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1	UNITED STATES OF AMERICA
2	NUCLEAR REGULATORY COMMISSION
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4	ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
5	(ACRS)
6	+ + + + +
7	US-APWR SUBCOMMITTEE
8	+ + + + +
9	OPEN SESSION
10	+ + + + +
11	THURSDAY, SEPTEMBER 20, 2012
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13	ROCKVILLE, MARYLAND
14	+ + + +
15	The Subcommittee met at the Nuclear
16	Regulatory Commission, Two White Flint North, Room
17	T2B1, 11545 Rockville Pike, at 8:30 a.m., John W.
18	Stetkar, Chairman, presiding.
19	COMMITTEE MEMBERS:
20	JOHN W. STETKAR, Chairman
21	J. SAM ARMIJO
22	DENNIS C. BLEY
23	CHARLES H. BROWN, JR.
24	JOY REMPE
25	WILLIAM J. SHACK
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1	NRC STAFF PRESENT:	
2	GIRIJA SHUKLA, Designated Federal Official	
3	JEFF CIACCO	
4	STEPHEN MONARQUE	
5	AMY SNYDER	
6	MIKE TAKACS	
7		
8	ALSO PRESENT:	
9	JAY AMIN	
10	RUSS BYWATER	
11	TIM CLOUSER	
12	JOHN CONLY	
13	KENJI MASHIO	
14	ROBERT REIBLE	
15	DAN WOODLAN	
16	* Present via telephone	
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1	T-A-B-L-E O-F C-O-N-T-E-N-T-S
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3	Discussion of Comanche Peak Units 3 and 4
4	R-COLA, Chapter 13, Conduct of Operations
5	By Luminant Generation Company 6
6	
7	Discussion of the SER for Comanche Peak
8	Units 3 and 4, R-COLA Chapter 13
9	By NRC Staff
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1	P-R-O-C-E-E-D-I-N-G-S
2	(8:31 a.m.)
3	CHAIR STETKAR: The meeting will now come
4	to order. This is a meeting of the United States
5	Advanced Pressurized Water Reactor Subcommittee. I am
6	John Stetkar, chairman of this subcommittee meeting.
7	ACRS members in attendance are Dennis
8	Bley, Sam Armijo, Bill Shack. I believe we will be
9	joined by Charlie Brown and Joy Rempe. Mr. Girija
10	Shukla of the ACRS staff is the designated federal
11	official.
12	The subcommittee will discuss Chapter 13,
13	Conduct of Operations and the staff safety evaluation
14	associated with the Comanche Peak Combined License
15	Application.
16	The committee will also receive briefings
17	from the staff on the US-APWR advanced accumulator,
18	and from MHI on the resolution of generic safety issue
19	191, Assessment of Debris Accumulation on PWR Sump
20	Performance for the US-APWR design.
21	You will hear presentations from
22	Mitsubishi Heavy Industries, Luminant Generation
23	Company, and the NRC staff. We have received no
24	written comments or requests for time to make oral
25	statements from members of the public regarding
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1	today's meeting.
2	The subcommittee will gather information,
3	analyze relevant issues and facts, and formulate
4	proposed positions and actions as appropriate for
5	deliberation by the full Committee.
6	The rules for participation in today's
7	meeting have been announced as part of the notice of
8	this meeting previously published in the Federal
9	Register.
10	Parts of this meeting may need to be
11	closed to the public to protect information
12	proprietary to MHI or other parties. I am asking the
13	NRC staff and the applicant to identify the need for
14	closing the meeting before we enter into such
15	discussions, and to verify that only people with a
16	required clearance and need to know are present.
17	We will close the afternoon session when
18	we discuss the advanced accumulator. If anything
19	arises during the morning session that is either
20	proprietary, or we need to close the meeting for
21	discussions, just let me know and we'll arrange that.
22	A transcript of this meeting is being kept
23	and will be made available as stated in the Federal
24	Register notice. Therefore, we request that
25	participants in the meeting use the microphones

