November 4, 2019
L-2019-192
10 CFR 50.90

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington DC 20555-0001

RE: Turkey Point Nuclear Plant, Unit 3 and 4
Docket Nos. 50-250 and 50-251
Renewed Facility Operating Licenses DPR-31 and DPR-41

License Amendment Request 270, Modify Containment Atmosphere Radioactivity Monitoring, Containment Ventilation Isolation and RCS Leakage Detection System Requirements

Pursuant to 10 CFR Part 50.90, Florida Power & Light Company (FPL) hereby requests amendments to Renewed Facility Operating Licenses DPR-31 and DPR-41 for Turkey Point Nuclear Plant Units 3 and 4 (Turkey Point), respectively. The proposed license amendments modify the Turkey Point Technical Specifications (TS) by modifying the containment atmosphere radioactivity monitoring, containment ventilation isolation and Reactor Coolant System (RCS) leakage detection system requirements.

The enclosure to this letter provides FPL's evaluation of the proposed changes. Attachment 1 to the enclosure provides a mark-up of the existing TS pages to show the proposed changes. Attachment 2 provides existing TS Bases pages marked up to show the proposed changes. The TS Bases changes are provided for information only and will be incorporated in accordance with the TS Bases Control Program upon implementation of the approved license amendments.

FPL has determined that the proposed changes do not involve a significant hazards consideration pursuant to 10 CFR 50.92(c), and there are no significant environmental impacts associated with the proposed changes. The Turkey Point Onsite Review Group has reviewed the proposed license amendments. In accordance with 10 CFR 50.91(b)(1), a copy of the proposed license amendments is being forwarded to the State designee for the State of Florida.

FPL requests the proposed changes are processed as a normal license amendment request with approval within one year of the submittal date. Once approved, the amendments will be implemented within 90 days.

This letter contains no regulatory commitments.

Should you have any questions regarding this submission, please contact Mr. Robert Hess, Turkey Point Licensing Manager, at 305-246-4112.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on the 4th day of November, 2019.

Sincerely,

Brian Stamp
Site Director, Turkey Point Nuclear Plant

Enclosure
Attachments

cc: USNRC Regional Administrator, Region II
USNRC Project Manager, Turkey Point Nuclear Plant
USNRC Senior Resident Inspector, Turkey Point Nuclear Plant
Ms. Cindy Becker, Florida Department of Health

EVALUATION OF THE PROPOSED CHANGES

Turkey Point Nuclear Plant Unit 3 and Unit 4

License Amendment Request 270, Modify Containment Atmosphere Radioactivity Monitoring, Containment Ventilation Isolation and RCS Leakage Detection System Requirements

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Attachment 1 - Proposed Technical Specification Page (markup)

Attachment 2 - Proposed Technical Specification Bases Page (markup)

1.0 SUMMARY DESCRIPTION

Pursuant to 10 CFR Part 50.90, Florida Power & Light Company (FPL) hereby requests amendments to Renewed Facility Operating Licenses DPR-31 and DPR-41 for Turkey Point Nuclear Plant Units 3 and 4 (Turkey Point), respectively. The proposed license amendments modify the Turkey Point Technical Specifications (TS) by modifying the containment atmosphere radioactivity monitoring, containment ventilation isolation and Reactor Coolant System (RCS) leakage detection system requirements.

2.0 DETAILED DESCRIPTION

2.1 System Design and Operation

2.1.1 Containment Atmosphere Radioactivity Monitoring System

Radiation monitoring instruments are located in and around the Units to detect and record radiation levels. Detected radiation levels in excess of desired setpoints initiate control room alarms. The radiation monitoring instruments operate in conjunction with regular and special radiation surveys and with chemical and radiochemical analyses performed by the plant staff to provide timely information for the continued safe operation of the Units and assurance that personnel exposure does not exceed 10 CFR 20 guidelines.

The containment air particulate radioactivity monitors, R-3-11 (Unit 3) and R-4-11 (Unit 4) (R-11), measure the containment air particulate beta radioactivity through continuous sampling of the containment atmosphere and transmit the detector outputs to the control room radiation monitoring system cabinets. The containment air particulate monitors ensure that the release rate through each containment vent during purging is maintained below specified limits. Each monitor has a measuring range of at least 10^{-9} to 10^{-6} µCi/cc. Upon the detection of high radioactivity, the containment air particulate monitors initiate closure of the containment purge supply and exhaust isolation valves and the containment instrument air bleed valves. The alarm setpoints for the containment air particulate radioactivity monitors are specified in the Turkey Point TS and set in accordance with the Turkey Point Offsite Dose Calculation Manual (ODCM).

The containment radioactive gas monitors, R-3-12 and R-4-12 (R-12), measure the gaseous beta radioactivity in the containments to ensure that the radiation release rate during containment purging is maintained below specified limits. The containment radioactive gas monitors take continuous air samples from the containment atmosphere after passing through the containment air particulate monitors, draw the samples through a closed, sealed system to a gas monitor assembly, and transmit the detector outputs to the control room radiation monitoring system cabinets. Each monitor has a measuring range of at least 10^{-6} to 10^{-3} µCi/cc. High radiation level initiates closure of the containment purge supply and exhaust isolation valves and the containment instrument air bleed valves. The alarm setpoints for the containment radioactivity gas monitors are specified in the Turkey Point TS and set in accordance with the Turkey Point ODCM.

2.1.2 Containment Purge System

The Containment Purge System is designed to purge the containment atmosphere as determined necessary during power operation and for unlimited access during shutdown periods. The Containment Purge System includes provisions for

handling both supply and exhaust air. The supply system includes an outside air connection to roughing filters, a fan duct system and a 48-inch diameter supply penetration with two quick-closing butterfly valves. The exhaust system includes a 54-inch diameter exhaust penetration, a duct system, fan, roughing filters with connection to the plant vent and two quick-closing butterfly valves. The supply and exhaust penetration butterfly valves are aligned in-series, with one inside and one outside the containment, and equipped with air cylinder operators with spring returns. The containment purge supply and exhaust isolation valves function to maintain containment pressure between Turkey Point TS limits during normal plant operation and to reduce airborne radioactivity levels in containment. The purge supply and exhaust isolation valves, and instrument air bleed valves, close upon receipt of a manual Phase A containment isolation signal, a safety injection (SI) signal or upon detection of containment radioactivity in excess of the containment atmosphere particulate or radioactive gas monitor (R-11, R-12) pre-set levels. The isolation action serves to limit radioactivity releases to the environment to within levels consistent with safety analyses assumptions and thereby assure accidental offsite radiological doses are maintained below 10 CFR 100 limits.

2.1.3 RCS Leakage Detection System

The Reactor Coolant System Leakage Detection System provides Control Room indication of reactor coolant system (RCS) leakage by equipment which monitors the radioactivity concentration in the containment atmosphere, auxiliary building ventilation exhaust, steam generator blowdown exhaust, and component cooling water loop liquid. This equipment includes containment air particulate and radioactive gas monitors R-11 and R-12, containment sump level monitors, component cooling water radiation monitor, and the reactor vessel head leakage detection system which is capable of sampling and analyzing each control rod drive mechanism (CRDM) cooler ventilation discharge and the containment atmosphere on an as-needed basis. In addition, the steam generator blowdown air ejector monitors function to detect primary-to-secondary system leakage. The basic design criterion is the detection of deviations from normal containment environmental conditions including air particulate activity, radio-gas activity, and in addition, in the case of gross leakage, the liquid inventory in the process systems and containment sump.

2.2 Current Requirements / Description of the Proposed Change

2.2.1 TS 3/4.3.2, Table 3.3-2, Engineered Safety Features Actuation System Instrumentation, specifies requirements for the FU 3.c, Containment Ventilation Isolation, instrument channels.

