November 7, 2007

MEMORANDUM TO:

Michael R. Gartman, Chief

ESBWR/ABWR Project Branch 2
Division of New Reactor Licensing

FROM:

Sujit K. Samaddar, Chief /RA/ Structural Engineering Branch 2

Division of Engineering

SUBJECT:

ACCEPTANCE REVIEW RESULTS FOR THE SOUTH TEXAS PROJECT COMBINED LICENSE APPLICATION

The Structural Engineering Branch 2 (SEB2) has completed its acceptance review of the South Texas Project (STP) Combined License Application (COLA) submitted by NRG Energy. This review covered the following COLA FSAR Sections for which SEB2 has primary review responsibilities and, in addition, applicable interface documentation referenced in the FSAR:

- FSAR Sections 3.3.1, 3.3.2
- FSAR Section 3.4.2
- FSAR Section 3.5.3
- FSAR Sections 3.7.1, 3.7.2, 3.7.3, 3.7.5
- FSAR Sections 3.8.1, 3.8.2, 3.8.3, 3.8.4, 3.8.5, 3.8.6
- FSAR Section 14.3.2
- FSAR Sections 19F, 19H, 19I

Completeness and Sufficiency

Based on this review, I conclude that the application contains the information required by regulations. However, there are significant gaps in the submitted information that preclude the conduct of an effective and efficient technical review and, therefore, preclude the development of a specific review schedule at this time. SEB2 cannot commence the STP COLA detailed technical review without the information identified in Enclosure 1.

CONTACT: Sujit K. Samaddar, SEB2

415-3309

11/2

The significant technical deficiencies are as follows:

- 1. Section 3.7.1 and 3.7.2: The STP site did not have the minimum shear wave velocity required per ABWR DCD. STP COLA failed to identify this Tier 1 departure, and did not address its effects on analysis of Seismic Category I structures. SEB2 staff does not have any information to perform this review.
- 2. Section 3.8.6.4 (3H.6): STP COLA provided a conceptual design of the site specific structures, e.g., the Ultimate Heat Sink (UHS) and the Reactor Service Water (RSW) Piping Tunnel. Final design of these structures is expected to be available by the third quarter of 2008, as proposed in the COLA. A reasonable assurance of safety determination of these site-specific structures can not be achieved until the final design is available.
- 3. Section 3.8.4 (3H.3): STP COLA has redesigned the Radwaste Building using a standard departure from the Tier 2 certified design. However, STP did not recognize the Tier 1 changes involved in the redesign related to using the Peak Ground Acceleration (PGA) value and minimum shear wave velocity that are less than the corresponding DCD values. Also, the COLA does not contain details of the redesigned Radwaste Building to the level of detail contained in the DCD.

In addition, there are several other Sections where insufficient or incomplete information is provided in the COLA as stated in Enclosure 1.

Schedule

The estimated effort for the detailed technical review of the following STP COLA SRP sections by SEB2 varies materially from the pre-baseline model in the EPM. The revised hours are calculated based on the estimated review time of additional documents expected from STP that were not included in the pre-baseline estimate. For each section, I have provided an updated resource plan for these tasks in Enclosure 2. The resource plan includes the new estimated level of effort and the resources assigned. The expected start date is not indicated, and will depend on the date of receipt of information from STP. Revisions to the resource plans have been submitted for the following FSAR section reviews:

- FSAR Section 3.4.2,
- FSAR Section 3.7.1, 3.7.2;
- FSAR Section 3.8.4, 3.8.6.1, 3.8.6.2, 3.8.6.3, 3.8.6.4

Review Dependencies.

SEB2's detailed technical review of the STP COLA is <u>independent</u> of other ongoing application reviews by the staff.

Enclosure:

- 1. Table 1 of the Safety Analysis Report Review Guide
- 2. Table 2 SEB2 Resource Plan Revisions for NRG Energy STP COLA

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DISTRIBUTION:

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Rebecca Karas

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OFFICE	NRO/DE/SEB2	NRO/DE/SEB2	NRO/DE/SEB2	NRO/DE/SEB2
NAME	MSHAMS	SCHAKRABARTI	DJENG	SSAMADDAR
DATE	11/07/07	11/07/07	11/07/07	11/07/07

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Table 1: Safety Analysis Report Acceptance Review Results for STP ABWR COLA Safety Analysis Report Acceptance Review Results Table

Technical Branch: SEB2 (Primary/Secondary) Technical Review FSER Section: 3.8 Branch Chief: S.K. Samaddar_ SRP Section: _3.8_ Date:_10/9/2007__ Does the section address the applicable regulations: Yes/No

Are there any technical deficiencies, changes in planning assumptions, or dependencies on concurrent reviews? Yes/No. Identify specific review

area/topic in table below.

