PMTurkeyCOLPEm Resource

From: Comar, Manny
Sent: Wednesday, November 20, 2013 3:34 PM
To: Franzone, Steve (Steve.Franzone@fpl.com)
Cc: TurkeyCOL Resource
Subject: FW: Update of TP Units 6&7 DWI Preliminary Staff Comments on FPL Aug. 9 2013 Partial Response to NRC RAI Letter No. 72
Attachments: Joint SER EIS Staff Comments Update on FPL TP 67 Response to RAI on DWI October 24 2013.docx

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From: Dehmel, Jean-Claude
Sent: Monday, October 28, 2013 11:27 AM
To: Barnhurst, Daniel; Giacinto, Joseph; Palmrose, Donald; Williamson, Alicia; Hinson, Charles; Cady, Ralph; Sweat, Tarico; Bland, Stewart
Cc: McCoppin, Michael; Comar, Manny; Harper, Richard; Weisman, Robert
Subject: Update of TP Units 6&7 DWI Preliminary Staff Comments on FPL Aug. 9 2013 Partial Response to NRC RAI Letter No. 72

All…

As a follow-up to the Sept. 23 staff meeting on the acceptability of FPL's response to the DWI RAI, I have updated the staff's listing of preliminary comments (attached) using staff input obtained to date from SER and EIS technical branches and RES and OGC. Some of the prior items were deleted, combined, and clarified for technical and regulatory purposes. Also, I have inserted new text, with OGC input, addressing the need for the applicant to include sufficient information in the FSAR to support an SER conclusion of reasonable assurance of compliance with NRC regulations and commitments to NRC and industry guidance.

This punch is still preliminary because the applicant is providing responses to this RAI question in two parts. The first set of responses to Questions 11.02-6-5 to 11.02-6-11 was submitted on Aug. 9, 2013, and responses to RAI Questions 11.02-6-1 to 11.02-6-4 are expected in late November 2013. Moreover, the applicant has proposed to revise numerous FSAR sections but has not included in its response any of the proposed mark-ups of the FSAR. Accordingly, the staff cannot assess the adequacy of any proposed revisions to these sections at this time. This part of the evaluation will be completed once the applicant submits this information and all other outstanding responses and we review it in a complete technical and regulatory context.

Accordingly, given further staff reviews and discussions on the remaining responses, some of the comments noted here may not necessarily become supplemental RAIs or may be integrated as other RAI categories, e.g., geo-hydrology, health physics, regulatory, and BOP system design. The approach that will be used to assemble and integrate supplemental RAIs will be addressed jointly later by the staff.

At this time, I recommend that DNRL AP1000 Project provide these preliminary staff observations to FPL (with DNRL to determine method) given that there may be enough time for the applicant to consider some/all of these preliminary concerns into the next submission, now expected in late November.

Regards, Jean-Claude...
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Joint SER & EIS Staff Comments and Observations
on
FPL Response to NRC RAI Letter No. 72, eRAI 6985, Questions 11.02-6-5 to 11.02-6-11

The applicant is providing responses to this RAI question in two parts. The first set of responses to Questions 11.02-6-5 to 11.02-6-11 was submitted on Aug. 9, 2013. Responses to RAI Questions 11.02-6-1 to 11.02-6-4 are expected in late November 2013. The following presents preliminary comments and observations upon reviewing the applicant's response in the context of SRP Chapter 11 review topics. Given further staff reviews and discussions on the remaining responses, some of the comments noted here may not necessarily become supplemental RAIs or may be integrated into other RAIs. The approach that will be used to assemble and integrate supplemental RAIs will be addressed jointly later by the staff.

I. Question 11.02-6-5

1. p.8 of 15, Deep injection wells

    a. The description of the pressure test acceptance criteria is not the same as that described later on p.12 of 15. It does not refer to the time duration (1 hr) and allowable fluctuation (5%). The applicant is requested to review and address this inconsistency.

