

## PMSTPCOL PEmails

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**From:** STPCOL  
**Sent:** Monday, November 09, 2009 2:41 PM  
**To:** PMSTPCOL PEmails  
**Subject:** FW: RAI Response Timeframes  
**Attachments:** RAI Response Timeframes; ER RAI Timeframes.pdf

**Hearing Identifier:** SouthTexas34Public\_EX  
**Email Number:** 1849

**Mail Envelope Properties** (377CB97DD54F0F4FAAC7E9FD88BCA6D017768BDDBE)

**Subject:** FW: RAI Response Timeframes  
**Sent Date:** 11/9/2009 2:40:31 PM  
**Received Date:** 11/9/2009 2:40:32 PM  
**From:** STPCOL

**Created By:** STP.COL@nrc.gov

**Recipients:**  
"PMSTPCOL PEmails" <PMSTPCOL.PEmails@nrc.gov>  
Tracking Status: None

**Post Office:** HQCLSTR01.nrc.gov

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	3	11/9/2009 2:40:32 PM
RAI Response Timeframes	13274	
ER RAI Timeframes.pdf	155512	

**Options**  
**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (RAI)
2.2 – 1	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	<p>Provide a more complete description of mineral and petroleum resources in Matagorda County adjacent to the proposed facilities. The presence of petroleum wells in the vicinity of the site makes it necessary to explain why there are no mineral or petroleum “resources adjacent to or within the site boundary presently being exploited or of known commercial value.”</p> <p>Provide a more complete statement on the control of mineral rights, and, hence, the control of future drilling at the STP site.</p>	<p>The statement on mineral resources in the vicinity of the site needs to address mineral resources in the vicinity of the site (within a 6-mile band). Include (see Texas reports) details of mineral resources in the county and the need to more fully study the application that no mineral resources adjacent to or within the site boundary of known commercial value (ER) would petroleum wells be drilled on the property, (i.e., be drilled adjacent to or within the site boundary) structure that preclude petroleum reserves within the site boundary.</p> <p>Who else owns the mineral rights and what percentage do they own? What potential drilling on the site and also have control over the site?</p>
2.2.1 – 1	10 CFR 51.71(d)  RG 4.2, Rev. 2, section 2.1.1	Land Use/Alternative Sites	Revise Tables 2.2–1 and 2.2–2 in the ER to reflect land occupied by STP units 1 and 2 and auxiliary facilities.	Tables 2.2–1 and 2.2–2 regarding the land occupied by STP units 1 and 2 and auxiliary facilities. Provide details to reflect this land activity.
2.3 – 1	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide USACE documentation regarding the status of the MCR as waters of the US.	Provide U.S. Army Corps of Engineers documentation that the Main Cooling Reservoir (MCR) is not be “waters of the United States” of the MCR as “navigable waters” in light of the above details.
2.3 – 2	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Describe the existing storm water treatment and outfalls, and the water bodies into which they discharge.	Describe existing storm water treatment and outfalls and the water bodies into which they discharge.
2.3 – 3	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide information regarding water rights under severe droughts.	Explain how water rights are affected by a drought and provide a record.
2.3 – 4	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide water use requirements downstream of the STP intake.	Describe the water use requirements downstream of the STP intake at the Colorado River Delta Pumping Facility (RM).

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2.3 – 5	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide the location and other pertinent data for the salinity wedge in the Colorado River during various discharges.	Provide pertinent data the salinity interface of the Colorado River, and its position under various conditions.
2.3 – 6	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide details of MCR operation during existing two–unit and future four–unit operation to help staff independently estimate water–use and water–quality impacts.	<p>Provide details of operating water withdrawal conditions defined by the Lower Colorado River Compact. Provide details on differences in the withdrawal policy of the MCR for operation during existing operation with two–unit and four–unit operation.</p> <p>When was the maximum of the salinity wedge from 45 to 47 ft mean sea level? Discuss the impact of an increase in the water table from 47 to 49 ft MSL on natural seepage losses from the MCR.</p> <p>Why is a discharge of 1200 cfs considered the threshold for the Colorado River near the RAI?</p> <p>Provide water budget and water quality for two–unit and for four–unit operation. Provide withdrawal policy, LCRA policy, and seepage losses from the MCR.</p> <p>Provide details of frequency of operation.</p>
2.3 – 7	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide details of the process followed in the selection of the site hydrogeologic conceptual model.	Provide a statement of the site hydrogeologic conceptual model to better understand alternative models that have been considered, those that have not. The site hydrogeologic conceptual model should include: (a) contextual background information, (b) potential impacts of the model, (c) alteration of groundwater quality, (d) the relationship to surrounding relief, (e) the estimate of the groundwater resource, and (f) the representation that has been on the record for the site.

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2.3 – 8	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	<p>Provide groundwater observations for a sufficiently long period to reveal seasonal trends.</p> <p>If available, also provide long-term trend data on groundwater in the vicinity of the proposed facility.</p>	<p>Section 2.3.1.2.3.2 of the permit requires groundwater measurements from the monitoring wells that began in December 2007. The permit requires that the groundwater observations be provided. Provide the complete data for each well, including seasonal trends and a summary that is representative of long-term trends.</p> <p>If available in the STP permit, provide historical data to reveal trends within the STP site boundary and adjacent to the proposed facility.</p>
2.3 – 9	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide construction details, purpose, and function of relief wells surrounding the MCR.	<p>(a) Provide construction details (i.e., screened interval, depth, etc.) and purpose of the relief wells, how they are designed and function of the dike surrounding the MCR, and describe briefly how the relief wells are designed to prevent groundwater from the Upper Shallow Aquifer from entering the MCR. Describe briefly how it is designed to prevent groundwater from the Upper Shallow Aquifer from entering the MCR.</p> <p>(b) If the MCR relief wells are designed to prevent groundwater from the MCR, then specify how they will penetrate the Upper Shallow Aquifer. Discharge/recharge is required. Provide an estimate of the discharge/recharge for each flow component.</p> <p>(c) Is the influence of the relief wells on potentiometric plots the same as their influence local to the MCR and not seen in potentiometric plots of the Upper Shallow Aquifer? Responses will clarify the purpose of the relief wells.</p>

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2.3 – 10	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Address inconsistency in ER text with respect to hydraulic conductivities presented in Figure 2.3.1–32.	Section 2.3.1.2.3.6 of included the grain size aquifer pumping test a conductivity. Compari although the grain size the range of regional the STP aquifer test r means indicates the g conductivity is within t results." Reconcile th and boxplots presente
2.3 – 11	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	<p>Address the inconsistency between the 1985 forecast of a decline in groundwater use in Matagorda County against currently available county data on groundwater use.</p> <p>Provide a projection of future groundwater use in Section 2.3.2.2, and provide a breakdown of water demand, described in Table 2.3.2-6, between that to be provided by surface water and groundwater resources.</p>	<p>(1) Provide a summary rationale for the subst consumption in Matag forecasted by the Stat movement from grou because of salt or bra and marked decline in brackish water intrusio forecasted for the Chi forecast, how has gro changed? Has the fo the NRC's initial indep with the Coastal Plain (CPGWCD) during the the 1985 forecast doe and that portraying gr County in this light ma availability of a State discussion to reconcil</p> <p>(2) Provide a projectio Section 2.3.2.2</p>

