

July 14, 2009

Mr. Jon Franke, Vice President
Crystal River Nuclear Plant (NA1B)
ATTN: Supervisor, Licensing & Regulatory
Programs
15760 W. Power Line Street
Crystal River, FL 34428-6708

SUBJECT: ENVIRONMENTAL SITE AUDIT REGARDING CRYSTAL RIVER UNIT 3
NUCLEAR GENERATING PLANT LICENSE RENEWAL APPLICATION
(TAC NO. ME0278)

Dear Mr. Franke:

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing the Florida Power Corporation license renewal application (LRA) for Crystal River Unit 3 Nuclear Generating Plant (CR-3). The environmental site audit will be conducted at CR-3 during the week of July 20, 2009, by NRC and Argonne National Laboratory staff. The environmental audit activities will be conducted in accordance with the enclosed environmental audit plan.

To develop the Supplemental Environmental Impact Statement, the NRC staff requests the information described in the enclosed environmental audit needs list be made available, to the extent possible, during the CR-3 environmental site audit. A draft schedule of tours and meetings for the audit is also enclosed. The NRC staff informally transmitted this information to Michael Heath, Progress Energy via e-mail on July 8, 2009.

If you have any questions, please contact Elaine Keegan by telephone at 301-415-8517 or by e-mail at Elaine.Keegan@nrc.gov, for the review of the CR-3 LRA.

Sincerely,

/RA/

David J. Wrona, Chief
Projects Branch 2
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-302

Enclosures:

1. Regulatory Environmental Audit Plan
2. Environmental Audit Needs List
3. Environmental Audit Draft Schedule

cc w/encls: See next page

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DATE	07/13/09	07/09/09	07/14/09

OFFICIAL AGENCY RECORD

Letter to Jon Franke from David J. Wrona dated July 14, 2009

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NUCLEAR GENERATING PLANT LICENSE RENEWAL APPLICATION
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Crystal River Unit 3 Nuclear Generating Plant, - 2 -

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LICENSE RENEWAL ENVIRONMENTAL AUDIT PLAN CRYSTAL RIVER UNIT 3 NUCLEAR GENERATING PLANT

1. Background

By letter dated December 18, 2008, Florida Power Corporation submitted to the U.S. Nuclear Regulatory Commission (NRC or staff) an application to renew the Crystal River Unit 3 Nuclear Generating Plant (CR-3) operating license (Operating License No. DPR-72). The purpose of the NRC's environmental audit is to identify pertinent environmental data, review the site facility and area, and obtain clarifications regarding information that was provided by the applicant in the Environmental Report (ER) that was submitted as part of its application to the NRC.

Office of the Nuclear Reactor Regulation Office Instruction LIC-111, Regulatory Audits, directs staff to prepare a regulatory audit plan that provides a clear overview of audit activities and scope, team assignments, and schedule. The environmental audit is one of the regulatory audits performed as part of the license renewal process.

2. Environmental Audit Bases

License renewal requirements are specified in Title 10 of the *Code of Federal Regulations* (CFR), Part 54 (10 CFR Part 54), "Requirements for Renewal of Operating Licenses for Nuclear Power Plants." Licensees are required by 10 CFR 54.23 to submit an ER that complies with the requirements in 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," as part of the license renewal application (LRA). Review guidance for the staff is provided in NUREG-1555, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants: Supplement 1 – Operating License Renewal."

NRC staff is required to prepare a site-specific supplement to NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants." During the scoping process required in 10 CFR Part 51, NRC staff is required to define the proposed action, identify significant issues which must be studied in depth, and to identify those issues that can be eliminated from further study.

3. Environmental Audit Scope

The scope of this environmental audit for the CR-3 license renewal is to identify those issues which are significant and those issues which can be eliminated from further study and to identify the environmental resources that must be adequately described and evaluated in the site-specific supplemental Environmental Impact Statement (EIS) for CR-3. Audit team members will focus on reviewing the documents and requested information listed in the CR-3 Environmental Audit Needs List (Enclosure 2) and discussing the information with plant personnel who are the subject matter experts.

4. Information and Other Material Necessary for the Environmental Audit

The project team will review the ER, the LRA, other supporting permits, and other pertinent studies and information that may need to be cited or described in the EIS for the LRA.

