PART 7

Florida Power & Light Company
Turkey Point Plant, Units 6 & 7
COL Application

COLA Table of Contents

Turkey Point Units 6 & 7

COL Application

Part 7

Departures and Exemption Requests

Revision 2

The following departures are described and evaluated in Part A, STD and PTN Departures, of this report.

A.1 Departures That Can Be Implemented Without Prior NRC Approval

Departure Number	Description
STD DEP 1.1-1	Administrative departure for organization and numbering for the FSAR sections and subsections
PTN DEP 2.0-2	Maximum normal wet bulb (noncoincident) air temperature
PTN DEP 2.0-4	Population distribution exclusion area (site)
PTN DEP 2.5-1	DELETED
PTN DEP 9.3-1	Plant gas system – hydrogen gas portion
PTN DEP 18.8-1	Operations support center location
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A.2 Departures That Require NRC Approval Prior to Implementation

Departure Number	Description
PTN DEP 2.0-1	Operating basis wind speed
PTN DEP 2.0-3	Maximum safety wet bulb (noncoincident) air temperature
PTN DEP 18.8-2	Technical support center location

The following exemptions are being requested in Part B, Turkey Point Units 6 & 7 Exemption Requests, of this report.

B. Turkey Point Units 6 & 7 Exemption Requests

Exemption Number	Description
B.1	Combined License (COL) Application organization and numbering
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A. STD and PTN Departures

This Departure Report includes deviations in the Turkey Point Units 6 & 7 COL Application FSAR from the information in the applicable DCD, pursuant to 10 CFR Part 52, Appendix D, Section VIII and Section X.B.1.

A.1 Departures That Can Be Implemented Without Prior NRC Approval

Departure Number	Description
STD DEP 1.1-1	Administrative departure for organization and numbering for the FSAR sections and subsections
PTN DEP 2.0-2	Maximum normal wet bulb (noncoincident) air temperature
PTN DEP 2.0-4	Population distribution exclusion area (site)
PTN DEP 2.5-1	DELETED
PTN DEP 9.3-1	Plant gas system – hydrogen gas portion
PTN DEP 18.8-1	Operations support center location
PTN DEP 19.58-1	Severe winds and tornadoes

Departure Number: STD DEP 1.1-1

AFFECTED DCD/FSAR SECTIONS:

2.1.1; 2.1.4; 2.2.1; 2.2.4; 2.4.1; 2.4.15; 2.5; 2.5.6; 9.2.11; 9.2.12; 9.2.13; 9.5.1.8; 9.5.1.9; 13.1; 13.1.4; 13.5; 13.5.3; 13.7; 17.5; 17.6; 17.7; 17.8 (Note the affected sections may vary in subsequent COL Applications, but the departure is standard).

SUMMARY OF DEPARTURE:

This FSAR generally follows the AP1000 DCD organization and numbering. Some organization and numbering differences are adopted where necessary to include additional material, such as additional content identified in Regulatory Guide 1.206.

SCOPE/EXTENT OF DEPARTURE:

The renumbered sections associated with this departure are identified in the FSAR (at the sections identified above).

DEPARTURE JUSTIFICATION:

An administrative departure is established to identify instances where the renumbering of FSAR sections is necessary to effectively include content consistent with Regulatory Guide 1.206, as well as NUREG-0800, Standard Review Plan.

DEPARTURE EVALUATION:

This departure is an administrative change that affects only section numbering of the indicated FSAR sections. Accordingly, it does not:

1. Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific DCD.
2. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety and previously evaluated in the plant-specific DCD.
3. Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific DCD.

Departure Number: STD DEP 1.1-1 (continued)

4. Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific DCD.
5. Create a possibility for an accident of a different type than any evaluated previously in the plant-specific DCD.
6. Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific DCD.
7. Result in a design basis limit for a fission product barrier as described in the plant-specific DCD being exceeded or altered.
8. Result in a departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses.

This departure does not affect resolution of a severe accident issue identified in the plant-specific DCD. Therefore, this departure has no safety significance.

NRC APPROVAL REQUIREMENT:

This departure does not require NRC approval pursuant to 10 CFR Part 52, Appendix D, Section VIII.B.5.

This departure requires an exemption from 10 CFR Part 52, Appendix D, Section IV.A.2.a. Therefore, an exemption is requested in Part B of this COL Application part.

Departure Number: PTN DEP 2.0-2

AFFECTED DCD/FSAR SECTIONS:

2.0; 2.3.1.5; 9.2.1.2; 9.2.7.2

SUMMARY OF DEPARTURE:

The DCD site parameter value for the maximum normal air temperature wet bulb (noncoincident) in DCD Tier 2, Table 2-1 is 80.1°F. The corresponding site characteristic value is 81.5°F as reported in FSAR Subsection 2.3.1.5. This site characteristic exceeds the DCD site parameter by 1.4°F.

SCOPE/EXTENT OF DEPARTURE:

The section and subsection associated with this departure are identified in the FSAR (at the section and subsection identified above).

DEPARTURE JUSTIFICATION:

The maximum normal wet bulb (noncoincident) air temperature for Units 6 & 7 is 81.5°F. This is the 0.4 percent annual exceedance value as reported in FSAR Subsection 2.3.1.5. This value is approximately equivalent to the 1 percent seasonal exceedance value, as stated in note (b) of DCD Table 2-1. This temperature exceeds the DCD site parameter of 80.1°F by 1.4°F. Analysis of the maximum normal wet bulb (noncoincident) air temperature for Units 6 & 7 has been performed. The results of this analysis show that the higher site characteristic temperature will not adversely affect any SSCs, their functional capability, or analysis methods as presented in the DCD.