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2.3 – 12	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide an analysis of the sustainable groundwater resource.	<p>ER Section 2.3.1.2.4.3, increasing the yield of the aquifer with the objective that to increase the yield of the aquifer to 3000 acre-ft per year permitted groundwater availability groundwater conservation measures, if practicable, water conservation measures, if practicable, water conservation engineering for STP 3 &amp; 4 sections.</p> <p>NRC independent analysis of the groundwater resource include its availability and the impact upon it. The analysis of the current 3000 acre-ft groundwater resource analysis is needed of the aquifer (e.g., safe yield) availability. The Deep Aquifer portion of the aquifer impacts analysis cannot be addressed by engineering.</p>
2.3 – 13	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide a clarification on the role of production wells related to groundwater pathway and impact on the deep aquifer.	<p>Midway through the last of the ER states, “Potential for the Deep Aquifer indicate that groundwater is moving toward the site and the potential for offsite groundwater effluent passes through the site suggest that there is no impact for the Deep Aquifer.” The latter statement because of the relationship between the site safety and the Deep Aquifer, for example, (1) question on whether each of the production wells can be offline, what rates of production, question that if they are offline surrounding Deep Aquifer safety related facilities, and other issues with regard to the Deep Aquifer be addressed in the S</p>

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2.3 – 14	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide a description of the STP groundwater monitoring program.	<p>The ER states in Subpart 51.71(d) of the proposed rule: “As part of detailed engineering design, the current STP groundwater monitoring program shall be evaluated with respect to the ability to determine if any modifications are required to adequately monitor groundwater.”</p> <p>Provide a description of the current groundwater monitoring program and the rationale that would be used to incorporate Units 3 and 4. If available, then provide the monitoring objective, as well as, a list of monitoring points.</p>
2.3 – 15	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide definitive information regarding known or assumed tritium sources.	<p>Regarding the field observations of tritium in wells in 2005 and 2006, if known or assumed tritium sources are identified, then provide the location of the source, then provide the MCR water has infiltrated through the windows in the clay sealant. If related to relief well or operational releases of tritium from the bases.</p>
2.4.1 – 1	10 CFR 51.71(d)	Terrestrial Ecology	Provide information regarding terrestrial species composition and abundance by habitat type on the STP site.	<p>Provide a description of the current vegetation and wildlife existing on the STP site. If the ER, or as described in draft documentation, the ENSR for the application of small mammals (including but not limited to present), common reptiles and amphibians, habitats on the STP site, transmission corridor, and other information is contained in the Corporation Report: 1. If the information are not consistent between the report. During the site visit, staff indicated that a report on site and the wildlife monitoring was under preparation.</p>

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (RAI)
2.4.1 – 2	10 CFR 51.71(d)	Terrestrial Ecology	Provide current information on the type and relative abundance of migratory bird species and waterfowl using the habitats on the STP site, potential impacts to these populations, and proposed mitigation measures to limit impacts during construction and operation.	Provide current information on the type and relative abundance of migratory bird species and waterfowl using the habitats on the STP site, potential impacts to these populations, and proposed mitigation measures to limit impacts during construction and operation. Also, provide information on operational practices to avoid adverse effects to migratory birds. Further discuss mitigation measures available to determine the extent of impacts from STP construction and operation. Also, provide information on operational practices to avoid adverse effects to migratory birds. Further discuss mitigation measures available to determine the extent of impacts from STP construction and operation. Also, provide information on operational practices to avoid adverse effects to migratory birds. Further discuss mitigation measures available to determine the extent of impacts from STP construction and operation.
2.4.1 – 3	10 CFR 51.71(d)	Terrestrial Ecology	Provide a copy of the preliminary validation and delineation data package for wetlands prepared for submittal to the Army Corps of Engineers.	The wetlands identified by the U.S. Army Corps of Engineers in the site audit, discussions with the applicant identified additional wetlands provided to the ACEC. Provide a copy of the preliminary validation and delineation data package provided to the ACEC.
2.4.1 – 4	10 CFR 51.71(d)	Terrestrial Ecology	Provide graphics that illustrate the salt deposition isopleths overlaid on existing habitat maps and wetland maps.	The extent and distribution of salt deposition have been modeled and overlaid on habitat maps and wetland maps. Provide graphics that illustrate the salt deposition isopleths overlaid on existing habitat maps and wetland maps.

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2.4.2 – 1	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Provide the results of the 12 months of aquatic resource sampling in the Colorado River.	<p>Describe the aquatic resources within the vicinity of the RMPF during efforts in 2007–08. Include species.</p> <p>Describe how the species in the Colorado River since the diversion of the Colorado River at East Matagorda Bay in 1983. List resources that are near the RMPF and entrainment at the RMPF Facility (RMPF).</p> <p>Describe the sampling methods used to characterize the resources during efforts in the 12 months activities.</p> <p>What is the relationship between the 12 months compared to the 1983 salinity, dissolved oxygen, and temperature?</p> <p>Describe any anomalies that may contribute to uncertainty. In 1983 one sample from the Colorado River had 99% of all the recorded species.</p>
2.4.2 – 2	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Describe the aquatic habitat features at the RMPF.	Describe the habitat features, sediment types and channel features to the flow characteristics and movement of the salt water resources likely to be present at the RMPF? Does the RMPF have resources? Discuss how the sampling activities (e.g., monitoring of the RMPF).

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2.4.2 – 3	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Characterize the aquatic resources in the MCR.	Describe the aquatic resources in the MCR, including vertebrate and invertebrate species.  Describe the sampling methods used to characterize the aquatic resources.  What is the relationship between the aquatic resources in the MCR and the surrounding environment, including salinity, dissolved oxygen, and temperature?  Describe the impingement of the MCR on the Colorado River Water Supply (CRWS). Include a description of the impingement (e.g., sampling locations, flow rates, etc.).  Relate the aquatic species found in the MCR to those found in the Colorado River.
2.4.2 – 4	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Describe the saltwater wedge at the RMPF (~NMM 8 on the Colorado River).	The discussion in Section 2.4.2-4 describes the saltwater wedge at the RMPF and the effects of the Colorado River channel's construction on the saltwater wedge at Matagorda Bay. Describe the saltwater wedge and its characteristics (cross-sectional variations and influence on the aquatic community) in relation to saltwater intrusion.
2.4.2 – 5	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Discuss the uncertainties in evaluating the aquatic resources from past to current studies.	The discussion in Section 2.4.2-5 describes the uncertainties in evaluating the aquatic resources from past to current studies. Discuss the uncertainties in evaluating the aquatic resources from past to current studies.
2.4.2 – 6	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	In Table 2.4–2, what land area does the column, “STP Site”, include?	In Table 2.4–2, what land area does the column, “STP Site”, include? Does it encompass in area? Does it include the boundary? Does it include the boundary?
2.4.2 – 7	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Provide correspondence with U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration, and U.S. Army Corps of Engineers that has occurred since September 20, 2007.	Based on discussions between STPNOC and the U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration, and U.S. Army Corps of Engineers that has occurred since September 20, 2007. Provide recent correspondence.