5. Tentative Team Assignments Area of Review Assigned Auditor

The environmental audit team members and their specific discipline assignments are shown in Table 1. Those members of the team who are contractors from Argonne National Laboratory will have ANL after their name.

Table 1. Environmental Audit Team Members and their Specific Discipline Assignments.

Discipline	Team Members
Environmental Project Manager	Elaine Keegan
Aquatic	Dennis Logan William Vinikour, ANL
Terrestrial	Richard Bulanevitz Kirk LaGory, ANL
Radiological	Steve Klementowicz *
Hydrology	Dennis Beissel Terri Patton, ANL
Air/Meteorology	Ekaterina Lenning * Dennis Beissel
Socioeconomic/Land use	Jeffery Rikhoff * William Metz
Cultural Resources	Jenny Davis Konstance Wescott
Alternatives	Allison Travers *
Other (thermophilic microbiological organisms (TMO) and electromagnetic fields (EMF) and non-rad waste)	Ekaterina Lenning *
* Will not be participating in environmental site audit.	

6. Logistics

The environmental audit will be conducted at CR-3 from July 20 through July 23, 2009. An entrance meeting will be held with plant management at the beginning of the audit. An exit meeting will be held at the end of this audit.

7. Special Requests

The staff requests the applicant make available the information identified on the Environmental Audit Needs List. Plant staff who are subject matter experts in the disciplines listed on the Environmental Site Audit Needs List should be available for interviews and to provide tours which have been identified on the Environmental Audit Draft Schedule (Enclosure 3).

8. Deliverables

A report should be issued to the applicant within 90 days from the end of the environmental audit.

CRYSTAL RIVER UNIT 3 NUCLEAR GENERATING PLANT LICENSE RENEWAL ENVIRONMENTAL SITE AUDIT NEEDS LIST

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed Appendix E, Environmental Report (ER) of the Crystal River Unit 3 Nuclear Generating Plant (CR-3) license renewal application and have found that it meets the requirements of 10 CFR 51.45.

DOCUMENTS/INFORMATION: Please make available the following documents and information for staff review during the environmental site audit.

1. AIR, METEROLOGY, CLIMATE (E. Lenning, NRC, R. Kolpa, ANL)

- A-1 Provide copies of relevant sections of the last five years of the Annual Operating Report submitted to the Florida Department of Environmental Protection (FL DEP) in accordance with Rule 62-210.370. Provide copies of all other permits (e.g., Prevention of Significant Deterioration [PSD] permit for the south cooling tower) issued by and correspondence with the FL DEP pertaining to air pollution sources associated with Unit #3 operation.
- A-2 Provide details of stationary and mobile sources of criteria pollutants associated with the operation of CR-3 (including on-site spent fuel storage), including, as appropriate, horse power ratings, fuel consumption, pollution control equipment, operating records, and estimates of annual criteria pollutant releases.
- A-3 Make available for review, records of preventative maintenance activities for emergency generators, back-up fire water and feedwater pumps, and other back-up or emergency diesel-fueled equipment for the last three years; confirm that all such stationary sources of air pollutant emissions are not regulated sources under the CR-3 Title V permit.
- A-4 Provide copies of procedures for meteorological instrument calibrations and for the collection, verification, and application of meteorological data to support operations.
- A-5 Provide procedures for maintenance of heating, ventilating, and air-conditioning (HVAC) equipment, including: management/inventory of refrigerants, characterization/management of filters, refrigerants, and pump oils for systems serving areas with potential airborne radioactivity.
- A-6 Provide estimates of drift loss from the helper cooling tower for CR-3, as well as details regarding the chemicals used (if any) to treat the water directed to the helper cooling towers; provide the average percentage of time that the helper cooling tower is operating.
- A-7 Provide additional details regarding refurbishment activities planned for 74-day period beginning in September 2009 (replacement of steam generators), including: capacity and throughput of temporary on-site concrete batch plant, type, number, and expected operating schedules of supplemental construction

ENCLOSURE 2

vehicles and equipment used to support refurbishment activities, expected vehicle trips (trucks bringing materials and equipment, as well as vehicles of the refurbishment workforce) that will occur as a result of refurbishment, total area of ground surface to be disturbed to support development of temporary laydown yards, material storage yards, and construction of new buildings/structures.