2. p.12 of 15, Post construction testing of wells

    a. The description of how the radioactive tracer is injected and the placement and relocation of the tracer tool and conduct of gamma log is confusing as to the meaning of "… lowermost 200 feet…" "… lowered to at least 50 feet below the base…" and lowering to the "… base of the well...." The applicant is requested to clarify the description of these locations.

3. p.13 of 15, Plant operation and procedures on failure of deep injection wells

    a. If migration were to occur, FPL is obligated under FDEP regulations to take the well out of service, and identify and fix the cause of the failure. The process invoke a state issued consent order which would allow a time period (10 years cited as an example) during which FPL would have to fix the problem and identify an alternate disposal method. It is questionable whether the NRC would allow a licensee to use a defective well for the disposal of radioactive effluents for such a protracted time. If one of the alternate release options is to use the existing cooling canals for liquid effluent discharges, then the applicant should address:

        i. regulatory implications of using a method that involves releases in a surface water body under Part 20 and Part 50, App. I since a demonstration of compliance with Part 20 and Part 50, App. I is not addressed in FPL's current TP Units 6&7 application for possible releases into surface cooling canals used by the other two FPL nuclear power plants;

        ii. regulatory implications of releasing additional radioactivity in the cooling canals since the other two operating plants use these canals for their releases and

compliance with Part 20 and Part 50, App. I on assessing the impact of cumulative radioactive releases of four operating plants in the same onsite surface water body; and

iii. operational considerations in coordinating radioactive releases of four plants in the cooling canals and incremental radiological impacts of release pathways (evaporation and groundwater, mainly driven by the tritium source term of about 1,000 Ci/yr per plant (AP1000 DCD Tier 2, Rev. 19, FSAR Table 11.2-7) and dose receptors not currently addressed in the TP Units 6&7 application.

4. p.15 of 15, Associated COLA revision

   a. The applicant states that no changes are being proposed for the COLA. This response is not acceptable as 10 CFR 52.79(a) requires that the COLA contain a final safety analysis report (FSAR), which must contain "a level of information sufficient to enable the Commission to reach a final decision" on particular safety matters. Specifically, the FSAR must contain detailed information designed to control and monitor liquid effluents, and a monitoring and sampling program as required by 10 CFR Part 50, Appendix I and 10 CFR 50.79(a)(16). As the staff explained in NRC RAI letter No. 72, the applicant's proposed disposal method for liquid radioactive effluents using deep well injection into the Boulder Zone is unique and not explicitly provided for in the regulations, nor does NRC guidance specify an acceptable method of disposal via deep well injection. Nonetheless, the applicant is still required to meet the regulatory requirements regarding liquid effluents in 10 CFR 20.1301, 20.1302, 20.1301(e), and 20.1406(a) and (c); 10 CFR 50.34a(d); and 10 CFR Part 50, Appendix I, Sections II.A and II.D. In order to provide sufficient information in the FSAR to enable the staff to reach a final conclusion on this subject, portions of the RAI response need to be added in the FSAR. The extent and format of the additional information to be included in the COLA should be addressed by the applicant as it complements the response to RAI Question 11.02-6-5.

II. Question 11.02-6-6

1. p.2 of 22, Description of deepwell injection system and introduction of new material in FSAR Section 9.2.12 and proposed revisions to existing ones

   a. In describing alternate sources of dilution water (top of p.2 of 22), the applicant refers to water contained in the makeup water reservoir. However, the applicant does not provide a basic description of the reservoir, its expected water capacity, how long could each plant operate given that inventory of water, and what is the expected source of water and replenishment rate as compared to the withdrawal rate when used at normal and maximum injection rates. A review of FSAR Tier 2, Rev. 4, Section 2.4.8 indicates that it does not provide an estimate of the usable volume water expected in the makeup water reservoir during normal plant operation. A review of ER Rev. 4, Table 3.3-1 (100% reclaimed water, stream No. 38) indicates a flow rate of over 40,000 gpm but does not specify a total usable volume. On the other hand, ER Rev. 4, Table 3.3-2 (100% salt water, stream No. 38) indicates that an alternate supply of water from the makeup water reservoir is not available when relying on sea water. The applicant is requested to provide such information since it is described as an alternate interim source of onsite dilution water; and clarify in the new FSAR Section 9.2.12 and Section 11.2 that there would not be any alternate