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2.4.2 – 8	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Discuss the different classifications of wetlands on the STP site and the acreages associated with each.	In various sections of wetlands are stated. discussions on page 2 of wetlands...”), 2.4–7 and 4.1–4 (“...110 ma wetlands...”) appear t clarification on the app (e.g., acre or acre/ft).
2.4.2 – 9	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Clarify the acreage of the Essential Cooling Pond.	In various sections of Essential Cooling Por acres (p.2.3.1–4), 68 4.2–2) are used. Prov acreage differs.
2.4.2 – 10	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	What requirements are there for Segment 1401 of the Colorado River associated with listing of the region as “impaired waters due to the presence of bacteria”?	Discuss the relationsh of the water quality fo River in the vicinity of found during recent m
2.4.2 – 11	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Provide information on the application for the Coastal Consistency Determination for Units 3 & 4.	In a letter from Greg C 2008 concerning Resi Site Audit Comments was stated that STPN General Land Office ( Texas Coastal Manag correspondence and c documentation with G
2.5 – 1	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Provide an electronic copy of the Socioeconomics “Validation Package”.	It is the staff’s underst in the socioeconomics back to a source in a “Validation Package,” contained in electronic
2.5 – 2	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Update population and growth rates based on post–2000 Census data.	2000 Census data can information from Texa American Community population between c supplemented from o availability of 5–6 ya population data chang geographic distributio composition? If not, s values for the affecte

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2.5 – 3	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Provide an estimate of transient population employment in the fishing industry.	Based on local interviews, there may be significant numbers of transient workers in the area, especially near the Palacios area. Identify the number of migrant workers and discuss how they affect the overall transient population.
2.5 – 4	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Provide a discussion of important community social structures and organizations.	Most community structures, including non-profits, faith-based organizations, and social service organizations, were identified. Provide a list of these organizations, and discuss how they would increase or an influx of transient workers, for example. How would this affect the community in phase?
2.5 – 5	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Identify public and private recreational facilities and opportunities, including present and projected capacity and percentage of use.	There is no information on the future use of outdoor recreational facilities. It is possible that water use from a plant-related population could affect water quality for an area. This could be a basis for any conclusions regarding the STP site and the alternative.
2.5 – 6	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Provide a discussion of non-zoning controls on land development	Provide a discussion of non-zoning controls on land development, including transportation plans, housing and business development, and utility hookups. Provide copies of these plans.
2.5 – 7	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Provide a discussion of changes to anticipated levels of traffic identified by state transportation planners for Matagorda and surrounding counties.	Based on staff interviews, both US Highway 60 and State Highway 161 are crowded during construction. Provide data regarding capacity of highways and transportation plans to relieve those choke points in the transportation plans.

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2.5 – 8	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Provide a discussion of distinctive (e.g., minority, ethnic, religious) communities that exist in the area of the STP plant.	The ER does not mention... However, staff interviewed... community in Palacio... communities. Provide... minority, ethnic, religious... area of the STP plant.
2.5 – 9	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Discuss contacts made with minority and low-income populations and state whether they identified any environmental concerns about STP Units 3 & 4.	Provide documentation... low-income population... proposed site, including... Summarize comments... the applicant that local... minority and low-income... the proposed station... practices and health... described in those... state.
2.5 – 10	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	What is the projected use of outdoor recreational facilities near STP?	Are there any universities... along the Colorado river... universities done surveys... fishing tournaments on... Colorado River that... plant? Are there any... kayak tours on the river?
2.5 – 11	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Confirm whether the 2000 Census is the most recent data available for housing availability in the counties near STP.	Confirm whether data... tenure from the 2000... available. If more recent... price and vacancy data... currently shown.
2.5 – 12	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Discuss non-governmental service organizations located in Matagorda County and adjacent counties.	Discuss the major non... organizations in Matagorda... identify services they... organizations which provide... income residents in year.
2.5 – 13	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Discuss the participation in federal school free and low-cost lunch programs.	Some of the local schools... participation in the federal... each ISD, discuss (including... participating students... participation is and how... finances.

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2.5 – 14	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Discuss the importance of local “roll-back” elections for ISD finances operating revenue.	Explain the importance mechanism on ISD M the region of STP.
2.5 – 15	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Discuss the outcome of the Moak, Casey, and Associates study and provide a copy.	The staff has learned Casey, and Associates of the economic impact finances. Summarize
2.5 – 16	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Describe the tax impact of the expanding San Antonio share of the STP 1 & 2, and impact of STP 3 & 4.	The staff has learned has changed over time non-taxable entity, ta plants. Describe the p this trend of STP Unit ownership of Units 3 a revenues.
2.5 – 17	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Describe the future impact of the growth in electricity production on water demand in the Colorado River.	The ER states that “st increase by 45%, from acre-feet in the same projects account for th
2.5 – 18	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Clarify contents and provide copies of references 2.5–14, 2.5–15, and 2.5–17.	Staff could not locate purported to be in refe 2.5–15. Reference 2. 1–16–2008. Provide “Yoakum District High Transportation Planni
2.5 – 19	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Confirm source for Table 2.5–9.	Table 2.5–9 seems to 2.5–11 not 2.5–12.
2.5 – 20	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Provide data on all property tax collections, including a separation of STP payments.	According to the ER, “ property taxes collect taxes STPNOC has p percent of the total co STPNOC. “ However show a breakdown of comparison with total comparison with total

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2.5 – 21	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Estimate the degree of congestion for key road links approaching STP.	Clarify the relationship between capacity and level-of-service used to estimate congestion for the key locations of which AADT are reported.
2.5 – 22	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Describe planned road upgrades on the commuting routes to STP.	In the course of offsite work, be aware of several potential transportation system upgrades in City. Are any upgrades planned for the transportation system?
2.5 – 23	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Discuss the environmental and socioeconomic impacts of upgrading the rail spur.	Is upgrading the 9-mile rail spur a commitment of the STP? What are the environmental and socioeconomic impacts of the rail spur?
2.5 – 24	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Discuss seasonal low water issues with using the STP barge slip.	Are there seasonal low water issues with using the STP barge slip? How will they be addressed?
2.5 – 25	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Provide an explanation as to why maximum water treated exceeds rated capacity in Table 2.5-30.	Provide an explanation as to why maximum water treated exceeds rated capacity in Table 2.5-30. Provide an explanation of the water treatment system (several instances).
2.5 – 26	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Determine whether the population forecasts in the TX Water Plan are consistent with those in the demographic section.	Determine whether the population forecasts in the TX Water Plan are consistent with those in the demographic section. Region K growth in Matagorda County by 2030 is predicted rate for region K.
2.5 – 27	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	List private schools within 50 miles of STP, including specific details of each.	List private schools within 50 miles of STP, including names, locations, and details of each.



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2.7 – 1	10 CFR 51.50 10 CFR 51.70(b) 10 CFR 51 Appx A RG 4.2	Meteorology/Air Quality/Accidents	Provide a climatological summary of the STP meteorological data.	According to ER Sect 2.7.4.1, meteorological measurements have been taken for more than 30 yrs. These data are used in the climatological description of the normal climatological conditions at the STP site and other data in 2.7.4 of the ER. Provide the data collected at Victorville and compare the conditions than the data
2.7 – 2 (5.3.3.1)	10 CFR 51.50 10 CFR 51.70(b) 10 CFR 51 Appx A RG 4.2	Meteorology/Air Quality/Accidents	Discuss the likelihood that the combination of the MCR and the STP Unit 3 & 4 cooling towers will have a synergistic effect that increases the frequency or intensity of fog.	Sections 2.7.4.1 and 2.7.4.2 from the MCR and from Units 3&4 as if they were in fact, they are in close proximity and occur simultaneously. Therefore, the cumulative effects of the towers; provide the cu
2.7 – 3 (7.1)	10 CFR 51.50 10 CFR 51.70(b) 10 CFR 51 Appx A RG 4.2 RG 1.145	Meteorology/Air Quality/Accidents	Describe which PAVAN files were used and how the 50% $\chi/Q$ values were derived.	Section 2.7.5.2 of the ER is used in evaluating the impacts of the NRC staff independent PAVAN files submitted by STP. The $\chi/Q$ values were determined from the PAVAN files. Provide a description of the 50% values from t
2.7 – 4 (5.4.2)	10 CFR 51.50 10 CFR 51.70(b) 10 CFR 51 Appx A RG 4.2 RG 1.111	Meteorology/Air Quality/Accidents	Explain why the XOQDOQ results presented in the FSAR differ from the results presented in the ER.	FSAR Section 2.3S.5.1 presents the results of long-term atmospheric deposition calculations and radiological consequences for Units 3&4. Please explain why the distance and distance-to-population values presented in FSAR differ from the values