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1	located throughout the meeting room when addressing
2	the Subcommittee.
3	Participants should first identify
4	themselves and speak with sufficient clarity and
5	volume so they may be readily heard. A telephone
6	bridge line has also been established for this
7	meeting.
8	To preclude interruption of the meeting,
9	the phone will be placed in a listen-in mode during
10	the presentations and subcommittee discussions. I
11	believe also, that later this morning or this
12	afternoon, we may be joined on the bridge-line by Dr.
13	Sanjoy Banerjee.
14	Please silence your cell phones during the
15	meeting. We will now proceed with the meeting. And
16	I call upon Stephan Monarque to begin.
17	MR. MONARQUE: Okay, good morning. Thank
18	you, Chairman. My name is Stephan Monarque. I am the
19	lead project manager for the Comanche Peak COL
20	Application.
21	I wanted to thank the Committee members
22	for giving us the opportunity to present Chapter 13,
23	Safety Evaluation with Open Items to the Subcommittee
24	this morning.
25	Today we have presented six chapters to
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7 1 the Subcommittee. And last week we had, of course, full Committee meetings so we're making a lot of 2 3 progress. And with that, I'll have to introduce my 4 branch chief, Amy Snyder. 5 MS. SNYDER: Good morning. I am Amy 6 Snyder. It is a pleasure to be here today to present to you Chapter 13 for Comanche Peak. 7 To set the 8 stage, the purpose of Chapter 13 is to provide 9 adequate assurance that the COL applicant establishes 10 and maintains a plant staff of adequate size and technical competencies. 11 And that operating plans, to be followed 12 by the licensee, are adequate to protect public health 13 14 and safety. We are prepared today to present our 15 Safety Evaluation with Open Items and answer your 16 questions. Thank you. 17 CHAIR STETKAR: Thank you very much. And I quess the first presentation we will hear is from 18 19 Luminant. The chairs seem to be, ah, they're being filled. Yes? 20 MEMBER REMPE: I had a question about the 21 agenda before they start, if that's acceptable. 22 CHAIR STETKAR: Yes, certainly. 23 24 MEMBER REMPE: I was just looking at it and I notice that MHI will be presenting about GSI-191 25

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1	but there is no compatible presentation from the
2	staff. And is that because the staff has not had time
3	to review that information? And when would we expect
4	to hear on that information?
5	CHAIR STETKAR: Yes?
6	MR. MONARQUE: We have someone joining,
7	Jeff in the back areas.
8	CHAIR STETKAR: There he is.
9	MR. CIACCO: Good morning. My name is
10	Jeff Ciacco. I am the lead project manager for the
11	US-APWR design certification. This morning's briefing
12	on the sump design, sump performance is going to be
13	given by Mitsubishi.
14	It is a status informational briefing on
15	where Mitsubishi is in its design of the US-APWR
16	design sump. NRC staff is in the review process, in
17	the Phase 2 review process.
18	We will be in attendance to answer any
19	questions. Staff has not completed its Safety
20	Evaluation Report. This is all a part of Chapter 6 of
21	the DCD so we haven't completed our Safety Evaluation
22	Report yet. And I think we're tentatively scheduled
23	to present Chapter 6 next year, early in the spring of
24	next year.
25	MEMBER REMPE: Okay.