The proposed change adds a new footnote denoted by an asterisk (*) exempting the containment purge supply and exhaust isolation valves from the FU 3.c instrument channel requirements. The proposed change is as follows:

TABLE 3.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT						
3) Containment Isolation						
c. Containment Ventilation Isolation *						
1) Containment	...	...	...	...	...	...

New Asterisk (*)

* ***Not applicable to Containment purge supply and exhaust isolation valves.***

2.2.2 TS 3/4.3.2, Table 3.3-3, Engineered Safety Features Actuation System Instrumentation Trip Setpoints, specifies the setpoint requirements for the FU 3.c, Containment Ventilation Isolation, instrument channels.

The proposed change adds a new footnote denoted by an asterisk (*) exempting the containment purge supply and exhaust isolation valves from the FU 3.c channel setpoint requirements. The proposed change additionally revises the allowable and trip setpoint values for the FU 3.c.4 instrument channels by converting the measurement units from counts per minute (CPM) to micro-curies per cubic centimeter (µCi/cc) in the Allowable Value and Trip Setpoint columns of Table 3.3-3, and Note 2 of Table 3.3-3, Table Notations. The proposed change additionally deletes instrument numbers R-11 and R-12 in the Allowable Value and Trip Setpoint columns of Table 3.3-3. The proposed change is as follows:

TABLE 3.3-3

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM
INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	ALLOWABLE VALUE	TRIP SETPOINT
3. Containment Isolation		
c. Containment Ventilation Isolation *****		
4) Containment Radioactivity--High New Asterisk (*) New Footnote	Particulate ***(R-11)*** ≤ ***6.8 x 10^{5} CPM*** ***5.00 x 10^{-6} µCi/cc*** Gaseous ***(R-12)*** See Note 2	Particulate ***(R-11)*** ≤ ***6.1 x 10^{5} CPM*** ***4.49 x 10^{-6} µCi/cc*** Gaseous ***(R-12)*** See Note 2

**** Not applicable to Containment purge supply and exhaust isolation valves.***

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM
INSTRUMENTATION TRIP SETPOINTS

TABLE NOTATIONS

(2) Containment Gaseous Monitor Setpoint = $\frac{(3.2 \times 10^{4}) \text{ CPM } (1.11 \times 10^{-3}) \mu Ci/cc}{(F)}$

Containment Gaseous Monitor Allowable Value = $\frac{(3.2 \times 10^{4}) \text{ CPM } (1.22 \times 10^{-3}) \mu Ci/cc}{(F)}$

Where F = $\frac{\text{Actual Purge Flow}}{\text{Design Purge Flow (35,000 CFM)}}$

2.2.3 TS 3/4.3.2, Table 4.3-2, Engineered Safety Features Actuation System Instrumentation Surveillance Requirements, specifies surveillance requirements (SRs) for the FU 3.c, Containment Ventilation Isolation, instrument channels.

The proposed change adds a new footnote denoted by an asterisk (*) exempting the containment purge supply and exhaust isolation valves from the FU 3.c instrument channel SRs. The proposed change is as follows:

TABLE 4.3-2

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	…	…	…	…	…	…
3) Containment Isolation (Continued)						
c. Containment Venti-lation Isolation *						
1) Containment Isolation Manual Phase A or Manual Phase B				…	…	…
…				…	…	…

New Asterisk (*)

New Footnote

* ***Not applicable to Containment purge supply and exhaust isolation valves.***

2.2.4 TS 3/4.3.3.1, Table 3.3-4, Radiation Monitoring Instrumentation for Plant Operations, specifies requirements for the FU 1.a, Containment Atmosphere Radioactivity - High, radiation monitoring instrument channels

The proposed change revises the alarm/trip setpoint numerical values for the FU 1.a instrument channels by converting the measurement units from CPM to µCi/cc in the Alarm/Trip Setpoint column of Table 3.3-4, and Note 2 of Table 3.3-4, Table Notations. The proposed change is as follows:

TABLE 3.3-4

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS

FUNCTIONAL UNIT	…	…	…	ALARM/TRIP SETPOINT	…
1. Containment					
a. Containment Atmosphere Radioactivity-High (Particulate or Gaseous (See Note 1.))	…	…	…	Particulate ≤ ~~***6.1 x 10^5 CPM***~~ ***4.49 x 10^{-6} µCi/cc*** Gaseous See Note 2	…

TABLE 3.3-4 (Continued)
TABLE NOTATIONS

Note 2 Containment Gaseous Monitor Setpoint = ~~***(3.2 x 10^4) CPM***~~ ***(1.11 x 10^{-3}) µCi/cc*** (F)

Where F = Actual Purge Flow / Design Purge Flow (35,000 CFM)

2.2.5 TS 3/4.4.6.1, Reactor Coolant System Leakage - Leakage Detection Systems, specifies requirements for the containment atmosphere particulate (R-11) and gaseous (R-12) radioactivity monitoring systems. ACTION a of TS 3/4.4.6.1 applies when the R-11 and R-12 radioactivity monitoring systems are inoperable.

The proposed change modifies ACTION a of TS 3/4.4.6.1, by increasing the Completion Time to 30 days, by providing the option to obtain grab samples or conduct RCS water inventories, and by decreasing the RCS water inventory balance frequency to 24 hours. The proposed change is as follows:

ACTION

a) With both Particulate and Gaseous Radioactivity Monitoring Systems inoperable, operation may continue for up to ~~7~~ ***30*** days provided:

1) A Containment Sump Level Monitoring System is OPERABLE;

2) Appropriate grab samples are obtained and analyzed at least once per 24 hours~~;~~ ***, or***

~~3)~~ A Reactor Coolant System water inventory balance is performed at least once per ~~8~~ ***24**** hours except when operating in shutdown cooling mode.

Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

2.2.6 TS 3/4.6.1.7, Containment Systems - Containment Ventilation System, specifies the Limiting Condition for Operation (LCO), ACTIONS, applicable MODES and SRs for the containment purge supply and exhaust isolation valves.

The proposed change modifies the LCO to require the containment purge supply and exhaust isolation valves be maintained administratively sealed closed and deactivated or isolated by blind flange, and relatedly modifies the ACTIONS and SRs in recognition that the purge valves shall not be opened in MODES 1 through 4 or Unit shutdown must commence. The proposed change additionally extends to 72-hours the Completion Time to restore the purge valves to within the leakage limit of SR 4.6.1.7.2. The proposed change adds a footnote denoted by an asterisk (*) exempting SR 4.6.1.7.1 and SR 4.6.1.7.2 when the associated purge supply and/or exhaust penetration(s) is isolated by blind flange. The proposed change additionally relocates the purge supply and exhaust valve leakage rate criteria to licensee control. The proposed change is as follows:

3.6.1.7 Each containment purge supply and exhaust isolation valve shall be ~~***OPERABLE and***~~ ***administratively sealed closed and deactivated or the associated penetration(s) shall be isolated by blind flange.***

~~***a. The containment purge supply and exhaust isolation valves shall be sealed closed to the maximum extent practicable but may be open for purge system operation for pressure control, for environmental conditions control, for ALARA and respirable air quality considerations for personnel entry and for surveillance tests that require the valve to be open.***~~

~~***b. The purge supply and exhaust isolation valves shall not be opened wider than 33 or 30 degrees, respectively (90 degrees is fully open).***~~

ACTION

a. With ***Specification 3.6.1.7 not met*** ~~***a containment purge supply and/or exhaust isolation valve(s) open for reasons other than given in 3.6.1.7.a above, close the open valve(s) or isolate the penetration(s***~~) within 4 hours, ***comply with Specification 3.6.1.7, or*** otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

~~***b.***~~ With a containment purge supply and/or exhaust isolation valve(s) having a measured leakage rate exceeding the limits of Specification 4.6.1.7.2 within ~~***24 hours***~~ ***72-hours***, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

New Asterisk (*)

4.6.1.7.1 Each containment purge supply and exhaust isolation valve shall be verified to be ***administratively sealed closed and deactivated*** ~~***sealed closed or open in accordance with Specification 3.6.1.7.a***~~ in accordance with the Surveillance Frequency Control Program.