· .	Comple	Completeness and Technical Adequacy Which Form Basis for Acceptability for Docketing				Cha Cor	anges to Planning Assumptions nsidered in Development of Bas Review Schedule	to be seline	Review Dependencies Among Concurrent Reviews		
1. Review Area/Topic*	2. Does COL section address the items required by regulation (refer to RG 1.206, Section C.IV.1)? (Yes/No)	 is COL section technically sufficient for this review area/ topic? (yes/no)** 	4. Can the technically deficiency be resolved through the RAI process? (yes/no)**	5. If no, for either completeness or technical adequacy, identify deficiency(ies). This information will be needed for technical review.	6. Is the identified technical deficiency related to a risk-significant SSC)? (yes/no)***	7. Are the pre-baseline review schedule and estimated staff-hours appropriate? (yes/no)	For each no, identify the change (or basis for change).	9. Identify the total review time in staff-hours****	 Can the review of the area/topic be completed without the completion of a concurrent review? (yes/no) 	11. For each no, identify which application (DCD or COLA) and section.	
3.8.1 – Concrete Containment	Yes	Ye s	N/A	N/A	N/A	Yes	No Change		Yes	N/A	
3.8.2 - Steel Containment	Yes	Ye s	N/A	N/A	N/A	Yes	No Change		Yes	N/A	
3.8.3 – Containment Internal Structure	Yes	Ye s	N/A	N/A	N/A	Yes	No Change	·.	Yes	N/A	

Enclosure 1

		1	Г	a) Evaluation of		···	STP DEP T1 5.0-1; Site	n r		
0.04/0114	,				ł	İ		1 1		٠
3.8.4 (3H.1) -	1 .			Reactor Building to]	!	flood level is 14 ft higher		1	
Reactor	1	1		address the effects of	l		than DCD PMF level.	Out of Scope		
Building	1	ŀ		STP DEP T1 5.0-1	i			. of		i
Ī			i	(increase in PMF			Review schedule will be	So		1
	1			level) is technically		ļ	impacted since additional	. op		
				insufficient.			time may be needed by the			,
1	İ			b) Site specific	, .		applicant to provide			
				structural evaluation	l		required analysis			
	Yes	No	Yes	lacks rigor.	Yes	No	information.		Yes	N/A
ļ	103	1113	100	tuoks rigor.	- 100	110	moment.			
	1	l		a) Evaluation of			STP DEP T1 5.0-1: Site			•
	1	1		Control Building to			flood level is 14 ft higher			
	1 :]							
	1	l	l .	address the effects of	ľ		than DCD PMF level.			
	l			STP DEP T1 5.0-1	l					
<u> </u>			į.	(increase in PMF		Ì	Review schedule will be			•
	· .	Į.		level) is technically	1	1	impacted since additional			•
				insufficient.	·		time may be needed by the			
3.8.4 (3H.2) -		1	1	b) Site specific	•		applicant to provide			•
Control	1	}	}	structural evaluation	1		required analysis			•
Building	Yes	No	Yes	lacks rigor.	Yes	No	information.		Yes	N/A
3				a) Radwaste Building						
İ	i			design departs from	1					
		1		ABWR DCD (STD						·
	l .	1		DEP 3.8-1). RG	i					·
	1			1.206 Sec. C.III.1.6	l	1	, .			
	}		l	requirement is not	1	1				
		1	1	met. FSAR does not						
					1					
				contain details of	ł				·	
	İ	l		change similar to the	į					
3.8.4 (3H.3) -				details provided in			· ,			
Radwaste	1	1		the DCD. Structural			` .			
Building	ļ			details will be		ł				
	1			available for review	ŀ			``]		
		l	1	prior to fuel load		ľ				
	'	Į	1	(COM 3H-1).	l	ļ				•
		l .	1	b) STD DEP 3.8-1	l	ł	Staff review of the			
	1	1		contains departure			departure is not possible	•		·
		i i		from DCD seismic G			with the information			
				value of 0.3g to		1	included in the COLA.			
	i `	ľ		0.15g. Therefore			Additional information may			
				departure constitutes			not be available prior to fuel			
1	No	No	No	a Tier 1 change.	No	No	load.		Yes	N/A
3.8.5 -		Ye		a rior i oliuligo.		 				
Foundations	Yes	s	N/A	N/A	N/A	Yes	No Change ´		Yes	N/A
, outladions	1 103	1 3	1 11/7	I INC	14//	, , , , ,	, unungu		,	