Specifically, the following evaluations were performed with the following results:

- Design Basis Heating Ventilation Air Conditioning Systems Operation

  The increase in wet bulb temperature will impact the standard plant design of the High Capacity Chilled Water System (HCVWS). To accommodate the impact of the higher wet bulb temperature on HVAC margins, the size of the air-cooled chillers in the HCVWS will be increased. The current HCVWS has two 1700-ton water cooled chillers coupled with two 300-ton air-cooled chillers. Replacing the two 300 ton air-cooled chillers with 400 ton air-cooled chillers will maintain adequate HVAC design margins and allow the HCVWS to meet the increased load due to higher wet bulb design basis. There is no impact on the performance of SSCs important to safety or to analysis methods as a result of the increase in maximum normal wet bulb temperature.

Departure Number: PTN DEP 2.0-2 (continued)

- Maximum Spent Fuel Pool Temperatures

  A SFS heat exchanger design will satisfy DCD Spent Fuel Pool temperature requirements taking into account elevated site wet bulb ambient temperatures and elevated CCS temperatures. All spent fuel pool temperature limit criteria are met with ambient wet bulb temperatures as specified for each case identified in the DCD.

- Service Water System (SWS) Maximum Cooling Water Temperature of 88.5°F at Design Peak SWS Heat Duty

  At conservative, yet more realistic best estimate conditions, the SWS demonstrates a capability to deliver water to the CCS heat exchanger at less than 88.5°F and meets the plant cooldown commitments with a maximum normal wet bulb temperature. This meets the acceptance criteria established for this analysis. SWS cold water temperature rises to 89.8°F with peak CCS/SWS heat duty four hours after reactor shutdown (beginning of cooldown), with an ambient wet bulb temperature of 81.5°F.

- Maximum Reactor Coolant System Cooldown Times

  Two cooldown cases have been analyzed:

  Case 1: 1 percent exceedance wet bulb temperature and operation of the blowdown HX.

  Case 2: 1 percent exceedance wet bulb temperature and no credit taken for the operation of the blowdown HX.

  The cooldown capability to 125°F within 96 hours can be met at ambient wet bulb temperature of 81.5°F.

- Turbine Building Closed Cooling Water (TCS) Maximum Temperature Limit of 105°

  The temperature of the TCS cooling water supplied to turbine and generator auxiliaries is lower than 105°F for the maximum ambient wet bulb temperature of 81.5°F. The plant can operate at full output at the maximum normal wet bulb condition without any restriction imposed by turbine or generator auxiliary cooling requirements.

Departure Number: PTN DEP 2.0-2 (continued)

DEPARTURE EVALUATION:

The effect of the site-specific maximum normal wet bulb temperature of 81.5°F (noncoincident) versus the DCD value of 80.1°F on SSCs important to safety or analyses described in the DCD was evaluated. The change to maximum normal wet bulb temperature does not affect the function of any SSCs important to safety or analysis methods as presented in the DCD. The following summarizes the evaluation:

1. Increase HCVWS chiller refrigeration tonnage by 100 tons (total 2100 tons per train) by increasing the capacity of the air-cooled HCVWS chillers to 400 tons. No change to Low Capacity Chilled Water chiller tonnage is required.
2. All spent fuel pool temperature limit criteria are met with ambient wet bulb temperatures as specified for each case identified in the DCD.
3. SWS cold water temperature increases to 89.8°F with peak CCS/SWS heat duty four hours after reactor shutdown (beginning of cooldown) with ambient wet bulb temperature of 81.5°F. With a conservative realistic design basis the SWS cold water temperature remains at or below 88.5°F with CCS/SWS heat duty at four hours after reactor shutdown (beginning of cooldown) and an ambient wet bulb temperature of 81.5°F.
4. The cooldown capability to 125°F within 96 hours can be met at ambient wet bulb temperature of 81.5°F.
5. TCS supply temperature remains below 105°F for all ambient wet bulb conditions, including the maximum normal value of 81.5°F.

Therefore, this departure does not:

1. Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific DCD.
2. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety and previously evaluated in the plant-specific DCD.
3. Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific DCD.
4. Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific DCD.

Departure Number: PTN DEP 2.0-2 (continued)

5. Create a possibility for an accident of a different type than any evaluated previously in the plant-specific DCD.
6. Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific DCD.
7. Result in a design basis limit for a fission product barrier as described in the plant-specific DCD being exceeded or altered.
8. Result in a departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses.

This departure does not affect resolution of a severe accident issue identified in the plant-specific DCD. Therefore, this departure has no safety significance.

NRC APPROVAL REQUIREMENT:

This departure does not require NRC approval pursuant to 10 CFR Part 52, Appendix D, Section VIII.B.5.