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2.7 – 5 (4.4.1)	10 CFR 51.50 10 CFR 51.70(b) 10 CFR 51 Appx A RG 4.2	Meteorology/Air Quality/Accidents	Interpret the word “may” as it relates to actions to mitigate potential impacts of construction on air quality.	The word “may” appears in 10 CFR 3.9S.1 et seq. relative to how the staff is to value and implement measures to mitigate impacts of construction. Is there any guidance on how the staff is to value or all of the measures? Is there any guidance on how the staff should give credit for the actions? Will the staff determine which measures will be taken? Will the staff make a determination and what will be made?
3.4.1 – 1 (5.3.4)	10 CFR 51.50 10 CFR 51.70(b) 10 CFR 51 Appx A	Meteorology/Air Quality/Accidents	Provide a citation for the estimated cooling tower noise level of about 57 dBA.	ER Section 2.7.7 discusses noise. Does it address potential noise? Section 5.3.3.2.2 (page 5) discusses the cooling tower of 57 dBA. Provide a citation or supporting documentation for the noise level estimate.
3.5 – 1	RG 4.2 10 CFR 20 10 CFR 51.45	Radiological/Fuel Cycle/Waste Systems	Provide explanations and calculations, as appropriate, of the inputs to the LADTAP, GASPARE, and construction worker dose calculation. One acceptable way to respond to this RAI would be to provide the calculation packages.	ESRP 3.5, Section III, discusses the following: “The reviewer should calculate the materials released and the parameters and calculate the dose. NUREG-0016... If the term that is consistent with the calculational technique and should not perform the source term calculation and output files.”



RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (RAI)
4.2 – 4	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Describe the impacts of new pump installation activities.	Describe the impacts, new pump installation area, and the Colorado
4.2 – 5	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide information regarding the locations of drainage ditches and retention ponds.	Provide information re ditches and retention currently available, the the NRC staff's review ditches and retention
4.2 – 6	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Describe the analytical process used to determine impacts to surface water hydrology would be SMALL.	Provide a description used to conclude that surface water hydrolo
4.2 – 7	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide a list and description of pre-construction activities mentioned in ER Section 1.1.2.7.	Provide a list and des activities mentioned in
4.2 – 8	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide a map or drawing showing the extent of the excavations, and how close they will come to STP 1 & 2, the MCR, and wetlands. Describe the dewatering and excavation process.	The excavation for ea ultimate heat sink (65 whether these areas c excavation is not disc showing the extent of proximity they will be wetlands. Describe th process and duration, evaluating [e.g., will a area encompassing th continue for an exten longer); would the de the reactor facilities a

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (RAI)
4.2 – 9	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Why is the lower value of subsidence estimates used?	A range of subsidence estimates is provided in Section 4.2-1, however, the design uses the lower and not the higher value. Why is the lower value being used, rather than the upper estimate of the MCR, or would mitigation measures to reduce the level of subsidence warrant a different approach to dewatering, such as tie-back walls, injection wells, etc. This decision has not been made. What method to be employed for dewatering is being evaluated (e.g., tie-back walls, discharge to mitigate, etc.)? Describe how dewatering will be implemented. Pollution Prevention Plan (PPP) will be developed where will the dewatering water be routed. Discuss subsidence (e.g., impact, etc.) as it relates to the storm water management plan. How will the storm water be routed).
4.2 – 10	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Demonstrate the lack of connectivity between dewatering wells and the wetlands and shallow surface water features.	Section 4.2.1.2 of the design states: "The surficial clays would act as a barrier to surface water (natural or artificial) in the vicinity of STP 3. The design shows subsurface soil units beneath the wetlands construction." Are the design showing connectivity between the dewatering wells and the wetlands and shallow surface water features in the vicinity of STP 3. long-term aquifer test results are available from the construction. Are the design showing connectivity between the dewatering wells and the wetlands and shallow surface water features in the vicinity of STP 3. STP develop a monitoring plan to monitor connectivity and trigger mitigation measures if connectivity is demonstrated. Describe the possible connectivity between the dewatering wells and the wetlands and shallow surface water features in the vicinity of STP 3.

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4.2 – 11	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide a full description of the potential impacts to nearby groundwater users.	Section 4.2.2 of the EIR states that the proposed project shall not exceed the site's groundwater withdrawal permit, "the Coastal Plain Groundwater Control District (CPGWCD) withdrawal limits" with respect to nearby groundwater users. Provide details of the potential impacts to nearby groundwater users related to full use of the proposed project.
4.2 – 12	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Present an evaluation or validation of the model shown at the beginning of Section 4.2.2.1.	Present an evaluation or validation of the equation (model) shown at the beginning of Section 4.2.2.1 to predict production wells. Give details of the data to be used to validate the model. Provide details of the drawdown resulting from the proposed withdrawals during construction of proposed Units 3 and 4.
4.2 – 13	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide information regarding dewatering discharge locations, any required ditches and retention ponds and associated permits, storm water outfalls, storm water treatment, and water bodies into which storm water will be discharged.	Describe the dewatering discharge locations, frequency, and location of storm water including precipitation. Provide details of any storm water treatment facilities to be collected in the existing storm water system. Provide details of any storm water treatment facilities needed for discharge to the storm water system and when these permits are required.
4.3.1 – 1	10 CFR 51.71(d)	Terrestrial Ecology	Identify and discuss habitats and important species associated with the 20-mile upgrade section of the Hillje transmission corridor.	The habitats and corridors associated with the transmission lines associated with the proposed project operations are described in the EIR. Provide details of the importance of these habitats and the species known to occur in these habitats adjacent to the 20-mile section of the Hillje transmission line that will be upgraded. Provide details of the discussion of their habitats and the importance of these habitats to the 20-mile section of the Hillje transmission line.

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (RAI)
4.3.1 – 2	10 CFR 51.71(d)	Terrestrial Ecology	Provide information and figures describing the proposed locations of various construction project areas and activities and describe associated impacts to terrestrial resources.	Discussions held at the conference calls indicate the proposed location and construction materials are unclear whether the project given in the ER for the (both from construction continue in the location information and figures of these areas if the project from ER Rev. 1, or if the project. In addition, provide information on impacts from construction different than stated in
4.3.2 – 1	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	What are the requirements for dredging in the Colorado River under the existing permits with the U.S. Corps of Engineers?	Provide updated correspondence with Engineers concerning permits 3 and 4 that were on-going
4.3.2 – 2	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Provide specific examples of activities that will reduce impacts to aquatic resources associated with the Erosion and Sediment Control Plan and Storm Water Management Plan.	ER Section 4.3.2 references Erosion and Sediment Management Plan. Provide examples of activities that reduce impacts to aquatic resources. Provide a list of examples that can be used
4.3.2 – 3	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	What are the impacts from construction activities on aquatic resources associated with surface water and drainage ditches?	ER Section 4.3.1 and the bioassessment study of the areas. What are the potential impacts to aquatic resources based on the evaluations? What changes to drainage ditches will affect aquatic resources found in the area during construction of reactor

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (RAI)
4.3.2 – 4	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Provide information and figures describing the proposed locations of various construction project areas and activities and describe associated impacts to aquatic resources.	Clarify the location of wetlands associated with wetlands. Clarify if the locations of wetlands, yard and soils piles (b) dredging) are still the same as on the location of these wetlands. ER Rev. 1, and provide information on impacts from construction.
4.4 – 1	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Add a month by month table of projected “workers on site”.	Add a month by month table of “workers on site,” to include existing workers, construction workers, and operating workforce for the month. The table should include months 2, 3 and 4 all operating workforce.
4.4 – 2	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Reconcile construction-period employment assumptions.	Reconcile the assumptions for construction workers and commuting distance v. 3.10S that less than 1% of the non–field craft labor is within 10 miles. Also reconcile the assumption that “Seventy to eighty percent of the workforce will be employed by the contractor. Most of the craft labor will seek temporary housing. Non–manual staff will seek permanent housing.”
4.4 – 3	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Re–calculate wage impacts using more realistic wage rates.	The construction wage rates for workers are likely to be higher than existing average annual wages in the County. Revise impacts to reflect more realistic wage rates. Cite sources.
4.4 – 4	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Revise estimated impacts of post–construction job and income losses.	The ER states that “upon completion, a total of 100 workers are expected to migrate by the end of the construction period. The source of plant construction is more than the specific work impacts. Revise the impacts to reflect the loss of the construction workers and the loss of the workers.”