source dilution water when using sea water and state that radioactive liquid discharges would not be permitted in this operating mode.

b. Given the design basis of the AP1000 DCD (FSAR Rev. 19, Tier 2, Section 11.2.3.3 and Table 11.2-8), the applicant is committing (p.2 of 22) to maintain a minimum dilution flow rate of 6,000 gpm per unit in complying with 10 CFR Part 20 effluent concentration limits and dose criteria for offsite dose receptors. This commitment should be stated in the next revision of TP 6&7 FSAR, Tier 2, Sections 11.2 and 11.5.

c. In the third full paragraph (p.2 of 22), the applicant calculate the expected linear velocity of the injectate using a final casing diameter of 23-inch. A review of the report describing the construction of the first exploratory well indicates that the nominal inner diameter of FRP piping is 16.6-inch - See FRP data specs on last page of App. H, Report on the Construction and Testing of Class V Exploratory Well EW-1, Sept. 2012. The applicant is requested to address the significance of the difference in casing diameter (23" vs 16.6") and assumption in deriving the linear flow velocity in light of actual data.

d. In the proposed insertions of new FSAR Tables 3.2-201 and 3.2-202 (p.10 and 11 of 22), the applicant states that the injection system is categorized as non-seismic in FSAR Table 3.2-201, but does not indicate the seismic category in FSAR Table 3.2-202. The footnote to FSAR Table 3.2-201 should note that the classification system of RG 1.143 (Rev. 2) applies instead given the definition of the radwaste system and discharge path. RG 1.143 defines a radwaste system as: "*The radwaste system terminates at the point of controlled discharge to the environment, at the point of recycle to the primary or secondary water system storage tanks, or at the point of storage of packaged solid wastes*." The applicant is requested to address these staff observations and revise the proposed response and application accordingly.

2. p.12 of 22, Addition of New FSAR Section 9.2.12, Deep Injection Well System

a. In the introductory paragraph of new FSAR Section 9.2.12, the description (p.12 of 22) should identify the water makeup reservoir as an alternate source of dilution in light of the information presented on p.2 of 22 and describe the essential characteristics that make it a viable source of dilution water when others would not be available.

b. The information describing operation in a plant outage mode states that the applicant is committing (p.13 of 22) to maintain a minimum dilution flow rate of 6,000 gpm per unit in complying with 10 CFR Part 20 effluent concentration limits and dose criteria for offsite dose receptors and Part 50, Appendix I requirements. The applicant should clarify this commitment in stating that a minimum dilution flow rate of 6,000 gpm per unit (or its equivalent ratio to the WLS discharge rate) will always be required, whatever the source of dilution water and whenever liquid effluents are discharged via deepwell injection. The applicant is requested to add a parallel description and commitment in the subsection describing normal operation.

c. The information describing components (p.13 and 14 of 22) does not describe the sampling system and sampling equipment used to collect samples from the monitoring wells. The applicant should describe the equipment and its operation, and identify the method used to temporarily collect and hold water accumulated during the development

of monitoring wells, and describe how the water will be processed and disposed of if plant-derived radioactive contamination were found.

d. The information describing the piping from the blowdown sump to the injection wells (p.15 of 22) refers to the use of steel or HDPE. The description does not address differences in the design of connections and field installation of components between steel and HDPE piping and what industry standards would be applied in ensuring the mechanical and hydraulic integrity of the discharge line and components once completed. The applicant is requested to describe how the design features of HDPE piping will be addressed in design specifications of the system and during field construction.