4.6.1.7.2 In accordance with the Surveillance Frequency Control Program, each containment purge supply and exhaust isolation valve shall be demonstrated OPERABLE by verifying that the measured leakage rate is ~~***less than or equal to 0.05 L_a***~~ ***within limit*** when pressurized to P_a.

4.6.1.7.3 ~~***In accordance with the Surveillance Frequency Control Program, the mechanical stop on each containment purge supply and exhaust isolation valve shall be verified to be in place and that the valves will open no more than 33 or 30 degrees, respectively.***~~ ***DELETED***

New Footnote

**** Performance of SR 4.6.1.7.1 and SR 4.6.1.2 are not required when the associated purge supply and/or exhaust penetration(s) is isolated by blind flange.***

2.3 Reason for the Proposed Change

The proposed license amendments accommodate planned upgrades to plant equipment and modify TS requirements that otherwise provide marginal benefit to safety.

3.0 TECHNICAL EVALUATION

The proposed license amendments modify the containment atmosphere radioactivity monitoring, containment ventilation isolation and RCS leakage detection system requirements.

3.1 Modify Containment Atmosphere Radioactivity Monitoring Requirements

The proposed change revises the allowable and trip setpoint values for the Containment particulate (R-11) and gaseous (R-12) radioactivity monitor instrument channels by converting the measurement units from CPM to µCi/cc. The proposed change additionally deletes instrument numbers, R-11 and R-12, in the Allowable Value and Trip Setpoint columns of TS 3/4.3.2, Table 3.3-3. The proposed change also exempts the containment

purge supply and exhaust isolation valves from the containment ventilation isolation instrumentation requirements of TS 3/4.3.2, Table 3.3-2, Table 3.3-3 and Table 4.3-2.

3.1.1 Revise R-11, R-12 Instrument Measurement Units

The proposed change revises the setpoint numerical values for the FU 3.c.4 instrument channels of TS 3/4.3.2, Table 3.3-3, and the FU 1.a instrument channels of TS 3/4.3.3.1, Table 3.3-4, by converting the measurement units from CPM to µCi/cc. Containment particulate and gaseous radioactivity monitors, R-11 and R-12, perform the functions specified in TS 3/4.3.2, Table 3.3-3, FU 3.c.4 and TS 3/4.3.3.1, Table 3.3-4, FU 1.a. The proposed change to convert the measurement units from CPM to µCi/cc accommodates planned upgrades to the R-11 and R12 instruments. The proposed change is implemented by converting the values specified in columns "Allowable Value" and "Trip Setpoint" and in Note 2 of TS 3/4.3.2, Table 3.3-3, FU 3.c.4 and column "Alarm/Trip Setpoint" and Note 2 of TS 3/4.3.3.1, Table 3.3-4, FU 1.a. The converted setpoint numerical values, identified in the TS mark-up pages (Attachment 1) and Section 2.0 of this amendment request, were verified in accordance with FPL's design control program. The proposed change is thereby administrative in nature since the current values in CPM are equivalent to the proposed values in µCi/cc, and no changes are proposed to the applicable regulatory requirements.

3.1.2 Remove R-11, R-12 Instrument Numbers

The proposed change deletes the instrument numbers, R-11 and R-12, in the Allowable Value and Trip Setpoint columns of Table 3.3-3 for the FU 3.c.4 instrument channels. The proposed change precludes the need for a license amendment should it become desirable to revise the instrument numbers in the future. The proposed change is administrative in nature since no changes are proposed to the instrument functions (particulate and gaseous radioactivity monitoring) or the applicable regulatory requirements.

3.1.3 Exempt Purge Valve Isolation Instrumentation Requirements

The proposed change adds a new footnote applicable to the FU 3.c instrument channels of TS 3/4.3.2, Table 3.3-2, Table 3.3-3 and Table 4.3-2. The footnote exempts the containment purge supply and exhaust isolation valves from the containment ventilation isolation instrumentation requirements of TS 3/4.3.2, Table 3.3-2, Table 3.3-3 and Table 4.3-2. As discussed in Section 3.3 of this amendment request, the containment purge supply and exhaust isolation valves will be maintained administratively sealed closed and deactivated or the associated penetration(s) shall be isolated by blind flange in MODES 1 through 4. Maintaining the subject valves administratively sealed closed and deactivated or isolating by blind flange assures the penetration(s) will perform their containment ventilation isolation function without reliance on engineering safety features actuation system instrumentation. As such, the FU 3.c instrument channels are no longer subject to TS inclusion as an LCO pursuant to Criterion 3 of 10 CFR 50.36(c)(2)(ii) since the containment ventilation isolation function is satisfied without the assistance of the FU 3.c instrumentation. Thereby, only the containment instrument air bleed isolation valves remain applicable to the FU 3.c requirements of TS 3/4.3.2, Tables 3.3-2, 3.3-3 and 4.3-2. The proposed change is implemented by adding an asterisk (*) to the FU 3.c instrument channel columns of TS 3/4.3.2, Tables 3.3-2, 3.3-3 and 4.3-2 and the new footnotes. Exempting the purge supply and exhaust valves from the FU 3.c instrument requirements is appropriate since the change is consistent with the proposed change to maintain the containment purge supply

and exhaust isolation valves administratively sealed closed and deactivated or isolate the associated penetration(s) by blind flange in MODES 1 through 4, as discussed in Section 3.3 of this amendment request.

3.2 Modify RCS Leakage Detection Requirements

The proposed change modifies ACTION of TS 3/4.4.6.1 for the condition of the R-11 and R-12 radioactivity monitors both inoperable by increasing the Completion Time from 7 days to 30 days, providing an option to either analyze containment atmosphere grab samples or conduct RCS water inventory balances, and decreasing the frequency of RCS water inventory balances from every 8 hours to once per 24 hours.

3.2.1 Increase ACTION Completion Time

The proposed change to increase the Completion Time from 7 days to 30 days is based on the availability of an operable containment sump level monitoring system for the detection of unidentified leakage and the performance of additional leakage detection activities such as RCS water inventory balances and containment atmosphere monitoring via grab sample analyses. For the condition of R-11 and R-12 both inoperable, ACTION a of TS 3/4.4.6.1 currently allows 7 days of continued operation provided the containment sump level monitoring system is operable, containment atmosphere grab samples are analyzed every 24 hours and RCS water inventory balances are conducted every 8 hours. However, the unavailability of R-11 and R-12 does not diminish the effectiveness of these other, RCS leakage detection methods. A 30-day Completion Time would provide a reasonable period to evaluate the cause of the dual inoperability and conduct work planning and repair. During this time, monitoring the containment sump level along with conducting more frequent RCS water inventory balances and/or containment atmospheric monitoring via grab sample analyses would provide suitable and diverse methods of RCS leakage detection. As such, extending the Completion Time to 30 days will not adversely impact safety since RCS leakage monitoring would not be interrupted for the duration of R-11, R-12 inoperability. The proposed change is consistent with Westinghouse STS 3.4.15, ACTION B (Reference 6.1) which allows continued operation for 30 days for the condition of the containment atmosphere radioactivity monitoring instrumentation requirement not met.

3.2.2 Reduce Redundant ACTIONS

The proposed change to either analyze grab samples of the containment atmosphere or conduct RCS water inventory balances, in lieu of performing both as currently required by ACTION a of TS 3/4.4.6.1, is based on the functional redundancy of the two activities. Though the monitoring methods differ, the RCS water inventory balance and the grab sample analyses are both methods of detecting RCS leakage. Moreover, either of these activities in conjunction with monitoring the containment sump level provide suitable effectiveness and diversity in obtaining early warning of RCS leakage during the period of R-11, R-12 inoperability. The proposed change is implemented by truncating the containment grab sample analysis requirement of ACTION a.2 with an “or”, and conjoining with the RCS inventory balance requirement of ACTION a.3. The proposed change is consistent with Westinghouse STS 3.4.15, ACTION B (Reference 6.1) which requires either containment air grab sample analyses or RCS water inventory balances for the condition of the containment atmosphere radioactivity monitoring instrumentation requirement not met.