							•	0	1	
				Impact of foundation waterproofing on capability of			COL License Information Item 3.23: Foundation Waterproofing. Review schedule will be	Out of Scope	-	
3.8.6.1 – Foundation Waterproofing	Yes	No	Yes	foundations to transfer shear loads is not adequately addressed.	Yes	No	impacted since the applicant will need to provide additional technical iustification.		Yes	N/A
vvaterprooning	165	140	163	addressed.	163	140	COL License Information Item 3.24: Site Specific Physical Properties and Foundation Settlement.			197
3.8.6.2 –		,		The referenced Section 3H.6 does not contain assessment of			Review schedule will be impacted since the applicant will need to		<i>y</i>	
Foundation Settlement	No	No	Yes	foundation settlement.	Yes	No .	provide additional analysis information.		Yes	N/A
					• .		COL License Information Item 3.25: Structural Integrity Test Results.	. • •		~
3.8.6.3 Structural				Details of the SIT and the instrumentation are not included in			Review schedule will be impacted depending on availability of additional			
Integrity Test	No	No	Yes	the COLA. Conceptual design	Yes	No	information.		Yes	N/A
				presented for two site specific seismic category I structures: the Ultimate Heat Sink and the Reactor Service Water Piping	,					
3.8.6.4 (3H.6)				Tunnel. This does not meet RG 1.206 Sec. C.I.3.8.4 criteria regarding level of detail to be included			COL License Information Item 3.26: Identification of Seismic Category I Structures.			
Site specific Seismic Category I				in the COLA. FSAR will be updated with the final design information by the		•	Review schedule will be impacted since information for review will not be available till the third			
structures	No	No	Yes	third quarter of 2008.	Yes	No	quarter of 2008.		Yes	N/A

*Review Area/Topic: Item identified in RG 1.206 or the regulations; for a COLA referencing a DC, this includes COL information items and departures from the design certification.

**Technical Adequacy: The application is compared against the SRP acceptance criteria. Note: New safety features, alternate regulatory compliance approaches, and/or deviations from DCs, should not be treated as deficiencies and factored into the basis for rejecting the application, unless staff determines that there is insufficient technical information associated with the respective item. These items are factored into confirmation of planning assumptions.

***DSRA will provide risk significance information at time of review, if available.

*****Identification of new review time is on a FSAR section basis and consistent with the review phases within the EPM. Changes from the pre-baseline review schedule and estimated hours should be on that basis.

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FSER Section:14.3.2	Technical BranchSEB2(Primary/Secondary)	Technical Reviewer	
Branch Chief:_S.K. Samaddar	SRP Section: _14.3	Date:_10/1	~

Does the section address the applicable regulations: Yes/No
Are there any technical deficiencies, changes in planning assumptions, or dependencies on concurrent reviews? Yes/No, Identify specific review area/topic in table below.

ble below.											
				Technical Adequacy V			ges to Planning Assumption idered in Development of Bar Review Schedule		Review Dependencies Among Concurrent Reviews		
1. Review Area/Topic*	 Loes COL section address the items required by regulation (refer to RG 1.206, Section C.IV 1)? (Yes/No) 	3. Is COL section technically sufficient for this review area/ topic? (yes/no)**	4. Can the technically deficiency be resolved through the RAI process? (yes/no)**	5. If no, for either completeness or technical adequacy, identify deficiency(ies). This information will be needed for technical review.	6. Is the identified technical deficiency related to a risk-significant SSC)? (yes/no)***	7. Are the pre-baseline review schedule and estimated staff-hours appropriate? (yes/no)	8. For each no, identify the change (or basis for change).	9. Identify the total review time in staff-hours****	 Can the review of the area/topic be completed without the completion of a concurrent review? (yes/no) 	11. For each no, identify which application (DCD or COLA) and section.	
Tier 1 Selection Criteria and Processes for Structures and Systems	Yes	Ye s	Ye s	N/A		Yes			No	Part 7 of COLA documents both Tier 1 & 2 departures, which need to be reviewed by responsible staff of COLA sections 3.7 and 3.8.	