- A-8 Provide information on the status of the FL DEP permit for the south cooling tower (PSD-FL-392) and any operating reports submitted to date.
- A-9 Provide copies of all applicable Air permits (past 5 years) including open burning or fire permits if such activities take place at CR-3.
- A-10 List all emission sources and materials emitted, if air permit does not contain this information.
- A-11 How does CR-3 dispose and/or re-use burned diesel oil and lube oil?
- A-12 Are there any incinerators onsite?
- A-13 Provide the most current and updated description of the metrological system/tower.
- A-14 What are the total direct and indirect projected emissions from the CR-3 refurbishment project?

2. AQUATIC ECOLOGY (D. Logan, NRC; W. Vinikour, ANL)

- AQ-1 Provide a copy of the responses received from the United States Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and Florida Wildlife Conservation (FWC) regarding listed species and sensitive habitats in the area of CR-3 or along the CR-3 associated transmission lines. (ER Section 2.5, page 2-14)
- AQ-2 It was mentioned that an environmental evaluation of the extended power uprate would be performed in mid-2009. What is the status of that review and when will documentation of that review be available? (ER Section 2.12.1, page 2-46)
- AQ-3 Provide a copy of the following ER Chapter 2 references: FDEP (2002); FNAI (2008a); FNAI (2008c); NMFS (2002); Progress Energy (undated); and SWEC (1985).
- AQ-4 How often is dredging conducted in the intake and discharge canals? (ER Section 3.1.2, page 3-3). Please provide a description of the dredging process and the ultimate fate of the dredged materials.

- AQ-5 It is stated that there are openings in the dikes along the intake canal to allow north-south boat traffic. These are not evident of Google Earth or Virtual earth photographs. Please show the locations of these openings. (ER Section 3.1.2, page 3-3)
- AQ-6 Provide a copy of any reports that provide information on entrainment and impingement for Unit 1 and Unit 2.
- AQ-7 What happens to the debris and organisms that are conveyed to the sumps that are located adjacent to the intakes for Units 1, 2 and 3? (ER Section 3.1.2, pages 3-3 and 3-4)
- AQ-8 Describe the method in which the discharge from Units 1 through 3 is used for cooling tower makeup for Units 4 and 5. Also, what is the quantity of makeup required for Units 4 and 5? (ER Section 3.1.2, page 3-4)
- AQ-9 Indicate on a photograph where the 67 modular cooling towers are located. (ER Section 3.1.2, page 3-4)
- AQ-10 The ER states that the 67 modular cooling towers should allow Units 1 and 2 to operate without reducing power. Has this actually been found to be the case? (ER Section 3.1.2, page 3-4)
- AQ-11 Provide a copy of Progress Energy's rights-of-way vegetation-management plan. (ER Section 3.1.3, page 3-5)
- AQ-12 Provide a copy of the following ER Chapter 3 references: Florida Power (2005); Golder Associates (2006).
- AQ-13 It is stated that "for the majority of the species, the level of entrainment estimated represented a small percentage of the commercial landings or recreational catch." What species are in the "minority" and how do their losses due to entrainment compare to commercial landings or recreational catches? (ER Section 4.2, page 4-7)
- AQ-14 Provide a copy of the Environmental Protection Agency (EPA) report (or letter) that concluded that entrainment and impingement losses (presented in the 316 Demonstration submitted in 1985) were unacceptable and any follow-up letters between Progress Energy and both State and Federal Agencies regarding 316(a) and 316(b) issues. (ER Section 4.2, page 4-7)
- AQ-15 What was the cooling water withdrawal rate prior to those established in the September 1988 National Pollutant Discharge Elimination System (NPDES) permit? (ER Section 4.2, page 4-7)
- AQ-16 Why are data not available for the Mariculture Center more recently than 2004? (ER Section 4.2, page 4-8)

