

## PMSTPCOL PEmails

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**From:** Kallan, Paul  
**Sent:** Friday, February 22, 2008 3:23 PM  
**To:** Bernal, Sara; Burton, William; Cristina Guerrero; Ahn, Hosung; Emch, Richard; Mussatti, Daniel; Nash, Harriet; Zalcmn, Barry; Yu, Irene  
**Cc:** 'Nona H Diediker'  
**Subject:** Fwd: STP - Blue Sheet Summary (Draft)  
**Attachments:** Blue Sheet Summary.xls

Folks,

I wanted to send you a copy of the blue sheets that STP filled out during the site audit.

regards,

Paul,

Here is an electronic copy of the spreadsheet summarizing the blue sheet comments from this week's audit. This list has 114 entries. Tomorrow morning, we will be updating the spreadsheet to incorporate comments from the Hydrology and the Ecology breakout sessions.

When complete, I'll forward you an updated version.

Russell W. Kiesling, PMP

Senior Environmental Associate

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STPNOC - Units 3 & 4

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**Hearing Identifier:** SouthTexas34Public\_EX  
**Email Number:** 1813

**Mail Envelope Properties** (3E54A9B051CAB64F8DA8BE1178BC8D3721F7B09C31)

**Subject:** Fwd: STP - Blue Sheet Summary (Draft)  
**Sent Date:** 2/22/2008 3:23:12 PM  
**Received Date:** 2/22/2008 3:23:12 PM  
**From:** Kallan, Paul

**Created By:** Paul.Kallan@nrc.gov

**Recipients:**

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

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	779	2/22/2008 3:23:12 PM
Blue Sheet Summary.xls		79936

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**STP Units 3 & 4**

**NRC Site Audit  
February 4-8, 2008**

<b>Ref. No.</b>	<b>Section</b>	<b>Question/Issue</b>	<b>Response if any Blue Sheet Summary</b>	<b>Raised By</b>	<b>Org.</b>	<b>Recorded By</b>
1	2.1	Provide a time line schedule for all new renewal STP permits that are needed to contract and operate units 3 and 4	Mentioned that the permits are listed in section 2.1 and will inform STP of this request. Informed Sandy	Prasad	PNNL	Day
2	2.2	1) Are Units 3 and 4 in compliance with the Texas coastal management Program? If not, will they be? 2) Will an Industrial land Use column be added to tables 2..2-2 to include OXEA and Celanese plants? 3) Sections 5.1.1.1 needs to be updated to include information from section 5.3.3.1 4) Include ESRP reference instead of NUREG-1555 reference in sections 5) Include units on page 4.1-5 when referring to 500 6) Double check wetlands acreage (include MCR acreage 7068 vs. 7096.	Will Consult with STP, Bechtel and TT management if approved, additional work will be completed	Hendrickson/Yu	NRC	Twigg
3	2.3	Provide historical salinity data of the Colorado River near the intake		Prasad	PNNL	Yelamanchi

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STP Units 3-4

NRC Site Audit  
February 4-8, 2008

Ref. No.	Section	Question/Issue	Response if any Blue Sheet Summary	Raised By	Org.	Recorded By
4	2.3	<p>Information needs item 106, 107, 109, and 121</p> <p>106 What is the maximum annual water use in ac-ft of STP units 1 and 2</p> <p>107 What is the expected maximum annual water use of STP Units 3 and 4</p> <p>109 Since there had been no release of water to the Colorado River from STP 1 and 2 operations STP site would not be considered a potential source of bacteria. Explain why there has been no release of water to the Colorado river from operation of Units 1 and 2</p> <p>121 What is the maximum annual water use needed to make up losses from the MCR when all four units are in operation</p> <p>106 ER section 2.3.2.1 and table 2.3.2-8 provides average diversion rate for years 2001 thru 2006. STP is permitted to remove 102,000 ac-ft/year at a rate of upto a maximum rate of 1200 cfs, subject to limitation that only 55% of flow in excess of 300 cfs. Average annual rate of diversion for period 2001-2006 is 37,084 ac-ft/year.</p> <p>107 ER section 3.3.1 and table 3.3-1 provide surface water consumptive use as 23,170 GPM and maximum MCR forced evaporation for units 3 and 4 as 23,427 GPM</p> <p>109 MCR water quality retained within the acceptable limits there for MCR was not blown down to maintain waste chemistry</p>	Inspector indicated that they will generate one RAI to combine all four items in order to obtain written response.	Prasad	PNNL	Yelamanchi

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**STP Units 3 & 4**

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5	2.4	1) Are Units 3 and 4 in compliance with the Texas coastal management Program? If not, will they be? 2) Will an Industrial land Use column be added to tables 2..2-2 to include OXEA and Celanese plants? 3) Sections 5.1.1.1 needs to be updated to include information from section 5.3.3.1 4) Include ESRP reference instead of NUREG-1555 reference in sections 5) Include units on page 4.1-5 when referring to 500 6) Double check wetlands acreage (include MCR acreage 7068 vs 7096.	Will Consult with STP, Bechtel and TT management if approved, additional work will be completed			
6	2.5	Could more detail be provided on the School Tax Equalization Program to clarify how the program works.	It would be possible to provide more information for clarification. STP, Bechtel and TtNUS Management will be consulted to determine if the ER section will be revised.			Emily McRee
7	2.5	Please provide data that supports that incoming workforces would or would not reside in Jackson or Calhoun Counties, as well as Matagorda and Brazoria counties.	Will consult with STP and TTNUS management. If approved, a small analysis of the ROI will be developed and presented to the NRC. The document will not be referenced in the COL-ER. STP management will decide whether the document may be given to the NRC or just shown to the NRC (in light of the plant's sensitivities to this document becoming available to the public).	Scott	PNNI	Hill
8	2.5	Please get more recent numbers on Semi traffic,, work shift change times, construction and operations worker numbers during overlapping construction time and outage schedule and worker numbers and apply to traffic counts and road usage.	Will consult w/ STP, Bechtel and TTNUS project management. If approved additional data will be obtained and submitted.	Scott/Mussatti	PNNL	Twiggs

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**STP Units 3-4**

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<b>Ref. No.</b>	<b>Section</b>	<b>Question/Issue</b>	<b>Response if any</b>	<b>Raised By</b>	<b>Org.</b>	<b>Recorded By</b>
9	2.5	What is the projected use of recreational facilities? Are there any universities that conduct studies of parks along the Colorado river? Are there any professional outriggers such as kayak tours on the river	Can we look for the information asked pending Bechtel and STP Approval	Scott	NNL	Henderson
10	2.5	Are there any private schools in Matagorda and Brazoria County? If and ISD does not have a high school what ISD does the locals attend. State consequences of school capacities.	We can look up the information asked pending Bechtel and STP approval	Scott/Mussatti	NRC/PNNL	Henderson
11	2.7	Table 2.7-15 Title of the table should be revised to clarify that these pertain to Unit 3.....If that is not the case, then the X/Q for Unit 4 should be made that this is to Unit 4 (construction working) for Unit 3	Noted-this should be an RAI	Antonia	PNNL	Patton
12	3.3	Provide a description of MCR operation relative to MCR water level, water chemistry and blowdown (work with water conservation plan)		Prasad	PNNL	Yelamanchi
13	3.3	Provide MCR Thermal model description and the associated analysis/calculation	MCR model and calculation are available and will be provided in response to an RAI	Prasad	PNNL	Yelamanchi
14	3.3	Provide MCR Water Budget Model	MCR water budget model will have to be developed and provided in response to an RAI.  ER water budgeted evaluation is based on LCRA contract which allows diversion up to 102,000 ac-ft on a rolling five year average basis	Prasad	PNNL	Yelamanchi

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STP Units 3-4

NRC Site Audit  
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Ref. No.	Section	Question/Issue	Response if any Blue Sheet Summary	Raised By	Org.	Recorded By
15	3.3	<p>Information needs item 106, 107, 109, and 121</p> <p>106 What is the maximum annual water use in ac-ft of STP units 1 and 2</p> <p>107 What is the expected maximum annual water use of STP Units 3 and 4</p> <p>109 Since there had been no release of water to the Colorado River from STP 1 and 2 operations STP site would not be considered a potential source of bacteria. Explain why there has been no release of water to the Colorado river from operation of Units 1 and 2</p> <p>121 What is the maximum annual water use needed to make up losses from the MCR when all four units are in operation</p> <p>106 ER section 2.3.2.1 and table 2.3.2-8 provides average diversion rate for years 2001 thru 2006. STP is permitted to remove 102,000 ac-ft/year at a rate of upto a maximum rate of 1200 cfs, subject to limitation that only 55% of flow in excess of 300 cfs. Average annual rate of diversion for period 2001-2006 is 37,084 ac-ft/year.</p> <p>107 ER section 3.3.1 and table 3.3-1 provide surface water consumptive use as 23,170 GPM and maximum MCR forced evaporation for units 3 and 4 as 23,427 GPM</p> <p>109 MCR water quality retained within the acceptable limits there for MCR was not blown down to maintain waste chemistry</p>	Inspector indicated that they will generate one RAI to combine all four items in order to obtain written response.			