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	Safety Analysis Report Acceptan	ce keview kesuiji	Q
FSER Section:19F	Technical Branch:_SEB2(Primary/Secondary)	Technical Reviewe	it of
Branch Chief:_S.K. Samaddar	SRP Section: _19	Date:_10 [/]	10/2007 ខ្លី
Does the section address the applications and the section address the applications and the section address the applications and the section address the applications and the section address the section address the applications and the section address the section address the applications and the section address the applications and the section address the applications and the section address the applications and the section address the applications and the section address the applications and the section address the applications and the section address the applications and the section address the applications and the section address the applications and the section address the applications and the section address the applications and the section address the applications and the section address the applications and the section address th	cable regulations: Yes/No		-

Are there any technical deficiencies, changes in planning assumptions, or dependencies on concurrent reviews? Yes/No, Identify specific review area/topic in

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de below.							· · · · · · · · · · · · · · · · · · ·	·		
	Completeness and Technical Adequacy Which Form Basis for Acceptability for Docketing					ges to Planning Assumption idered in Development of Ba Review Schedule	Review Dependencies Among Concurrent Reviews			
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Containment Ultimate		Ye	Ye							,
Strength	Yes	s	s	N/A		Yes			Yes	

^{*}Review Area/Topic: Item identified in RG 1.206 or the regulations; for a COLA referencing a DC, this includes COL information items and departures from the design certification.

^{**}Technical Adequacy: The application is compared against the SRP acceptance criteria. Note: New safety features, alternate regulatory compliance approaches, and/or deviations from DCs, should not be treated as deficiencies and factored into the basis for rejecting the application, unless staff determines that there is insufficient technical information associated with the respective item. These items are factored into confirmation of planning assumptions.

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	Safety Analysis Report Acceptance Revie	ew Results Tabler	0
FSER Section:19H	Technical Branch: SEB2_(Primary/Secondary)	Technical Reviewer	ui of
Branch Chief: S.K. Samaddar	SRP Section: _19	Date:_10/10/2007	88
Does the section address the applicable regu	ulations: Yes/No	L	<u> </u>

Are there any technical deficiencies, changes in planning assumptions, or dependencies on concurrent reviews? Yes/No, Identify specific review area/topic in table below.

ible below.						· · · · ·					
				Technical Adequacy V cceptability for Docket			ges to Planning Assumption idered in Development of Barriew Schedule	Re	Review Dependencies Among Concurrent Reviews		
1. Review Area/Topic* Seismic	 Loes COL section address the items required by regulation (refer to RG 1.206, Section C.IV.1)? (Yes/No) 	3. Is COL section technically sufficient for this review area/ topic? (yes/no)**	4. Can the technically deficiency be resolved through the RAI process? (yes/no)**	5. If no, for either completeness or technical adequacy, identify deficiency(ies). This information will be needed for technical review.	6. Is the identified technical deficiency related to a risk-significant SSC)? (yes/no)***	7. Are the pre-baseline review schedule and estimated staff-hours appropriate? (yes/no)	8. For each no, identify the change (or basis for change).	9. Identify the total review time in staff-hours****	10. Can the review of the area/topic be completed without the completion of a concurrent review? (yes/no)	11. For each no, identify which application (DCD or COLA) and section.	
Capacity Analysis	Yes	Ye s	Ye s	N/A		Yes	•		Yes		
							·				

Safaty	Analysis	Panart	Acceptance	Review	Regulte	Table
Satety	Anaivsis	Report.	Accebiance	Review	Results	Lable

FSER Section:19I	Technical Branch: SEB2_(Primary/Second	dary) Technical Reviewer:	Out	•
Branch Chief: S.K. Samaddar	SRP Section: _19	Date:_10/1tm	72 007 8	
Does the section address the app	licable regulations: Yes/No		cope	•
Are there any technical deficiencies	es, changes in planning assumptions, or depen	idencies on concurrent reviews?	Yes/No, Identify specif	fic review area/topic in
table below.				•

	Comp For	letenes m Basi	ss and s for A	Technical Adequacy V cceptability for Docket	Vhich ing		ges to Planning Assumption idered in Development of Bar Review Schedule		Review Dependencies Among Concurrent Reviews		
1. Review Area/Topic* Seismic	Loos COL section address the items required by regulation (refer to RG 1.206, Section C.IV.1)? (Yes/No)	3. Is COL section technically sufficient for this review area/ topic? (yes/no)**	4. Can the technically deficiency be resolved through the RAI process? (yes/no)**	5. If no, for either completeness or technical adequacy, identify deficiency(ies). This information will be needed for technical review.	6. Is the identified technical deficiency related to a risk-significant SSC)? (yes/no)***	7. Are the pre-baseline review schedule and estimated staff-hours appropriate? (yes/no)	8. For each no, identify the change (or basis for change).	9. Identify the total review time in staff-hours****	 Can the review of the area/topic be completed without the completion of a concurrent review? (yes/no) 	11. For each no, identify which application (DCD or COLA) and section.	
Margin Analysis	Yes	Ye s	Ye s	N/A		Yes			Yes		

^{*}Review Area/Topic: Item identified in RG 1.206 or the regulations; for a COLA referencing a DC, this includes COL information items and departures from the design certification.

