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GNRO-2014/00010

February 5th, 2014

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

SUBJECT: Draft Plant-Specific Supplement 50 to the Generic Environmental Impact Statement for License Renewal of Nuclear Plants Regarding Grand Gulf Nuclear Station, Unit 1
Grand Gulf Nuclear Station, Unit 1
Docket No. 50-416
License No. NPF-29

Dear Sir or Madam:

Entergy Operations, Inc. is providing, in Attachment 1, comments to the Draft Plant-Specific Supplement 50 to the Generic Environmental Impact Statement (GEIS) for License Renewal of Nuclear Plants Regarding Grand Gulf Nuclear Station, Unit 1.

This letter contains no new commitments. If you have any questions or require additional information, please contact Jeffery Seiter at 601-437-2344.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 5th day of February, 2014.

Sincerely,

A handwritten signature in black ink, appearing to be "KM/jas", with a long horizontal line extending to the right and a wavy tail.

KM/jas

Attachment: Comments to Draft Plant-Specific Supplement 50 to the GEIS for License Renewal of Nuclear Plants Regarding Grand Gulf Nuclear Station, Unit 1

cc: (see next page)

cc: with Attachment

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NRC Senior Resident Inspector
Grand Gulf Nuclear Station
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Attachment 1 to

GNRO-2014/00010

**Comments to Draft Plant-Specific Supplement 50 to the GEIS for License Renewal of
Nuclear Plants Regarding Grand Gulf Nuclear Station, Unit 1**

GGNS Draft SEIS Comments				
Number	Section	Page	Line(s)	Comment
1	Executive Summary	xvi	27	Change " <u>criterion</u> " to " <u>criteria</u> ."
2	Acronyms	xxv	9	Delete " <u>MCEQ (Mississippi Commission on Environmental Quality)</u> " since it should be " <u>MSCEQ - Mississippi Commission of Environmental Quality</u> ", which is already identified on Line 35 of this same page. Also, the MCEQ is not utilized anywhere in the Draft SEIS.
3	Acronyms	xxv	15	Delete " <u>MDEQ (Mississippi Department of Environmental Quality)</u> " since it is already identified on Line 12 of this same page.
4	General Comment	----	----	Although the DSEIS discusses the revised GEIS and the final rule with a revised Table B-1 in Appendix B to Subpart A of 10 CFR Part 51 that was published on June 20, 2013, Entergy believes that the discussion of these issues could be revised to clarify (1) the NRC has considered all of the Category 1 issues in the revised rule and determined that there is no new and significant information and the Category 1 determinations remain applicable, and (2) the NRC has either determined that the Category 2 issues in the new rule are inapplicable to GGNS or evaluated the relevant environmental impacts.

GGNS Draft SEIS Comments				
Number	Section	Page	Line(s)	Comment
5	1.4	1-6	1-3	<p>This sentence identifies the new Category 1 issues in the June 20, 2013, final rule. This list appears to be inconsistent with the rulemaking documents, which state (78 Fed. Reg. at 37,283): “New Category 1 issues were added: geology and soils; effects of dredging on surface water quality; groundwater use and quality; exposure of terrestrial organisms to radionuclides; exposure of aquatic organisms to radionuclides; effects of dredging on aquatic organisms; impacts of transmission line right-of-way management on aquatic resources; employment and income; tax revenues; human health impacts from chemicals; and physical occupational hazards.” and “Several issues were changed from Category 2 to Category 1: Offsite land use, air quality, public services (several issues), and population and housing.”</p> <p>The differences in the DSEIS sentence and the list in the rulemaking documents may be due to how the DSEIS was defining “new” Category 1 issues or if the DSEIS was only providing examples. Entergy requests that the DSEIS be revised to add all of the new Category 1 issues to this sentence or to clarify the scope of this sentence.</p>
6	1.4	1-6	3-5	<p>This sentence identifies the new Category 2 issues in the June 20, 2013 final rule. This list appears to be inconsistent with the rulemaking documents, which state (78 Fed. Reg. at 37,283): “New Category 2 issues were added: Radionuclides released to groundwater, water use conflicts with terrestrial resources, water use conflicts with aquatic resources, and cumulative impacts.” and “One uncharacterized issue was reclassified as Category 2: Environmental justice/minority and low-income populations.”</p> <p>The differences in the DSEIS sentence and the list in the rulemaking documents may be due to how the DSEIS was defining “new” Category 2 issues or if the DSEIS was only providing examples. Entergy requests that the DSEIS be revised to add all of the new Category 2 issues or to clarify the scope of this sentence.</p>
7	1.4	1-6	6-12	<p>This paragraph discusses the effectiveness of the final rule with the new or revised Category 1 and 2 issues, and that the NRC must consider them. Entergy recommends that the NRC add a brief discussion to provide additional details about how the NRC considered all of the Category 1 and 2 issues.</p>