- AQ-17 Provide a copy of the “Fact Sheet” for the current NPDES permit. (ER Section 4.4, page 4-11) Also, if available, provide figures that show the thermal plume at different times of the year for the Units 1 through 3 discharge (e.g., from the point of discharge to ambient Crystal Bay temperatures). As practicable, areas of various ΔT s (e.g., every 3 to 5 degrees above ambient) should be provided.
- AQ-18 Provide a copy of the following ER Chapter 4 references: FWC (undated); Progress Energy (2004); Progress Energy (2005); all other annual reports pertaining to Mariculture Center [e.g., those prior to Progress Energy (2004) and any prepared following Progress Energy (2005)].
- AQ-19 Provide a figure that shows the monitoring point sample locations for the NPDES permit.
- AQ-20 Provide a copy of Progress Energy’s Manatee Protection Plan. (ER Appendix F, page F-9)
- AQ-22 Provide a copy of Progress Energy’s Sea Turtle Rescue and Handling Guidance. (ER Appendix F, page F-10)
- AQ-24 Provide a copy of the PSD permit for the proposed South Cooling Tower that would be constructed and used in association with the CR-3 uprate.
- AQ-25 Provide an update on the design and location of the South Cooling Tower.
- AQ-26 It was stated that “if increased impingement does occur (due to CR-3 uprate), Progress Energy would take further steps to avoid or minimize impingement.” Would there actually be impingement (and entrainment) monitoring conducted for the uprate? If so, please provide a description of how this monitoring would be conducted.
- AQ-27 In the Certification Hearing for the uprate, it is mentioned that Progress Energy’s Mariculture operations have contributed to the restoration of red drum and “scallop” fisheries in the offshore and adjacent waters. In the ER and other reference documents, little is mentioned about a “scallop” fishery. Was “shrimp” or “crab” fishery actually meant to be mentioned?
- AQ-28 The ER (Section 2.2, page 2-4) says that the sources of information are old (the [Atomic Energy Commission] AEC report is three and a half decades old) but that they still contain useful information. The most recent reviews in Section 2.2 are typically from the 1980s. Please provide a justification that supports the ER’s contention that the information is still useful: For example, document the degree to which potentially affected aquatic biological habitats, communities, and population levels have changed over the decades and how those changes might affect predicted impact levels.

- AQ-29 The data in the ER section “Commercial and Recreational Fishing in the CR-3 Area” (under Section 2.2, page 2-7) are very old. Provide more recent data and a justification of why fishing patterns almost 40 years ago represent patterns today and over the requested period of license renewal.
- AQ-30 The last sentence of ER Section 2.5.1 [Endangered Species] Fish states that “Progress Energy is not aware of any Gulf sturgeon occurrences at CR-3.” Provide information on how Progress Energy monitors and has monitored impingement, entrainment, entrapment, or other “occurrences” of Gulf sturgeon at CR-3.
- AQ-31 What is the intake channel water velocity?
- AQ-32 What is the water velocity across the traveling screens?
- AQ-33 Provide diagram(s) of intake structures showing traveling screens, trash racks, pumps, intake bays, and other structures relevant to impingement and entrainment.

3. ARCHAEOLOGY (J. Davis, NRC; K. Wescott, ANL)

- AR-1 Provide a map detailing the level of ground disturbance at the plant, including documentation on how this level of disturbance was determined. Has this understanding of the level of disturbance been coordinated with the Florida State Historic Preservation Officer (FL SHPO)? In other words is the FL SHPO in agreement that these portions of the plant have been disturbed sufficiently as to preclude the possibility of any significant archaeological resources, including burials, existing in these areas?
- AR-2 Provide a series of aerial photographs of the entire plant site and associated transmission line(s) (during pre-construction, construction, and post-construction periods) looking at levels of disturbance that occurred during construction or since operation, whether any historic structures or possible sites are present on the property, and identifying any recent projects that will require a review of additional documentation.
- AR-3 Provide topographic maps of the plant and associated transmission line(s).
- AR-4 Provide vegetation/land-use maps of the plant and associated transmission line(s).
- AR-5 Provide maps of ownership and land use of the applicant's property and associated transmission lines. Copies of historic plat maps would be useful, if available.