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^{****}Identification of new review time is on a FSAR section basis and consistent with the review phases within the EPM. Changes from the pre-basline review schedule and estimated hours should be on that basis.

SER Section: Branch Chief: <u>S. S</u>	Samaddar		l Branch: <u>SEB2</u> (SRP Section: <u>3</u>		Techi	nical Reviewe	-	of Scop Date	10/31	<u>/07</u>
Does the section a	address the a	oplicable requ	<u>lations: Yes</u> in planning assur	nntinns	or den	endencies or	COncurre	nt reviews?	No Identi	ify specific review area/topic in to
pelow.	inical deficien	cics, changes	The planting assur	приопа,	Or dep	Chacheles of		TRICTIONS.	, (denti	
			nical Sufficiency W ability for Docketin			iges to Plann sidered in De Reviev		of Baseline	F	Review Dependencies Among Concurrent Reviews
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3.3.1 Wind Loadings	YES	YES	YES	NA .	NA	YE S	NA:	No Chang e	YES	NA .
3.3.2 Tornado Loadings	YES	YES	YES	NA	NA	YE S	NA	No Chang e	YES	NA
COL Item	YES	YES	YES	NA	NA	YE S	NA	No Chang e	YES	NA
COL Item 3.2	YES	YES	YES	NA	NA	YE S	NA	No Chang e	YES	NA

				nical Sufficiency V ability for Docketi			nges to Planning Assumption sidered in Development of E Review Schedule		Review Dependencies Among Concurrent Reviews		
1. Review Area/Topic*	 Does COL section address the items required by regulation (refer to RG 1.206, Section C.IV.1)? (Yes/No) 	 Is COL section technically sufficient for this review area/ topic? (yes/no)** 	4. Can the technical deficiency be resolved through the RAI process? (yes/no)***	5. If no, for either completeness or technical sufficiency, identify deficiency(ies). This information will be needed for technical review.	 6. Is the identified technical deficiency related to a risk-significant SSC? (yes/no)**** 	7. Are the pre-baseline review schedule and estimated staff-hours appropriate? (yes/no)	8. For each no, identify the change (or basis for change).	9. Identify the total review time in staff-hours*****	 Can the review of the area/topic be completed without the completion of a concurrent review? (yes/no) 	11. For each no, identify which application (DCD or COLA) and section.	
COL Item	YES	YES	YES	NA	NA	YE [.] S	NA	Chang e	YES	NA .	
COL Item 3.4	YES	YES	YES	NA	NA	YE S	NA	No Chang e	YES	NA	

^{*}Review Area/Topic: Item identified in RG 1.206 or the regulations; for a COLA referencing a DC, this includes COL information items and departures from the design certification.

^{**}Technical Sufficiency: The application is compared against the SRP acceptance criteria. Note: New safety features, alternate regulatory compliance approaches, and/or deviations from DCs, should not be treated as deficiencies and factored into the basis for rejecting the application, unless staff determines that there is insufficient technical information associated with the respective item. These items are factored into confirmation of planning assumptions.

^{***}Significant deficiencies are those review area/topic which impact the staff's ability to begin the detailed technical review or complete its review within a predictable timeframe.

^{****}DSRA will provide risk significance information at time of review, if available.

^{******}Identification of new review time is on a FSAR section basis and consistent with the review phases within the EPM. Changes from the pre-basline review schedule and estimated hours should be on that basis.