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STP Units 3-4

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Ref. No.	Section	Question/Issue	Response if any Blue Sheet Summary	Raised By	Org.	Recorded By
16	3.4	Information need Item #126 What is the expected frequency of blowdown from the MCR to the Colorado river with all four units in operations	Blowdown from the MCR depends on the MCR water quality, MCR level and river water flow rate which in turn vary on rain fall, river water quality. Blowdown from the MCR would occur to maintain MCR water quality at the average 3000 micro Siemens per centimeter. The TDPE Permit has no restrictions relative to frequency. The permit shows blowdown only when the river flow rate is higher than 800 CFS. The inspector is requesting that a bounding analysis be performed to determine the frequency of blowdown for 4 unit operation.* STP to provide further direction on how to proceed with the request *In addition to determining the frequency of blowdown for the 4 unit operation, PNNL is requesting the analysis to determine the impacts on water quality on the Colorado river as a result of the increased frequency of blowdown.	Prasad	PNNL	Yelamanchi
17	3.4	Provide a description of MCR operation relative to MCR water level, water chemistry and nd blowdown (work with water conservation plan)		Prasad	PNNL	Yelamanchi
18	3.4	Provide MCR Water Budgen Model	MCR water budget model will have to be developed and provided in response to an RAI.  ER water budged evaluation is based on LCRA contract which allows diversion up to 102,000 ac-ft on a rolling five year average basis	Prasad	PNNL	Yelamanchi
19	3.5	Could more detail be provided on the School Tax Equalization Program to clarify how the program works.	It would be possible to provide more information for clarification. STP, Bechtel and TtNUS Management will be consulted to determine if the ER section will be revised.			Emily McRee

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**STP Units 3 & 4**

**NRC Site Audit  
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<b>Ref. No.</b>	<b>Section</b>	<b>Question/Issue</b>	<b>Response if any</b>	<b>Raised By</b>	<b>Org.</b>	<b>Recorded By</b>
20	4.0	New request and discussion is on new LWA rules after submittal of application, PNNL suggest in table in Section 4 separating regulated and non regulated activity.	STP, NRC, PNNL are not sure if required or not since after the application STP will discuss with management but may need RAI since NRC not even sure if or what is needed request is from PNNL.	Prasad	PNNL	Day
21	4.1	1) Are Units 3 and 4 in compliance with the Texas coastal management Program? If not, will they be? 2) Will an Industrial land Use column be added to tables 2..2-2 to include OXEA and Celanese plants? 3) Sections 5.1.1.1 needs to be updated to include information from section 5.3.3.1 4) Include ESRP reference instead of NUREG-1555 reference in sections 5) Include units on page 4.1-5 when referring to 500 6) Double check wetlands acreage (include MCR acreage 7068 vs. 7096.	Will Consult with STP, Bechtel and TT management if approved, additional work will be completed			
22	4.2	102 Requested expansion of options for disposing or getting rid of water from dewatering process	Garret Dan (B) and Gary Gunter (TTNUS) gave verbal possibilities of water disposal including pump to MCR, discharge to site drainage and/or river and wetlands after discharge to settlement basin. PNNL wanted to know where basins would be for settled. Were told up to dewatering contracted & construction to determine method of disposal. (possible RAI)	Prasad	PNNL	Gunter
23	4.2	131 Requested details on whether new outfalls for storm water would be required locations. Permits required	Gary( TTNUS) explained could be new outfalls based in how dewatering compared and construction handled disposal and based in permit requirements (possible RAI)	Prasad	PNNL	Gunter
24	4.2	147 Details requested need to increase discussion on analysis of storm water flow impacts flow and water quality	RAI (147-148)	Prasad	PNNL	Gunter

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**STP Units 3 & 4**

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25	4.2	183 Inconsistency between 4.2, 5.2, and 10.5S in level of impacts	RAI	Kincaid	PNNL	Gunter
26	4.2	1) Are Units 3 and 4 in compliance with the Texas coastal management Program? If not, will they be? 2) Will an Industrial land Use column be added to tables 2..2-2 to include OXEA and Celanese plants? 3) Sections 5.1.1.1 needs to be updated to include information from section 5.3.3.1 4) Include ESRP reference instead of NUREG-1555 reference in sections 5) Include units on page 4.1-5 when referring to 500 6) Double check wetlands acreage (include MCR acreage 7068 vs. 7096.	Will Consult with STP, Bechtel and TT management if approved, additional work will be completed			
27	4.5	copies of the following STP 1 and 2 calculations were requested: NC05113-OSASF Shielding 2006-11820-LTSF Shielding Copy of he ORNL report on the MORSE computer program	STP will make decision regarding release of calculations (PNNL/NRC reviewers viewed excerpts of calculations on laptop) (as an alternative to providing the old MORSE calculations, it may be possible to just refer to the measured data and make a conservative assumption based on that for the LTSF doses, then the reference to the MORSE program would be removed all together)	Antonia	PNNL	Jha
28	4.5	Why are STP 1 and 2 gaseous effluent doses for 2004 higher than for other years? The doses are taken from the annual effluent reports	Milton Rejcheck is investigating this and if possible will report back to the NRC this week	Antonia	PNNL	Jha
29	4.5	Distances from OSASF to nearby TLDs were measured by PNNL/NRC in the field and are different from those assumed in the ER based on drawings	Reviewer agree that the ER is conservative as is but my want it reworded to reflect measured distances. If this becomes an RAI, a SIR will be issued to request GPS coordinates to OSGSF and TLDs.	Antonio	PNNL	Jha

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**STP Units 3 & 4**

**NRC Site Audit  
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Ref. No.	Section	Question/Issue	Response if any Blue Sheet Summary	Raised By	Org.	Recorded By
30	5.1	1) Are Units 3 and 4 in compliance with the Texas coastal management Program? If not, will they be? 2) Will an Industrial land Use column be added to tables 2..2-2 to include OXEA and Celanese plants? 3) Sections 5.1.1.1 needs to be updated to include information from section 5.3.3.1 4) Include ESRP reference instead of NUREG-1555 reference in sections 5) Include units on page 4.1-5 when referring to 500 6) Double check wetlands acreage (include MCR acreage 7068 vs 7096.	Will Consult with STP, Bechtel and TT management if approved, additional work will be completed			
31	5.2	104/105 - Requested additional detail on priority rights under extreme drought conditions. Add m formation from existing water contract and priority rights.	Gary( TTNUS) and Garret Day (B) explained priority rights in LCRA and contract W/STP. Also explained water rights under extreme conditions. Units 1 & 2 and 3 & 4. (Possible RAI)	Prasad	PNNL	Gunter
32	5.2	132 Requested details on whether new outfalls for storm water would be required locations. Permits required	Gary( TTNUS) explained could be new outfalls based in how dewatering compared and construction handled disposal and based in permit requirements (possible RAI)	Prasad	PNNL	Gunter
33	5.2	151 and 152 Requested information on increase in water level from 47 feet to 49 feet. Natural and forced evaporation and seepage losses	Bechtel discussion that the levels are natural for 47 to 49 feet would be the same forced 47 to 49 feet. Bechtel gave verbal calc values for each to back up answer.	Prasad	PNNL	Gunter
34	5.2	183 Inconsistency between 4.2, 5.2, and 10.5S in level of impacts	RAI	Kincaid	PNNL	Gunter
35	5.2	Update section to include 118 and 113 Drainage description used in ecology (terms consist and and description) Inventory of water resources on water bodies (not drainage ditches) Can put in table	Potential RAI	Prasad	PNNL	Gunter
36	5.2	114/116/118/120 More detail on potential impacts to individual water bodies in area of construction. Write to possible discharge locations	Potential RAI	Prasad	PNNL	Gunter