- AR-6 Provide a copy of the Environmental Compliance Manual and any other environmental review procedures for land-disturbing activities (e.g., trenching, clearing, digging).
- AR-7 Provide a copy of the transmission line vegetation management program plan, including timing of mowing, herbicide application, and clearing; inspections and repair activities conducted by helicopters or other vehicles; standard operating procedures or guidelines for the applicant and any contractors; technician training programs, and any regulations that restrict maintenance activities (e.g., looking for the depth of disturbance, especially with tree removal in a portion of the corridor). Of particular importance are vegetation management procedures for the site and associated transmission line(s) to avoid impacts to historic and archaeological resources.
- AR-8 Provide information on management around less-developed areas of the plant site, for instance, brush removal programs near known historic and archaeological resources or near unsurveyed areas.
- AR-9 Provide documentation of construction projects that have occurred on the property since the original Unit 3 construction to determine how historic and archaeological resources were considered. Include any documentation demonstrating compliance with the Environmental Compliance Manual regarding historic properties (since 2004 update). What materials are used by the staff to determine whether the FL SHPO should be consulted? Any survey or mitigation reports performed in conjunction with the plant or transmission line(s), or for other/subsequent plant activities.
- AR-10 Provide the historic and archaeological references presented in the ER, especially survey reports (e.g., Miller 1973).
- AR-11 Provide consultation letters and other documentation indicating correspondence with the FL SHPO and Federally recognized Native American Tribes that have aboriginal ties to the project area.

4. ENVIRONMENTAL JUSTICE (J. Rikhoff, NRC; W. Metz, ANL)

- EJ -1 In order to address the provisions of Section 4-4, "Subsistence Consumption of Fish and Wildlife," in Executive Order 12898, provide the following information:

1. Information about any observed subsistence consumption behavior patterns—specifically fish and wildlife consumption—by minority and low-income populations in the vicinity of CR-3. This subsistence consumption behavior could consist of hunting, fishing, and trapping of game animals and any other general food gathering activities (e.g., collecting nuts, berries, and other plant material) conducted by minority and low-income individuals in the vicinity of CR-3.
2. Information about current or past wildlife sampling and testing of game animals such as deer, squirrel, turkey, pheasant, duck, fish and other game birds and animals that may have been conducted in the vicinity of CR-3. Wildlife sampling and testing may have been conducted before, during, and after plant construction and in the early days of plant operation, but was discontinued after determining that tissue samples consistently showed no significant or measurable radiological impact on the environment from plant operations.

5. HYDROLOGY (D. Beissel, NRC; T. Patton, ANL)

- H-1 Provide specific information on groundwater wells (PW-1 through PW-7, and PW-1A/B and any others), including locations, depths, and yields. This information should be detailed in Johnson, R., 2006, Response to Request for Information on Groundwater, email to Jan S. Kozyra (Progress Energy), July 26 (cited in ER Section 2.3).
- H-2 Provide permits for all on-site wells (including those that are currently inactive and monitoring wells) and monitoring reports for the past 5 years.
- H-3 Provide permits for all surface discharges, including surface impoundments, and monitoring reports for the past 5 years. Include the stormwater management plan, if available.
- H-4 Provide the complete NPDES permit (No. FL0000159), including maps showing outfalls, monitoring locations, and other relevant site features. The parts of the permit provided in Appendix B of the ER address some discharge parameter limits, but do not include thermal discharge limits. Latitudes and longitudes of outfall locations are provided, but there are no maps. There's also no information on intake flow limits.
- H-5 Provide discharge monitoring reports submitted to the state as required by the NPDES permit for the past 5 years.
- H-6 From the past 5 years, provide any release notifications, violation information (NOVs), or remediation documentation associated with surface water discharges, septic or sewage systems, groundwater or soil contamination (including spills, leaks, and other releases of fuel solvents, or other chemicals).

- H-7 Provide any reports on Clean Water Act 316(a) demonstration studies in support of thermal limits set in the NPDES permit (or variances applied for – e.g., has a variance been applied for the increased thermal output associated with the extended power uprate to occur in the fall of 2009?). Please include information (as cited on p. 2-47, line 3, of the ER) regarding how higher discharge temperatures would be mitigated.
- H-8 Provide any environmental site assessments conducted onsite since the CR-3 was built.
- H-9 Please also provide the following documents cited in the ER:
- SWEC, 1985, Final Report: Crystal River 316 Studies, prepared for Florida Power Corporation, Jan. 15.
 - Florida Power, 2005, Crystal River Unit 3 Final Safety Analysis Report, Rev. 29, Aug.