Departure Number: PTN DEP 2.0-4

AFFECTED DCD/FSAR SECTIONS:

2.0; 2.1.2; 2.3.4.2

SUMMARY OF DEPARTURE:

DCD Table 2-1 lists a site parameter for the population distribution exclusion area (site) of 0.5 miles. The distance from the Units 6 & 7 source boundary to the exclusion area boundary (EAB) and the atmospheric dispersion value (X/Q) at the EAB are listed in the following table:

Sector	Distance to EAB (feet)	Distance to EAB (miles)	X/Q (sec/m^3) 0-2 Hours
S	2756	0.52	2.51E-04
SSW	2687	0.51	1.03E-04
SW	2375	0.45	1.25E-04
WSW	2559	0.49	1.17E-04
W	2566	0.49	1.38E-04
WNW	2589	0.49	1.33E-04
NW	2513	0.48	1.39E-04
NNW	2516	0.48	1.18E-04
N	2516	0.48	1.10E-04
NNE	2516	0.48	1.23E-04
NE	1427	0.27	3.54E-04
ENE	1503	0.29	3.26E-04
E	1572	0.30	3.92E-04
ESE	1932	0.37	3.51E-04
SE	1923	0.37	4.19E-04
SSE	2782	0.53	3.04E-04

All sector distances, except for S, SSW, and SSE sectors, are less than the 0.5 mile site parameter, with the minimum being 0.27 miles in the northeast sector.

Departure Number: PTN DEP 2.0-4 (continued)

SCOPE/EXTENT OF DEPARTURE:

The section and subsection associated with this departure is identified in the FSAR (at the section and subsection identified above).

DEPARTURE JUSTIFICATION:

DCD Table 2-1 lists the site parameter for the X/Q at the site boundary (0 – 2 hr) to be ≤ 5.1E-04 sec/m^3. Note (e) to this table states that the terms "site boundary" and "exclusion area boundary" are used interchangeably in the DCD. Therefore, this X/Q site parameter applies to the exclusion area boundary and is the limiting parameter, not distance. As listed in the above table, all the X/Q values in all the sectors are below the 5.1E-04 sec/m^3 DCD site parameter limit for X/Q.

DEPARTURE EVALUATION:

This departure does not affect the design or function of any SSCs. Therefore, this departure does not:

1. Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific DCD.
2. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety and previously evaluated in the plant-specific DCD.
3. Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific DCD.
4. Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific DCD.
5. Create a possibility for an accident of a different type than any evaluated previously in the plant-specific DCD.
6. Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific DCD.
7. Result in a design basis limit for a fission product barrier as described in the plant-specific DCD being exceeded or altered.

Departure Number: PTN DEP 2.0-4 (continued)

8. Result in a departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses.

This departure does not affect resolution of a severe accident issue identified in the plant-specific DCD. Therefore, this departure has no safety significance.

NRC APPROVAL REQUIREMENT:

This departure does not require NRC approval pursuant to 10 CFR Part 52, Appendix D, Section VIII.B.5.

Departure Number: PTN DEP 2.5-1

DELETED

Departure Number: PTN DEP 9.3-1

AFFECTED DCD/FSAR SECTIONS:

9.3.2.2, 9.3.2.5

SUMMARY OF DEPARTURE:

DCD Subsection 9.3.2.2.1 describes the hydrogen gas portion of the plant gas system as a packaged system consisting of a liquid hydrogen storage tank and vaporizers. Units 6 & 7 will use a series of hydrogen storage banks that store hydrogen gas in banks of storage tubes instead of the liquid hydrogen storage tank and vaporizers. The hydrogen gas storage banks will be located at the hydrogen storage tank area.

SCOPE/EXTENT OF DEPARTURE:

The subsections associated with this departure are identified in the FSAR (at the subsections identified above).

DEPARTURE JUSTIFICATION:

To be consistent with the operating practice at Turkey Point Units 3 & 4, the hydrogen portion of the plant gas system at Units 6 & 7 will be supplied from a series of hydrogen gas storage banks. The change from a liquid hydrogen storage tank and vaporizers to hydrogen gas storage banks affects only the source of hydrogen for the plant gas system. The plant gas system serves no safety-related function and has no nuclear safety design basis.

Toxicity, flammability, and explosion analyses have been performed. These analyses use a series of up to 40,000 standard cubic foot hydrogen banks of gaseous hydrogen placed 560 feet east of the Unit 6 control room. The cumulative volume of hydrogen gas contained in the banks would be equivalent to 1500 gallons of liquid hydrogen. The results of these analyses show no adverse effects on the safe operation or shutdown of Units 6 & 7, as described in FSAR Section 2.2.

DEPARTURE EVALUATION:

The supply of gaseous hydrogen directly from banks of storage tubes is functionally equivalent to the supply of gaseous hydrogen via the process of vaporizing liquid hydrogen into a gas to then be distributed to the plant. The gas hydrogen banks will be located on a gas pad far enough from the nuclear island so as not to require a change in a SSC. Storing hydrogen in compressed gas cylinders is a proven technology and is used at most operating nuclear plants.

Departure Number: PTN DEP 9.3-1 (continued)

Therefore, this departure does not:

1. Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific DCD.
2. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety and previously evaluated in the plant-specific DCD.
3. Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific DCD.
4. Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific DCD.
5. Create a possibility for an accident of a different type than any evaluated previously in the plant-specific DCD.
6. Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific DCD.
7. Result in a design basis limit for a fission product barrier as described in the plant-specific DCD being exceeded or altered.
8. Result in a departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses.

This departure does not affect resolution of a severe accident issue identified in the plant-specific DCD. Therefore, this departure has no safety significance.

NRC APPROVAL REQUIREMENT:

This departure does not require NRC approval pursuant to 10 CFR Part 52, Appendix D, Section VIII.B.5.

Departure Number: PTN DEP 18.8-1

AFFECTED DCD/FSAR SECTIONS:

1.2.3; 9.4.2.2; 9A; 12.3.1.2; 12.5.2.2; 12.5.3.2; 18.8.3.6

SUMMARY OF DEPARTURE:

The Operations Support Center (OSC) is being moved from the location identified in DCD Subsections 18.8.3.6, 12.5.2.2, and 12.5.3.2 and as identified on DCD figures in Subsections 1.2, 12.3, and Appendix 9A. There will be a single OSC for Units 6 & 7 located as described in the Emergency Plan.