GGNS Draft SEIS Comments				
Number	Section	Page	Line(s)	Comment
8	2.1.7.2	2-14	9-11	<p>Since none of the water from the North Construction Well and the North and South Drinking Water Wells is discharged through the 54-inch pipeline to the Mississippi River after usage, recommend revising the sentence below as follows for accuracy:</p> <p>After it has been used, this water <i>is discharged either through Sedimentation Basins A or B, dependent on the use of the water, to Hamilton Lake. flows to the Mississippi River through a 54-in. (137-cm) diameter pipeline, either after it has been processed by the onsite sewage treatment facility or as other permitted surface water discharges.</i></p>
9	2.2.2.1	2-21	23-26	<p>Since it was determined during the processing of the 2013 permit renewal application for Air Permit 0420-00023 that GGNS no longer has a need for the use of a portable auxiliary boiler and the renewed permit issued January 6, 2014 reflects that, recommend revising the sentence below to reflect actual plant operations as it relates to sources of emissions. In addition, recommend changing "power outages" to "maintenance/refueling outages" since the use of portable generators occurs under both scenarios.</p> <p>Although GGNS may periodically use a portable auxiliary boiler or generator(s) during maintenance/refueling power outages, nonradioactive combustion-related gaseous effluents result primarily from testing and preventive maintenance of emergency generators and diesel pumps operating on an intermittent basis.</p>
10	2.2.2.1	2-21	31-33	<p>Since there are no emissions from the cooling towers when GGNS is in maintenance or refueling outages, recommend that the sentence below be revised as shown for accuracy. In addition, for clarification, , recommend adding additional language as it relates to cooling tower operating hours based on the language contained in the 2013 GGNS draft Air Permit 0420-00023.</p> <p>Continuous Emission sources at the GGNS site <i>also</i> include cooling towers, which emit particulate matter as drift. <i>Although GGNS is required by permit to operate these towers as efficiently as possible to provide the maximum reduction of air contaminants, t</i>he GGNS air permit does not require reporting of cooling tower operating hours.</p>

GGNS Draft SEIS Comments				
Number	Section	Page	Line(s)	Comment
11	2.2.4	2-30	30-32	<p>Since all NPDES permitted outfalls are located within the GGNS site boundary, the sentence below needs to be revised as follows for accuracy:</p> <p>Three of the outfalls monitor discharges <i>prior to the final receiving to</i> surface water body outside the site boundary (external outfalls); eight of the outfall locations monitor <i>specific wastewater streams prior to mixing with another wastewater stream discharges within the site boundary</i> (internal outfalls).</p>
12	2.2.4	2-32	3-4	<p>Monitoring parameters associated with the outfalls are included in the GGNS NPDES Permit, not the stormwater permit. Therefore, the sentence should be revised as follows:</p> <p>... Details are provided in GGNS's Certificate of Permit Coverage under Mississippi's Baseline Storm Water General NPDES Permit (MDEQ 2010a 2011a).</p>
13	2.2.5.4	2 -34	47 - 48	<p>Since the reference to "recently found" in the sentence below is ambiguous, recommend revising the sentence for better specificity:</p> <p>In 2010, G Groundwater with elevated tritium activities (above background levels) was detected recently found in backfill material and in the Upland Complex Aquifer near the northeast side of the Unit 2 power block.</p>

GGNS Draft SEIS Comments				
Number	Section	Page	Line(s)	Comment
14	2.2.5.4	2-35	9 –12	<p>Because additional monitoring wells have been installed and sampled since submittal of the license renewal application, the NRC has access to the 2012 Annual Radioactive Release Report (GNRO-2013/00033), and based on Entergy’s Response to NRC’s request for additional information dated April 23, 2012 (GNRO-2012/00039), the following revisions should be made to the sentence below:</p> <p>With the exception of dewatering well DW-01 and monitor well MW-07, Based on sampling results through 2012, all wells with tritium activities above background levels have levels significantly below the EPA primary drinking water standard for tritium (20,000 pCi/L) (40 CFR 141), <u>with the exception of dewatering well DW-01 and monitoring well MW-07.</u> Recent Tritium values for DW-01 ranged from 3,990 to 8,407 to 21,100 pCi/L and for MW-07 ranged from 1,639 to 7,135 to 17,404 pCi/L.</p>
15	2.2.5.4	2-35	21	<p>Suggest revising the sentence below to make it more clear that the reference to “outside the site” is referring to the site property boundary.</p> <p>Elevated tritium values have not been detected in any wells located outside the site <u>property boundary</u>.</p>
16	2.2.5.4	2-35	36–37	<p>Although the ODCM specifies a sampling frequency of annually, GGNS is sampling the wells quarterly as reported in the Annual Radiological Environmental Operating Reports submitted to the NRC. Therefore, the sentence should be revised as follows to accurately reflect the current sampling frequency:</p> <p>...These wells are sampled annually <u>annually per the ODCM and currently quarterly per GGNS processes</u> for tritium and the results are reported to the NRC.</p>