6. NON-RADIOLOGICAL WASTE (E. Lenning, NRC)

- NRW-1 Provide a description of all non-radioactive (hazardous and non-hazardous) waste streams and applicable procedures at CR-3, including types and quantities.
- NRW-2 Provide a description of the CR-3 wastewater streams and onsite sanitary waste treatment facility.
- NRW-3 Provide copies of applicable procedures of sludge disposal.
- NRW-4 Provide copies of all applicable non-radioactive waste permits.
- NRW-5 Provide copies of the Section 312 (TIER II) annual reports to EPA with a list of hazardous and toxic chemicals.
- NRW-6 Does CRS-3 produce any low-level mixed wastes?
- NRW-7 Provide details of characterization and disposition of used oils generated in relation to the operation of CR-3, including used oil removed from dedicated emergency/back-up engines and oils recovered from HVAC vacuum pumps.
- NRW-8 Provide a description of any waste minimization measures used at CR-3. If annual or quarterly recycling reports are available, please provide copies.
- NRW-9 Does CR-3 produce any medical wastes? If so, please specify quantity and how the disposal of medical wastes is handled.

7. RADIATION PROTECTION (S. Klementowicz)

- RP-1 Provide information on the radiological groundwater protection program.
- RP-2 Provide information on any abnormal, unusual spills or leaks documented in accordance with 10 CFR 50.75(g) and/or any Nuclear Energy Institute Groundwater Protection Initiative reports to State and/or Local government.
- RP-3 Provide information on any on-site disposal (10 CFR 20.2002) of radioactive material.
- RP-4 Provide the plans and procedures for the long-term on-site storage of low-level radioactive waste.

8. SOCIOECONOMICS (J. Rikhoff, NRC; W. Metz, ANL)

- S-1 Confirm that data for 2005, 2006 and 2007 in ER Table 2-4 labeled, "Citrus County Tax Revenues," (the second column) is actually data for Citrus County PROPERTY tax revenues (i.e., versus total tax revenues).
- S-2 If available, provide 2008 data on:
 - 1. Total property tax revenues in Citrus County
 - 2. Total property taxes paid by CR-3 in Citrus County (i.e., an update of Table 2-4)
- S-3 Provide the distribution of CR-3 local property taxes to the various jurisdictions in Citrus County listed in paragraph 2, pages 2-29.
- S-4 If available, provide recent information on the total number of CR-3 permanent (employed for more than one year), on-site employees and the residential distribution of permanent, on-site employees by county.
- S-5 In addition to property tax payment information presented in Section 2.7 of the ER, describe any other major annual support payments, one-time payments, and other forms of non-tax compensation (if any) provided to local organizations, communities, and jurisdictions (e.g., county, municipality, townships, villages, incorporated places, and school districts) on behalf of CR-3.
- S-6 Provide information about any changes in assessed property value or any other recent or anticipated payment adjustments that could result in notable increases or decreases in tax or other payments.
- S-7 Provide information on any studies that have quantified, or considered, the impact of noise from CR-3 facilities at various offsite locations.

S-8 Provide data on:

1. The height of stacks, cooling towers, and other plant buildings
2. The visibility of plant facilities and cooling tower plumes from various off-site locations.

9. TERRESTRIAL ECOLOGY (R. Bulanevitz, NRC; K. LaGory, ANL)

- T-1 Provide a map of the CR-3 site that delineates developed areas, previously disturbed areas, and undeveloped terrestrial, wetland, and aquatic habitats (pages 2-11 of the ER). Provide a table or spreadsheet that presents the area covered by each habitat.
- T-2 Provide a map of associated transmission line corridors that delineates terrestrial, wetland, and aquatic habitat types crossed (pages 2-11 and 2-12 of the ER). Provide a table or spreadsheet that presents the area covered by each habitat.
- T-3 Provide a map of areas posted for protection of shorebird and sea bird nesting sites at CR-3 (pages 2-12 of the ER).
- T-4 Provide a list of representative animal species in each of the terrestrial habitats of the CR-3 site (note: representative plants are provided on pages 2-11 of the ER, but not animals).
- T-5 Provide a list of invasive plant species that are of concern on the CR-3 site and associated transmission lines and a description of any practices used to control these species.
- T-6 The Final Environmental Statement (AEC 1973) serves as the basis for the terrestrial species list and habitat descriptions in Section 2.4. Is more recent information available?
- T-7 If available, provide any survey information for threatened and endangered species conducted on the CR-3 site or along associated transmission lines (pages 2-14 of the ER).
- T-8 Provide information on bald eagle use of the site and associated transmission lines including a map of the areas used for foraging, roosting, and nesting (pages 2-17 of the ER).
- T-9 Provide information on Florida scrub jay use of transmission lines including a map of the areas that contain potentially suitable habitat and locations where scrub jays have been seen (pages 2-17 of the ER).
- T-10 Provide information on wood stork use of the site including a map of the areas used (pages 2-18 of the ER).
- T-11 Provide information on water and sediment characteristics in percolation ponds used by wood storks (pages 2-18 of the ER).