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1	MR. CIACCO: So it is just an information
2	briefing and we will be here to participate in
3	discussions and we'll have technical staff here as
4	well. But we haven't concluded yet our safety
5	evaluation. I think you will hear in the presentation
6	where Mitsubishi is in its design process.
7	MEMBER REMPE: Okay, thank you.
8	MR. CIACCO: You're welcome.
9	CHAIR STETKAR: Thanks, Jeff. Also, for
10	just general information and the record, the whole
11	issue of sump performance and long-term cooling is a
12	bit different between the staff and the ACRS. Because
13	we, as a Committee, obviously review each of the
14	chapters of the Safety Evaluation Report on the issue
15	of long-term cooling, sump performance, et cetera.
16	It is mostly covered in Chapter 6 of the
17	Safety Evaluation, with some partial coverage in
18	Chapter 15 in terms of accident analyses. That being
19	said, the ACRS has a separate tasking from the
20	Commission to write a separate letter on the viability
21	and safety implications of long-term cooling for each
22	new design certification.
23	So we have that separate task to address,
24	specifically, the issue of long-term cooling, outside
25	of the context of the Safety Evaluation Report breech
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1	of the chapters in the design certification.
2	And that is another reason why we tend to
3	have some of these separate briefings on the status of
4	GSI-191 and some of the long-term cooling issues. And
5	thanks, Jeff, that helped. With that, I guess I will
6	turn it over to Don.
7	MR. WOODLAN: Good morning. I am Don
8	Woodlan. I am the licensing manager for Luminant for
9	the new build project, Comanche Peak Units 3 and 4.
10	On behalf of Luminant, it is a pleasure to be here
11	this morning and to continue this process.
12	We are here to discuss Chapter 13. And
13	this is going to be coordinated, this morning, by John
14	Conly. And also presenting will be Bob Reible, both
15	Luminant, John, help me out, you're the COLA project
16	manager?
17	MR. CONLY: Yes.
18	MR. WOODLAN: All right. I am going to
19	turn it over to John now.
20	MR. CONLY: Thank you, Don. Good morning.
21	My name is John Conly. I am the COLA project manager
22	for Luminant, Units 3 and 4. We will be presenting
23	Chapter 13 briefly, an introduction, a discussion of
24	site-specific information and followed by a short
25	summary.

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1	As far as introduction, the R-COLA uses
2	the incorporated by reference methodology, with which
3	you are all familiar. There are no departures from
4	the US-APWR DCD taken in FSAR Chapter 13. There are
5	no contentions pending before the ASLB.
6	Section 13.1 of the FSAR, Organization
7	Structure of the Applicant. General education and
8	experience requirements do meet the ANSI/ANS-3.1-1993.
9	Shift staffing meets NUREG-0737 TMI. And the reactor
10	operator and senior reactor operator candidates meet
11	ACAD 09-001.
12	CHAIR STETKAR: John, can I ask you,
13	you're not going to address specifics of the shift
14	staffing. But I noticed looking at your staffing, I
15	recognize that it meets NUREG-0737. And I have a
16	couple of questions.
17	As I understand it, the minimum shift
18	staffing is that for the two units you will have three
19	senior reactor operators, one of whom will be the
20	shift manager. Is that correct?
21	MR. CONLY: That is correct. And let me
22	ask Tim Clouser of Luminant to respond to specifics.
23	MR. CLOUSER: Yes, you're right so far.
24	CHAIR STETKAR: We have the right name.
25	MR. CLOUSER: And I am Tim Clouser.
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1	CHAIR STETKAR: Thanks. The shift manager
2	is shared between the two units, is that correct?
3	MR. CLOUSER: That is the minimum
4	requirement in practice. Our administrative
5	requirement will be to have a separate shift manager
6	for each unit.
7	CHAIR STETKAR: A separate shift, so you
8	will have four SROs?
9	MR. CLOUSER: That is correct.
10	CHAIR STETKAR: Okay. Good, thank you.
11	But that's the way you will do business but it's not
12	what you're committing to?
13	MR. CLOUSER: That's correct.
14	CHAIR STETKAR: I got it, okay. Also, the
15	commitment is you have two reactor operators for each
16	unit and I think I read that they are indeed dedicated
17	to the units.
18	MR. CLOUSER: That's correct.
19	CHAIR STETKAR: So how does Luminant
20	organize their reactor operators? Many plants, for
21	example, have electrical operators and mechanical
22	operators. So is one of your two reactor I'm
23	sorry, I was getting ahead of myself. You have two
24	reactor operators per unit in the control room,
25	they're licensed?
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1	MR. CLOUSER: Right.
2	CHAIR STETKAR: And then you have two
3	nuclear equipment operators per unit. They are the
4	ones I actually wanted to ask you about. In many
5	plants, the nuclear equipment operators, the people
6	out in the plant, you have an electrical operator and
7	a number of mechanical operators.
8	Does Luminant organize your operation
9	skills that way, such that, of the two, one is
10	primarily electrical and the other one is primarily a
11	mechanical operator who turns valves?
12	MR. CLOUSER: No. We don't organize that
13	way. We typically organize by building, so components
14	that are associated with a given building, and this is
15	on Units 1 and 2. So for Units 1 and 2, we actually
16	have seven auxiliary operators, field operators for
17	two units.
18	And that is divided up by all the outside
19	equipment, the electrical equipment, the control
20	building where all the inverters, et cetera are, so
21	that would be like, also by the turbine building or
22	the balance of plant. And then by the primary side,
23	the NSSS systems.
24	So in Units 3 and 4, it will be largely
25	the same. Although, our minimum staffing is a little
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14 1 bit lower because there is no requirement for safeshutdown operators in the field based on the design. 2 CHAIR STETKAR: The reason I am asking 3 4 about this, it's a two-unit site and I'm thinking 5 about events that may affect both units. And to me, the committed staffing, quite honestly, looks really 6 7 thin for that. Especially if one of your operators is 8 9 dedicated to only switching electrical things because 10 he is the electrical control building operator. And you have one other operator running everywhere else in 11 the plant to turn all of the valves that need to be 12 That's a difficult thing to do. 13 turned. 14 MR. CLOUSER: Right, and I don't disagree 15 But again, this is minimum staffing. with you at all. 16 Our administrative minimum levels are eight field 17 operators for two units. CHAIR STETKAR: Okay. Let me just make 18 19 What about the shift technical advisor some notes. that again, the commitment is to have one shift 20 technical advisor shared between the two units? 21 MR. CLOUSER: That is correct. 22 That is the commitment. 23 And what is your 24 CHAIR STETKAR: administrative position for the shift technical 25