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SER Section: 3.4.2	Technical Branch: SEB2 (Primary)	Technical Reviewe
Branch Chief: S. Samaddar	SRP Section: 3.4.2	Date: <u>10/31/07</u>

Does the section address the applicable regulations: Yes

Are there any technical deficiencies, changes in planning assumptions, or dependencies on concurrent reviews? Yes, Identify specific review area/topic in table

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					Technical Sufficiency V			hanges to Planning Assum idered in Development of E		Revi	ew Dependencies Among
1	•	For	m Basi	s for A	cceptability for Docketi	ng		Schedule -			Concurrent Reviews
	1. Review Area/Topic*	 Does COL section address the items required by regulation (refer to RG 1.206, Section C.IV.1)? (Yes/No) 	S	 Can the technical deficiency be resolved through the RAI process? (yes/no)*** 	5. If no, for either completeness or technical sufficiency, identify deficiency(ies). This information will be needed for technical review.	6. Is the identified technical deficiency related to a risk-significant SSC? (yes/no)***	7. Are the pre-baseline review schedule and estimated staff-hours appropriate? (yes/no)	8. For each no, identify the change (or basis for change).	9. Identify the total review time in staff-hours****	 Can the review of the area/topic be completed without the completion of a concurrent review? (yes/no) 	11. For each no, identify which application (DCD or COLA) and section.
	3.4 Water Level (Flood) Design 3.4.2 Analytical and Test Procedures	YES	N O	YE S	RG 1.206 Sec. C.1.3.4.2 requirement is not met. The methods and procedures used to account for the design-basis flood in the analysis are not described. Design-basis static and dynamic flood loads on Category I structures are not provided.	YE S	NO	Basis for Change Site flood level is +14ft higher than referenced CD flood level. (STP DEP T1 5.0-1) Review schedule will be impacted by the period of time required by the applicant to submit the required analysis information.	Out of Scope		NA

	Completeness and Technical Sufficiency Which Form Basis for Acceptability for Docketing					Changes to Planning Assumptions to be Considered in Development of Baseline Review Schedule				Review Dependencies Among Concurrent Reviews		
1. Review Area/Topic*	 Loes COL section address the items required by regulation (refer to RG 1.206, Section C.IV.1)? (Yes/No) 	s COL section technically sufficie ew area/ topic? (yes/no)**	 Can the technical deficiency be resolved through the RAI process? (yes/no)*** 	5. If no, for either completeness or technical sufficiency, identify deficiency(ies). This information will be needed for technical review.	6. Is the identified technical deficiency related to a risk-significant SSC? (yes/no)****	—7. Are the pre-baseline review schedule and estimated staff-hours appropriate? (yes/no)	8. For each no, identify the change (or basis for change).	9. Identify the total review time in staff-hours****	 Can the review of the area/topic be completed without the completion of a concurrent review? (yes/no) 	11. For each no, identify which application (DCD or COLA) and section.		
					_		ut of Scop					

*Review Area/Topic: Item identified in RG 1.206 or the regulations; الله عن المحمد الم

^{**}Technical Sufficiency: The application is compared against the SRP acceptance criteria. Note: New safety features, alternate regulatory compliance approaches, and/or deviations from DCs, should not be treated as deficiencies and factored into the basis for rejecting the application, unless staff determines that there is insufficient technical information associated with the respective item. These items are factored into confirmation of planning assumptions.

^{***}Significant deficiencies are those review area/topic which impact the staff's ability to begin the detailed technical review or complete its review within a predictable timeframe.

^{*****}DSRA will provide risk significance information at time of review, if available.

^{*****}Identification of new review time is on a FSAR section basis and consistent with the review phases within the EPM. Changes from the pre-basline review schedule and estimated hours should be on that basis.

Branch Chief: S. Samaddar SRP Section: 3.5,3 9 Date: 10/12/07 Does the section address the applicable regulations: Yes	SER Section: 3.5.3	Technical Branch: SEB2 (Primar	y) Technical Review	ا ا و ا				
Does the section address the applicable regulations: Yes	Branch Chief: S. Samaddar	SRP Section: 3.5,3		COP	Date:_	10/12/07		
	Does the section address the a	pplicable regulations: Yes	•	Ф			•	

Are there any technical deficiencies, changes in planning assumptions, or dependencies on concurrent reviews? No. Identify specific review area/topic in table below.

	Completeness and Technical Sufficiency Which Form Basis for Acceptability for Docketing						es to Planning Assumptions dered in Development of Ba Review Schedule	Review Dependencies Among Concurrent Reviews		
1. Review Area/Topic*	2. Does COL section address the items required by regulation (refer to RG 1.206, Section C.IV.1)? (Yes/No)	ction technically sufficient for this topic? (yes/no)**	4. Can the technical deficiency be resolved through the RAI process? (yes/no)***	5. If no, for either completeness or technical sufficiency, identify deficiency(ies). This information will be needed for technical review.	6. Is the identified technical deficiency related to a risk-significant SSC? (yes/no)****	7. Are the pre-baseline review schedule and estimated staff-hours appropriate? (yes/no)	8. For each no, identify the change (or basis for change).	9. Identify the total review time in staff-hours****	 Can the review of the area/topic be completed without the completion of a concurrent review? (yes/no) 	11. For each no, identify which application (DCD or COLA) and section.
3.5.3 Barrier Design			ΥE	:				No Chang		> *
Procedures	YES	YES	S	NA	NA	YES	NA	е	YES	NA

^{*}Review Area/Topic: Item identified in RG 1.206 or the regulations; for a COLA referencing a DC, this includes COL information items and departures from the design certification.