e. The information describing components (p.15 of 22) identifies the use of vacuum breakers on the discharge line to prevent water hammering. However, the discussion does not address recent industry experience (e.g., Braidwood event) with operational failures of such components that have resulted in very large uncontrolled water spills containing plant-derived radionuclides and introduction of significant levels of tritium contamination in the environment. The applicant is requested to address how the selection of vacuum breakers, installation, and their operation and maintenance will avoid the occurrence of such events.

f. The information on the safety evaluation (p.16 of 22) does not address compliance with the requirements of 10 CFR 20.1406 and guidance of IE Bulletin 80-10, RG 4.21, and NEI Topical Report 08-08A. The applicant is requested to discuss how these requirements and guidance will be addressed and include this information in FSAR Section 9.2.12.4 or present it elsewhere in the FSAR, such as Tier 2, FSAR Sections 11.2 and 12.3-12.4.

g. A review of the information described in the new insert (p.15 and 16 of 22) indicates that it does not address any associated QA provisions on the design, procurement, installation, and testing of the deep injection well system. The applicant is requested to describe the elements of the quality assurance programs for the associated SSCs using the guidelines of RG 1.143 since this system does not fall under the requirements 10 CFR Part 50, Appendix B.

h. A review of the information describing instrumentation (p.16 of 22) indicates that it does not refer to FSAR Tier 2, Sections 11.2 and 11.5 for supplementary details on radiation monitoring governing discharge via the deep injection well system. The applicant is requested to revise that section by inserting appropriate references to FSAR Sections 11.2 and 11.5 for supporting details on the development of a plant and site-specific REMP and ODCM.

i. The information presented in the context of the question includes five figures, four of which are proposed for inclusion in FSAR Section 9.2.12. The figures are shown on p.4, 17, 18, 19, and 20 of 22. A comparison of Fig. 2 (p.4 of 22) and Fig. 9.2-203 (p.18 of 22) indicates that Fig. 2 presents a more complete description of the deep injection well system and its interface with other plant systems. However, both figures seem to be lacking the inclusion of some important components, e.g., vacuum breakers as typical installations. The applicant is requested to consider using Fig. 2 as replacement for the system depiction in Fig. 9.2-203 and ensure that all essential components are included in the revised flow diagram. For example, the proposed revision to the initial test plan

(p.21 of 22) refers to interlocks and actuation signals, but it is not clear if these components and their functions are included in the newly proposed FSAR Section 9.2.12.

j. The information on the scope of the initial test plan (ITP, p.21 of 22) does not identify as a prerequisite that the mechanical and hydraulic integrity of the system at expected operating pressures should be confirmed before initiating any of the tests. While the test methods and acceptance criteria refer to FSAR Section 9.2.12 for details, the newly proposed FSAR section does not include operating criteria that could be used to evaluate test results and declare the system fully operational. The applicant is requested to review FSAR Section 9.2.12 and describe operating design specifications that would be used as acceptance criteria for the ITP.

3. p.22 of 22, Associated COLA revision

    a. The applicant has proposed to revise numerous FSAR sections. For the FSAR section identified on p.22 of 22, the response to this question does not present any proposed revisions or inserts for 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; 9.5.1.8; 9.5.1.9; 13.1; 13.1.4; 13.5; 13.5.3; 13.7; 17.5; 17.6; 17.7; and 17.8. Accordingly, the staff cannot assess the adequacy of any proposed revisions and inserts to these sections at this time. This part of the evaluation will be completed once the applicant submits this information.

    b. Also, it is not clear as to why the proposed FPL COLA revision would affect the AP1000 DCD since deep well injection is a disposal method chosen by FPL and dependent on unique site features. In addition, it is not clear as to what is meant by the affected sections may vary in subsequent COLA applications, but the departure is standard. The applicant is requested to review this information and clarify it accordingly or delete it.