- T-12 Provide information on gopher tortoise use of transmission lines including a map of the areas that contain potentially suitable habitat and locations where tortoises have been seen (pages 2-21 of ER).
- T-13 Provide locations of listed plant species mentioned as being in the vicinity of CR-3 associated transmission lines (pages 2-22 to 2-23 of the ER).
- T-14 Provide a copy or description of vegetation management procedures for transmission line corridors including procedures for wetland, aquatic, and other sensitive areas; threatened and endangered species locations and habitats (pages 3-5 and 3-6 of the ER).
- T-15 Provide a copy of Progress Energy's Environmental Compliance Manual. The ER (pages 4-42) discusses this manual and enclosed procedures relative to historical and cultural resources. Are procedures also available for ecological resources?
- T-16 Provide copies of recent environmental evaluations of construction projects (e.g., steam generator replacement; pages 4-18 of the ER) demonstrating use of Progress Energy's Environmental Compliance Manual.
- T-17 Provide information on the potential effects of cooling tower drift on terrestrial vegetation of the CR-3 site (page A-4). Has deposition of particulates (salt drift) from cooling tower plumes resulted in any damage to vegetation or increased salinity of soils?
- T-18 Provide a description of reporting procedures for raptor and other bird strikes at transmission lines and cooling towers. Provide recent and historical reports of strikes if available (page A-4 of the ER).
- T-19 Provide a description of methods used to minimize bird strikes with transmission lines especially at wetland and water crossings.
- T-20 Provide copies of all correspondence with the USFWS, NMFS, and the state of Florida regarding threatened and endangered species including responses from those agencies if available (Appendix C of the ER).
- T-21 Provide descriptions and locations of the proposed South Cooling Tower and other associated infrastructure that has been proposed to offset increased thermal discharge associated with the planned power uprate project. This information was to be provided as part of the renewal of the NPDES permit renewal in 2009 (see page 19 of the uprate certification document DEP08-0863).
- T-22 Provide a copy of the following documents cited in the ER:
- FNAI (Florida Natural Areas Inventory). 2008a. Element Occurrences Documented on or Near Project Site, Central Florida, April 17.
 - FNAI (Florida Natural Areas Inventory). 2008c. Element occurrences Documented on or Near Project Site, Lake Tarpon, April 17.

- Pranty, B., J. W. Fitzpatrick, and B. Stith. Undated. Distribution of the Florida Scrub Jay, 1992-1996 (Draft). Archbold Biological Station, Venice, Florida, database cited in FNAI (Florida Natural Areas Inventory). 2008a. Element Occurrences Documented on or near Project Site, Central Florida, April 17.

DRAFT CRYSTAL RIVER UNIT 3 ENVIRONMENTAL AUDIT DRAFT SCHEDULE

TIME/DATE	Monday – July 20	Tuesday – July 21	Wednesday – July 22	Thursday – July 23
0800 – noon	NRC and ANL staff will travel to the site on either Sunday or Monday morning.	<p align="center">General site Tour</p> <p align="center">Breakout into on-site walking/driving tours – by specific disciplines:</p> <ol style="list-style-type: none"> 1. Terrestrial Ecology 2. Aquatic Ecology/Hydrology 3. Air-Meteorology-Non Radwaste 4. Cultural Resources 5. Radiological 6. Socioeconomic-Land Use 	<p align="center">Boat Tour</p> <ol style="list-style-type: none"> 1. Terrestrial Ecology 2. Aquatic Ecology/Hydrology 3. Cultural Resources 4. Socioeconomic-Land Use <p align="center">Continuation of walking/driving tours, as necessary.</p>	<p align="center">Transmission Line Tour</p> <ol style="list-style-type: none"> 1. Terrestrial Ecology 2. Aquatic Ecology/Hydrology 3. Cultural Resources 4. Socioeconomic-Land Use
1300 – 1700	Entrance Meeting at 3:00.	<p align="center">Interviews:</p> <ol style="list-style-type: none"> 1. Terrestrial Ecology 2. Aquatic Ecology/Hydrology 3. Air-Meteorology-Non Radwaste-TMO-EMF 4. Cultural Resources 5. Radiological 6. Socioeconomic-Land Use 	Continuation of interviews from Tuesday afternoon, as necessary.	Exit Meeting at 2:00