^{**}Technical Sufficiency: The application is compared against the SRP acceptance criteria. Note: New safety features, alternate regulatory compliance approaches, and/or deviations from DCs, should not be treated as deficiencies and factored into the basis for rejecting the application, unless staff determines that there is insufficient technical information associated with the respective item. These items are factored into confirmation of planning assumptions.

***Significant deficiencies are those review area/topic which impact the staff's ability to begin the detailed technical review or complete its review within a predictable timeframe.

^{****}DSRA will provide risk significance information at time of review, if available.

^{******}Identification of new review time is on a FSAR section basis and consistent with the review phases within the EPM. Changes from the pre-basline review schedule and estimated hours should be on that basis.

Safety Analysis Report Acceptance Review Results Table
(Preliminary Evaluation Results)

FSER Section:3.7	Technical Branch:_SEB2(Primary/Secondar	y) Technical Review	v to s	
Branch Chief: S.K. Samaddar	SRP Section: _3.7			
Does the section address the applic			,	
Are there any technical deficiencies	, changes in planning assumptions; or depende	ncies on concurrent revie	iews? Yes/No, Identify specific review area/top	ic in

				Fechnical Adequacy coeptability for Docke			es to Planning Assumption dered in Development of Ba Review Schedule			w Dependencies Among Concurrent Reviews
1. Review Area/Topic*	z. Does COL section address the Items required by regulation (refer to RG 1.206, Section C.IV.1)? (Yes/No)	suffic	4. Can the technically denotericy be resolved through the RAI process? (yes/no)**	5. If no, for either completeness or technical adequacy, identify deficiency(ies). This information will be needed for technical review.	 6. Is the identified technical deficiency related to a risk-significant SSC)? (yes/no)*** 	7. Are the pre-baseline review schedule and estimated staff-hours appropriate? (yes/no)	8. For each no, identify the change (or basis for change).	Identify the total review time in staff-hours****	 Can the review of the area/topic be completed without the completion of a concurrent review? (yes/no) 	11. For each no, identify which application (DCD or COLA) and section.
Section 3.7.1	yes	No.	ye s	Shear wave profile less than DCD requirement	Yes	See table 2	Review schedule will be impacted due to the additional review of information when available		yes	
Section 3.7.2	yes	No	ye s	Shear wave profile less than DCD requirement	Yes	See table 2	Review schedule will be impacted due to the additional review of information when available		yes	

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· · · · · · · · · · · · · · · · · · ·			ye	Т	_	See	T	<u> </u>	Τ	T
Section 3.7.3	yes	yes	s		no	table 2	. !	<u> </u>	yes	
Section 3H.6	no	No	no	The prop. time of submitting of the final seismic analysis of ultimate heat sink and RSW piping tunnel structures, i.e., 3 rd Qtr of 2008, is beyond the review completion time, thus, is not acceptable. The submittal time should be revised to be consistent with staff review compl sched.	no	No Include d in the above change			yes	COLA Section 3H.6
Section 3.7.5, COL License Information	1	1	'		1	[: '	1.	l		
Section 3.7.5.1,								1	·	
Seismic Design Parameters	yes	yes	ye s	'	по	yes		I!	yes	COL License Info item 3.19
	DSE R/RA P2 Revi ew Scop e			This section is related to SRP Section 3.7.4, and is within the review scope of DSER/RAP2			This section is related to SRP Section 3.7.4, and is within the review scope of DSER/RAP2			This section is related to SRP Section 3.7.4, and is within the review scope of DSER/RAP2.
Section 3.7.5.3, Piping Analysis, Modeling of Piping Supports	yes	yes	ye s		по	yes			yes	COL License Info item 3.21

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Section 3.7.5.4, Assessment of								
Interaction Due to	[ſ	ye	ſ	[[ĺ	
Seismic Effects	yes	yes	s	 no	yes		yes	COL License Info item 3,22
Section 3.7.5.5, Response Spectra Amplification at								
Support Attachment Points	_yes	yes	ye s	 по	yes		yes	COL License Info item in Subsection 3.7.3.3.1.8
Section 3.7.5.6, Modeling of Special								
Engineered Pipe			ye :					COL License Info item in Subsection
Supports	yes	yes	S	 no	yes	·	yes	3.7.3.3.1.7

^{*}Review Area/Topic: Item identified in RG 1.206 or the regulations; for a COLA referencing a DC, this includes COL information items and departures from the design certification.

