueling outage conditions.

As early as 1981, Oconee Site Management recognized the need for formal "Technical Specification Interpretation" (TSI) documents to provide clarification, guidance, and policy for selected provisions of TS where experience indicates guidance is needed. A formal process was created whereby, after review and approval by site management, these documents are filed in the control copies of TS to assist site personnel in complying with TS. As part of a revision to this process, a number of TSIs were approved by site management on March 19, 1986. One of these TSIs applied to TS 4.0.1 and 4.0.2, Surveillance Intervals, and stated in part:

"Surveillance testing required to be performed 'during each refueling outage' need not be performed more frequently than once every 22 1/2 months, even though circumstances may arise which require refueling operations at a shorter interval. This testing may be performed at times other than a refueling outage, unless outage conditions are required for the testing. ... In general, the actual scheduled interval between 'refueling' surveillances should be 18 months or less so that the maximum interval of 22 1/2 months is rarely used."

Although portions of this TSI have been revised since 1986, this wording has continued unchanged. Therefore, Oconee has, in the past, interpreted a refueling outage frequency as allowing the surveillances to be performed based on a refueling outage frequency at times other than during a refueling outage.

Conclusion

The affected Technical Specifications (TS) have been reviewed and, although some may require cold shutdown conditions, none actually require refueling activities in order to perform the surveillance. When the site was originally licensed, certain surveillances were required annually. However, when the site transitioned from annual to 18 month cycles, the word "annual" was replaced with "refueling outage". Oconee has interpreted the wording "refueling outage" to relate to a frequency requirement for these surveillances, consistent with the basis of the original TSs.

Therefore the root cause of this event was inadequate Management Policy, in that a policy contained in a Technical Specification Interpretation did not comply with a literal interpretation of the associated TS.

LER 269/96-06 documented a similar literal compliance event where a surveillance requirement (filter testing to a specific standard) had been interpreted to allow testing by a later standard. In that event, the corrective action was to revise the TS to refer to the newer standard. Due to the length of time that the refueling frequency TS interpretation

has been in place, any corrective actions from the 1996 event would not have prevented this event.

There were no equipment failures, personnel injuries, radioactive releases or exposures associated with this event.

CORRECTIVE ACTION:

Immediate:

1. Upon confirmation that credit had been taken for surveillances with "refueling" frequencies being performed at conditions other than refueling, and that the literal definition interval had been exceeded, Oconee placed Units 2 and 3 in a Limiting Condition for Operation per Technical Specification (TS) 3.0.

2. A request for enforcement discretion was requested and a NOED was received.

Subsequent:

1. A proposed TS revision was submitted to the NRC on February 2, 1998.

Planned:

1. Revise the TS interpretation applicable to TS 4.0.1 and 4.0.2 as necessary.

2. Review TS interpretations against TS for other instances where "literal compliance" issues may exist and revise as necessary.

3. Upon approval of the TS submittal associated with this event, appropriate procedures will be revised as necessary to indicate the correct surveillance frequency.

4. After approval of the TS submittal associated with this event, the Improved TS and other outstanding proposed TS submittals will be reviewed and revised as necessary.

Planned corrective actions 1, 2, and 3 are considered to be NRC Commitment Items. These are the only NRC Commitment items contained in this LER.

SAFETY ANALYSIS:

As stated previously, all required surveillances had been performed within the time constraints required by the Technical Specifications (TS). The affected TS have been reviewed and did not actually require refueling activities in order to perform the surveillance. Although some of the affected TS may require cold shutdown conditions, others may be, and have been, performed on-line. Thus, there is not a technical basis for requiring these surveillances to only be performed during outages where fuel is being moved.

Oconee has custom TS and is in the process of converting to Improved Technical Specifications (ITS). The ITS submittal was made on October 28, 1997, as an initiative to improve the Oconee specifications. The ITS submittal corrects the interpretation issue associated with refueling outage frequencies by clearly defining these frequencies as 18 months, with a maximum allowed interval of 22 months 15 days. The 18 month interval is typical of surveillance frequency requirements contained in NRC approved TS at other nuclear sites.

Therefore, the surveillances performed at times other than during a refueling outage satisfy the intent of the TS from an operability perspective. Thus, this compliance issue does not create any concerns regarding the capability of any structures, systems, or components to perform their intended safety functions. If anything, non-compliance with the literal interpretation has resulted in a safety enhancement in that some surveillances have been performed more recently than the most recent refueling outages.

As a result, this compliance issue did not impact the health and safety of the public.