3.2.3 Modify ACTION for RCS Water Inventory Balance Frequency

The proposed change to decrease the frequency of RCS water inventory balances from every 8 hours to every 24 hours is based on the low likelihood of undetected RCS leakage during any 24-hour period. SR 4.4.6.2.1 requires the performance of RCS water inventory balances and verification of steam generator primary to secondary leakage within limit every 72-hours in accordance with the Surveillance Frequency Control Program (SFCP). In addition, containment atmosphere radioactivity monitoring and containment sump level monitoring are performed every 12 hours in accordance with the SFCP. As such, conducting RCS water inventory balances every 8 hours imposes more frequent monitoring for RCS leakage than the 12-hour containment atmosphere radioactivity monitoring the RCS water inventory balances are meant to replace. The absence of containment atmosphere radioactivity monitoring due to R-11 and R-12 both inoperable neither increases the likelihood of RCS leakage nor diminishes the effectiveness of either RCS water inventory balances or containment air grab sample analyses every 24-hours combined with containment sump level monitoring every 12-hours. Conducting RCS water inventory balances every 8 hours distracts station resources from more safety significant activities with no benefit to safety given the diversity and effectiveness of the other RCS leakage detection methods required by ACTION a. The proposed change is consistent with Westinghouse STS 3.4.15, ACTION B (Reference 6.1) which provides the option of performing RCS water inventory balances every 24 hours for the condition of the containment atmosphere radioactivity monitoring instrumentation requirement not met.

3.3 Modify Containment Ventilation System Requirements

The proposed change modifies the LCO of TS 3/4 3.6.1.7, Containment Ventilation System, to require the containment purge supply and exhaust isolation valves be maintained administratively sealed closed and deactivated or the associated penetration(s) shall be isolated by blind flange and relatedly modifies the ACTIONS and SRs in recognition that the valves shall not be opened in MODES 1 thru 4. The proposed change additionally modifies the ACTIONS to allow 72-hours to restore the purge valves to within the leakage limit of SR 4.6.1.7.2. The proposed change adds a footnote denoted by an asterisk (*) exempting SR 4.6.1.7.1 and SR 4.6.1.7.2 when the associated purge supply and/or exhaust penetration(s) is isolated by blind flange. The proposed change additionally relocates the purge valve leakage rate criteria to licensee control.

3.3.1 Modify Purge Valve LCO

The proposed change modifies the LCO to require the containment purge supply and exhaust isolation valves be maintained administratively sealed closed and deactivated or the associated penetration(s) shall be isolated by blind flange in MODES 1 through 4. These spring-return valves will be administratively sealed closed and deactivated by purging instrument air from the valve actuators and removing power to the actuator solenoid valves to prevent inadvertent actuation. Otherwise, the associated penetration will be isolated by blind flange featuring double o-ring gaskets. The proposed change is implemented by modifying LCO 3.6.1.7 to state that the valves shall be administratively sealed closed and deactivated or the associated penetration(s) shall be isolated by blind flange and by deleting LCO 3.6.1.7.a and LCO 3.6.1.7.b, which specify conditions for opening the valves in MODES 1 through 4. The proposed change to maintain the valves administratively sealed closed and deactivated would eliminate disturbances to the seating surfaces normally caused by valve actuations that follow satisfactory Type-C testing. The proposed change to isolate the associated penetration(s) by blind

flange featuring double o-ring gaskets would provide the requisite redundant barriers for containment purge penetration leakage subject to Type-B testing in accordance with the Containment Leakage Testing Program of TS 6.8.4.h. The proposed change thereby enhances purge valve leakage performance in a manner consistent with safety analysis assumptions for containment leakage.

3.3.2 Extend Completion Time to 72-Hours

The proposed change modifies ACTION a by applying the existing 4-hour Completion Time to the condition of proposed LCO 3.6.1.7 not met and modifies ACTION b by extending the Completion Time from 24-hours to 72-hours for the condition of purge valve leakage in excess of SR 4.6.1.7.2. As discussed in Section 3.3.1 of this amendment request, proposed LCO 3.6.1.7 requires the purge valves are maintained sealed closed and deactivated or the associated penetration(s) shall be isolated by blind flange. Applying the existing 4-hour Completion Time to the condition of LCO 3.6.1.7 not met is consistent with the existing requirement to close the open purge valve or isolate the penetration when the LCO cannot be met. Hence, the proposed change to ACTION a maintains the existing margin of safety by requiring prompt action or commencing Unit shutdown if the containment purge ventilation isolation function cannot be assured.

The proposed change to extend the Completion Time to 72-hours for the condition of purge valve leakage in excess of SR 4.6.1.7.2 is based upon the historically substantial margin that exists between the Type B & C leakage limit of 0.60 La [= 166,355 standard cubic centimeters per minute (sccm)] and the combined Type B & C maximum pathway measured leakage determined in accordance with TS 6.8.4.h. As can be seen from historical testing summarized in the tables below, the margin between the 0.60 La leakage limit and the combined Type B & C maximum pathway leakage rate during years 2009 through 2019 ranged between 70% to 87% of the 0.60 La leakage limit (see last columns).

Unit 3 Combined Type B&C vs. Type B&C Leakage Limit (0.60 L_a)

Unit 3 Outage/ Year	Combined Type B&C Leakage	Combined Type B&C Leakage in percent of 0.60 L_a*	Margin between Combined Type B&C Leakage and 0.60 L_a	
	(sccm)	(%)	(sccm)	(%)
PT3-24 / 2009	29,032	17.6%	137,147	82.4%
PT3-25 / 2011	23,314	14.1%	142,900	85.9%
PT3-26 / 2012	27,499	16.6%	138,690	83.4%
PT3-27/ 2014	32,498	19.7%	133,660	80.3%
PT3-28 / 2015	35,397	21.4%	130,744	78.6%
PT3-29 / 2017	41,688	25.2%	124,415	74.8%
PT3-30 / 2018	42,804	25.9%	123,292	74.1%

[* 0.60 La = 166,355 sccm]

Unit 4 Combined Type B&C vs. Type B&C Leakage Limit (0.60 L_a)

Unit 4 Outage/ Year	Combined Type B&C Leakage	Combined Type B&C Leakage in percent of 0.60 L_a *	Margin between Combined Type B&C Leakage and 0.60 L_a	
	(sccm)	(%)	(%)	(sccm)
PT4-25 / 2010	39,313	23.8%	126,804	76.2%
PT4-26 / 2011	33,446	20.2%	132,707	79.8%
PT4-27 / 2013	39,295	23.8%	126,822	76.2%
PT4-28 / 2014	48,584	29.4%	117,477	70.6%
PT4-29 / 2016	43,535	26.3%	122,557	73.7%
PT4-30 / 2017	22,282	13.5%	143,938	86.5%
PT4-31 / 2019	48,422	29.3%	117,640	70.7%

[* 0.60 La = 166,355 sccm]

The containment purge penetrations (supply and exhaust) are Type-C tested by pressurizing the annulus between the inner and outer purge isolation valves. In determining the combined Type B & C maximum pathway (i.e. as-left) leakage required by TS 6.8.4.h, the total purge penetration leakage rate is applied (rather than the highest single valve leakage rate as with most penetrations housing two isolation valves). Even with this conservatism, the above tables exhibit the substantial margin (i.e. >117,000 sccm) that routinely exists between the combined Type B & C maximum pathway leakage and the 0.60 L_a leakage limit. From a historical testing perspective, the purge valve leakage limit of 0.05 L_a currently specified in SR 4.6.1.7.2 equates to 13,860 sccm whereby mid-cycle purge valve leakage test failures have ranged from 15,000 to 35,000 sccm. Hence, a 24-hour Completion Time for a marginal reduction in the margin to the 0.60 L_a leakage limit is not commensurate with the impact of the failure on safety. Moreover, the 24-hour Completion Time is unreasonably burdensome since it does not allow for repairs that may result from discovery, requires rescheduling of planned activities that may contribute to plant risk such as TS surveillances and preventive maintenance, and can warrant power reductions requiring around-the-clock coverage to accommodate repairs inside the containment building. Additionally, a review of industry licensing actions reveals numerous requests for Notice of Enforcement Discretion (NOED) prompted by unanticipated purge valve leakage test failures that could not be remedied within 24-hours. The proposed change to extend the Completion Time to 72-hours would provide for orderly maintenance planning and repair, and thereby reduce requests for short-notice regulatory authorization to avoid plant shutdown. Thereby, the proposed change to extend the Completion Time from 24-hours to 72-hours for purge valve leakage in excess of the SR 4.6.1.7.2 specified limit is reasonable since it would reduce unanticipated challenges to station and NRC resources without compromising safety.