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1	advisor?
2	MR. CLOUSER: The administrative position
3	will likely remain one shift technical advisor.
4	CHAIR STETKAR: As it is for rad
5	protection technicians?
6	MR. CLOUSER: That is correct.
7	CHAIR STETKAR: Insects over in the corner
8	somewhere.
9	MEMBER BLEY: As we think about that, let
10	me just throw something in if I might. We've seen a
11	couple events, especially one, in recent times, where
12	people went to their minimums, rather than their usual
13	mode of operation, in preparation for upcoming outages
14	to have people dedicated to planning that work.
15	And then unfortunately, a significant
16	event has happened right in that window of time when
17	they are down at minimum staff and it has led to some
18	pretty significant difficulties. So I don't know
19	that, I expect that is something we want to talk about
20	a little bit more.
21	CHAIR STETKAR: Well, and the minimum
22	commitments are actually reduced if you have one unit
23	in shutdown, from even
24	MEMBER BLEY: Well, this was approaching
25	at times of need. I don't know if does everywhere.

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1	But it led people to go down to their minimums a week
2	or two early. And unfortunately, that's right when
3	the difficult situations popped up.
4	CHAIR STETKAR: Well, I will just make
5	that note. I know from my experience, this was many
6	many years ago, and I don't like to tell old stories.
7	But we had a shared two units. And when
8	things happened on both units we were pretty thin.
9	And we had more staff. We had seven, similar staffing
10	to what you mentioned for Units 1 and 2.
11	MR. CLOUSER: Right.
12	CHAIR STETKAR: But even with that, times
13	got a little pressed if you had problems in both
14	units. And occasionally we did.
15	MR. CLOUSER: And just to be clear, we
16	actually, Units 1 and 2 will be the same way on Units
17	3 and 4. There is actually three levels of minimum
18	staff is to expect minimum, which we never get to.
19	There is a procedural minimum
20	CHAIR STETKAR: We almost never got to it
21	too, almost never.
22	MR. CLOUSER: The procedural minimum, we
23	may occasionally get to. And then there is an
24	administrative, a normal operations staffing.
25	CHAIR STETKAR: Okay, thank you. And
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1	since we're talking about staffing here a little bit,
2	how will you staff the fire brigade?
3	MR. CLOUSER: Currently the way we staff
4	the fire brigade on Unit 1 and 2, on our existing
5	units, is to use two equipment operators. One of
6	those being the fire brigade leader. Then we also use
7	I&C techs and some security officers to make up a
8	total of five people on the fire brigade.
9	Currently we are still evaluating how we
10	will do that on Unit 3 and 4. Because of the scale of
11	the additional units, it may be beneficial to go back
12	to a contract fire brigade, which is how we used to do
13	it on Unit 1 and 2 to keep that completely separate.
14	It will really depend on what we end up
15	with for staffing with the equipment operators and the
16	maintenance people, to see if we are going to have
17	adequate people to do these as fire brigade.
18	CHAIR STETKAR: Because there is a section
19	of the FSAR that does specifically state that the fire
20	brigade has five members.
21	MR. CLOUSER: Right.
22	CHAIR STETKAR: And in principle, they are
23	independent from other duties. So if you're pulling
24	operations folks off there, and you're down to your
25	minimum staffing, that could get really difficult in