GGNS Draft SEIS Comments				
Number	Section	Page	Line(s)	Comment
17	2.2.9.2	2-65	10-12	<p>The City of Jackson has two drinking water systems. Sources of water for system number MS0250008 are from the Ross Barnett Reservoir and Pearl River (surface water) based on the City of Jackson's Annual Drinking Water Quality Report accessed at http://www.jacksonms.gov/DocumentCenter/View/423. Source of water for system number MS0250012 is groundwater (Maddox Road Well system comprised of six groundwater wells) based on the City of Jackson's Annual Drinking Water Quality Report accessed at http://www.city.jackson.ms.us/DocumentCenter/View/424. These two systems together provide water to a population of approximately 192,000 based on information obtained from the Mississippi Department of Health's public water supply system search accessed at http://apps.msdh.ms.gov/DWWW/. Therefore for accuracy, suggest revising the sentence as follows:</p> <p>...These systems use groundwater wells with the exception of the City of Jackson, which relies on <u>both surface water and groundwater</u> Lake Jackson to provide water to a population of approximately <u>192,000</u> 476,000 (EPA 2012e).</p>
18	2.2.9.2	2-66	1-2	It appears that some of the wording in Line 2 could be moved to Line 1.
19	2.2.9.5	2-69	8	Change " <u>Table-13</u> " to " <u>Table 2-13</u> ".
20	Table 2-15	2-74	----	For consistency with previous sections of the Draft SEIS, the number of GGNS employees should be shown as " <u>690</u> "
21	General Comment	Chapter 4	----	Although this chapter on the environmental impacts of operation addresses most of the new issues in the June 20, 2013 final rule that revised Table B-1, it is not clear whether all of those issues have been addressed. Entergy recommends that the NRC include a discussion in this chapter, or elsewhere in the DSEIS, to provide a clear crosswalk to explain that all of the Category 1 and 2 issues have been addressed. For example, it is not clear how the following Category 1 issues are addressed: effects of dredging on surface water quality, groundwater contamination and use (non-cooling system impacts), effects of dredging on aquatic organisms, and impacts of transmission line ROW management on aquatic resources.

GGNS Draft SEIS Comments				
Number	Section	Page	Line(s)	Comment
22	Table 4-3	4-3	----	Based on the justification provided in Table 4.0-1 of the GGNS ER, the following Category 1 issues are not applicable (as Lines 2–3 on Page 4-3 of the Draft SEIS imply they are applicable) to GGNS and should be removed from this table since no refurbishment activities are planned. Also, as previously stated in Chapter 3 of the Draft SEIS, GGNS does not discharge to estuary, and GGNS does not discharge to a lake or reservoir: <u>(1) impact of refurbishment on surface water quality; (2) impact of refurbishment on surface water use; (3) altered salinity gradients; and (4) eutrophication.</u>
23	4.5.3	4-4	47	For clarification for all stakeholders based on the discussion in this section, recommend that the beginning of the sentence be revised as follows so that stakeholders will know the period of results evaluated: ... <u>Based on GGNS monitoring results through 2012,</u> t The groundwater contamination appears to be restricted to the..
24	4.5.3	4-5	4–6	For consistency with the Section 2.2.5.4 language and since there is occasional tritium detected above background in other Upland Complex Aquifer locations, make the following revision to the sentence below: No radionuclide concentrations above background levels have been detected in the Catahoula Aquifer or the Mississippi River Alluvial Aquifer or in any other areas in the Upland Complex Aquifer.
25	Table 4-5	4-6	----	Based on the justification provided in Table 4.0-1 of the GGNS ER, the following Category 1 issues are not applicable (as Lines 35–36 on Page 4-5 of the Draft SEIS implies they are applicable) to GGNS and should be removed from this table since GGNS does not have an intake structure and therefore cannot impinge or entrain aquatic organisms: <u>(1) Entrainment of phytoplankton & zooplankton; (2) Entrainment of fish and shellfish in early life stages; (3) and Impingement of fish and shellfish.</u>