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STP Units 3-4

NRC Site Audit  
February 4-8, 2008

Ref. No.	Section	Question/Issue	Response if any Blue Sheet Summary	Raised By	Org.	Recorded By
37	5.4	URL to 2002 County Agricultural Census Data: Recommend that this be added as a reference to section 5.4	www.nass.usda.gov/census/create_census_us_cnty.jsp This is the url. Adding it as a reference will be considered	Antonio	PNNL	Toblin
38	5.4	Table 5.4-7-Annual External. Dose at site boundary will be 4.84 mrem, limit is 5 mrem/year. What is impacts of two units and will limit be met	a) Reg is per unit basis and is met b) Important conservatism-release will be NRC will check DCD to determine actual release height. Nor further STP response planned.	Antonio		Toblin
39	5.4	LAD TAP/GASPAR INPUT/OUTPUT Files Requested	Files are available. We took a look at input files.	Antonio		Toblin
40	5.4	How was dose to biota calculated?	Showed liquid pathway, LADTAP, output. Explained atmospheric pathway (based on GASPAR program outputs) methodology, NRC was satisfied with explanation and said they might do independent confirmatory calculations.	Antonio	PNNL	Toblin
41	5.4	Rad release from MCR is apportioned to Little Robbins Slough, Colorado River and Matagorda Bay according to water balance model in ODCM. What is affect of adding 2 feet of water to MCR for Units # and 4 on this ODCM water balance/mass balance model	No response. RAI forthcoming.	Antonio	PNNL	Toblin
42	5.4	URL to 2002 County Agricultural Census Data: Add as a reference	www.nass.usda.gov/census/create_census_us_cnty.jsp given (hand-written) to Ernie Antonio, 2/4/08	Antonio	PNNL	Toblin
43	5.7	Clarify chemical effluents information in Table 5.7-1. The subheading row "Effluents - Chemical (mT)" was omitted from the table in ER Rev.0 9/15/07	Clarify that the chemical effluents are reported in MT. Insert the missing subheading row in future revision to the E.R.	Ernie Antonio	PNNL	Lisa Matis
44	5.82	Need expenditures within the region for materials and services in (order of magnitude only) during operations. Also explain how these purchases would possibly cause a scarcity of materials and services in the region and how that scarcity might affect small local and regional businesses	Will consult with STP and Bechtel to 1) see if data is available and, 2) present the data to the NRC.	Scott	PNNL	Hill

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**STP Units 3 & 4**

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45	7.1	Questions No. 2, 4, and 5 pertain to clarification of information presented in the DCE, not the COLA. It's STP decision how to respond, as DCD questions can't be answered without the GE input.		Ramsdell	PNNL	Jha
46	8.0	Clarification of ownership throughout chapter has various names for the same owners, e.g.. CPS, City of San Antonio, CPS-Energy. Clarify NRG LP 3 & 4 are separate entities owned by NRG Energy. Verify these titles throughout other chapters	We will work with NRG to determine if there is an appropriate format for clarifying ownership relationships. We will work to consistently provide a single name reflecting co-ownership of city of San Antonio. Potential correction is to use the names as listed on the issued license applied for.	Mussatti	NRC	Puleo
47	8.1	Clarification of ownership throughout chapter has various names for the same owners, e.g.. CPS, City of San Antonio, CPS-Energy. Clarify NRG LP 3 & 4 are separate entities owned by NRG Energy. Verify these titles throughout other chapters	We will work with NRG to determine if there is an appropriate format for clarifying ownership relationships. We will work to consistently provide a single name reflecting co-ownership of city of San Antonio. Potential correction is to use the names as listed on the issued license applied for.	Mussatti	NRC	Puleo
48	8.2	Clarification of ownership throughout chapter has various names for the same owners, e.g.. CPS, City of San Antonio, CPS-Energy. Clarify NRG LP 3 & 4 are separate entities owned by NRG Energy. Verify these titles throughout other chapters	We will work with NRG to determine if there is an appropriate format for clarifying ownership relationships. We will work to consistently provide a single name reflecting co-ownership of city of San Antonio. Potential correction is to use the names as listed on the issued license applied for.	Mussatti	NRC	Puleo

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49	8.3	Clarification of ownership throughout chapter has various names for the same owners, e.g.. CPS, City of San Antonio, CPS-Energy. Clarify NRG LP 3 & 4 are separate entities owned by NRG Energy. Verify these titles throughout other chapters	We will work with NRG to determine if there is an appropriate format for clarifying ownership relationships. We will work to consistently provide a single name reflecting co-ownership of city of San Antonio. Potential correction is to use the names as listed on the issued license applied for.	Mussatti	NRC	Puleo
50	8.4	Clarification of ownership throughout chapter has various names for the same owners, e.g.. CPS, City of San Antonio, CPS-Energy. Clarify NRG LP 3 & 4 are separate entities owned by NRG Energy. Verify these titles throughout other chapters	We will work with NRG to determine if there is an appropriate format for clarifying ownership relationships. We will work to consistently provide a single name reflecting co-ownership of city of San Antonio. Potential correction is to use the names as listed on the issued license applied for.	Mussatti	NRC	Puleo
51	8.4	Long term assessment CDR (capacity demand and reserve) Load responses and forecasts beyond 10 years look towards 2018-2020 time frame	Referenced Ercot continually updates CDR and forecasts are updated at least every 2 years. After team left SLC, John Conly identified there forecasts are available in figures 8.4-2 and 8.4-3	Scott	PNNL	Puleo
52	9.2	Add discussion on "wave/tidal power"	Will consult with STP, Bechtel and TT management and proceed upon approval	Hendrickson	NRC	Theisen
53	9.3	Ecology at each alternative basic habitat more detailed ecological comparisons and community habitat	Look at supporting information to determine if materials called out	Jim Backer		Cerafini
54	9.3	Needs more socioeconomic information for alternative sties	Will review /prepare new subsection	Dan Musatti	NRC	Cerafini
55	9.3	9.3-19 Land use for Limestone-Identify reservations possible other impacts for	RAI?			

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STP Units 3-4

NRC Site Audit  
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56	9.3	Alternatives sites 1. Feels that they need more information federally listed species? Look at grand Gulf	Information will be made available will 1. List of Species 2. "Here's what research shows" would be an answer 3. Critical habitat 4. Supporting Support RAI answer	Aquatic Biology Tertestrial Ecology		Cerafini
57	9.3	Level of information for alternatives discuss alternatives	Look at previous ELS's identify level of information Grand Gulf and Vogtle EIS		PNNL	Cerafini
58	9.3	Land Use		Hendrickson	PNNL	Cerafini
59	9.3	Clarify Discussion Logic. Identify departures from diagram Question #64	"Road map" Provide	Hendrickson	PNNL	Cerafini
60	9.4	Hydrology Alternatives 9.4 132-142 Were the hydrology issues in systems analysis applied to the alternative sites/	Will ensure that the discussion is identified	Prasad		Cerafini
61	10.5	182 Requested more information on conservation and other possible mitigation measures. Requested a discussion to explain water sustainability in 2.3.1 and 2.3.2.	GG and Garrett Day (B) described process of how TWDB determined water availability values and relationship to sustainability. Also let PNNL know TWDB developing graduation model for sustainability/availability due out in 2008. (possible RAI)	Kincaid	PNNL	Gunter
62	1.1.2.1	Sentence States " the proposed units would be base load merchant generation plants." Because part of the ownership is CPS, not all would be "merchant generator". Propose that merchant be removes from sentence	Will consult with STP, Bechtel and Tetra Tech management and proceed as directed	Hendrickson	NRC	Theisen
63	10.5S	148 Details requested need to increase discussion on analysis of storm water flow impacts flow and water quality	RAI (147-148)	Prasad	PNNL	Gunter
64	10.5S	148 Details requested need to increase discussion on analysis of storm water flow impacts flow and water quality	RAI (147-148)	Prasad	PNNL	Gunter