III. Question 11.02-6-7

1. A review of the information describing the process used to control radioactive releases and comply with the stated regulations and guidance indicates that the staff's evaluation will be conducted once the applicant submits the responses to RAI Questions 11.02-6-1 and 11.02.6-2, expected in late November. However, the staff disagrees with the conclusion that FPL will not impose any conditions on Standard Radiological Effluent Controls (SRECs) or discharge restrictions in its Offsite Dose Calculation Manual (ODCM). Reliance only the AP1000 DCD in controlling discharges is not appropriate because the DCD Rev. 19, FSAR Tier 2, Sections 11.2 and 11.5 rely on commonly used discharge methods, such as surface water bodies and streams which is supported by NRC regulations and guidance and ample industry experience. In its application, the method proposed by the applicant relies on disposal by deep well injection which is not addressed in current NRC regulations and guidance, and not supported by current nuclear power plant operating experience. Specifically, the current generic NEI ODCM template (NEI 07-09A) does not address this type of disposal method, nor does the ODCM for the currently operating TP Units 3&4, should it be chosen as a template in developing a plant and site-specific ODCM and SREC for TP Units 6&7. In describing the implementation of the ODCM, the applicant is requested to review and consider the guidance of Regulatory Guides 1.21 and 4.15 and NUREG-1301 and make appropriate changes to address this unique disposal method.

2. As a result, the staff finds the applicant's response inadequate and requests that the applicant identifies conditions in developing a plant and site-specific ODCM and SREC such that discharges of liquid effluents will not be initiated unless a minimum dilution flow rate is established in demonstrating compliance with effluent concentration limits and unity-rule of 10 CFR Part 20, Appendix B, Table 2, Column 2; dose limits of 10 CFR 20.1301, 20.1302, and 20.1301(e); and numerical guides, design objectives, and ALARA provisions of Appendix I to 10 CFR Part 50 for liquid effluents. This aspect should be addressed in FSAR Tier 2, Sections 11.2 and 11.5 and cross-referenced in FSAR Tier 2, Section 9.2.12.

IV. Question 11.02-6-8

1. A review of the information describing the features of the deep injection well system (p.1 to 4 of 4) indicates that it does not address design aspects that are unique to the use of HDPE piping when compared to steel, such as field construction and assembly that do not rely on traditional mechanical flanging methods. The use of curbing on the concrete pad where the equipment is located in containing spills and leaks is questionable given the high projected injection flow rates and potential for large spills. For spills that could possibly involve tens of thousands of gallons of water, the applicant should describe surrounding grounds elevation and sloping features around each concrete pad in ensuring that water spills remain contained locally and facilitate its pumping and collection into temporary tanks and measures to be taken if spills are directed to the site's surface water drainage system. The applicant is requested to address these aspects and revise the response and FSAR accordingly.

2. The applicant states that no changes are being proposed for the COLA. This response is not acceptable as 10 CFR 52.79(a) requires that the COLA contain a final safety analysis report (FSAR), which must contain "a level of information sufficient to enable the Commission to reach a final decision" on particular safety matters. Specifically, the FSAR must contain detailed information designed to control and monitor liquid effluents, and a monitoring and sampling program as required by 10 CFR Part 50, Appendix I and 10 CFR 50.79(a)(16). As the staff explained in NRC RAI Letter No. 72, the applicant's proposed disposal method for liquid radioactive effluents using deep well injection into the Boulder Zone is unique and not explicitly provided for in the regulations, nor does NRC guidance specify an acceptable method of disposal via deep well injection. Nonetheless, the applicant is still required to meet the regulatory requirements regarding liquid effluents in 10 CFR 20.1301, 20.1302, 20.1301(e), and 20.1406(a) and (c); 10 CFR 50.34a(d); and 10 CFR Part 50, Appendix I, Sections II.A and II.D. In order to provide sufficient information in the FSAR to enable the staff to reach a final conclusion on this subject, portions of the RAI response need to be added in the FSAR. While the response provides, in part, such supporting information, the applicant is requested to discuss and describe in the COLA the extent to which engineered design features and operational programs and procedures would be used to respond to spills of the injectate on the site and control runoff to unrestricted areas via the site's surface water drainage system. The extent and format of the additional information to be included in the COLA should be addressed by the applicant as it complements the response to RAI Question 11.02-6-8.