Discipline	Team Members
Environmental Project Manager	Elaine Keegan
Aquatic	Dennis Logan William Vinikour, ANL
Terrestrial	Richard Bulanevitz Kirk LaGory, ANL
Radiological	Steve Klementowicz *
Hydrology	Dennis Beissel Terri Patton, ANL
Air/Meteorology	Ekaterina Lenning * Ron Kolpa, ANL
Socioeconomic/Land use	Jeffery Rikhoff * William Metz, ANL
Cultural Resources	Jenny Davis Konstance Wescott, ANL
Alternatives	Allison Travers *
Other (TMO and EMF and non-rad waste)	Ekaterina Lenning *
* Will not be participating in environmental site audit.	
Bo Pham, Chief, Environmental Review Branch, Division of License Renewal will also be attending audit.	

WALKING/DRIVING TOURS:

- On-site facilities, particularly the following features in the intake and discharge areas:
 - Trash rack and intake screen areas for Unit 3
 - Area where backwash for the intake screens are routed and disposed,
 - Thermal discharge outfall areas for Units 1-3,
 - Cooling towers
 - Proposed location of the South Cooling Tower (to be installed in conjunction with the Unit 3 uprate)
 - Other National Pollutant Discharge Elimination System (NPDES) permitted outfall areas.
 - Along the intake and discharge canal dikes
 - Posted shorebird and seabird nesting sites on the Crystal River Unit 3 Nuclear Generating Plant (CR-3) site
 - Representative foraging and perching areas for bald eagles on site
 - Archaeological areas of interest
- Tour of the Crystal River Mariculture Center.
- Crystal River Preserve State Park (adjacent to CR-3 site).
- Representative examples of the four natural habitats on the CR-3 site: salt marsh, hardwood hammock forest, pineland, and freshwater swamp.
- Representative freshwater wetlands, streams, ponds, and lakes on site that are in the vicinity of CR-3 and support facilities.
- Critical habitat for the Florida manatee near the CR-3 site.
- The two bald eagle nests on and in the immediate vicinity of the site.
- Representative foraging and perching areas for bald eagles.
- Percolation ponds on CR-3 site used by foraging wood storks.
- Areas to be affected by planned refurbishment activities including the proposed construction laydown area described in the Environmental Report as “low-quality wetland”.
- Archaeological and historical areas of interest in the vicinity of CR-3.

BOAT TOUR:

- Near shore and shoreline areas near the facility. Areas to observe include:
 - Critical habitat area for the Florida manatee; and
 - Examples of various aquatic/wetland habitat types that occur within the nearshore and shoreline areas of Crystal Bay (e.g., oyster bars, seagrass beds [including areas where Progress Energy may have conducted restoration], mangroves, tidal marshes and mudflats, and coastal swamps)

TRANSMISSION LINE TOUR:

- Stops at large river, small stream, and major wetland crossings.
- Representative portions of the transmission lines that cross agricultural, forest, shrub-scrub, wetland, and aquatic habitats (ponds, lakes, streams, and rivers) to show typical vegetation management practices.
- Oak scrub habitat (imperiled in State) crossed by the Central Florida transmission line.
- Portions of the Central Florida transmission lines that are adjacent to the Haltapa Tasthanaki Preserve and Crystal River State Park, cross the Withlacoochee State Forest, and cross the Withlacoochee River.
- Portions of the Lake Tarpon transmission line that are adjacent to the Chassahowitzka Wildlife Management Area, cross the Withlacoochee State Forest, cross the Starkey Wilderness Preserve, and cross the Brooker Creek Preserve.

RADIOLOGICAL TOUR:

- Low-level radioactive waste storage.
- Representative sample of radiological environmental monitoring stations (including co-located State monitoring stations).

AIR/MET TOUR:

- Tour of meteorological tower(s).

NON-RADIOLOGICAL WASTE TOUR:

- Tour of hazardous/mixed waste accumulation facility.