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1	a fire.
2	MR. CLOUSER: And that's exactly why I
3	said we may end up with a contract. Because if we
4	have enough people in Unit 1 and 2 that we can
5	dedicate when the fire brigade is required, we can
6	dedicate those people to the fire brigade, without
7	any other incurred duties. We're not sure we will be
8	there with 3 and 4 so we may end up with contract.
9	CHAIR STETKAR: How do you do it on 1 and
10	2? Because as I read in the FSAR, it said that the
11	fire brigade members for a shift are designated in
12	accordance with established procedures at the
13	beginning of the shift. Does somebody just get
14	together and say, today you are on the fire brigade
15	and you're on the fire brigade or is
16	MR. CLOUSER: Actually, it's
17	CHAIR STETKAR: there a specific
18	MR. CLOUSER: very similar to that.
19	CHAIR STETKAR: It is?
20	MR. CLOUSER: Yes, there is a field
21	supervisor who is, more of his responsibilities or her
22	responsibilities is to build the watch bill and to
23	make sure that all the safe-shutdown positions are
24	filled and the fire brigade positions are filled, that
25	the folks are qualified for those positions.
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1	And they don't have concurrent duties that
2	would keep them from performing those duties. So that
3	is done on a daily basis. So in other words, the
4	field operator may be assigned to the electrical
5	control building for their normal duties. But if a
6	fire comes up, then they are part of the fire brigade.
7	CHAIR STETKAR: And then you have nobody
8	doing switching?
9	MR. CLOUSER: No, but there is a safe-
10	shutdown operator that goes into his position as safe-
11	shutdown and does all the switching, et cetera. The
12	duties are transferred at that time. It sounds
13	complicated. It's not. It's something that is done
14	
15	CHAIR STETKAR: Well, it does, you said
16	you also rely on security personnel. Does that mean
17	that everybody, essentially everybody onsite is fully
18	trained as a fire brigade member?
19	MR. CLOUSER: No. There are specific
20	officers that are trained for the fire brigade. And
21	that's coordinated again, before the shift, similarly
22	with the maintenance people.
23	There are specific maintenance people that
24	are trained and qualified on the fire brigade and
25	prior to the beginning of shift, and go out on the

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1	watch bill and stuff.
2	CHAIR STETKAR: Okay.
3	MEMBER BLEY: Before you leave that, since
4	you brought it up, I'm interested at the way you're
5	organized. If you do have a significant fire and have
6	to implement your fire procedure, does one of your two
7	ROs take that up as a dedicated activity, is managing
8	the fire procedure, from the control room?
9	MR. CLOUSER: I would have to say that it
10	depends. It depends on whether their current
11	activities are going on. That would normally be
12	something that the SRO would drive. However, if there
13	was a higher priority procedure or an accident
14	condition
15	MALE PARTICIPANT: Can you speak closer to
16	the microphone, please?
17	MEMBER BLEY: Yes, if you were just
18	assuming the fire leads to a reactor trip and they are
19	in their emergency procedures in the control room.
20	And you're trying to implement the fire procedure at
21	the same time, who would take charge of the fire
22	personnel?
23	MR. CLOUSER: That would be the fire
24	brigade leader out in the field.
25	MEMBER BLEY: Okay, nobody in the control