V. Question 11.02-6-9

1. A review of the information summarizing (p.3 of 5) the monitoring requirements under FDEP regulations indicates that the frequency of the periodic monitoring is not stated in the response and it is not sure if it would be consistent with that described in the response to RAI Question 11.02-6-10. The applicant is requested to include in its response the frequency of periodic monitoring, as stated by FDEP rules, or modified as it relates to the development of a plant and site-specific REMP. In describing the implementation of the REMP, the applicant is requested to consider the guidance of Regulatory Guides 1.21, 4.1 and 4.15 and NUREG-1301 and make appropriate changes to address this unique disposal method.

2. While the applicant concludes that compliance with FDEP Rule Chapter 62-528 requirements also satisfy the requirements of 10 CFR 20.1406, the applicant does not proposed to include any of that information in a future revision of the COLA. This response is not acceptable as 10 CFR 52.79(a) requires that the COLA contain a final safety analysis report (FSAR), which must contain "a level of information sufficient to enable the Commission to reach a final decision" on particular safety matters. Specifically, the FSAR must contain detailed information designed to control and monitor liquid effluents, and a monitoring and sampling program as required by 10 CFR Part 50, Appendix I and 10 CFR 50.79(a)(16). As the staff explained in NRC RAI Letter No. 72, the applicant's proposed disposal method for liquid radioactive effluents using deep well injection into the Boulder Zone is unique and not explicitly provided for in the regulations, nor does NRC guidance specify an acceptable method of disposal via deep well injection. Nonetheless, the applicant is still required to meet the regulatory requirements regarding liquid effluents in 10 CFR 20.1301, 20.1302, 20.1301(e), and 20.1406(a) and (c); 10 CFR 50.34a(d); and 10 CFR Part 50, Appendix I, Sections II.A and II.D. In order to provide sufficient information in the FSAR to enable the staff to reach a final conclusion on this subject, portions of the RAI response need to be added in the FSAR. While the response provides, in part, such supporting information, the applicant is requested to discuss and describe in FSAR Sections 11.2 and 12.3-12.4 the extent to which engineered design features and leakage detection monitoring satisfying the regulatory requirements of FDEP would also demonstrate compliance with 10 CFR 20.1406 in minimizing the contamination of plant discharge blowdown systems and the environment, including groundwater and surface water. The extent and format of the additional information to be included in the COLA should be addressed by the applicant as it complements the response to RAI Question 11.02-6-9.

VI. Question 11.02-6-10

1. A review of the information summarizing (p.2 of 3) some aspects of the FDEP monitoring requirements under State regulations and its integration with the radiological environmental monitoring program (REMP) indicates that some aspects of the program are incomplete. While the staff agrees on the reliance of tritium as the first sentinel indicator of a possible well failure or breakthrough within the overlying confining units, the discussion should identify other long-lived and environmentally mobile radionuclides, such as C-14, Ni-63, Tc-99, Sr-90, I-129, Cs-137, among others, and both parent and progeny radionuclides for radionuclides with decay chains. The applicant is requested to revise the scope of targeted radionuclides that would be included in the sampling and analysis program in the plant and site-specific REMP and COLA Sections 11.2 and 11.5. In describing the implementation of the REMP, the applicant is requested to review and consider the guidance of Regulatory Guides 1.21, 4.1 and 4.15 and NUREG-1301 and make appropriate changes to address this unique disposal method.