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (RAI)
4.4 – 5	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Further explain the land conversion assumption presented in Section 4.4.2 of the ER.	Explain why 50% of the workers would return to their homes and remain converted.
4.4 – 6	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Re-calculate traffic impacts based on more realistic assumptions.	Section 4.4.2 of the ER analysis, it was assumed that 50% of the workers were attributable to the project. This seems like an overestimate. There are about 1365 workers. If they all drove alone, this would be the peak traffic impacts, considering contractors, and non-employees estimate.
4.4 – 7	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Calculate traffic impacts in congestion terms, not just impacts on pavements.	The ER currently uses a (load) -based estimate to calculate traffic impacts on pavement cracking and congestion. Calculate how traffic relates to peak-congestion.
4.4 – 8	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Calculate traffic interactions between STP and hurricane evacuations.	What would be the queue during construction to get on routes Highways 60, 370, FM 1095, FM 1468?
4.4 – 9	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Discuss the impacts of any interactions between the re-built rail spur and road traffic, especially on FM 521.	If the rebuilt railroad spans the crossing, what would be the impacts on FM 521 and what actions would be taken? Discuss the impacts of the re-built rail spur and road traffic on FM 521.
4.4 – 10	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Discuss the impact of construction on housing demand.	The quantitative housing demand assumes that the workers would occupy permanent housing, RVs and mobile homes. Discuss the heavy reliance of workers on housing during construction of the project.



RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (RAI)
4.4 – 15	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	List commitments to reduce physical impacts of construction.	The text notes for example 3.9S.2.1, procedures to reduce vibration impacts from construction measures such as reducing generating activities to reduce construction traffic from the site through specific neighborhood producing equipment (e.g., staggering activities), limiting equipment on vehicles, and working order. Notification to nearby residents regarding events (e.g., pile driving) performed.” These are the options. Identify which
4.4 – 16	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	List commitments to reduce traffic impacts of construction.	“Public roads may be closed (or installed) as a result of construction commitment? If not, will it become a commitment?”
4.4 – 17	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	List commitments to reduce physical impacts of construction.	“The following control measures are incorporated into activities to reduce noise and associated impacts:  Regularly inspecting and maintaining equipment to include noise aspects  Restricting noise-related activities during daylight hours  Restricting delivery times  Identify which of these
4.4 – 18	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Provide a copy of RIMS II multipliers used.	Provide a copy of “RIMS II Economic Analysis, Brazoria Counties, Texas (Brazoria Economic Analysis), U.S. Economic and Statistical Administration Economic Analysis, W

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (RAI)
4.4 – 19	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Provide information on any pre-existing health conditions among minority and low-income populations that could result in disproportionate adverse health impacts.	Discuss in detail pathways (including socioeconomic) that may interact with cultural practices and result in disproportionate adverse health impacts among minority and low-income populations. If a natural system were found to be a significant source, only a summary of agency information was supplied. Discuss health conditions among minority and low-income populations, although the Texas Department of Health has provided extensive local statistical information on the general population. Identify weaknesses in the community and literature.
4.5 – 1	10 CFR 20 RG 8.8, Rev. 3	Radiological/Fuel Cycle/Waste Systems	Discuss rationale for comparing construction worker doses to 40 CFR 190 criteria.	In Table 4.5–19 of the draft RAIs, the construction worker protection criteria. 40 CFR 190 applies to the boundary, not at the U.S. site boundary. Inside the site boundary, the construction worker annual dose to the public. Table 4.5–19 does not appear to provide rationale for this comparison.
4.5 – 2	10 CFR 20	Radiological/Fuel Cycle/Waste Systems	Discuss rationale for comparing construction worker doses to 10 CFR 50 Appendix I criteria.	In Table 4.5–18 of the draft RAIs, the doses due to liquid effluents. Appendix I design objectives. Appendix I compares onsite work effluents to the Appendix I design objectives. Appendix I applies to unrestricted areas, this is not appropriate. Discuss

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (RAI)
4.5 – 3	10 CFR 20 10 CFR 51.45	Radiological/Fuel Cycle/Waste Systems	What was the thought process for using Units 1 & 2 Annual Effluent Report data for 2005 to calculate air pathway doses to construction workers?	<p>The GASPAR analysis used four input files. File "C" is the input file for modeling the ER, Table 4.5–1 lists the Effluents from STP 1. The maximums listed appear to be consistent with the Effluent Reports on hand. The 2005 data used in the 2005 were the midpoint values. The total curie release was calculated using the 2005 data used rather than the year w</p> <p>Table 4.5–1 lists the radiological gaseous effluents; however, in the context of the 2005 da</p>
4.6 – 1 (5.10)	10 CFR 50.36b 10 CFR 51.50(c)	Transmission System / Measures & Controls	Provide an Environmental Protection Plan for STP Units 3&4.	<p>An Environmental Protection Plan was included in the ER. Tables 5.10 include the need to provide on a basis the following text in the environmental report: "The licensee will report and keep records of any conditions and measures taken to protect the non-aquatic life figures prominently in the STPNOC's measures to avoid potential adverse impacts." Provide an EPP that describes the controls, including monitoring of resources during cons</p>
4.6 – 2	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Indicate which actions to limit adverse impacts during construction are commitments.	<p>A number of actions are listed in the ER of Potentially Adverse Impacts with respect to limiting impacts (4.4.1) and socioeconomic impacts. These potential actions are listed in the ER and action by the applicant to address them that could be taken by</p>

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (s)
4.6 – 3	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Describe the planned control program to mitigate construction-related impacts to aquatic ecosystems from suspended sediments.	During conference call occurring since the site changes to ER Rev. 1. diversion of water from foundation. Confirm the addressing impacts to water during construction encompass all diverted
5.2 – 1	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Discuss the incremental change in the availability of the water resource, and the incremental change in groundwater drawdown as an impact of station operation on potential water users.	Discuss the impact of users. Describe this potential seen by offsite are the magnitude, duration surface and groundwater the operation of Units
5.2 – 2	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Address inconsistencies in the ER regarding groundwater impact levels.	<p>There appears to be an impacts to the groundwater operation, and cumulative ft/year rate; however, dit</p> <p>Reconcile how the analysis deep Chicot aquifer conclusion of SMALL to result of construction impacts analyses considered permitted level (3000 ac</p> <p>Provide the basis for how during construction can conclusion in the construction MODERATE with possibility of additional deep aquifer</p> <p>While the cumulative operation is consistent with the earlier impacts section, it does SMALL to MODERATE impacts section.</p>

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (RAI)
5.2 – 3	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Describe quantitatively the known impacts and qualitatively the potential future impacts on the groundwater system.	The ER section 5.2.3.3 during operation does the groundwater system between the MCR and conceptual model. Describe quantitatively and the qualitatively. Present levels that exist in the introduced to the shaft how present-day mean MCR operation under operation of all four units.
5.3.1.2 – 1	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Describe the design feature of the RMPF that allows an “escape route” for fish to swim back to the river and precluding entrapment.	Section 5.3.1.2.1 Describe that preclude or mitigate “escape route” the fish structure, or is it some between trash racks and whether the fish return off and was not used Describe the process trapped around the RMPF any circumstances due not functional.
5.3.1.2 – 2	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Describe the process for calculating the maximum design approach velocity at the traveling screens on the RMPF for four units and provide the results of the calculations.	Section 5.3.1.2.1 describe approach velocity of the 2 units and for 4 units are cited as 0.5 fps, 0 process for calculating velocity at the traveling units. Provide all the of the water at a screen.