3.3.3 Revise Purge Valve Surveillance Requirements (SRs)

The proposed change modifies SR 4.6.1.7.1 by replacing the option to verify the subject valves are open in accordance with LCO 3.6.1.7.a with a requirement to verify the valves are administratively sealed closed and deactivated in accordance

with the SFCP. The proposed change is acceptable since, consistent with the current LCO 3.6.1.7.a, the proposed change verifies the LCO requirement is being met in accordance with the SFCP.

The proposed change modifies SR 4.6.1.7.2 by relocating the purge valve leakage rate criterion of 0.05 L_a to the Containment Leakage Rate Testing Program of TS 6.8.4.h. The bases for the proposed change is that the purge valve leakage criterion does not satisfy the four criteria of 10 CFR 50.36c(2)(ii) for TS inclusion. Specifically, the leakage rate criterion is not instrumentation installed to detect and indicate in the Control Room significant abnormal degradation of RCS pressure boundary, and thereby does not satisfy *Criterion 1*. Though containment integrity is credited in accident analyses as an initial condition, the purge valve leakage criterion equates to 5% of the allowable containment leakage such that purge valve leakage test failures do not challenge the containment leakage assumed in plant safety analyses. Thereby, the criterion is not a process variable, design feature or operating restriction that is an initial condition assumed in any accident or transient analyses which challenges fission product barrier integrity, and thereby does not satisfy *Criterion 2*. The leakage criterion is not a SSC that is part of the primary success path to mitigate a design basis accident or transient challenging fission product barrier integrity, and thereby does not satisfy *Criterion 3*. As discussed in References 6.2 and 6.3 of this amendment request, industry operating experience (OE) revealed reliability concerns with containment purge valves equipped with resilient seats. The proposed change retains the more frequent leakage testing requirement of SR 4.6.1.7.2, which the NRC imposed on licensees in response to the OE but without added restrictions on the leakage criterion. In addition, purge valve leakage performance is not modeled in the Turkey Point probabilistic risk assessment (PRA). As such, the purge valve leakage criterion is not a SSC which OE or PRA has shown to be significant to public health and safety, and thereby does not satisfy *Criterion 4*. Consistent with the NRC Final Policy Statement on TS Improvements (Reference 6.4), the purge valve leakage rate criterion is appropriate for relocation to licensee control whereby future changes will be subject to 10 CFR 50.59. The proposed change is consistent with Westinghouse STS 3.6.3.7 (Reference 6.1), which doesn't specify leakage criteria for containment purge valves with resilient seats, and is thereby reasonable.

The proposed change adds an asterisk (*) to SR 4.6.1.7.1 and SR 4.6.1.7.2 and adds a new footnote denoted by the asterisk (*) exempting SR performance when the associated containment purge penetration(s) is isolated by blind flange. The proposed footnote is appropriate since by the sealing the associated containment purge penetration(s) with a double o-ring blind flange and subjecting the flange to Type B testing in accordance with the Containment Leakage Rate Testing Program of TS 6.8.4.h., containment purge ventilation isolation is assured and the purge valve leakage reliability issues identified in References 6.2 and 6.3 are resolved.

The proposed change deletes SR 4.6.1.7.3, which requires verification of the mechanical stop positions to ensure the that the purge supply and exhaust isolation valves cannot be opened beyond the limits established in plant safety analyses. The proposed change is acceptable since, as discussed in Section 3.3.1 of this amendment request, the purge valves will be administratively sealed closed and deactivated or the associated penetration will be isolated by blind flange in MODES 1 through 4, thereby negating the need to verify disc travel restrictions applicable to design basis loss of coolant accident (LOCA) analyses.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

- 10 CFR 50.36(c)(2)(i) states that when a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition is met.

- 10 CFR 50.36(c)(2)(ii) states that a limiting condition for operation must be established for each item meeting one or more of the four criteria specified therein.

- 10 CFR 50, Appendix J, Option B, provides assurance that leakage through containments or systems and components penetrating containments does not exceed allowable leakage rates specified in the TS, and that the integrity of the containment structure is maintained during its service.

- 1967 Proposed General Design Criteria (GDC) 13 states that means shall be provided for monitoring or otherwise measuring and maintaining control over the fission process throughout core life under all conditions that can reasonably be anticipated to cause variations in reactivity of the core.

- 1967 Proposed GDC 15 states that protection systems shall be provided for sensing accident situations and initiating necessary engineered safety features.

- 1967 Proposed GDC 16 states that means shall be provided to detect significant uncontrolled leakage from the reactor coolant pressure boundary.

- 1967 Proposed GDC 17 states that means shall be provided for monitoring the containment atmosphere and the facility effluent discharge paths for radioactivity released from normal operations, anticipated transients and accident conditions.

- 1967 Proposed GDC 49 states the reactor containment structure, including access openings and penetrations, shall be designed so that any leakage of radioactive materials from the containment structure will not result in undue risk to the public.

- 1967 Proposed GDC 53 states that penetrations requiring closure for containment functions shall be protected by redundant valving and associated apparatus.

The proposed license amendments do not alter the manner in which the station is operated and maintained, consistent with 10 CFR 50.36, 10 CFR 50, Appendix J, Option B, and 1967 Proposed GDC(s) 13, 15, 16, 17, 49 and 53. All applicable regulatory requirements will continue to be satisfied as a result of the proposed change.

4.2 No Significant Hazards Consideration

The proposed license amendments modify the Turkey Point Technical Specifications by modifying the containment atmosphere radioactivity monitoring, containment ventilation isolation and Reactor Coolant System leakage detection system requirements. As required by 10 CFR 50.91(a), FPL evaluated the proposed change using the criteria in 10 CFR 50.92 and determined that the proposed change does not involve a significant hazards consideration. An analysis of the no significant hazards consideration is presented below:

(1) Do the proposed amendments involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The proposed amendments revise the containment particulate and gaseous radioactivity monitors, R-11 and R-12, requirements by converting the setpoint measurement units to accommodate planned equipment upgrades. The proposed change modifies the RCS leakage detection requirements by extending the Completion Time and limiting the required leakage detection methods to more closely align with NUREG-1431, Revision 4, for R-11 and R-12 both inoperable. The proposed change modifies the containment purge supply and exhaust isolation valve and associated containment ventilation isolation instrumentation requirements to reflect that the purge valves will be maintained administratively sealed closed and deactivated or the penetration isolated by blind flange in MODES 1 through 4, relocates the purge valve leakage criterion to licensee control and extends the Completion Time to 7-days under specified conditions. Converting the instrument measurement units is an administrative change since the revised setpoint values are equivalent to the current values and the applicable regulatory requirements are unchanged. Limiting the required leakage detection methods to either containment grab sample analyses or RCS inventory balances neither increases the likelihood of RCS leakage nor reduces the effectiveness of either, diverse RCS leakage detection method. Likewise, increasing the completion time for the condition of R-11 and R-12 both inoperable cannot reduce the effectiveness of the required RCS leakage detection methods. Maintaining the purge valves administratively sealed closed and deactivated or the penetration isolated by blind flange during the applicable MODES is consistent with the Turkey Point licensing basis and thereby cannot adversely impact plant safety analyses. Though the proposed change exempts the containment ventilation isolation instrumentation requirements for the purge supply and exhaust isolation valves, by maintaining the purge valves closed or the penetrations isolated in the applicable MODES, the purge valve containment ventilation isolation function is assured. Extending the purge valve leakage test Completion Time to 72-hours aligns the revised Completion Time with the impact on safety. Hence, the proposed changes will not affect any accident initiators or precursors or alter the design, conditions, or configuration of the facility as currently analyzed. All SSCs will continue to perform consistent with applicable requirements and safety analysis assumptions.