SCOPE/EXTENT OF DEPARTURE:

The sections and subsections associated with this departure are identified in the FSAR (at the sections and subsections identified above).

DEPARTURE JUSTIFICATION:

The referenced DCD states, "The ALARA briefing and operations support center is located off the main corridor immediately beyond the main entry to the annex building," and indicates that the OSC location is identified on Figure 1.2-18. For Units 6 & 7, the OSC is being moved, as described in the Emergency Plan, and one OSC will serve both Units 6 & 7 to optimize use of space and operational resources.

DEPARTURE EVALUATION:

This departure is for a non-safety-related system, and the alternate location of the OSC meets applicable requirements. Relocating the OSC does not adversely affect its function and therefore this departure does not:

1. Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific DCD.
2. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety and previously evaluated in the plant-specific DCD.
3. Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific DCD.
4. Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific DCD.

Departure Number: PTN DEP 18.8-1 (continued)

5. Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific DCD.
6. Create a possibility for an accident of a different type than any evaluated previously in the plant-specific DCD.
7. Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific DCD.
8. Result in a design basis limit for a fission product barrier as described in the plant-specific DCD being exceeded or altered.
9. Result in a departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses.

This departure does not affect resolution of a severe accident issue identified in the plant-specific DCD. Therefore, this departure has no safety significance.

NRC APPROVAL REQUIREMENT:

This departure does not require NRC approval pursuant to 10 CFR Part 52, Appendix D, Section VIII.B.5.

Departure Number: PTN DEP 19.58-1

AFFECTED DCD/FSAR SECTIONS:

19.58

SUMMARY OF DEPARTURE:

As shown in Table 19.58-201, the initiating event frequency for high winds at Units 6 & 7 are higher than those in the DCD. Therefore, a site-specific analysis of high winds and tornadoes was conducted to determine core damage frequency (CDF). The analysis determined the total CDF for Case 1 (loss of offsite power) is 3.3E-09, the CDF for Case 2 (loss of offsite power with non-safety systems unavailable for select events) is 1.0E-08, and for Case 3 (loss of offsite power with non-safety systems unavailable for all events) the CDF is 2.0E-08 per year. These values are higher than the DCD CDF values listed in DCD Table 19.58-3.

SCOPE/EXTENT OF DEPARTURE:

The section associated with this departure is identified in the FSAR (at the section identified above).

DEPARTURE JUSTIFICATION:

The site-specific high winds and tornadoes analysis consists of three case studies, with Case 2 (loss of offsite power with non-safety systems unavailable for select events) considered to be the representative conservative model. Case 1 (loss of offsite power) and Case 3 (loss of offsite power with non-safety systems unavailable for all events) of the analysis are treated as sensitivity studies, with Case 3 being a very conservative scenario. The actual non-safety structures are designed to the Uniform Building Code and offer a degree of robustness such that the failure of all such systems in all events is considered extreme and conservative.

The site-specific CDF for Case 1 is 3.3E-09 per year and Case 2 is 1.0E-08 per year. These both meet the CDF screening criteria of 1.0E-08 per year as described in Westinghouse Technical Report APP-GW-GLR-101, “AP1000 Probabilistic Risk Assessment Site-Specific Considerations,” Revision 1, Section 3.0, High Winds Evaluation. Case 3 is slightly above the DCD value of 1.38E-08, the result is considered very conservative for the reasons stated above. Therefore, a further detailed PRA for Units 6 & 7 high winds and tornadoes is not necessary. The complete discussion of the site-specific high winds and tornadoes analysis is provided in FSAR Section 19.58.

Departure Number: PTN DEP 19.58-1 (continued)

DEPARTURE EVALUATION:

As reported in FSAR Section 19.58, the CDF for Case 2 of the high winds hazard evaluation is not greater than the 1.0E-08 per year screening criteria. Consequently, further detailed PRA is not necessary for the Units 6 & 7 High Winds and Tornado analysis.

Therefore, this departure does not:

1. Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific DCD.
2. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety and previously evaluated in the plant-specific DCD.
3. Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific DCD.
4. Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific DCD.
5. Create a possibility for an accident of a different type than any evaluated previously in the plant-specific DCD.
6. Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific DCD.
7. Result in a design basis limit for a fission product barrier as described in the plant-specific DCD being exceeded or altered.
8. Result in a departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses.

This departure does not affect resolution of a severe accident issue identified in the plant-specific DCD. Therefore, this departure has no safety significance.

NRC APPROVAL REQUIREMENT:

This departure does not require NRC approval pursuant to 10 CFR Part 52, Appendix D, Section VIII.B.5.

A.2 Departures That Require NRC Approval Prior to Implementation

Departure Number	Description
PTN DEP 2.0-1	Operating basis wind speed
PTN DEP 2.0-3	Maximum safety wet bulb (noncoincident) air temperature
PTN DEP 18.8-2	Technical support center location

Departure Number: PTN DEP 2.0-1

AFFECTED DCD/FSAR SECTIONS:

2.0; 2.3.1.3.1; 3.3.1.1; 3.3.3; 3H3.3

SUMMARY OF DEPARTURE:

The DCD site parameter value for operating basis wind speed in DCD Tier 2, Table 2-1 is 145 miles per hour. In DCD Appendix 3H, the operating basis wind speed is a Tier 2* value. The corresponding site characteristic is the 50-year return period, 3-second gust wind speed of 150 miles per hour as reported in FSAR Subsection 2.3.1.3.1. This site characteristic exceeds the DCD site parameter by 5 miles per hour.