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**STP Units 3 & 4**

**NRC Site Audit  
February 4-8, 2008**

<b>Ref. No.</b>	<b>Section</b>	<b>Question/Issue</b>	<b>Response if any Blue Sheet Summary</b>	<b>Raised By</b>	<b>Org.</b>	<b>Recorded By</b>
65	10.5S	151 and 152 Requested information on increase in water level from 47 feet to 49 feet. Natural and forced evaporation and seepage losses	Bechtel discussion that the levels are natural for 47 to 49 feet would be the same forced 47 to 49 feet. Bechtel gave verbal calc values for each to back up answer.	Prasad	PNNL	Gunter
66	10.5S	183 Inconsistency between 4.2, 5.2, and 10.5S in level of impacts	RAI	Kincaid	PNNL	Gunter
67	2.2.1.1	151 Requested more information on mineral and petroleum resources for at least 6 miles. Prefer 50 mile radius		Kincaid	PNNL	Gunter
68	2.3.1	182 Requested more information on conservation and other possible mitigation measures. Requested a discussion to explain water sustainability in 2.3.1 and 2.3.2.	GG and Garrett Day (B) described process of how TWDB determined water availability values and relationship to sustainability. Also let PNNL know TWDB developing graduation model for sustainability/availability due out in 2008. (possible RAI)	Kincaid	PNNL	Gunter
69	2.3.1	Audit Question 102 If the additional dewatering discharge points have not been finished, lay out options describe each option potential effects to environment (impacts) and mitigations	discussed response with technical knowledge of optimal discharge points. The setup in ER 2.3.1 would also need to be described in 2.3.1 and 4.2 Indications of a RAI and or Revision to ER 2.3.1 and 4.2.	Prasad	PNNL	Day
70	2.3.2	182 Requested more information on conservation and other possible mitigation measures. Requested a discussion to explain water sustainability in 2.3.1 and 2.3.2.	GG and Garrett Day (B) described process of how TWDB determined water availability values and relationship to sustainability. Also let PNNL know TWDB developing graduation model for sustainability/availability due out in 2008. (possible RAI)	Kincaid	PNNL	Gunter

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**STP Units 3 & 4**

**NRC Site Audit  
February 4-8, 2008**

<b>Ref. No.</b>	<b>Section</b>	<b>Question/Issue</b>	<b>Response if any Blue Sheet Summary</b>	<b>Raised By</b>	<b>Org.</b>	<b>Recorded By</b>
71	2.3.2	This section discussion on what was provided in the text lead to a much larger discussion on how the MCR is and will be operated for water need.	Ron Yifan (Bechtel) provided an in depth description of the water right, permits, and response of water make up to different surface water. Supply limitation. PNNL and NRC appreciated the in debth information but request it is properly documented in section. Probably RAI or Section Revision is required unless it can be referenced from ER to FSAR.	Bechtel	PNNL	Day
72	2.3.2	104/105 - Requested additional detail on priority rights under extreme drought conditions. Add m formation from existing water contract and priority rights.	Gary( TTNUS) and Garret Day (B) explained priority rights in LCRA and contract W/STP. Also explained water rights under extreme conditions. Units 1 & 2 and 3 & 4. (Possible RAI)	Prasad	PNNL	Gunter
73	2.5.1	Please update demographic data to most current years. USCB estimates OK USCB American Household Survey OK	Will consult with STP and TTNUS project management. If request approved, data will be updated.	Messatti Scott	NRC PNNL	Hill
74	2.5.2	Need cities and towns land use plans for the cities and towns most likely to be inhabited by the new workforce. Need any other data about land use control	Will consult with STP and TTNUS project management. If approved land use plans (city and town) subdivisions regulations, and floodplain management plans will be obtained and sent to the NRC	Scott	PNNL	Hill
75	2.5.2.7	Please note in text that there is a difference in population growth rates between Region K and Matagorda County and why.	Will consult with STP and TTNUS management. If approved, additional text will be added to this sections explaining this difference	Scott	PNNL	Hill
76	2.5.2.7	Please add information to the public services section (and any other sections in 2.5-2) that provide context or a scale of sorts, for comparison of impacts (to determine the relative strength of the impacts)	Will consult with STP and TTNUS project management. If approved, additional data that will help improve the understanding of the nature and magnitude of the impacts will be added.	Scott	PNNL	Hill

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**STP Units 3-4**

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<b>Ref. No.</b>	<b>Section</b>	<b>Question/Issue</b>	<b>Response if any Blue Sheet Summary</b>	<b>Raised By</b>	<b>Org.</b>	<b>Recorded By</b>
77	2.5.4	Can we research and discuss any pre-existing health conditions that minorities or low-income individuals identified may suffer from and that may make them more susceptible to construction and operations impacts. The Texas Dept. of Health keeps statistics on these.	It would be possible to research pre-existing health conditions through the Texas Dept. of Health for minorities and low-income populations. TtNUS and Bechtel management and STP will be consulted regarding additional research and additions to 2.5-4 and the impacts sections.	Mike Scott	PNNL	Emily McRee
78	2.5.4	Can more identification of distinctive communities be provided (i.e. Vietnamese in Palacios), as well as any more detail on age/race breakdown within the 10-mile radius so that particularly susceptible individuals/groups (e.g. women of child-bearing age, children, elderly) can be identified with the EP2.	It would be possible to identify populations with greater percentages of elderly, women, children, etc. by block group within the EP2. Will consult with STP and Tetra Tech, NUS, Bechtel management regarding update of section.	Mike Scott/Dan Mussatti	PNNL/NRC	Emily McRee
79	2.5.4	1) Was information included on the Asian community near STP? 2) The suggestion was made to include more information in the ER regarding specifics of conversations with individuals and agencies	1) The Asian community in Palacios was identified as a minority block group. I did not find any history of the Vietnamese community, but did speak with one of the community leaders. We have this information in a personal communication, which can be viewed while at STP. 2) Will consult with STP and Bechtel management/TetraTech NUS regarding update of the section.	Daniel Mussatti	NRC	Emily McRee
80	2.5.4	Can we show the transportation system on JED maps so that travel conditions can be seen in comparison to minority/low income block groups?	Any extra information (roads, highways, cities, etc.) is generally left off of EJ maps so that the minority/low-income block groups can be seen more clearly. However, roads (especially major) can be shown on these maps. Will consult with STP and Tetra TechNUS/Bechtel management regarding update of the section	Mussatti		McRee

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STP Units 3 & 4

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Ref. No.	Section	Question/Issue	Response if any Blue Sheet Summary	Raised By	Org.	Recorded By
81	2.5.4	Explain how the population projections were performed when county projections from the state demographers office only go to 2040, and the projections by sector/radius are out to 2080	An exponential growth rate was back calculated $P^2 = (P_1)e^{(rxn)}$ and applied to the appropriate county within a sector/radius. Once projections were done by sector/radius/by county. The county fractions for each sector/radius were totaled to get a projection for each sector/radius. No further questions were asked or information requested.	Scott		McRee
82	2.7.1.1	Specify why MET data from Victoria are representative of the STP site (provide more info) Also justify that the STP MET Data are similar to those collected from Victoria. Try to use longer term onsite data to make comparison	We understand the question and can provide the justification and the comparison between onsite data and Victoria data.	Ramsdale	PNNL	Lin
83	2.7.3.2	Provide Tornado and Hurricane strike probabilities for STP Site	Tornado characteristics in contiguous US from 1950-2003 from NUREG/CR-4461 Rev. 2 2007 Tornado strike possibility at LAT 20 and Longitude 96 , was estimated to be 3.62 E-04 per year.  <u>Hurricane Strike Possibilities</u> Probabilities can be obtained from U.S. Land falling hurricane probability project. for the STP site the 50 year return hurricane and intense hurricane probabilities are 51% and 15.2% respectively. (This may become a formal RAI just so the response gets documented)	Ramsdale	PNNL	Fritz
84	2.7.4.1	Question 229 Describe the Units 1 thru 4 combined impact to the MCR Specifically the thermal load and the fogging. Justify statement that because fogging from operation of 1 and 2 is not a problem then fogging due to 1, 2, 3, and 4 will not be a problem.	(It will need to provide the response to this since they did the analysis.) Elaboration in this section will be considered.)	Ramsdell	PNNL	Lin