Therefore, this proposed change does not represent a significant increase in the probability or consequences of an accident previously evaluated.

(2) Do the proposed amendments create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed change revises the R-11 and R-12 requirements by converting the setpoint measurement units. The proposed change modifies the RCS leakage detection requirements by extending the CT and limiting the required leakage detection methods to more closely align with NUREG-1431, Revision 4, for R-11 and R-12 both inoperable. The proposed change modifies the containment purge supply and exhaust isolation valve and associated containment ventilation isolation instrumentation requirements to reflect that the purge valves will be maintained administratively sealed closed and deactivated or isolated by blind flange in MODES 1 through 4. Converting the instrument measurement units cannot adversely affect safety. Limiting the required RCS leakage detection methods or increasing the Completion Time for the condition of R-11 and R-12

both inoperable neither introduces new accident initiators nor equipment failure modes. Maintaining the purge valves closed or isolated by blind flange and exempting the containment ventilation isolation requirements during MODES 1 through 4 cannot introduce new equipment failure modes or introduce new kinds of accidents. Extending the purge valve Completion Time to 72-hours consistent with the impact on safety cannot introduce new purge valve failure modes or new precursors to any accident. The proposed changes do not alter the types or increase the amounts of fission product effluents and no increase in individual or cumulative occupational exposure will occur as a result of the change. The proposed change aligns with all applicable regulations and NRC endorsed industry guidance for safe operation. Thereby, no new accident scenarios, transient precursors, failure mechanisms, or limiting single failures can result.

Therefore, the proposed amendments do not create the possibility of a new or different kind of accident from any previously evaluated.

(3) Do the proposed amendments involve a significant reduction in a margin of safety?

Response: No

The proposed change revises the R-11 and R-12 requirements by converting the setpoint measurement units. The proposed change modifies the RCS leakage detection requirements by extending the Completion Time and limiting the required leakage detection methods to more closely align with NUREG-1431, Revision 4, for R-11 and R-12 both inoperable. The proposed change modifies the containment purge supply and exhaust isolation valve and associated containment ventilation isolation instrumentation requirements to reflect that the purge valves will be maintained administratively sealed closed and deactivated or isolated by blind flange in MODES 1 through 4. Converting the instrument measurement units cannot adversely affect safety. Limiting the required RCS leakage detection methods or increasing the CT for the condition of R-11 and R-12 both inoperable will not reduce the margin of safety since the proposed changes are consistent with the NRC endorsed NUREG-1431, Revision 4. Exempting the containment ventilation isolation instrumentation requirements cannot reduce the margin of safety since the change merely aligns the TS requirements with the licensing basis to assure containment ventilation isolation in MODES 1 through 4. Extending the purge valve Completion Time to 72-hours does not adversely impact safety since the safety analysis assumptions for Type B & C leakage remain valid with substantial margin. No instrument or system response times or acceptance criteria associated with any accident analyses are affected by the proposed change. No new or altered methods of assessing plant performance are introduced and accident analysis assumptions are unaffected. Thereby, no safety limits or limiting safety settings are challenged by the proposed change.

Therefore, the proposed amendments do not involve a significant reduction in a margin of safety.

Based upon the above analysis, FPL concludes that the proposed license amendments do not involve a significant hazards consideration, under the standards set forth in 10 CFR 50.92, “Issuance of Amendment,” and accordingly, a finding of “no significant hazards consideration” is justified.

4.3 Conclusion

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 ENVIRONMENTAL CONSIDERATION

FPL has evaluated the proposed amendment for environmental considerations. The review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set for in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the proposed amendment.

6.0 REFERENCES

6.1 NUREG-1431, Standard Technical Specifications - Westinghouse Plants, Revision 4.0, Volume 1, Specifications (ADAMS Accession No. ML12100A222)

6.2 NRC Generic Issue B-20, Containment Leakage Due to Seal Deterioration

6.3 NRC IE Circular 77-11, Leakage of Containment Isolation Valves with Resilient Seats, September 2, 1977

6.4 NRC Final Policy Statement on Technical Specification Improvements for Nuclear Power Reactors, dated July 22, 1993 (58 FR 39132)

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION PAGE (MARKUP)

(10 pages follow)

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION PAGE (MARKUP)

This page is for information only. No changes are proposed to this page.

INSTRUMENTATION

3/4.3.2 ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2 The Engineered Safety Feature Actuation System (ESFAS) instrumentation channels and interlocks shown in Table 3.3-2 shall be OPERABLE with their Trip Setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-3.

APPLICABILITY: As shown in Table 3.3-2.

ACTION:

a. With an ESFAS Instrumentation or Interlock Trip Setpoint less conservative than the value shown in the Trip Setpoint column but more conservative than the value shown in the Allowable Value column of Table 3.3-3, adjust the Setpoint consistent with the Trip Setpoint value within permissible calibration tolerance.

b. With an ESFAS Instrumentation or Interlock Trip Setpoint less conservative than the value shown in the Allowable Value column of Table 3.3-3, either:

   1. Adjust the Setpoint consistent with the Trip Setpoint value of Table 3.3-3 and determine within 12 hours that the affected channel is OPERABLE; or

   2. Declare the channel inoperable and apply the applicable ACTION statement requirements of Table 3.3-2 until the channel is restored to OPERABLE status with its setpoint adjusted consistent with the Trip Setpoint value.

c. With an ESFAS instrumentation channel or interlock inoperable, take the ACTION shown in Table 3.3-2.

SURVEILLANCE REQUIREMENTS

4.3.2.1 Each ESFAS instrumentation channel and interlock and the automatic actuation logic and relays shall be demonstrated OPERABLE by performance of the ESFAS Instrumentation Surveillance Requirements specified in Table 4.3-2.

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION PAGE (MARKUP)

TABLE 3.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
3. Containment Isolation (Continued)					
3) Safety Injection	See Item 1. above for all Safety Injection initiating functions and requirements. (Manual S.I. initiation will not initiate Phase A Isolation).				
b. Phase "B" Isolation					
1) Manual Initiation	2	2 (Both buttons must be pushed simultaneously to actuate)	2	1, 2, 3, 4	17
2) Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4	14
3) Containment Pressure--High-High	3	2	2	1, 2, 3	15
Coincident with: Containment Pressure--High	3	2	2	1, 2, 3	15
c. Containment Ventilation Isolation ← Add asterisk (*)					
1) Containment Isolation Manual Phase A or Manual Phase B	See Items 3.a.1 and 3.b.1 above for all Manual Containment Ventilation functions and requirements.				

Add " * Not applicable to Containment purge supply and exhaust isolation valves."