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (RAI)
5.3.1.2 – 3	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	What is the magnitude of impingement and entrainment of aquatic species at the RMPF for the species of fish currently found in the Colorado River compared to species present prior to 1993 when the diversion channel directed the river into East Matagorda Bay?	<p>Provide one year of information on the RMPF or justify why the RMPF are not operating on the Colorado River.</p> <p>Section 5.3.1.2.1 is based on entrainment of Colorado River. Section 2.4.2 that have been changed by the river was changed by the channel into East Matagorda Bay in the river traveling from the RMPF. affected by impingement and entrainment. Describe seasonal differences in the Colorado River that may be affected by the RMPF.</p> <p>Estimate susceptibility to mortality upon entrainment in the RMPF.</p> <p>Estimate susceptibility to mortality upon entrainment in the RMPF.</p>
5.3.1.2 – 4	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	What is the impact of operation of the RMPF on managed species included in the Fisheries Management Plans for the Gulf of Mexico?	Initial information on species diversity demonstrates that the RMPF fish habitat identified in the Fisheries Management Plans for the Gulf of Mexico is likely to be affected by the RMPF. What level of impact (if any) on their life stages) and the RMPF experienced in association with the RMPF characteristics of the RMPF (e.g., substrate) are likely to be affected by the RMPF?
5.3.1.2 – 5	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Please describe the proposed bank stabilization project and its impact on terrestrial and aquatic resources.	At the STP site audit, a bank stabilization project is proposed to prevent diffuser outlet

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (RAI)
5.3.2 – 1	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Provide information on how aquatic resources may be impacted by discharges at outfall 001.	<p>The information provided should provide enough information to determine if the quality characteristics of the discharge criteria are being met. More information is needed to determine the impact to the aquatic resources from the discharges at outfall 001. The information should be being discharged from the outfall of the water in the Colorado River from the MCR and the discharge plume. This information should address the potential of the discharges on the aquatic resources in the Colorado River.</p> <p>What are the temperature characteristics in the Colorado River?</p> <p>What are the flow and velocity characteristics in the Colorado River when the discharges are to happen? Section 5.3.2.1 likely occur during high flow in winter and the spring.</p>
5.3.2 – 2	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	How will water discharged at outfall 001 be evaluated and compliance with TCEQ permit # WQ0001908000 be determined?	<p>Discuss the conditions under which the water is considered SMALL as defined in the permit. Where will temperature monitoring be conducted in the water that is to be discharged into the Colorado River?</p>
5.3.2 – 3	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	What is the impact of outfall 001 and discharge from the MCR on managed species included in the Fisheries Management Plans for the Gulf of Mexico?	<p>Initial information on species diversity should demonstrate that the species diversity of the fish habitat identified in the Fisheries Management Plans for the Gulf of Mexico is not being impacted by the outfall 001 on the Colorado River. The information should address the impact to the species diversity of the fish habitat experienced by those species in the Colorado River. What character (e.g., river substrate) is being impacted by the discharges from the MCR?</p>

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (
5.3.3.1 – 1	10 CFR 51.50  10 CFR 51.70(b)  10 CFR 51 Appx A  RG 4.2	Meteorology/Air Quality/Accidents	Justify the assumption in the 2 <sup>nd</sup> paragraph of ER Section 5.3.3.1.2 that there will not be increased fogging.	ER Section 5.3.3.1.2 increase fogging and to occur as a result of paragraph of this sect statement; however, t provided to support th 3&4 may increase the increasing the radiatin facts need to be addre part of the statement
5.3.3.1 – 2	10 CFR 51.50  10 CFR 51.70(b)  10 CFR 51 Appx A  RG 4.2	Meteorology/Air Quality/Accidents	Provide consistent values for cooling tower drift deposition at the Unit 3&4 switchyard.	ER Section 5.3.3.1.3 (5–24) states a maximum annual average depos switchyard. These ra Reconcile whether the summer rate is correc
5.3.4 – 1	10 CFR 51.71(d)	Aquatic Ecology / Thermophilic Microorganisms	What are the annual maximum and minimum flow rates and temperatures for the Colorado River in the vicinity of the blowdown structure on the Colorado River? What is the frequency planned for discharging at outfall 001?	The description of the Colorado River in ER includes information o WQ0001908000, but the permit conditions the process for evalua the Colorado River to support of the assess microorganisms are n Describe how often di and create an opportu microorganisms to int
5.3.4 – 2	10 CFR 51.71(d)	Aquatic Ecology / Thermophilic Microorganisms	Identify the recreational uses within Segment 1401 of the Colorado River and discuss the potential for exposure to thermophilic microorganisms via the thermal plume associated with outfall 001.	ER Section 5.3.2.1 sta Colorado River is des Contact recreation is a from thermophilic mic recreational activities of outfall 001 and the thermal plume from d the river at outfall 001 would reach to the res side of the river.

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (RAI)
5.3.4 – 3	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Provide documentation of any correspondence with the Texas Department of State Health Services in support of the evaluation of thermophillic microorganisms in the vicinity of the discharge from the MCR into the Colorado River.	Has the Texas Department of State Health Services been contacted concerning thermophillic microorganisms in the Colorado River?
5.3.4 – 4	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	How does the state's designation of Segment 1401 of the Colorado River as "impaired" relate to the impact evaluation?	ER Section 2.4.2.5 states that Segment 1401 of the Colorado River is a state water quality standard area from the operations of the MCR. Discharges from Units 3 and 4. Discharges are monitored to ensure they are compliant with the state water quality standard for bacteria in the vicinity of the discharge.
5.4.1 – 1	10 CFR 20 10 CFR 51.45	Radiological/Fuel Cycle/Waste Systems	What source term was used for the LADTAP input file "LADTROB2.DAT"?	In the LADTAP analysis, the LADTROB2.DAT input file was derived from DCD Table 12.2-22. ODCM were applied. DCD states that 118 MMBq average liquid release factor for Little Robbins (From Table B4-1, page 10). For example, the product of the release factor does not appear to be in the input file (2.87E-06). The radionuclides listed in the input file are not the values from FSAR Table 12.2-22. Instead, the input file uses the values from FSAR Table 12.2-22. The values used in the input file are the values used in the FSAR.
5.4.1 – 2	10 CFR 51.45	Radiological/Fuel Cycle/Waste Systems	Why does the ABWR DCD table 12.2-22 not match the FSAR table 12.2-22?	The quantities of radionuclides in Table 12.2-22 and the FSAR are not consistent. The lists of radionuclides in the tables differ – ABWR Table 12.2-22 and FSAR Table 12.2-22. FSAR does not have a release basis for the set of radionuclides listed in Table 12.2-22.