2. For analysis radiological analyses relying on gross-beta counting techniques (p.2 of 3), the applicant is requested to address the feasibility of using such a method given that well water samples may be characterized by high concentrations of dissolved and suspended solids. The applicant is requested to acknowledge this possibility and note that in such instances new sample collection, preservation, and preparation procedures will be developed, or modifications to existing ones will be implemented in processing such types of water samples.

3. A review of the information summarizing (p.2 of 3) the construction and sequencing of the injections and monitoring wells indicates that not all wells are expected to be operationally ready on the expected commercial date of operation for TP Units 6&7. In the Aug. 22, 2013 NRC HQ meeting, the applicant stated in its presentation that all injections and monitoring wells would be operationally ready for Unit 6 for the start of commercial operation. The applicant is requested to review and modify this aspect of the response in light of future expectations on the readiness of the deep injection well system.

4. The applicant has proposed to revise yet unspecified FSAR sections, in part, pending on the resolution of RAI Questions 11.02-6-1 to 11.02-6-4 (p.3 of 3) and has not provided any suggested revisions at this time. Accordingly, the staff cannot completely assess the adequacy of any proposed revisions and inserts to specific COLA sections at this time. This part of the evaluation will be completed once the applicant submits this information.

5. A review of the response (p.2 of 3) indicates that the applicant recognizes the possibility of a well failure or breakthrough of injectate into the overlying confining units and its migration into the Upper Floridan aquifer. If it were to occur, radioactivity would be detected by the presence of tritium in well water samples analyzed under the REMP. Since cooling water for TP Unit 5 and process water for TP Units 1, 2, and 5 are obtained from Upper Floridan aquifer production wells, the detection of tritium would warrant an evaluation the radiological impacts, consider the regulatory implications on using contaminated cooling and process water, and whether some mitigation measures are necessary in protecting site workers and plant systems and components. Given the requirements of 10 CFR 20.1201, 20.1301, and 20.1406 and associated NRC and industry guidance, the applicant is requested to address this aspect in FSAR Sections 11.2 and 11.5 and include a provision in the REMP in committing to the periodic collection and analyses of water from onsite production wells (PW-1, PW-3, and PW-4). In describing the implementation of the REMP, the applicant is requested to review and consider the guidance of Regulatory Guides 1.21, 4.1 and 4.15 and NUREG-1301 and make appropriate changes to address this unique disposal method.

VII. Question 11.02-6-11

1. A review of the response (p.1 and 2 of 2) indicates that the applicant has committed to characterize the presence of naturally occurring background radioactivity as part of a site-specific preoperational monitoring program. In its description, the applicant notes that it is not necessary to continually monitor background radioactivity in the Upper Floridan aquifer since tritium will be used as a sentinel indicator of a breakthrough of the injectate into the upper confining units. It should be noted that the duration and scope of a preoperational monitoring program should be driven by the quality of sample results

and collection of an adequate number of samples with which to assess the reliability of the results and characterize the variability of radioactivity levels in the Upper Floridan aquifer under possibly different water quality conditions. Consequently, the applicant is requested to revise the objectives of the preoperational monitoring program in confirming that sample collections and analysis will be conducted over a time period and aquifer conditions that are expected to yield representative and reliable sample results. In describing the implementation of the preoperational monitoring program, the applicant is requested to consider and address the guidance of Regulatory Guides 1.21, 4.1 and 4.15 and NUREG-1301 and make appropriate changes to address this unique disposal method.

2. The applicant has proposed to revise yet unspecified FSAR sections, in part, pending on the resolution of RAI Questions 11.02-6-1 to 11.02-6-4 (p.2 of 2) and has not provided any suggested revisions at this time. Accordingly, the staff cannot completely assess the adequacy of any proposed revisions and inserts to specific COLA sections at this time. This part of the evaluation will be completed once the applicant submits this information.