SCOPE/EXTENT OF DEPARTURE:

The sections and subsections associated with this departure are identified in the FSAR (at the sections and subsections identified above).

DEPARTURE JUSTIFICATION:

The 50-year return, 3-second gust wind speed for Units 6 & 7 is 150 miles per hour. This wind speed exceeds the DCD site parameter of 145 miles per hour by 5 miles per hour. Analysis of the site characteristic wind speed has been performed and it has been concluded that the increase in wind design speed will not impact the AP1000 design. The safety related structures that are affected by the increase in wind speed are the Auxiliary Building and Shield Building of the Nuclear Island. There are no other safety related SSCs exposed to the wind speeds evaluated. The results of this analysis show that the higher wind speed will not adversely affect any safety-related SSCs.

DEPARTURE EVALUATION:

The wind load does not control the design for the Nuclear Island structures. The Auxiliary Building wall and roof structure design is controlled by tornado, seismic, and accident pressure/ temperature. The Shield Building design is controlled by the seismic loads.

From this evaluation, it has been concluded:

1. The Auxiliary Building external walls and roof design is not controlled by the wind load, and an increase of wind speed from 145 mph to 150 mph will not require a redesign of the building.

Departure Number: PTN DEP 2.0-1 (continued)

2. The Shield Building design is not controlled by the wind load, and an increase of wind speed from 145 mph to 150 mph will not require a redesign of the building.

Therefore, this departure does not:

1. Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific DCD.
2. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety and previously evaluated in the plant-specific DCD.
3. Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific DCD.
4. Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific DCD.
5. Create a possibility for an accident of a different type than any evaluated previously in the plant-specific DCD.
6. Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific DCD.
7. Result in a design basis limit for a fission product barrier as described in the plant-specific DCD being exceeded or altered.
8. Result in a departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses.

This departure does not affect resolution of a severe accident issue identified in the plant-specific DCD. Therefore, this departure has no safety significance.

NRC APPROVAL REQUIREMENT:

This departure requires NRC approval pursuant to 10 CFR Part 52, Appendix D, Section VIII.B.6.

Departure Number: PTN DEP 2.0-3

AFFECTED DCD/FSAR SECTIONS:

2.0; 2.3.1.5; 5.4.7.1; 9.2.2.1

SUMMARY OF DEPARTURE:

The site parameter value provided in DCD Tier 1, Table 5.0-1 for the air temperature maximum wet bulb (noncoincident) is 86.1°F. This site parameter value is listed as the maximum safety wet bulb (noncoincident) air temperature in DCD Tier 2, Table 2-1. The corresponding site characteristic value is 87.4°F as reported in FSAR Subsection 2.3.1.5. This site characteristic exceeds the DCD site parameter by 1.3°F.

SCOPE/EXTENT OF DEPARTURE:

The sections and subsections associated with this departure are identified in the FSAR (at the sections and subsections identified above).

DEPARTURE JUSTIFICATION:

The maximum safety wet bulb (noncoincident) air temperature is 87.4°F. This is the 100-year return estimate of 2-hour duration as reported in FSAR Subsection 2.3.1.5. This temperature exceeds the DCD site parameter of 86.1°F by 1.3°F. Analysis of the maximum safety wet bulb (noncoincident) air temperature has been performed. The results of this analysis show that the higher maximum safety wet bulb (noncoincident) air temperature will not adversely affect any safety-related SSCs, their functional capabilities or analysis methods as presented in the DCD.

Specifically, the following evaluations were performed with the following results:

- Containment Pressure Design Limit Evaluation

  There is no change in maximum containment pressure value reported in the DCD as a result of increasing the maximum safety noncoincident wet bulb temperature to 87.4°F.

- IRWST Temperature Control with Normal Residual Heat Removal System (RNS)

  The IRWST does not steam with RNS cooling initiated two hours after loss of high pressure heat removal and PRHR actuation, with the safety noncoincident wet bulb at or below 87.4°F.

Departure Number: PTN DEP 2.0-3 (continued)

- Component Cooling Water System (CCS) Maximum Temperature <100°F During Power Operation

  At the maximum safety noncoincident wet-bulb temperature, the Service Water System and CCS must maintain a CCS supply temperature of less than 100°F for all cooled loads at full power operating conditions. The CCS temperature remains below 100°F with the safety noncoincident wet bulb temperature at or below 87.4°F.

- Nuclear Island Nonradioactive Ventilation System (VBS) Capability

  The evaluation shows that the increase in the safety noncoincident wet bulb temperature will not impact the standard plant design of the Low Capacity Chilled Water System (LCVWS). With the increased heat loads resulting from the higher maximum safety wet bulb temperature, the LCVWS maintains the VBS's capability to maintain the main control room, and 1E electrical rooms below 75°F with a single train of VBS and the Chilled Water System in service. No change to LCVWS chiller capacity or the VBS capacity is required with the safety noncoincident wet bulb at or below 87.4°F.

DEPARTURE EVALUATION:

The effect of the site-specific maximum safety wet bulb (noncoincident) air temperature of 87.4°F was evaluated. The results of this evaluation determined that the Unit 6 & 7 site-specific value does not affect any SSC design function or analysis methods as presented in the DCD. The following summarizes the evaluation:

- There is no change in maximum containment pressure value reported in the DCD as a result of increasing the maximum safety noncoincident wet bulb temperature to 87.4°F.