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STP Units 3 & 4

NRC Site Audit  
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Ref. No.	Section	Question/Issue	Response if any	Raised By	Org.	Recorded By
85	2.7.4.3	Provide Tornado and Hurricane strike probabilities for STP Site	Tornado characteristics in contiguous US from 1950-2003 from NUREG/CR-4461 Rev. 2 2007 Tornado strike possibility at LAT 20 and Longitude 96 , was estimated to be 3.62 E-04 per year.  <u>Hurricane Strike Possibilities</u> Probabilities can be obtained from U.S. Land falling hurricane probability project. for the STP site the 50 year return hurricane and intense hurricane probabilities are 51% and 15.2% respectively. (This may become a formal RAI just so the response gets documented)	Ramsdale	PNNL	Fritz
86	2.7.4.4	Typographical error 60 M should be replaced with 10M in 2.7.4.4 (Last paragraph	Noted	Ramsdell	PNNL	Lin
87	2.7.7	Provide noise level estimates for the unit 3 & 4 cooling towers	Contingent on STP approval. TTNUS would provide the "UHS concepts and feasibility Evaluation for STP Units 3 and 4 25293-501-MOR-WNE-00001, Rev 0 Attachment 2	Ramsdell	PNNL	Bailey
88	4.2.1	111 Details requested in t line modification STP Hillje.Want a figure w/ replacement tower locations and water bodies. Any additional rights of way	RAI	Prasad	PNNL	Gunter
89	4.2.1	112 Requested more detail on T Line STP to Hillier. Table to include water Body Potential Impact. Mitigation if needed. Figure showing replacement tower locations	Potential RAI STP Personnel stated different utility due to deregulization. Cannot give that information. Can do general write up on potential impacts to water bodies bit it will not have construction locations or specific impacts.	Prasad	PNNL	Gunter
90	4.2.1	Update section to include 118 and 113 Drainage description used in ecology (terms consist and and description) Inventory of water resources on water bodies (not drainage ditches) Can put in table	Potential RAI	Prasad	PNNL	Gunter

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**STP Units 3-4**

**NRC Site Audit  
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<b>Ref. No.</b>	<b>Section</b>	<b>Question/Issue</b>	<b>Response if any</b>	<b>Raised By</b>	<b>Org.</b>	<b>Recorded By</b>
91	4.2.1	114/116/118/120 More detail on potential impacts to individual water bodies in area of construction. Write to possible discharge locations	Potential RAI	Prasad	PNNL	Gunter
92	4.2.1	115/119 Add detail of water impacts to water bodies and water quality associated with surface water pumps and intake areas	STP can increase potential impacts to screen replacement and dredging at impact. No impact to Colorado River. Screen replacement and dredging considered maintenance activities.	Prasad	PNNL	Gunter
93	4.2.1	Audit Question 111 and 112 Request more detail (Descriptions, maps, drawings) and assessments concerning right away impacts to transmission line modification.	STP did a very good job describing ownership of transmission lines and would be similar to most maintenance activities (Tetra Tech) PNNL indicated this would be a RAI if can't reference or find in ER	Prasad	PNNL	Day
94	4.2.1	1115 and 119 Requested simple description of the pump installation activities (since same, existing structure) and impacts to River during these activities	Since the MCR and the pump structure was sized for 4 units, it would be considered an operation/maintenance activity with minimal design changes and impacts Both questions will be one RAI unless can send a letter response.	Rajiu		Day
95	4.2.3	1116 and 119 Requested simple description of the pump installation activities (since same, existing structure) and impacts to River during these activities	Since the MCR and the pump structure was sized for 4 units, it would be considered an operation/maintenance activity with minimal design changes and impacts Both questions will be one RAI unless can send a letter response.	Rajiu		Day
96	4.4.3	Can we research and discuss any pre-existing health conditions that minorities or low-income individuals identified may suffer from and that may make them more susceptible to construction and operations impacts. The Texas Dept. of Health keeps statistics on these.	It would be possible to research pre-existing health conditions through the Texas Dept. of Health for minorities and low-income populations. TtNUS and Bechtel management and STP will be consulted regarding additional research and additions to 2.5-4 and the impacts sections.	Mike Scott	PNNL	Emily McRee

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**STP Units 3-4**

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Ref. No.	Section	Question/Issue	Response if any Blue Sheet Summary	Raised By	Org.	Recorded By
97	5.1.2	182 Requested more information on conservation and other possible mitigation measures. Requested a discussion to explain water sustainability in 2.3.1 and 2.3.2.	GG and Garrett Day (B) described process of how TWDB determined water availability values and relationship to sustainability. Also let PNNL know TWDB developing graduation model for sustainability/availability due out in 2008. (possible RAI)	Kincaid	PNNL	Gunter
98	5.2.2	Want details of down stream users to be added. Not just unreferenced material (downstream water requirements)	Requirement now only will include and document flow to Matagorda Bay	Prasad	PNNL	Gunter
99	5.2.3	Information need Item #126 What is the expected frequency of blowdown from the MCR to the Colorado river with all four units in operations	Blowdown from the MCR depends on the MCR water quality, MCR level and river water flow rate which in turn vary on rain fall, river water quality. Blowdown from the MCR would occur to maintain MCR water quality at the average 3000 micro Siemens per centimeter. The TDPE Permit has no restrictions relative to frequency. The permit shows blowdown only when the river flow rate is higher than 800 CFS. The inspector is requesting that a bounding analysis be performed to determine the frequency of blowdown for 4 unit operation.* STP to provide further direction on how to proceed with the request *In addition to determining the frequency of blowdown for the 4 unit operation, PNNL is requesting the analysis to determine the impacts on water quality on the Colorado river as a result of the increased frequency of blowdown.	Prasad	PNNL	Yelamanchi
100	5.3.3.1	NUREG-1555 is a guide for information collection and processing. It is not a technical reference document and is not an authoritative technical reference. Justify the statements made in this section on some other basis or revise the statements	A literature search did not identify any references suitable or inclusion to defend the statements. The statements can be made without reference. Per STP director, the section could be revised to remove the reference and the statements can stand alone.	Ramsdell	PNNL	Zimmerly

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**STP Units 3-4**

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<b>Ref. No.</b>	<b>Section</b>	<b>Question/Issue</b>	<b>Response if any</b>	<b>Raised By</b>	<b>Org.</b>	<b>Recorded By</b>
101	5.3.3.1	Provide input and output from the SACTI code	The input and output can be provided per STP direction	Ramsdell	PNNL	Zimmerly
102	5.3.3.1.1	Provide estimates of fraction of time that the plume would extend beyond the site boundary by season and direction	The estimates are available from the SACTI output and can be included in the section per STP direction	Ramsdell	PNNL	Zimmerly
103	5.3.3.1.2	2nd paragraph Justify the conclusion in light of the increased heat load on the MCR from Units 3 and 4 and the possible increase in level of MCR. Provide a copy of the reference 5.3-31	Van already had a copy of reference 5.3-31. Discussed with Van that the minimal increase in temperature would not change the conclusion in the section. He agreed. I believe the question may not be a RAI.	Ramsdell	PNNL	Zimmerly
104	5.3.3.1.2	Discuss possible synergistic effects resulting from the combination of the MCR and the MDCT.	Explained to Van that there would be on expected additive effects. A literature search did not reveal any references backing up the conclusion. A statement could be added to the section to state that there would be no expected additive effects per the direction of STP.;	Ramsdell	PNNL	Zimmerly
105	5.3.3.1.3	last paragraph The annual deposition rate given in the second sentence is inconsistent with the summer deposition rate given in the same sentence	Although the observation is true, the results are correct and match the code models the annual cast separately from each of the seasons and that the sum of the seasons may not necessarily match the annual results. Van stated that the annual results could be removed or replaced by the sum of the seasons. The section can be changed per direction of STP. All annual results in Section 5.3.3.1 would also be changed.	Ramsdell	PNNL	Zimmerly
106	5.8.1.1	Page 5.8.3 3rd paragraph What are the distance to the closest point of the EAB and the closest residence	Contingent on STP approval, TTNUS will provide distances referenced in seductions 2.2.1.1 and 2.2.1.2	Ramsdell	PNNL	Bailey
107	5.8.1.1	The statement in the next to the last sentence (i.e. noise is 4 times louder) is m consistent with the rule of thumb earlier that perceived noise level tables with increase of 3DBA	contingent on STP approval, TTNUS will correct the statement to read "noise is more than 6 times louder.	Ramsdell	PNNL	Bailey