GGNS Draft SEIS Comments				
Number	Section	Page	Line(s)	Comment
26	4.8.2.4	4-10	36-43	Since correspondence from the FWS Mississippi Field Office and the MDFWP discussed in Lines 36-40 both imply "no effects" on the bayou darter, it appears that the impact level of "may affect, but is not likely to adversely affect" should be changed to " <u>no effect.</u> "
27	4.8.2.5	4-11	3-4	Since the purpose of the NPDES program is to minimize adverse effects of discharges, recommend either deleting the sentence below or specify the associated indirect impacts. If there is a noticeable impact from GGNS' thermal discharge, the effect could be either positive or negative depending on the flora or fauna involved and natural and temporal and spatial effects. <u>Indirect effects could include a decrease in habitat quality from thermal discharge in the Mississippi River.</u>
28	4.8.2.5	4-11	8-15	Since correspondence from the FWS Mississippi Field Office and the MDFWP discussed in Lines 36-40 both imply "no effects" on the pallid sturgeon, it appears that the impact level of "may affect, but is not likely to adversely affect" should be changed to " <u>no effect.</u> "
29	4.10.6	4-22	3-4	For consistency with 36 CFR 800.16(l)(1) regarding the definition of historic properties, recommend that the sentence below be revised as follows: Historic properties are defined as resources <u>included in or</u> eligible for listing on the National Register of Historic Places (NRHP).

GGNS Draft SEIS Comments				
Number	Section	Page	Line(s)	Comment
30	4.10.6	4-23	4-10	<p>To more accurately reflect the purpose of the procedures as it relates to protection of cultural resources, suggest revising the sentences as follows:</p> <p>However, given the high potential for the discovery of additional historic and archaeological resources at GGNS, Entergy has formal guidelines in its Environmental Reviews and Evaluations Nuclear Management Manual (EN-EV-115) and Cultural Resources Protection Plan (EN-EV-121) fleet procedures for protecting archaeological resources. <u>These procedures jointly work together to</u> The procedure advise advises Entergy staff on consulting with the appropriate SHPO, and the NRC, as applicable, before ground-disturbing activities take place at GGNS, and An additional procedure (EN-EV-121) requires work to be stopped if evidence of a historical or archaeological artifact is found during ground disturbance.</p>
31	4.10.6	4-23	20-22	<p>Recommend deleting the sentence below since: (1) vegetation management activities at the GGNS site consist of mowing and occasional herbicide applications to control weeds in areas previously disturbed; (2) any deforestation activities would be reviewed in accordance with EN-EV-115 (Environmental Reviews and Evaluations), which would require consideration of protecting cultural resources; and (3) there is no formal vegetation management plan in place at the GGNS site for mowing activities other than GGNS' chemical control program, which manages the use of herbicides.</p> <p><u>Entergy could further reduce any potential effect to historic and archaeological resources at the GGNS site by referencing its formal guidelines for protecting historic and archaeological resources in its vegetation management plan.</u></p>
32	4.10.7.4	4-29	10-11	<p>The reference to "annually" is misleading as sampling frequency varies among the different sample media (i.e., weekly, monthly, quarterly, semiannually, and annually). Therefore, revise the sentence as follows:</p> <p>... To assess the impact of nuclear power plant operations, samples are collected <u>at a frequency specified in the GGNS ODCM</u> annually from the environment and analyzed for radioactivity...</p>