- IRWST does not steam with RNS cooling initiated two hours after loss of high pressure heat removal and Passive Residual Heat Removal (PRHR) actuation, with maximum safety noncoincident wet bulb of 87.4°F.

- The CCS temperature remains below 100°F with a maximum safety noncoincident wet bulb temperature of 87.4°F.

- No change to LCCW chiller capacity required due to the increase in the maximum safety wet bulb temperature.

Departure Number: PTN DEP 2.0-3 (continued)

Therefore, this departure does not:

1. Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific DCD.
2. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety and previously evaluated in the plant-specific DCD.
3. Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific DCD.
4. Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific DCD.
5. Create a possibility for an accident of a different type than any evaluated previously in the plant-specific DCD.
6. Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific DCD.
7. Result in a design basis limit for a fission product barrier as described in the plant-specific DCD being exceeded or altered.
8. Result in a departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses.

This departure does not affect resolution of a severe accident issue identified in the plant-specific DCD. Therefore, this departure has no safety significance.

NRC APPROVAL REQUIREMENT:

This departure requires an exemption from the requirements of 10 CFR Part 52, Appendix D, Section IV.A.2.d, which requires information demonstrating compliance with the site parameters and interface requirements. Therefore, an exemption is requested in Part B of this COL Application part.

Departure Number: PTN DEP 18.8-2

AFFECTED DCD/FSAR SECTIONS:

18.8.3.5

SUMMARY OF DEPARTURE:

The Technical Support Center (TSC) is not located in the control support area as identified in DCD Subsection 18.8.3.5. The TSC is common for Turkey Point Units 3, 4, 6, and 7 and is located as described in the Emergency Plan.

SCOPE/EXTENT OF DEPARTURE:

The subsection associated with this departure is identified in the FSAR (at the subsection identified above).

DEPARTURE JUSTIFICATION:

The referenced DCD states, "The TSC is located in the control support area (CSA)." This is not the case for Units 6 & 7. The TSC location is moved to a central location as identified in the Emergency Plan, such that a single TSC can serve Units 3, 4, 6, and 7 to optimize use of space and operational resources.

DEPARTURE EVALUATION:

This departure is for a non-safety-related system, and the alternate location of the TSC meets applicable requirements. Relocating the TSC does not adversely affect its function and therefore this departure does not:

1. Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific DCD.
2. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety and previously evaluated in the plant-specific DCD.
3. Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific DCD.
4. Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific DCD.

Departure Number: PTN DEP 18.8-2 (continued)

5. Create a possibility for an accident of a different type than any evaluated previously in the plant-specific DCD.
6. Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific DCD.
7. Result in a design basis limit for a fission product barrier as described in the plant-specific DCD being exceeded or altered.
8. Result in a departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses.

This departure does not affect resolution of a severe accident issue identified in the plant-specific DCD. Therefore, this departure has no safety significance.

NRC APPROVAL REQUIREMENT:

This departure requires prior NRC approval pursuant to 10 CFR Part 52, Appendix D, Section VIII.B.6.

B. Turkey Point Units 6 & 7 Exemption Requests

FPL requests the following exemptions:

Exemption Number	Description
B.1	Combined License (COL) Application organization and numbering
B.2	Maximum safety wet bulb (noncoincident) air temperature
B.3	Mitigative Strategies Report

Discussion and justification for each of these requests is provided in the following pages.

B.1) COMBINED LICENSE (COL) APPLICATION ORGANIZATION AND NUMBERING (PART 52, APPENDIX D)

Applicable Regulation(s): 10 CFR Part 52, Appendix D, Section IV.A.2.a

Specific wording from which exemption is requested:

"IV. Additional Requirements and Restrictions

A. An applicant for a combined license that wishes to reference this appendix shall, in addition to complying with the requirements of 10 CFR 52.77, 52.79, and 52.80, comply with the following requirements:

1. Incorporate by reference, as part of its application, this appendix.

2. Include, as part of its application:

a. A plant-specific DCD containing the same type of information and using the same organization and numbering as the generic DCD for the AP1000 design, as modified and supplemented by the applicant's exemptions and departures;"

Pursuant to 10 CFR 52.7 and 52.93, FPL requests an exemption from the requirement of 10 CFR 52, Appendix D, Section IV.A.2.a, to include a plant-specific DCD "containing the same type of information and using the same organization and numbering as the generic DCD for the AP1000 design…" While the Turkey Point Units 6 & 7 plant specific DCD does contain the same type of information and generally follows the same organization and numbering as the generic DCD for the AP1000 design, some limited sections and subsections of the FSAR (as identified in the departures report as item STD DEP 1.1-1) do not follow the "same organization and numbering as the generic DCD for the AP1000 design." FPL proposes to provide the plant-specific DCD (i.e., FSAR) with some administrative revisions to the organization and numbering of the AP1000 DCD.

Discussion:

The AP1000 DCD generally has an organization and numbering format that provides text by subject in general conformance with the Standard Review Plans (SRPs) in effect at the time the DCD was written. Generally, COL information items are included at the end of a chapter, section, or subsection. In some cases, such as DCD Sections 2.1 and 2.2, the section may consist solely of a short description of topic and the COL information item subsection. This organization and numbering does not allow for the detailed discussion of these topics that is to be included in a complete FSAR section. As such, it is necessary to include numerous additional sections and subsections to fully address the topic as identified in the guidance of RG 1.206 and the applicable SRP. In other cases, the organization and numbering must be modified slightly to allow for

inclusion of plant-specific discussions within the appropriate section of the FSAR, such as including an additional water system description in Section 9.2. In these cases, the COL information item discussions are retained at the end of the DCD corresponding chapter, section, or subsection (to maintain the organization), but the numbering may be different.