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (s)
5.4.1 – 3	10 CFR 51.45	Radiological/Fuel Cycle/Waste Systems	What is the basis and where did the source term for LADTROB2.DAT come from?	In the LADTAP analysis, LADTROB2.DAT indicates that the source term is based on the FSAI radionuclides, however, Provide the basis for the analyses.
5.4.1 – 4	10 CFR 51.45	Radiological/Fuel Cycle/Waste Systems	Where did the source term for LADTROB2.DAT come from?	In the LADTAP analysis, LADTROB2.DAT indicates that the source term is based on the FSAI radionuclides, however, Provide the basis for the analyses.
5.4.4 – 1	10 CFR 51.45	Radiological/Fuel Cycle/Waste Systems	What effect will raising the MCR level by 2 feet, have on the migration of radionuclides from MCR to Little Robbins Slough?	After the water level is raised, the fractions Reaching Of ODCM (Table B4–1) will change, would analyses ABWRs need to be re-evaluated? Table B4–1 in the OD
5.8 – 1	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Estimate expenditures within the region for materials and services during operation.	Estimate expenditures for materials and services during operation. Provide information, if quantitative, on the order of magnitude of expenditures that are
5.8 – 2	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Estimate tax yields during operations.	Base tax revenue yields on population percentages. Using values that are necessary, provide tax yields during operation
5.8 – 3	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Estimate maximum road congestion during operations.	As with section 4.4.2, provide information on workers, outage workers, and peak hour usage of F
5.8 – 4	10 CFR 51.45(c) 10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Estimate housing impacts using latest population data.	As with the corresponding section, provide latest housing figures that the 2000 Census

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (s)
5.10 – 1	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Indicate which actions to limit adverse impacts during operation are commitments.	A number of actions a of Potentially Adverse to limiting impacts on socioeconomic impac actions are actually co opposed to potential a unspecified parties?
5.10 – 2	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Explain the difference regarding the potential impact significance for water quality impacts found in Table 5.10-1 and the determination stated in the text of Section 5.2.3.	Section 5.2.3.1 states proposed MCR blowd quality would be SMA mitigation.” Table 5.1 would be SMALL to M between the potential Table 5.10-1 and Sec mitigation.
5.10 – 3	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Explain the difference in the planned control program information for the discharge system and the description of temperature limits for TPDES Permit No. WQ0001908000.	Sections 5.2.3.1 and permit (No. WQ00019 discharge temperature discharge temperature 5.10-1 states that “. Explain the difference information.
6.3 – 1	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Describe waste effluent and storm water outfalls that will be added to existing outfalls and the water bodies into which they will discharge.	Describe waste stream be added to existing c treatment associated Units 3 and 4 constru the water bodies into Describe the impact a units' discharge throu near the site.
6.3 – 2	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Provide information regarding the anticipated operational monitoring deriving from the NRC 10 CFR 20.1406 initiative and the Nuclear Energy Institute program.	While the program ini Institute (NEI) is ment Hydrological Monitoring Operational Monitoring the anticipated operat NEI program. If not a operational monitoring the NRC 10 CFR 20.1

RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (RAI)
7.1 – 1	10 CFR 51.50  10 CFR 51.70(b)  10 CFR 51 Appx A  RG 1.3  RG 4.2	Meteorology/Air Quality/Accidents	Provide the source of the dose factors used in evaluation of each design basis accident.	Tables 7.1–1 through 7.1–14 list release rates for ABWR calculated from the isotope release rates consistent with the design basis accidents in Tables 7.1–14, which are summarized in Table 7.1–14. Differences appear to exist between the ABWR DCD lists and the source of the dose factors used in the tables.
7.1 – 2	10 CFR 51.50  10 CFR 51.70(b)  10 CFR 51 Appx A  RG 1.3  RG 4.2	Meteorology/Air Quality/Accidents	Provide correct EAB and LPZ dose estimates for the Clean Up Water Line Break Outside Containment DBA in Table 7.1–12.	Table 7.1–12 lists the thyroid doses for this accident. The table lists the estimated doses for the Carrying Primary Coolant System (CPCS) which involves the same accident as a factor of 50 difference in the thyroid doses in Table 7.1–8. Table 7.1–12 is in error and this error exists elsewhere in the document.
7.2 – 1	10 CFR 51.50(c)  Severe Accident Policy Statement  Safety Goals Policy Statement	Meteorology/Air Quality/Accidents	Provide MACCS2 input and output files for MACCS2 calculations that include calculations of early fatalities for an average individual within 1 mile of Units 3&4.	The Commission has reviewed the power plants (51 FR 30000) and include an average individual in the population risk of later fatalities in the safety goal insights to the Commission. The MACCS2 calculations of early fatalities and the Commission's safety goal insights. The MACCS2 input and output files for the MACCS2 calculations do not include evaluation of early fatalities. Provide the MACCS2 input and output files for these calculations.

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7.2 – 2	10 CFR 51.50(c)  Severe Accident Policy Statement  Safety Goals Policy Statement	Meteorology/Air Quality/Accidents	Provide a description of each severe accident scenario and release category.	The MACCS2 files su... accident scenarios us... Provide a cross-walk... string and the acciden... evaluated.
7.2 – 3	10 CFR 51.50(c)  Severe Accident Policy Statement  Safety Goals Policy Statement	Meteorology/Air Quality/Accidents	Provide source terms, core damage frequencies and severe accident consequences by release category. Separate the consequences for the air and water pathways.	Section 7.2.1 of the E... aggregate. In perform... staff considers both c... consequences by rele... 7.2–1 presents risks... consequence and cor... the air and water path... disaggregated risk inf... isotopic source terms... release category.
7.2 – 4	10 CFR 51.50(c)  Severe Accident Policy Statement  Safety Goals Policy Statement	Meteorology/Air Quality/Accidents	Provide a discussion of the risks associated with external initiating events.	Section 7.2.2.1 of the... Table 7.2–1 are only f... associated with extern... described for complet... Damage Frequencies... comparison with the C...
7.2 – 5	10 CFR 51.50(c)  Severe Accident Policy Statement  Safety Goals Policy Statement	Meteorology/Air Quality/Accidents	Describe how evacuation was modeled in MACCS2.	Section 7.2.2.1 states... was assumed to evac... general emergency... assumptions that wer... evacuation parameter... “evacuees” assumed

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7.2 – 6	10 CFR 51.50(c)  Severe Accident Policy Statement  Safety Goals Policy Statement	Meteorology/Air Quality/Accidents	Provide a list of major surface water users within 50 mi of STP Units 3 & 4, especially public water supplies.	The MACCS2 code is based on user input. list of surface water users. surface water users w For MACCS2 analysis extension of the air pa constrained to a single not considering all of or an update of the ar
7.2 – 7	10 CFR 51.50(c)  Severe Accident Policy Statement	Meteorology/Air Quality/Accidents	Revise the discussion of the groundwater pathway risks for STP Units 3 & 4 to support the conclusion in the last sentence of ER Section 7.2.2.3.	ER Section 7.2.2.3 dis However, the discuss conclusion in the last paragraph of the secti accidents or STP Unit not related to STP Un third paragraph does final sentence of the p core damage frequen section to discuss gro
7.2 – 8	10 CFR 51.50(c)  Severe Accident Policy Statement  Safety Goals Policy Statement	Meteorology/Air Quality/Accidents	Describe how the average individual risk listed in ER Section 7.2.3 was determined.	Section 7.2.3 and Tab individual risk for com safety goal. Average using early fatality est code. However, the M the input files to enab appropriate early fatal output files do not cor comparison.
7.2 – 9	10 CFR 51.50(c)  10 CFR 52.79(d)(3)	Meteorology/Air Quality/Accidents	Discuss ABWR DCD COL action items and open items related to severe accidents and how the action and open items will be addressed.	Section 7.2 of the ER and open items relate in Section 19.9 of the items need to be ackr

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7.3 – 1	10 CFR 51.50(c)  10 CFR 52.79(d)(3)	Meteorology/Air Quality/Accidents	Discuss the process for ensuring that SAMAs related to operating procedure and administrative controls will be evaluated prior to plant startup.	Section 7.3.3 presents conclusion that SAMA changes are likely not the last paragraph of a specific administrative 3 & 4 design is finalized evaluation be tracked
8.0 – 1	10 CFR 51.45(c )  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Clarify ownership of STP Units 3 & 4.	Section 8.0 and through given for the same ownership of San Antonio, CPS– separate entities own titles throughout other
8.4 – 1	10 CFR 51.45 (c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Provide contact information for ERCOT studies and forecasts.	Provide contact information (contacts) on the ERCOT ER section 8.4.
9.3 – 1	10 CFR 51.71(d)  RG 4.2, Rev. 2, section 9.2	Land Use/Alternative Sites	Explain how the Limestone alternative site satisfies NRC’s siting criteria for candidate sites.	The revision to ESRP NRC staff and for public sites “to be among the for the siting of a nuclear is at p. 9.3–1 of the original Section 9.2.1 of Regulatory candidate sites must be licensable, and capable information in the ER nuclear units upon the since Units 1 and 2 are identify where prospective on the Limestone site the Limestone site that unit 3 at Limestone will insufficient water is available nuclear units sited at need to use dry cooling economic penalty in cost NRG does not own the
9.3 – 2	10 CFR 51.71(d)  RG 4.2, Rev. 2, section 9.2	Land Use/Alternative Sites	How would inclusion of information regarding the proposed coal–fired unit 3 at the Limestone site affect the discussion of the site in section 9.3.3.1 of the ER?	NRG’s planned coal– not mentioned in section addition of information site affect any of the cost ER? Would the discussion conclusions?