^{**}Technical Adequacy: The application is compared against the SRP acceptance criteria. Note: New safety features, alternate regulatory compliance approaches, and/or deviations from DCs, should not be treated as deficiencies and factored into the basis for rejecting the application, unless staff determines that there is insufficient technical information associated with the respective item. These items are factored into confirmation of planning assumptions.

^{***}DSRA will provide risk significance information at time of review, if available.

^{****}Identification of new review time is on a FSAR section basis and consistent with the review phases within the EPM. Changes from the pre-basline review schedule and estimated hours should be on that basis

⁽¹⁾ Data to be provided in the final report.

Table 2: SEB2 Resource Plan Revisions for NRG Energy South Texas Project ABWR COL

•		Resource Changes						
SER Sectio n No.	SER Section Title	Task *	Concurrent Dependent Review Activity **	Revised Start Date	Revised Finish Date	Name of Resource	Change Type ***	Revised Hours
3.8.4	Other Seismic Category I Structures	SER Phase 1	N/A	·		or or occupa	Revised	
3.8.4	Other Seismic Category I Structures	SER Phase 2	N/A				Revised	
3.8.6.1	Foundation Waterproofing (COL License Information Item 3.23)	SER Phase 1	N/A	,			Revised	
3.8.6.1	Foundation Waterproofing (COL License Information Item 3.23)	SER Phase 2	N/A	-			Revised	
3.8.6.2	Site Specific Physical Properties and Foundation Settlement (COL License Information Item 3.24)	SER Phase 1	N/A				Revised	
3.8.6.2	Site Specific Physical Properties and Foundation Settlement (COL License Information Item 3.24)	SER Phase 2	N/A			•	Revised	

		Resource Changes						
SER Section No.	SER Section Title	Task *	Concurrent Dependent Review Activity **	Revised Start Date	Revised Finish Date	Name of Resource	Change Type ***	Revise
3.8.6.3	Structural Integrity Test Results (COL License Information Item 3.25)	SER Phase 1	N/A	,		ut of Scope	Revised	
3.8.6.3	Structural Integrity Test Results (COL License Information Item 3.25)	SER Phase 2	N/A ·		·		Revised	
3.8.6.4 (3H.6)	Identification of Seismic Category I Structures (COL License Information Item 3.26)	Ser Phase 1	N/A	-			Revised	
3.8.6.4 (3H.6)	Identification of Seismic Category I Structures (COL License Information Item 3.26)	Ser Phase 2	N/A				Revised	
3.7.1	Seismic Design Parameters	SER Phase I	N/A				Revised	
3.7.1	Seismic Design Parameters	SER Phase II	N/A				Revised	
3.7.2	Seismic System Analysis	SER Phase I	N/A				Revised	:
3.7.2	Seismic System Analysis	SER Phase II	N/A				Revised	

	·	Resource Changes						
SER Section No.	SER Section Title	Task *	Concurrent Dependent Review Activity **	Revised Start Date	Revised Finish Date	Name of Resource	Change Type ***	Revised Hours
3.4.2	Analysis Procedures	SER Phase 1	NA				Out of Scope Revised	
3.4.2	Analysis Procedures	SER Phase 2	NA				Revised	

staffing, labor estimates, or start/finish dates.

* Specify the task being revised: SER Phase 1 ~ PSER and RAIs Prepared

SER Phase 1 ~ PSER and RAIs Prepared SER Phase 2 ~ Evaluation Completed

Other - Give task name

Indicate if this task or SER section is new (not yet in the schedule).

** Concurrent Dependent Review Activity: Identify, if any, the project and activity that precedes the affected task in this schedule (e.g., Task in a design

certification review that precedes a COL review).

*** Change Type indicates how the resource is being changed:

Revised – For an existing task, if a currently assigned resource is staying the same, but the hours or dates are being changed.

New - For an existing task or a new task, if a new resource is being added to the task.

Deleted - For an existing task and a currently assigned resource, if the resource is being removed from the task.