These differences are well identified in the FSAR as STD DEP 1.1-1 at each location where the departure is taken and are considered to be purely administrative to support a logical construction of the document. Where the departure from the DCD organization and numbering is taken, the revised organization and numbering generally follows the guidance provided in RG 1.206 and the applicable SRP. As such, there are no significant departures from the expected organization and numbering of a typical FSAR, and the information is readily identifiable to facilitate NRC review.

In view of the above, we believe that it would be inconsistent with the purpose of the rule for both FPL and the NRC to fully comply with the regulation of 10 CFR Part 52, Appendix D, Section IV.A.2.a, which requires strict adherence to the "same organization and numbering as the generic DCD for the AP1000 design." Accordingly, FPL hereby submits a request for an exemption from the regulations of 10 CFR 52, Appendix D, Section IV.A.2.a, pursuant to 10 CFR 52.7, "Specific Exemptions," and 10 CFR 52.93, "Exemptions and Variances."

Granting this request, which is authorized by law, would facilitate the NRC review of the Units 6 & 7 COL Application. For this and other reasons, granting this exemption request will not present an undue risk to the public health and safety, and is consistent with the common defense and security.

Moreover, compliance with the current rule would cause undue hardship for FPL and would also be inefficient and burdensome for the NRC staff. That approach would require FPL to prepare, and NRC to review, information with an organization and numbering that is unfamiliar and inconsistent with the current guidance for format and content of a COL Application.

Additionally, compliance with Appendix D, Section IV.A.2.a, is not necessary to achieve its underlying purpose. Most of the FSAR conforms to the organization and numbering of the referenced DCD. The exceptions are limited and do not lead to confusion regarding the incorporation of the DCD into the FSAR.

For these reasons, FPL requests approval of the requested exemption from current regulations of 10 CFR 52, Appendix D, Section IV.A.2.a, as identified herein and in the application departures report.

B.2) MAXIMUM SAFETY WET BULB (NONCOINCIDENT) AIR TEMPERATURE (PART 52, APPENDIX D)

Applicable Regulation(s): 10 CFR Part 52, Appendix D, Section IV.A.2.d

Specific wording from which exemption is requested:

"IV. Additional Requirements and Restrictions

A. An applicant for a combined license that wishes to reference this appendix shall, in addition to complying with the requirements of 10 CFR 52.77, 52.79, and 52.80, comply with the following requirements:

1. Incorporate by reference, as part of its application, this appendix.

2. Include, as part of its application:

a. A plant-specific DCD containing the same type of information and using the same organization and numbering as the generic DCD for the AP1000 design, as modified and supplemented by the applicant's exemptions and departures;

b. The reports on departures from and updates to the plant-specific DCD required by paragraph X.B of this appendix;

c. Plant-specific TS, consisting of the generic and site-specific TS that are required by 10 CFR 50.36 and 50.36a;

d. Information demonstrating compliance with the site parameters and interface requirements;"

Pursuant to 10 CFR 52.7 and 52.93, FPL requests an exemption from the requirement of 10 CFR 52, Appendix D, Section IV.A.2.d, to include "information demonstrating compliance with the site parameters and interface requirements."

Discussion:

The site parameter value provided in DCD Tier 1, Table 5.0-1 for the air temperature maximum wet bulb (noncoincident) is 86.1°F. This site parameter value is listed as the maximum safety wet bulb (noncoincident) air temperature in DCD Tier 2, Table 2-1.The site characteristic for the maximum safety wet bulb (noncoincident) air temperature for Units 6 & 7 is 87.4°F. This is the 100-year return estimate of 2-hour duration as reported in FSAR Subsection 2.3.1.5. This temperature exceeds the DCD site parameter of 86.1°F by 1.3°F.

Analysis of the maximum safety wet bulb (noncoincident) air temperature of 87.4°F for Units 6 & 7 has been performed. The results of this analysis show that the higher maximum safety wet bulb (noncoincident) air temperature will not adversely affect any safety-related structures, systems or components.

Conclusion:

This exemption request was evaluated in accordance with Section VIII.A.4 of the design certification rule which requires that 1) the change will not result in a significant decrease in the level of safety otherwise provided by the design; 2) the exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security; 3) special circumstances are present as specified in 10 CFR 50.12(a)(2); and 4) the special circumstances outweigh any decrease in safety that may result from the reduction in standardization caused by the exemption. As shown below, each of these four criteria are satisfied.

(1) As described above, the exemption does not have an adverse impact on the AP1000 Standard Plant design and therefore will not result in a significant decrease in the level of safety otherwise provided by the design.

(2) The exemption is not inconsistent with the Atomic Energy Act or any other statute and therefore is authorized by law. As discussed above, the exemption does not have an adverse impact on the AP1000 Standard Plant design and therefore will not present an undue risk to the public health and safety. The exemption does not relate to security and does not otherwise pertain to the common defense and security.

(3) Special circumstances are present as specified in 10 CFR 50.12(a)(2). Specifically, application of 10 CFR 52, Appendix D, Section IV.A.2.d and the site parameters in Tier 1 of the DCD are not necessary to achieve the underlying purpose of the rules. The analysis described above shows that the increase in the maximum safety temperature does not affect the AP1000 Standard Plant design. Consequently, granting relief from the maximum safety air temperature in the DCD would maintain the level of safety in the design, which is the underlying purpose of the rule.