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9.3 – 3	10 CFR 51.71(d)  RG 4.2, Rev. 2, section 9.2	Land Use/Alternative Sites	What are the dimensions of the existing transmission line ROWs serving the Limestone site?	What are the dimensions of the existing transmission line ROWs serving the Limestone site?
9.3 – 4	10 CFR 51.71(d)  RG 4.2, Rev. 2, section 9.2	Land Use/Alternative Sites	Explain how the Malakoff alternative site satisfies NRC's siting criteria for candidate sites.	The revision to ESRP Section 9.3.3 states that candidate sites "to be among the most suitable for the siting of a nuclear reactor" is at p. 9.3-1 of the original ESRP. Section 9.2.1 of Regulation 4.2 requires that candidate sites must be suitable, licensable, and capable of supporting a reactor. As learned on their visit to the Cedar Creek site, the Malakoff site would not be available for siting. (1) the Malakoff site, (2) there are no sites in Palestine but the quality of the sites is insufficient to support a reactor, and (3) it is not clear whether the data could be obtained for the Cedar Creek site. The Richland-Chambers Facility site satisfies the ESRP Section 9.3.3 Rev. 2 siting criteria for candidate sites limitations.
9.3 – 5	10 CFR 51.71(d)  RG 4.2, Rev. 2, section 9.2	Land Use/Alternative Sites	Who are the current owners of the Allens Creek and Malakoff alternative sites?	Who are the current owners of the Allens Creek and Malakoff alternative sites? How many nuclear units could be sited at each site?
9.3 – 6	10 CFR 51.45(c )  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Reconcile conflicting socioeconomic impact levels for the Limestone site.	ER Section 9.3.3: "Impacts at the Limestone site will be MODERATE beneficial, somewhat less than the impacts were described in the EIS. Similar to impacts at the Limestone site, traffic impacts on roads will be MODERATE to LARGE. Differences between the impacts at the Limestone site and the impacts at the Limestone site are described in the EIS." ER Section 9.3.3: "Impacts at the Limestone site will be MODERATE beneficial, somewhat less than the impacts were described in the EIS. Similar to impacts at the Limestone site, traffic impacts on roads will be MODERATE to LARGE. Differences between the impacts at the Limestone site and the impacts at the Limestone site are described in the EIS."

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9.3 – 7	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Reconcile conflicting socioeconomic impact levels for the Allens Creek site.	ER Section 9.3.3: “Im the Allens Creek site MODERATE beneficial in Austin County, whe services. These impac those impacts predict impacts were describe similar to impacts at th traffic impacts on roac MODERATE to LARG differences between t impacts.
9.3 – 8	10 CFR 51.45(c)  10 CFR 51.71(d)	Socioeconomics & Environmental Justice	Reconcile conflicting socioeconomic impact levels for the Malakoff site.	ER Section 9.3.3: “It impacts would be SM those at the proposed construction workers r resources in Henders beneficial impacts ma increased taxes and j impacts were describe similar to impacts at th traffic impacts on roac MODERATE to LARG differences between t impacts.
9.3.2-1	10 CFR 51.45(c)  10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Please describe potential impacts to threatened or endangered species and their habitats as a result of construction and operation at each of the three alternative sites.	An up-to-date summa threatened or endang aquatic environment a required to evaluate th and operations on rel



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9.3.2 – 3	10 CFR 51.71(d)	Terrestrial Ecology	Provide the documentation that supports the statements and conclusions used in Section 9.3 on terrestrial resources at the Malakoff site.	Section 9.3.2.3.4 states that the Malakoff site “would have impacts greater than those at the proposed STP site, respond to the following questions: (1) Identify the estimated impacts on cropland, wetlands, riparian bottomland for the potential ROWs for the proposed transmission line. Provide information on species/habitats and v new transmission line
9.3.3 – 1	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Describe the process used to quantify the impact statement for aquatic resources at the Limestone site and provide the documentation that supports the statements and conclusions used in Section 9.3.	Section 9.3.3.1.5 states that the Limestone site “would have impacts greater than those at the proposed STP site, describe the process used to quantify aquatic resources at the Limestone site and differences between the proposed STP site that justify rating the a
9.3.3 – 2	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Describe the process used to quantify the impact statement for aquatic resources at the Allens Creek site and provide the documentation that supports the statements and conclusions used in Section 9.3.	Section 9.3.3.2.5 states that the Allens Creek site “would have impacts greater than those at the proposed STP site, describe the process used to quantify aquatic resources at the Allens Creek site and effects to the proposed STP site. Provide information about Brazos River/Allens Creek about “short-term adverse effects from construction or operation. Describe the process used to quantify aquatic resources and the water resource lake.

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9.3.3 – 3	10 CFR 51.71(d)	Aquatic Ecology / Thermophillic Microorganisms	Describe the process used to quantify the impact statement for aquatic resources at the Malakoff site and provide the documentation that supports the statements and conclusions used in Section 9.3.	Section 9.3.3.3.5 states Malakoff site “would be proposed STP site.” aquatic resources at the site” that would be the statement about “ associated with const concerns operation, h short-term over the o plant? Describe the p statement for aquatic
9.4 – 1	RG 4.2	Hydrology/Alternative Plant Systems	If the MCR is part of the closed-loop cooling system, then describe alternatives considered for the proposed circulating water system including a description of all elements required by ESRP 9.4.2. Describe the process followed to determine that no obviously superior alternatives for the proposed circulating water system, water supply, and water treatment exist.	Provide an evaluation environmental impact the MCR blowdown a of the alternative water treatments for the circ process followed to ex preference of the alter costs of circulating wa preferable to the prop
10.5S – 1	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Describe groundwater conservation and other mitigative measures as noted in Section 10.5S.1.2.	Section 10.5S.1.2 of t withdrawal rate requir withdrawal rate permi conservation or other water conservation an
10.5S – 2	10 CFR 51.71(d)	Hydrology/Alternative Plant Systems	Describe the analytical process used to determine cumulative impacts to downstream surface water users.	Section 10.5S.2.2 of t these limits assures th downstream users du Colorado River to sup SMALL, not warrant n effect.” Describe the the conclusion that th water users will be SM still warrants consider mitigation measures t warranted based on a

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10.5S.1	10 CFR 51.45(c)	Socioeconomics & Environmental Justice	Limited Work Authorization for Nuclear Power Plants	<p>The ER provides evaluation of construction and precursors impacts of the construction need to be broken down in the Interim Staff Guide. The level of analysis and breakdowns should be based on impact.</p> <p>Simple analyses should be used in these areas. These breakdowns are required for NRC staff to properly evaluate construction activities. Limited work authorization is required.</p>



RAI	Citation	Subject Area	Question Summary (RAI)	Full Text (
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