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION PAGE (MARKUP)

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM
INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	ALLOWABLE VALUE	TRIP SETPOINT
3. Containment Isolation (Continued)		
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.
3) Containment Pressure--High-High	≤22.6 psig	≤20.0 psig
Coincident with: Containment Pressure--High	≤4.5 psig	≤4.0 psig
c. Containment Ventilation Isolation		
1) Containment Isolation Manual Phase A or Manual Phase B	N.A.	N.A.
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.
3) Safety Injection	See Item 1. above for all Safety Injection Allowable Values.	See Item 1. above for all Safety Injection Trip Setpoints.
4) Containment Radioactivity--High	Particulate ~~(R-11)~~ ~~≤6.8 x 10^5 CPM~~ Gaseous ~~(R-12)~~ See Note 2	Particulate ~~(R-11)~~ ~~≤6.1 x 10^5 CPM~~ Gaseous ~~(R-12)~~ See Note 2
4. Steam Line Isolation		
a. Manual Initiation	N.A.	N.A.

Add asterisk (*)

≤ 5.00 x 10^{-6} µCi/cc

≤ 4.49 x 10^{-6} µCi/cc

Add " * Not applicable to Containment purge supply and exhaust isolation valves."

TURKEY POINT – UNITS 3 & 4

3/4 3-25

AMENDMENT NOS. ~~283 AND 277~~

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION PAGE (MARKUP)

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM
INSTRUMENTATION TRIP SETPOINTS

TABLE NOTATIONS

(1) Deleted

(2) Containment Gaseous Monitor Setpoint = $\frac{(\text{~~3.2 x 10}^{-4}\text{~~}\ \text{1.11 x 10}^{-3}\ \mu\text{Ci/cc})}{(\ F\ )}$ ~~CFM~~;

Containment Gaseous Monitor Allowable Value = $\frac{(\text{~~3.5 x 10}^{-4}\text{~~}\ \text{1.22 x 10}^{-3}\ \mu\text{Ci/cc})}{(\ F\ )}$ ~~CFM~~;

Where F = $\frac{\text{Actual Purge Flow}}{\text{Design Purge Flow (35,000 CFM)}}$

Setpoint may vary according to current plant conditions provided that the release rate does not exceed allowable limits provided in the Offsite Dose Calculation Manual.

(3) Auxiliary feedwater manual initiation is included in Specification 3.7.1.2.

(4) Time constants utilized in lead-lag controller for Steam Generator Pressure-Low and Steam Line Pressure-Low are $\tau_1 \geq 50$ seconds and $\tau_2 \leq 5$ seconds. CHANNEL CALIBRATION shall ensure that these time constants are adjusted to these values.

If no Allowable Value is specified, as indicated by [ ], the trip setpoint shall also be the allowable value.

TURKEY POINT – UNITS 3 & 4

3/4 3-31

AMENDMENT NOS. ~~289 AND 277~~

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION PAGE (MARKUP)

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

CHANNEL FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST #	MODES FOR WHICH SURVEILLANCE IS REQUIRED
3. Containment Isolation (Continued)						
3) Containment Pressure--High-High Coincident with: Containment Pressure--High	N.A.	SFCP	N.A.	SFCP	SFCP(1)	1, 2, 3
	N.A.	SFCP	N.A.	SFCP	SFCP(1)	1, 2, 3
c. Containment Ventilation Isolation	Add asterisk (*)					
1) Containment Isolation Manual Phase A or Manual Phase B	N.A.	N.A.	N.A.	SFCP	N.A.	1, 2, 3, 4
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.	
3) Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.					
4) Containment Radioactivity--High	SFCP	SFCP	SFCP	N.A.	N.A.	1, 2, 3, 4
4. Steam Line Isolation						
a. Manual Initiation	N.A.	N.A.	N.A.	SFCP	N.A.	1, 2, 3
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	SFCP(1)	1, 2, 3(3)

Add " * Not applicable to Containment purge supply and exhaust isolation valves."

TURKEY POINT – UNIT 3 & 4

3/4 3-34

AMENDMENT NOS. ~~250 AND 250~~

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION PAGE (MARKUP)

This page is for information only. No changes are proposed to this page.

INSTRUMENTATION

3/4.3.3 MONITORING INSTRUMENTATION

RADIATION MONITORING FOR PLANT OPERATIONS

LIMITING CONDITION FOR OPERATION

3.3.3.1 The radiation monitoring instrumentation channels for plant operations shown in Table 3.3-4 shall be OPERABLE with their Alarm/Trip Setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3-4.

ACTION:

a. With a radiation monitoring channel Alarm/Trip Setpoint for plant operations exceeding the value shown in Table 3.3-4, adjust the Setpoint to within the limit within 4 hours or declare the channel inoperable.

b. With one or more radiation monitoring channels for plant operations inoperable, take the ACTION shown in Table 3.3-4.

c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.1 Each radiation monitoring instrumentation channel for plant operations shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and ANALOG CHANNEL OPERATIONAL TEST for the MODES and at the frequencies shown in Table 4.3-3.

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION PAGE (MARKUP)

TABLE 3.3-4

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS

FUNCTIONAL UNIT	CHANNELS TO TRIP/ALARM	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	ACTION
1. Containment					
a. Containment Atmosphere Radioactivity-High (Particulate or Gaseous (See Note 1.))	1	1*	All*	< 4.49 x 10^{-6} µCi/cc Particulate ~~≤6.1x10^{5}GPM~~ Gaseous See Note 2.	26 for MODES 1, 2, 3, 4 or 27 for MODES 5 and 6

TURKEY POINT – UNITS 3 & 4

3/4 3-40

AMENDMENT NOS. ~~283 AND 277~~

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION PAGE (MARKUP)

TABLE 3.3-4 (Continued)
TABLE NOTATIONS

* During movement of irradiated fuel within the containment, comply with Specification 3/4.9.13.

Note 1 Either the particulate or gaseous channel in the OPERABLE status will satisfy this LCO.

Note 2 Containment Gaseous Monitor Setpoint = $\frac{(3.2 \times 10^{4})}{(\ F\ )}$ ~~CPM;~~ 1.11×10^{-3} µCi/cc

Where F = $\frac{\text{Actual Purge Flow}}{\text{Design Purge Flow (35,000 CFM)}}$

Setpoint may vary according to current plant conditions provided that the release rate does not exceed allowable limits provided in the Offsite Dose Calculation Manual.

ACTION STATEMENTS

ACTION 26 - In MODES 1 thru 4: With both the Particulate and Gaseous Radioactivity Monitoring Systems inoperable, comply with the following:

1) Table 3.3-2, ACTION 16, and

2) Technical Specification 3.4.6.1, ACTION a.

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION PAGE (MARKUP)

REACTOR COOLANT SYSTEM

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.6.1 The following Reactor Coolant System Leakage Detection Systems shall be OPERABLE:

a. The Containment Atmosphere Gaseous or Particulate Radioactivity Monitoring System, and

b. A Containment Sump Level Monitoring System.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With both the Particulate and Gaseous Radioactivity Monitoring Systems inoperable, operation may continue for up to ~~7~~ 30 days provided:

1) A Containment Sump Level Monitoring System is OPERABLE;

2) Appropriate grab samples are obtained and analyzed at least once per 24 hours; or

~~3)~~ A Reactor Coolant System water inventory balance is performed at least once per ~~8~~ 24* hours except when operating in shutdown cooling mode.

Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With no Containment Sump Level Monitoring System operable, restore at least one Containment Sump Level Monitoring System to OPERABLE status within 7 days, or be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.6.1 The Leakage Detection System shall be demonstrated OPERABLE by:

a. Containment Atmosphere Gaseous and Particulate Monitoring System performance of CHANNEL CHECK, CHANNEL CALIBRATION and ANALOG CHANNEL OPERATIONAL TEST in accordance with the Surveillance Frequency Control Program, and

b. Containment Sump Level Monitoring System-performance of CHANNEL CALIBRATION in accordance with the Surveillance Frequency Control Program.

* Not required to be performed until 12 hours after establishment of steady state operation.

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION PAGE (MARKUP)

CONTAINMENT SYSTEMS

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.1.7 Each containment purge supply and exhaust isolation valve shall be ~~OPERABLE and:~~ administratively sealed closed and deactivated or the associated penetration(s) shall be isolated by blind flange.