(4) The special circumstances outweigh any decrease in safety that may result from the reduction in standardization (due to the increase in the maximum safety temperature) caused by the exemption. Specifically, the exemption does not change the AP1000 Standard Plant design and does not affect the configuration of the plant or the manner in which the plant is operated.

As demonstrated above, this exemption request complies with the requirements in Section VIII.A.4 of the design certification rule for the AP1000. Therefore, the exemption also satisfies the requirements in 10 CFR 52.7 for an exemption from 10 CFR 52, Appendix D, Section IV.A.2.d,

since the criteria in 10 CFR 52.7 are a subset of the criteria in Section VIII.A.4 of the design certification rule for the AP1000.

B.3) MITIGATIVE STRATEGIES REPORT

Applicable Regulation: 10 CFR 52.80(d)

Specific wording from which an exemption is requested:

> "(d) A description and plans for implementation of the guidance and strategies intended to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities under the circumstances associated with the loss of large areas of the plant due to explosions or fire as required by 50.54(hh)(2) of this chapter."

Pursuant to 10 CFR 52.7 and 52.93, FPL requests an exemption from the effective date of the NRC's recently promulgated security rule with respect to requirements in the rule for information to be included in a COL Application, specifically: the requirement of 10 CFR 52.80(d) to provide a "description and plans for implementation of the guidance and strategies intended to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities under the circumstances associated with the loss of large areas of the plant due to explosions or fire." FPL proposes to provide this information within 180 days after issuance of NRC-approved implementation guidance.

Discussion:

The NRC promulgated amendments to NRC power reactor security regulations as a Final Rule on March 27, 2009. The new rule became effective on May 26, 2009, but compliance with the rule is not generally required for currently operating plants until March 31, 2010.

New Section 50.54(hh)(2) requires licensees to develop guidance and strategies for addressing the loss of large areas of the plant due to explosions or fires from a beyond-design basis event through the use of readily available resources and identification of potential practicable areas for the use of beyond-readily-available resources. New Section 52.80(d) requires COL applicants to submit a description of and plans for implementation of the guidance and strategies required by new Section 50.54(hh)(2) ("Mitigative Strategies Report"). Applicants that have already submitted COL Applications are required to amend their applications to provide a mitigative strategies report, but the rule provides no timeframe for such amendments.

FPL hereby submits a request for an exemption from the effective date of the requirements of 10 CFR 52.80(d), pursuant to 10 CFR 52.93, "Exemptions and Variances" and 10 CFR 52.7, "Specific Exemptions." Specifically, FPL proposes an exemption that would allow it to submit its mitigative strategies report within 180 days after issuance of NRC-approved implementation guidance. FPL will continue to monitor the progress of final NRC-approved implementation guidance.

In a November 21, 2008 letter to the NRC, FPL reported a planned COL Application submittal date of June 30, 2009. FPL recognizes that applicant schedule information is necessary for NRC scheduling and planning purposes. However, immediate implementation of the recently promulgated security rule would lead to an unnecessary delay of the submittal of FPL's application, which would cause corresponding delays to the NRC's scheduled review. In addition, requiring the provision of this information at this time would be inconsistent with the NRC's design-centered review approach (DCRA). As the NRC stated in RIS-2007-08, in order for the DCRA to be fully effective, it is paramount that applicants achieve a consistent level of standardization. FPL cannot achieve the level of standardization sought by the NRC without an opportunity to review a reference COL Application (R-COLA) as well as the approved NRC implementation guidance prior to the submittal of the FPL COL Application.

Granting this request, which is authorized by law, would allow FPL to present the information in a manner consistent with planned NRC guidance and with the R-COLA and would align the FPL review schedule and process with that of other recent COL applicants, none of whom included this information with their initial applications.

The requested exemption does not relieve FPL of its obligation to provide the information required by 10 CFR 52.80(d). In fact, the requested exemption assures that the information required by the new rules will be provided upon receipt, review and careful consideration of needed guidance from the NRC Staff. Accordingly, the request for relief from the rule's effective date does not create any safety issues as it merely defers submittal of the information required by the new rule. For this reason, granting this exemption request will not present an undue risk to the public health and safety, and is consistent with the common defense and security (10 CFR 50.12(a)(1)).

In addition to the NRC scheduling and review concerns discussed above, “special circumstances” are present, as defined in 10 CFR 50.12, which warrant an exemption from the effective date of the rule. Specifically, this exemption would only provide temporary relief from the applicable regulations and FPL will fully comply with the regulations following issuance of draft NRC guidance (10 CFR 50.12(a)(2)(v)). In addition, application of the May 26, 2009 effective date of the new rule with respect to FPL's application for Units 6 & 7 is not necessary to achieve its underlying purpose (10 CFR 50.12(a)(2)(ii)). The underlying purpose of the regulation is to provide the NRC Staff with the information necessary to perform its safety review. This purpose can be satisfied by FPL's submittal of the information following the publication of NRC guidance and prior to the completion of the NRC's safety review and issuance of the requested COL.

For these reasons, FPL requests an exemption from the May 26, 2009 effective date of the new security rule with respect to the 10 CFR 52.80(d) requirement to submit a mitigative strategies report with its COL Application. FPL will submit its mitigative strategies report within 180 days after issuance of final NRC-approved implementation guidance on these requirements.