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1	room.
2	MR. CLOUSER: Right.
3	MEMBER BLEY: Okay.
4	CHAIR STETKAR: Anything more on kind of
5	on-shift staffing at that level? If not, continue,
6	please.
7	MR. CONLY: Thank you. This is the slide
8	depicting the nuclear generation organization. This
9	organization has been built based on the success and
10	lessons learned from many years operating Units 1 and
11	2.
12	As you can see, the executive vice
13	president, chief nuclear officer is in charge. He is
14	assisted by the site vice president, by nuclear
15	engineering and support, oversight and Reg Affairs.
16	We will discuss the site organization in the next
17	slide.
18	As you see, quality assurance is under the
19	vice president, nuclear Engineering and Support.
20	SAFETEAM is under Reg Affairs. Fairly standard
21	organization. Next?
22	The site organization under the site vice
23	president, as depicted here, plant manager,
24	performance improvement, plant support, and nuclear
25	training, with the individual subdivisions as shown.
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1	Again, based on 20 years of successful operation of
2	Units 1 and 2.
3	FSAR Section 13.2, Training. NEI 06-
4	13Alpha, Rev. 2, the template for the industry
5	training program description endorsed by the NRC is
6	incorporated by reference. FSAR Section 13.3,
7	Emergency Planning. Bob Reible will address this.
8	MR. REIBLE: Bob Reible from Luminant.
9	The emergency planning, the Units 3 and 4 are within
10	the Emergency Planning Zone for our operating units.
11	The EP draws heavily from the operating units from
12	Units 1 and 2, but is an independent plan. And the EP
13	plan reads both 10 CFR 50 and 52 requirements.
14	MEMBER BROWN: Before you go on, I wanted
15	to ask, because I don't know which section is going to
16	be covered, if it is going to covered at all, would be
17	the cyber security.
18	MR. WOODLAN: We do have a follow-up slide
19	if you want to wait until we get to that.
20	MEMBER BROWN: Was that later in this
21	MR. WOODLAN: In this presentation, yes.
22	MEMBER BROWN: Okay, fine.
23	MR. WOODLAN: Okay.
24	MEMBER BROWN: Is it follow-up or one of
25	the main ones
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1	MR. WOODLAN: It's one of the main ones.
2	MEMBER BROWN: Okay, I didn't
3	MR. WOODLAN: Just a couple more slides.
4	MEMBER BROWN: I didn't see the magic
5	words in there, I don't think. So either that or I am
6	blind right now.
7	MR. WOODLAN: We may have left off the
8	magic words.
9	MEMBER BROWN: Okay, thank you.
10	MR. CONLY: FSAR Section 13.4, Operational
11	Program Implementation. Table 13.4-201 identifies
12	implementation of operational programs, which are
13	fully described in the FSAR. There is a single
14	proposed license condition for the implementation of
15	operational programs that are implemented by means of
16	a license condition.
17	13.5, Plant Procedures. The
18	administrative controls are consistent with Reg Guide
19	1.33, Rev. 2. Computer-based procedures meet NUREG-
20	0700, 0711, 0899, and DNIC-ISG-04 and are backed up by
21	paper-based procedures.
22	CHAIR STETKAR: John?
23	MR. CONLY: Yes?
24	CHAIR STETKAR: Who will develop the
25	Emergency Operating Procedures? Is MHI developing
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1	those for you and you're just checking revisions for
2	any plant specific, site-specific features? Or will
3	you actually be writing the procedures?
4	MR. CONLY: And let me again, ask Tim
5	Clouser to address that specifically.
6	MR. CLOUSER: Again, I am Tim Clouser.
7	MHI is writing the ERGs and it will be almost exactly
8	as you describe, that would be a generic, where we
9	will essentially just add that information, and use
10	those as our Emergency Operating Procedures.
11	CHAIR STETKAR: Because again, it is not
12	our role here at the ACRS to become overly involved in
13	the administrative issues. But in some cases, you
14	will look at schedules and things and you wonder
15	whether adequate time has been provided for a good
16	review.
17	And in particular, in the FSAR, I noted
18	that the procedure, what you call your procedure
19	generation package, which essentially includes
20	Luminant's version of all of, as I understand it
21	anyway, all of the technical background.
22	The description of the program, for V&V of
23	the Emergency Operating Procedures and so forth, will
24	be delivered to the NRC three months prior to
25	commencing formal operator training on the EOPs, three
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Operator training is scheduled to begin 18 months prior to fuel load, as I understand it. This means that the NRC staff will first see any information about the technical bases for the EOPs for this plant under, my opinion, a very very tight schedule.