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**STP Untis 3 4**

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108	5.8.3	Can we research and discuss any pre-existing health conditions that minorities or low-income individuals identified may suffer from and that may make them more susceptible to construction and operations impacts. The Texas Dept. of Health keeps statistics on these.	It would be possible to research pre-existing health conditions through the Texas Dept. of Health for minorities and low-income populations. TtNUS and Bechtel management and STP will be consulted regarding additional research and additions to 2.5-4 and the impacts sections.	Mike Scott	PNNL	Emily McRee
109	9.2.1.3	CPS energy, a utility, would own 40% of STP 3 and 4. As a utility. would CPS energy apply demand side management or promote energy conservation? If not, why? If so, what programs would they potentially offer, and what would be the potential reduction in the need for power.	Will consult with STP, Bechtel and Tetra Tech management and proceed as directed	Hendrickson	NRC	Theisen
110	9.2.3.1.2	75% Coal ash recycle seems overly optimistic cite reference and/or choose more realistic value (I.E. 45%)	Will consult with STP, Bechtel and Tetra Tech management and proceed as directed	Hendrickson	NRC	Theisen
111	9.2.3.1.2	Quantity =105,000 is cited. Clarify time interval to generate this quantity (I.E. per year)	Will consult with STP, Bechtel and Tetra Tech management and proceed as directed	Irene Yu	NRC	Theisen
112	9.2.3.1.4	At the end of the third sentence add "therefore, delivery by roll is assumed."	Will address during ER revision with approval from STP, Bechtel and Tetra Tech management	Hendrickson	NRC	Theisen
113	9.2.3.4	Table 9.2-4 quantifies the manner in which each single energy alternatives (E.G. Coal, Gas) would be achieved (E.G. Coal = four 675 mw units); However, the manner in which the combination of alternatives would be achieved is not quantified in table 9.2-4. Present the quantities breakdown for energy combination alternative in table 9.2-4, if energy conservation could represent a meaningful portion of an alternate, include it.	Will consult with STP, Bechtel and Tetra Tech management and proceed as directed.	Hendrickson	NRC	Theisen
114	General Question	RAI issues-how do we handle Land Ownership for alternatives.				

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Section	Recorded By	Raised By	Org.	Question/Issue	Response if any
4.5	Jha	Antonia	PNNL	copies of the following STP 1 and 2 calculations were requested: NC05113-OSASF Shielding 2006-11820-LTSF Shielding Copy of he ORNL report on the MORSE computer program	STP will make decision regarding release of calculations (PNNL/NRC reviewers viewed excerpts of calculations on laptop) (as an alternative to providing the old MORSE calculations, it may be possible to just refer to the measured data and make a conservative assumption based on that for the LTSF doses, then the reference to the MORSE program would be removed all together)
4.5	Jha	Antonia	PNNL	Why are STP 1 and 2 gaseous effluent doses for 2004 higher than for other years? The doses are taken from the annual effluent reports	Milton Rejcheck is investigating this and if possible will report back to the NRC this week
9.2	Theisen	Hendrickson	NRC	Add discussion on "wave/tidal power"	Will consult with STP, Bechtel and TT management and proceed upon approval
2.7.3.2	Fritz	Ramsdale	PNNL	Provide Tornado and Hurricane strike probabilities for STP Site	Tornado characteristics in contiguous US from 1950-2003 from NUREG/CR-4461 Rev. 2 2007 Tornado strike possibility at LAT 20 and Longitude 96 , was estimated to be 3.62 E-04 per year.  <u>Hurricane Strike Possibilities</u> Probabilities can be obtained from U.S. Land falling hurricane probability project. for the STP site the 50 year return hurricane and intense hurricane probabilities are 51% and 15.2% respectively. (This may become a formal RAI just so the response gets documented)
2.7.4.1	Lin	Ramsdell	PNNL	Question 229 Describe the Units 1 thru 4 combined impact to the MCR Specifically the thermal load and the fogging. Justify statement that because fogging from operation of 1 and 2 is not a problem then fogging due to 1, 2, 3, and 4 will not be a problem.	(It will need to provide the response to this since they did the analysis.) Elaboration in this section will be considered.)

2.7.4.3	Fritz	Ramsdale	PNNL	Provide Tornado and Hurricane strike probabilities for STP Site	<p>Tornado characteristics in contiguous US from 1950-2003 from NUREG/CR-4461 Rev. 2 2007 Tornado strike possibility at LAT 20 and Longitude 96 , was estimated to be 3.62 E-04 per year.</p> <p><u>Hurricane Strike Possibilities</u> Probabilities can be obtained from U.S. Land falling hurricane probability project. for the STP site the 50 year return hurricane and intense hurricane probabilities are 51% and 15.2% respectively. (This may become a formal RAI just so the response gets documented)</p>
2.7.1.1	Lin	Ramsdale	PNNL	Specify why MET data from Victoria are representative of the STP site (provide more info) Also justify that the STP MET Data are similar to those collected from Victoria. Try to use longer term onsite data to make comparison	We understand the question and can provide the justification and the comparison between onsite data and Victoria data.
2.7	Patton	Antonia	PNNL	Table 2.7-15 Title of the table should be revised to clarify that these pertain to Unit 3.....If that is not the case, then the X/Q for Unit 4 should be made that this is to Unit 4 (construction working) for Unit 3	Noted-this should be an RAI

5.2.3	Yelamanchi	Prasad	PNNL	Information need Item #126 What is the expected frequency of blowdown from the MCR to the Colorado river with all four units in operations	<p>Blowdown from the MCR depends on the MCR water quality, MCR level and river water flow rate which in turn vary on rain fall, river water quality. Blowdown from the MCR would occur to maintain MCR water quality at the average 3000 micro Siemens per centimeter.</p> <p>The TDPEs Permit has no restrictions relative to frequency. The permit shows blowdown only when the river flow rate is higher than 800 CFS. The inspector is requesting that a bounding analysis be performed to determine the frequency of blowdown for 4 unit operation.* STP to provide further direction on how to proceed with the request</p> <p>*In addition to determining the frequency of blowdown for the 4 unit operation, PNNL is requesting the analysis to determine the impacts on water quality on the Colorado river as a result of the increased frequency of blowdown.</p>
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3.4	Yelamanchi	Prasad	PNNL	Information need Item #126 What is the expected frequency of blowdown from the MCR to the Colorado river with all four units in operations	Blowdown from the MCR depends on the MCR water quality, MCR level and river water flow rate which in turn vary on rain fall, river water quality. Blowdown from the MCR would occur to maintain MCR water quality at the average 3000 micro Siemens per centimeter. The TDPEs Permit has no restrictions relative to frequency. The permit shows blowdown only when the river flow rate is higher than 800 CFS. The inspector is requesting that a bounding analysis be performed to determine the frequency of blowdown for 4 unit operation.* STP to provide further direction on how to proceed with the request *In addition to determining the frequency of blowdown for the 4 unit operation, PNNL is requesting the analysis to determine the impacts on water quality on the Colorado river as a result of the increased frequency of blowdown.
5.4	Toblin	Antonio	PNNL	URL to 2002 County Agricultural Census Data: Recommend that this be added as a reference to section 5.4	<a href="http://www.nass.usda.gov/census/create_census_us_cnty.jsp">www.nass.usda.gov/census/create_census_us_cnty.jsp</a> This is the url. Adding it as a reference will be considered
2.2	Twigg	Hendrickson/Yu	NRC	<ol style="list-style-type: none"> <li>1) Are Units 3 and 4 in compliance with the Texas coastal management Program? If not, will they be?</li> <li>2) Will an Industrial land Use column be added to tables 2..2-2 to include OXEA and Celanese plants?</li> <li>3) Sections 5.1.1.1 needs to be updated to include information from section 5.3.3.1</li> <li>4) Include ESRP reference instead of NUREG-1555 reference in sections</li> <li>5) Include units on page 4.1-5 when referring to 500</li> <li>6) Double check wetlands acreage (include MCR acreage 7068 vs. 7096.</li> </ol>	Will Consult with STP, Bechtel and TT management if approved, additional work will be completed