~~a. The containment purge supply and exhaust isolation valves shall be sealed closed to the maximum extent practicable but may be open for purge system operation for pressure control, for environmental conditions control, for ALARA and respirable air quality considerations for personnel entry and for surveillance tests that require the valve to be open.~~

~~b. The purge supply and exhaust isolation valves shall not be opened wider than 33 or 30 degrees, respectively (90 degrees is fully open).~~

APPLICABILITY: MODES 1, 2, 3, AND 4.

ACTION:

a. With ~~a containment purge supply and/or exhaust isolation valve(s) open for reasons other than given in 3.6.1.7.a above, close the open valve(s) or isolate the penetration(s)~~ Specification 3.6.1.7 not met, comply with Specification 3.6.1.7, or within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With a containment purge supply and/or exhaust isolation valve(s) having a measured leakage rate exceeding the limits of Specification 4.6.1.7.2, restore the inoperable valve(s) to OPERABLE status or isolate the penetrations such that the measured leakage rate does not exceed the limits of Specification 4.6.1.7.2 within ~~24 hours~~ 72 hours, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

Add new asterisk (*)

4.6.1.7.1 Each containment purge supply and exhaust isolation valve shall be verified to be ~~sealed closed or open in accordance with Specification 3.6.1.7.a~~ administratively sealed closed and deactivated in accordance with the Surveillance Frequency Control Program.

4.6.1.7.2 In accordance with the Surveillance Frequency Control Program, each containment purge supply and exhaust isolation valve shall be demonstrated OPERABLE by verifying that the measured leakage rate is ~~less than or equal to 0.05 L_a~~ within limit when pressurized to P_a.

~~4.6.1.7.3 In accordance with the Surveillance Frequency Control Program, the mechanical stop on each containment purge supply and exhaust isolation valve shall be verified to be in place and that the valves will open no more than 33 or 30 degrees, respectively.~~

* Performance of SR 4.6.1.7.1 and SR 4.6.1.7.2 are not required when the associated purge supply and/or exhaust penetration is isolated by blind flange.

ATTACHMENT 2

PROPOSED TECHNICAL SPECIFICATION BASES PAGE (MARKUP)

(4 pages follow)

ATTACHMENT 2

PROPOSED TECHNICAL SPECIFICATION BASES PAGE (MARKUP)

FPL

TURKEY POINT PLANT

ADMINISTRATIVE PROCEDURE

SAFETY RELATED
INFORMATION USE

Procedure No.
0-ADM-536

Revision No.
~~37~~

Title:

TECHNICAL SPECIFICATION BASES CONTROL PROGRAM

Responsible Department: LICENSING

Special Considerations:

FOR INFORMATION ONLY
Before use, verify revision and change documentation (if applicable) with a controlled index or document.
DATE VERIFIED_____ INITIAL_____

Revision	Approved By	Approval Date
0	Bob Tomonto	07/09/12
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ATTACHMENT 2

PROPOSED TECHNICAL SPECIFICATION BASES PAGE (MARKUP)

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3/4.3.1 & 3/4.3.2 (Continued)

Item 5 of Table 3.3-2 requires that two trains of feedwater isolation actuation logic and relays be OPERABLE in MODES 1, 2 and 3. Operability requires:

- Isolation of both the normal feedwater branch and the bypass branch lines through automatic closure of the main feedwater and main feedwater bypass flow control valves (FCV) or automatic closure of the feedwater isolation valves (FIV) during a safety injection actuation signal or high-high steam generator water level signal, and
- Two independent trains of Automatic Actuation Logic and actuation relays.

In the event that maintenance and/or in-service testing is required on a feedwater regulating valve in Mode 1, 2 and 3, the above requirements can be met by closing the isolation valve upstream of the affected feedwater regulating valve, administratively controlling the position of the isolation valve, and controlling feedwater flow with an OPERABLE feedwater regulating valve (main or bypass).

INSERT A

For Table 3.3-2, Functional Unit (FU) 3.c.4, simultaneous inoperability of the Containment Atmosphere Particulate (R-11) and Gaseous (R-12) Radioactivity Monitoring Systems impact the Containment Ventilation Isolation (TS 3.3.2), Containment Radiation Monitoring for Plant Operations (TS 3.3.3.1), and RCS Leakage Detection (TS 3.4.6.1) functions. With R-11 and R-12 both inoperable, the following ACTIONS must be entered:

- ACTION 16 of TS 3.3-2, Table 3.3-2, FU 3.c.4
- ACTION 26 (or ACTION 27 for Modes 5 and 6) of TS 3.3.3.1, Table 3.3-4, FU 1.a
- ACTION (a) of TS 3.4.6.1

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3/4.6.1.7 Containment Ventilation System

In MODES 1 through 4, Specification 3.6.1.7 requires that either

The Containment Purge supply and exhaust isolation valves are required to be closed during a LOCA. ~~When **NOT** purging,~~ power to the purge valve actuators ~~will~~ be removed (sealed closed) to prevent inadvertent opening of these values. Maintaining these valves sealed closed during plant operation ensures that excessive quantities of radioactive materials will **NOT** be released via the Containment Purge System.

or isolating the penetration(s)

or the associated penetration(s) is isolated by blind flange

INSERT B

Leakage integrity tests with a maximum allowable leakage rate for Containment Purge supply and exhaust supply valves will provide early indication of resilient material seal degradation and will allow opportunity for repair before gross leakage failures could develop. The 0.60 La leakage limit shall **NOT** be exceeded when the leakage rates determined by the leakage integrity tests of these valves are added to the previously determined total for all valves and penetrations subject to Type B and C tests.

INSERT C

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INSERT A

Functional Unit (FU) 3.c of ESFAS Tables 3.3-2, 3.3-3 and 4.3-2, specifies requirements for the containment ventilation isolation instrument channels. The footnote (*) to FU 3.c exempts the containment purge supply and exhaust isolation valves from the FU 3.c requirements. Specification 3.6.1.7 requires the containment purge supply and exhaust isolation valves to be maintained administratively sealed closed and deactivated or the associated penetration(s) shall be isolated by blind flange in MODES 1 through 4. Thereby, the purge valve containment ventilation isolation function is performed without reliance on the FU 3.c actuation instrumentation. Only the containment instrument air bleed isolation valves are applicable to the FU 3.c requirements of ESFAS Tables 3.3-2, 3.3-3 and 4.3-2.

INSERT B

If Specification 3.6.1.7 is not met, ACTION a) allots 4-hours to restore compliance or Unit shutdown must commence. The 4-hours provides sufficient time to verify the purge valves are administratively sealed closed and power to the actuators are removed (i.e. if a blind flange is not installed). Specification 4.6.1.7.1 requires each containment purge valve to be verified administratively sealed closed and deactivated in accordance with the Surveillance Frequency Control Program (SFCP). The footnote (*) exempts performance of Specification 4.6.1.7.1 when the associated penetration(s) is isolated by blind flange. The double o-ring blind flange(s) obviates the need to verify containment purge penetration redundant barrier isolation while at-power.

INSERT C

Specification 4.6.1.7.2 requires the containment purge supply and exhaust isolation valve(s) measured leakage rate to be verified within limit in accordance with the SFCP. If the containment purge valve(s) measured leakage rate exceeds the limits of Specification 4.6.1.7.2, ACTION b) allots 72-hours to restore the measure leakage rate to within limit. The 72-hours provides sufficient time for orderly planning and repair without adversely impacting safety given the substantial margin that routinely exists between the Type B & C leakage limit [0.60 L_a] and the combined Type B & C maximum pathway leakage determined in accordance with TS 6.8.4.h, Containment Leakage Rate Testing Program. The footnote (*) exempts Specification 4.6.1.7.2 performance when the associated penetration(s) is isolated by blind flange. Installation of double o-ring blind flange(s) resolves the NRC's reliability concern with containment purge penetrations featuring purge valves equipped with resilient seats [IE Circular 77-11].