GGNS Draft SEIS Comments				
Number	Section	Page	Line(s)	Comment
33	4.11	4-29 to 4-30	All	Entergy requests that the DSEIS be revised to include an affirmative statement in this section clarifying that the NRC has reviewed all of the Category 1 issues in the revised Table B-1 in the June 20, 2013, final rule and has determined that there is no new and significant information on any of these topics, and therefore the Category 1 designations for these issues remain correct and the small impact designations in Table B-1 remain correct.
34	4.12	4-30	38–39	Need to delete the space between Lines 38 and 39.
35	4.12.1	4-32	28	Insert a space between " <u>5,425</u> " and " <u>metric</u> ".
36	4.12.5	4-40	17–19	Since the verb usage of "conducted" suggests a past activity that is no longer occurring, revise the sentence as follows: The radiological environmental monitoring program Entergy conducted <u>conducts</u> in the vicinity of the GGNS site measures radiation and radioactive materials from all sources (i.e., hospitals and other licensed users of radioactive material).
37	4.12.8	4-42	35–36	There were no resources in the cumulative impact analysis with an impact level of LARGE. In addition, Table 4-10 does not show a resource with an impact level of LARGE. Therefore, revise the sentence as follows: The preliminary determination is that the potential cumulative impacts would range from SMALL to <u>MODERATE</u> LARGE , depending on the resource.
38	6.2.1	6-3	26–30	These two items are numbered 4 and 5. Entergy believes that they should be numbered 1 and 2.
39	8.1	8-5	39–42	Recommend the following revisions for consistency with how "small modular reactors" are referenced elsewhere in the Draft SEIS: The NRC also considered the installation of multiple small and modular reactors at the GGNS site as an alternative to renewing the GGNS license. The NRC established the Advanced Reactor Program in the Office of New Reactors because of considerable interest in small and modular reactors along with anticipated license applications by vendors.

GGNS Draft SEIS Comments				
Number	Section	Page	Line(s)	Comment
40	8.1.2	8-6	40-41	<p>Based on information contained in Entergy's suspended COL application, it was determined that water for construction purposes associated with the new nuclear plant would be from groundwater wells installed in the Upland Complex aquifer. Therefore, suggest revising the sentence as follows for consistency purposes:</p> <p>Water for construction would be obtained from groundwater the existing Ranney wells <i>installed in the Upland Complex aquifer.</i></p>
41	8.2.2	8-15	39-40	<p>Based on information contained in Entergy's suspended COL application, it was determined that water for construction purposes associated with the new nuclear plant would be from groundwater wells installed in the Upland Complex aquifer. Therefore, suggest revising the sentence as follows for consistency purposes since the NGCC alternative would be built on the GGNS site:</p> <p>Water for construction would be obtained from groundwater the existing Ranney wells <i>installed in the Upland Complex aquifer.</i></p>
42	8.3.1	8-23	39-41	<p>Suggest deleting the sentence below since although there are no Class I Federal Areas within 186 miles of the GGNS site, the location of where the coal-fired alternative will actually be built is unknown, and this alternative is not being constructed at the GGNS site. Therefore, depending on the location, this alternative could potentially fall within a 62-mile radius of a Class I Federal Area in an adjoining state, which would trigger a review under the Regional Haze Rule.</p> <p><u><i>The rule would not apply to this coal-fired alternative, however, because there are no Class I Federal areas within 186 mi (300 km) of the GGNS site (EPA 2012b).</i></u></p>

GGNS Draft SEIS Comments				
Number	Section	Page	Line(s)	Comment
43	8.4.1	8-34	40-42	<p>Suggest deleting the sentence below since, although there are no Class I Federal Areas within 186 miles of the GGNS site where the natural gas-fired unit would be constructed, the location of the biomass plants is unknown. Therefore, depending on the location, the biomass plants could potentially fall within a 62-mile radius of a Class I Federal Area in an adjoining state, which would trigger a review under the Regional Haze Rule.</p> <p><u><i>The rule would not apply to this coal-fired alternative, however, because there are no Class I Federal areas within 186 mi (300 km) of the GGNS site (EPA 2012b).</i></u></p>
44	8.4.8	8-41	49-42	<p>As previously stated in the Draft SEIS, there is no land requirement for DSM, and there will be no associated property taxes. Therefore for accuracy, recommend the following revision:</p> <p>However, a larger amount of property taxes may be paid to local jurisdictions from the NGCC, biomass, DSM and purchased power components as more land may be required to support this combination alternative than GGNS.</p>
45	8.4.13	8-45	24-25	<p>The "MSCEQ" agency referenced below is incorrect since management of waste is governed by the Mississippi Department of Environmental Quality. Reference designation is also incorrect. Therefore, suggest revising the sentence as follows:</p> <p>Waste would be handled in accordance with appropriate Mississippi <u>Department Commission of</u> of Environmental Quality waste management regulations (MSCEQ <u>MDEQ</u> 2012).</p>
46	9.1	9-1	25-27	<p>Since cumulative impacts associated with the aquatic and terrestrial resources would be MODERATE even in the absence of GGNS, request the following revisions to the sentences below:</p> <p>For aquatic <u>and terrestrial</u> resources, the staff concluded that the cumulative impact would be MODERATE <u>primarily due to factors unrelated to GGNS operations. For terrestrial resources, the cumulative impacts would be MODERATE.</u></p>