4.1			<ol style="list-style-type: none"> <li>1) Are Units 3 and 4 in compliance with the Texas coastal management Program? If not, will they be?</li> <li>2) Will an Industrial land Use column be added to tables 2..2-2 to include OXEA and Celanese plants?</li> <li>3) Sections 5.1.1.1 needs to be updated to include information from section 5.3.3.1</li> <li>4) Include ESRP reference instead of NUREG-1555 reference in sections</li> <li>5) Include units on page 4.1-5 when referring to 500</li> <li>6) Double check wetlands acreage (include MCR acreage 7068 vs. 7096).</li> </ol>	Will Consult with STP, Bechtel and TT management if approved, additional work will be completed
4.2			<ol style="list-style-type: none"> <li>1) Are Units 3 and 4 in compliance with the Texas coastal management Program? If not, will they be?</li> <li>2) Will an Industrial land Use column be added to tables 2..2-2 to include OXEA and Celanese plants?</li> <li>3) Sections 5.1.1.1 needs to be updated to include information from section 5.3.3.1</li> <li>4) Include ESRP reference instead of NUREG-1555 reference in sections</li> <li>5) Include units on page 4.1-5 when referring to 500</li> <li>6) Double check wetlands acreage (include MCR acreage 7068 vs. 7096).</li> </ol>	Will Consult with STP, Bechtel and TT management if approved, additional work will be completed
5.1			<ol style="list-style-type: none"> <li>1) Are Units 3 and 4 in compliance with the Texas coastal management Program? If not, will they be?</li> <li>2) Will an Industrial land Use column be added to tables 2..2-2 to include OXEA and Celanese plants?</li> <li>3) Sections 5.1.1.1 needs to be updated to include information from section 5.3.3.1</li> <li>4) Include ESRP reference instead of NUREG-1555 reference in sections</li> <li>5) Include units on page 4.1-5 when referring to 500</li> <li>6) Double check wetlands acreage (include MCR acreage 7068 vs 7096).</li> </ol>	Will Consult with STP, Bechtel and TT management if approved, additional work will be completed

2.4				<p>1) Are Units 3 and 4 in compliance with the Texas coastal management Program? If not, will they be?</p> <p>2) Will an Industrial land Use column be added to tables 2..2-2 to include OXEA and Celanese plants?</p> <p>3) Sections 5.1.1.1 needs to be updated to include information from section 5.3.3.1</p> <p>4) Include ESRP reference instead of NUREG-1555 reference in sections</p> <p>5) Include units on page 4.1-5 when referring to 500</p> <p>6) Double check wetlands acreage (include MCR acreage 7068 vs 7096.</p>	Will Consult with STP, Bechtel and TT management if approved, additional work will be completed
5.3.3.1	Zimmerly	Ramsdell	PNNL	NUREG-1555 is a guide for information collection and processing. It is not a technical reference document and is not an authoritative technical reference. Justify the statements made in this section on some other basis or revise the statements	A literature search did not identify any references suitable or inclusion to defend the statements. The statements can be made without reference. Per STP director, the section could be revised to remove the reference and the statements can stand alone.
5.3.3.1	Zimmerly	Ramsdell	PNNL	Provide input and output from the SACTI code	The input and output can be provided per STP direction
5.3.3.1.1	Zimmerly	Ramsdell	PNNL	Provide estimates of fraction of time that the plume would extend beyond the site boundary by season and direction	The estimates are available from the SACTI output and can be included in the section per STP direction
5.3.3.1.2	Zimmerly	Ramsdell	PNNL	2nd paragraph Justify the conclusion in light of the increased heat load on the MCR from Units 3 and 4 and the possible increase in level of MCR. Provide a copy of the reference 5.3-31	Van already had a copy of reference 5.3-31. Discussed with Van that the minimal increase in temperature would not change the conclusion in the section. He agreed. I believe the question may not be a RAI.
5.3.3.1.2	Zimmerly	Ramsdell	PNNL	Discuss possible synergistic effects resulting from the combination of the MCR and the MDCT.	Explained to Van that there would be on expected additive effects. A literature search did not reveal any references backing up the conclusion. A statement could be added to the section to state that there would be no expected additive effects per the direction of STP.;

5.3.3.1.3	Zimmerly	Ramsdell	PNNL	last paragraph The annual deposition rate given in the second sentence is inconsistent with the summer deposition rate given in the same sentence	Although the observation is true, the results are correct and match the code models the annual cast separately from each of the seasons and that the sum of the seasons may not necessarily match the annual results. Van stated that the annual results could be removed or replaced by the sum of the seasons. The section can be changed per direction of STP. All annual results in Section 5.3.3.1 would also be changed.
5.4	Toblin	Antonio		Table 5.4-7-Annual External. Dose at site boundary will be 4.84 mrem, limit is 5 mrem/year. What is impacts of two units and will limit be met	a) Reg is per unit basis and is met b) Important conservatism-release will be NRC will check DCD to determine actual release height. Nor further STP response planned.
5.4	Toblin	Antonio		LAD TAP/GASPAR INPUT/OUTPUT Files Requested	Files are available. We took a look at input files.
5.4	Toblin	Antonio	PNNL	How was dose to biota calculated?	Showed liquid pathway, LADTAP, output. Explained atmospheric pathway (based on GASPAR program outputs) methodology, NRC was satisfied with explanation and said they might do independent confirmatory calculations.
5.4	Toblin	Antonio	PNNL	Rad release from MCR is apportioned to Little Robbins Slough, Colorado River and Matagorda Bay according to water balance model in ODCM. What is affect of adding 2 feet of water to MCR for Units # and 4 on this ODCM water balance/mass balance model	No response. RAI forthcoming.
5.4	Toblin	Antonio	PNNL	URL to 2002 County Agricultural Census Data: Add as a reference	<a href="http://www.nass.usda.gov/census/create_census_us_cnty.jsp">www.nass.usda.gov/census/create_census_us_cnty.jsp</a> given (hand-written) to Ernie Antonio, 2/4/08
7.1	Jha	Ramsdell	PNNL	Questions No. 2, 4, and 5 pertain to clarification of information presented in the DCE, not the COLA. It's STP decision how to respond, as DCD questions can't be answered without the GE input.	
4.5	Jha	Antonio	PNNL	Distances from OSASF to nearby TLDs were measured by PNNL/NRC in the field and are different from those assumed in the ER based on drawings	Reviewer agree that the ER is conservative as is but my want it reworded to reflect measured distances. If this becomes an RAI, a SIR will be issued to request GPS coordinates to OSGSF and TLDs.

2.2.1.1	Gunter	Kincaid	PNNL	151 Requested more information on mineral and petroleum resources for at least 6 miles. Prefer 50 mile radius	
4.2.1	Gunter	Prasad	PNNL	112 Requested more detail on T Line STP to Hillier. Table to include water Body Potential Impact. Mitigation if needed. Figure showing replacement tower locations	Potential RAI STP Personnel stated different utility due to deregulization. Cannot give that information. Can do general write up on potential impacts to water bodies bit it will not have construction locations or specific impacts.
4.2.1	Gunter	Prasad	PNNL	Update section to include 118 and 113 Drainage description used in ecology (terms consist and and description) Inventory of water resources on water bodies (not drainage ditches) Can put in table	Potential RAI
5.2	Gunter	Prasad	PNNL	Update section to include 118 and 113 Drainage description used in ecology (terms consist and and description) Inventory of water resources on water bodies (not drainage ditches) Can put in table	Potential RAI
4.2.1	Gunter	Prasad	PNNL	114/116/118/120 More detail on potential impacts to individual water bodies in area of construction. Write to possible discharge locations	Potential RAI
5.2	Gunter	Prasad	PNNL	114/116/118/120 More detail on potential impacts to individual water bodies in area of construction. Write to possible discharge locations	Potential RAI
4.2.1	Gunter	Prasad	PNNL	115/119 Add detail of water impacts to water bodies and water quality associated with surface water pumps and intake areas	STP can increase potential impacts to screen replacement and dredging at impact. No impact to Colorado River. Screen replacement and dredging considered maintenance activities.
5.2.2	Gunter	Prasad	PNNL	Want details of down stream users to be added. Not just unreferenced material (downstream water requirements)	Requirement now only will include and document flow to Matagorda Bay
2.7.4.4	Lin	Ramsdell	PNNL	Typographical error 60 M should be replaced with 10M in 2.7.4.4 (Last paragraph	Noted

8.0	Puleo	Mussatti	NRC	Clarification of ownership throughout chapter has various names for the same owners, e.g.. CPS, City of San Antonio, CPS-Energy. Clarify NRG LP 3 & 4 are separate entities owned by NRG Energy. Verify these titles throughout other chapters	We will work with NRG to determine if there is an appropriate format for clarifying ownership relationships. We will work to consistently provide a single name reflecting co-ownership of city of San Antonio. Potential correction is to use the names as listed on the issued license applied for.
8.1	Puleo	Mussatti	NRC	Clarification of ownership throughout chapter has various names for the same owners, e.g.. CPS, City of San Antonio, CPS-Energy. Clarify NRG LP 3 & 4 are separate entities owned by NRG Energy. Verify these titles throughout other chapters	We will work with NRG to determine if there is an appropriate format for clarifying ownership relationships. We will work to consistently provide a single name reflecting co-ownership of city of San Antonio. Potential correction is to use the names as listed on the issued license applied for.
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8.4	Puleo	Mussatti	NRC	Clarification of ownership throughout chapter has various names for the same owners, e.g.. CPS, City of San Antonio, CPS-Energy. Clarify NRG LP 3 & 4 are separate entities owned by NRG Energy. Verify these titles throughout other chapters	We will work with NRG to determine if there is an appropriate format for clarifying ownership relationships. We will work to consistently provide a single name reflecting co-ownership of city of San Antonio. Potential correction is to use the names as listed on the issued license applied for.
8.4	Puleo	Scott	PNNL	Long term assessment CDR (capacity demand and reserve) Load responses and forecasts beyond 10 years look towards 2018-2020 time frame	Referenced Ercot continually updates CDR and forecasts are updated at least every 2 years. After team left SLC, John Conly identified there forecasts are available in figures 8.4-2 and 8.4-3
2.3.1	Day	Prasad	PNNL	Audit Question 102 If the additional dewatering discharge points have not been finished, lay out options describe each option potential effects to environment (impacts) and mitigations	discussed response with technical knowledge of optimal discharge points. The setup in ER 2.3.1 would also need to be described in 2.3.1 and 4.2 Indications of a RAI and or Revision to ER 2.3.1 and 4.2.
Section 4	Day	Prasad	PNNL	New request and discussion is on new LWA rules after submittal of application, PNNL suggest in table in Section 4 separating regulated and non regulated activity.	STP, NRC, PNNL are not sure if required or not since after the application STP will discuss with management but may need RAI since NRC not even sure if or what is needed request is from PNNL.
2.1	Day	Prasad	PNNL	Provide a time line schedule for all new renewal STP permits that are needed to contract and operate units 3 and 4	Mentioned that the permits are listed in section 2.1 and will inform STP of this request. Informed Sandy
2.3.2	Day	Bechtel	PNNL	This section discussion on what was provided in the text lead to a much larger discussion on how the MCR is and will be operated for water need.	Ron Yifan (Bechtel) provided an in depth description of the water right, permits, and response of water make up to different surface water. Supply limitation. PNNL and NRC appreciated the in debth information but request it is properly documented in section. Probably RAI or Section Revision is required unless it can be referenced from ER to FSAR.

4.2.1	Day	Prasad	PNNL	Audit Question 111 and 112 Request more detail (Descriptions, maps, drawings) and assessments concerning right away impacts to transmission line modification.	STP did a very good job describing ownership of transmission lines and would be similar to most maintenance activities (Tetra Tech) PNNL indicated this would be a RAI if can't reference or find in ER
2.3	Yelamanchi	Prasad	PNNL	Provide historical salinity data of the Colorado River near the intake	
3.3	Yelamanchi	Prasad	PNNL	Provide a description of MCR operation relative to MCR water level, water chemistry and blowdown (work with water conservation plan)	
3.4	Yelamanchi	Prasad	PNNL	Provide a description of MCR operation relative to MCR water level, water chemistry and nd blowdown (work with water conservation plan)	
3.3	Yelamanchi	Prasad	PNNL	Provide MCR Thermal model description and the associated analysis/calculation	MCR model and calculation are available and will be provided in response to an RAI
3.3	Yelamanchi	Prasad	PNNL	Provide MCR Water Budget Model	MCR water budget model will have to be developed and provided in response to an RAI.  ER water budged evaluation is based on LCRA contract which allows diversion up to 102,000 ac-ft on a rolling five year average basis
3.4	Yelamanchi	Prasad	PNNL	Provide MCR Water Budgen Model	MCR water budget model will have to be developed and provided in response to an RAI.  ER water budged evaluation is based on LCRA contract which allows diversion up to 102,000 ac-ft on a rolling five year average basis
4.2.1	Day	Rajiu		1115 and 119 Requested simple description of the pump installation activities (since same, existing structure) and impacts to River during these activities	Since the MCR and the pump structure was sized for 4 units, it would be considered an operation/maintenance activity with minimal design changes and impacts Both questions will be one RAI unless can send a letter response.

4.2.3	Day	Raju		1116 and 119 Requested simple description of the pump installation activities (since same, existing structure) and impacts to River during these activities	Since the MCR and the pump structure was sized for 4 units, it would be considered an operation/maintenance activity with minimal design changes and impacts Both questions will be one RAI unless can send a letter response.
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2.3	Yelamanchi	Prasad	PNNL	<p>Information needs item 106, 107, 109, and 121</p> <p>106 What is the maximum annual water use in ac-ft of STP units 1 and 2</p> <p>107 What is the expected maximum annual water use of STP Units 3 and 4</p> <p>109 Since there had been no release of water to the Colorado River from STP 1 and 2 operations STP site would not be considered a potential source of bacteria. Explain why there has been no release of water to the Colorado river from operation of Units 1 and 2</p> <p>121 What is the maximum annual water use needed to make up losses from the MCR when all four units are in operation</p> <p>106 ER section 2.3.2.1 and table 2.3.2-8 provides average diversion rate for years 2001 thru 2006. STP is permitted to remove 102,000 ac-ft/year at a rate of upto a maximum rate of 1200 cfs, subject to limitation that only 55% of flow in excess of 300 cfs. Average annual rate of diversion for period 2001-2006 is 37,084 ac-ft/year.</p> <p>107 ER section 3.3.1 and table 3.3-1 provide surface water consumptive use as 23,170 GPM and maximum MCR forced evaporation for units 3 and 4 as 23,427 GPM</p> <p>109 MCR water quality retained with in the acceptable limits there for MCR was not blown down to maintain waste chemistry</p>	Inspector indicated that they will generate one RAI to combine all four items in order to obtain written response.
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3.3			<p>Information needs item 106, 107, 109, and 121</p> <p>106 What is the maximum annual water use in ac-ft of STP units 1 and 2</p> <p>107 What is the expected maximum annual water use of STP Units 3 and 4</p> <p>109 Since there had been no release of water to the Colorado River from STP 1 and 2 operations STP site would not be considered a potential source of bacteria. Explain why there has been no release of water to the Colorado river from operation of Units 1 and 2</p> <p>121 What is the maximum annual water use needed to make up losses from the MCR when all four units are in operation</p> <p>106 ER section 2.3.2.1 and table 2.3.2-8 provides average diversion rate for years 2001 thru 2006. STP is permitted to remove 102,000 ac-ft/year at a rate of upto a maximum rate of 1200 cfs, subject to limitation that only 55% of flow in excess of 300 cfs. Average annual rate of diversion for period 2001-2006 is 37,084 ac-ft/year.</p> <p>107 ER section 3.3.1 and table 3.3-1 provide surface water consumptive use as 23,170 GPM and maximum MCR forced evaporation for units 3 and 4 as 23,427 GPM</p> <p>109 MCR water quality retained with in the acceptable limits there for MCR was not blown down to maintain waste chemistry</p>	<p>Inspector indicated that they will generate one RAI to combine all four items in order to obtain written response.</p>
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