8 Because if they discover any questions 9 that they want to raise about the EOPs or the V&V, 10 it's going to have a direct affect on your operator 11 training program, which is already fairly tight. 12 Eighteen months is not an awfully long time to bring 13 a new group of operators up to speed on a plant.

MR. CLOUSER: And I can answer part of your question. I'll let MNES answer the rest of it. Our actual plan for operator training is that we will commence that process four years and nine months before fuel load in the first unit, so significantly longer than the commitment.

20 CHAIR STETKAR: Than what you committed 21 to. 22 MR. CLOUSER: And the ERGs are largely 23 done and I'll let MNES verify that. And I have had 24 the opportunity to review them and I get quarterly 25 updates on exactly where they are at with that. So

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1	that said, let me turn it back over, who can give you
2	some details on when they will be available to the
3	NRC, et cetera.
4	MEMBER BLEY: Before you give it to them,
5	have you had any of your own operators involved in
6	that development process to date?
7	MR. CLOUSER: The only way that I have
8	been involved, I was previously licensed at Comanche
9	Peak Units 1 and 2. So I have been involved in
10	overseeing the development of the ERGs.
11	We have used some of those procedures with
12	some currently licensed operators on Unit 1 and 2, at
13	the simulator in Pittsburgh. So they have seen some
14	early development. They've actually seen some similar
15	simulator.
16	MEMBER BLEY: All right, thanks.
17	MR. CLOUSER: Did you want to, maybe
18	restate the rest of the question? When the NRC is
19	going to get the
20	CHAIR STETKAR: Well, my fundamental
21	concern is, if I look at the commitments and I
22	recognize that there are other plans in the
23	background, but the only thing I see are the
24	commitments.
25	MR. CLOUSER: Right.
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1	CHAIR STETKAR: The concern is that if
2	there are elements of the Emergency Operating
3	Procedures, or more importantly their technical basis
4	documents, or part of the V&V plan for human factors
5	engineering and so forth, that could have a
6	fundamental affect on how the procedures are
7	developed, or certain strategies within those
8	procedures, for particular plant conditions.
9	The NRC does not have, at least according
10	to the committed schedule, a very long time to examine
11	that documentation before again, according to the
12	committed schedule, the operators will begin training
13	on those procedures.
14	And it seems to be an awful lot of time
15	pressure on the staff, if that is indeed the schedule
16	that they will receive the information. So again,
17	it's not the ACRS's role to speak too much in terms of
18	administrative issues or timing.
19	But if there is some implication that the
20	timing could affect the quality of the procedures, oo
21	the quality of the staff's review of the procedures,
22	or the technical basis documents for those procedures,
23	that is an area I think we're interested.
24	So in terms of MNES, I don't know if you
25	would like to have them add something about the

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1	schedule or the timing of their development.
2	MR. CLOUSER: Go ahead.
3	MR. BYWATER: My name is Russ Bywater from
4	MNES. And for that kind of question, Mr. Kenji
5	Mashio, would you be able to discuss some of the
6	development, staffs or schedule?
7	MR. MASHIO: This is Kenji Mashio with
8	MNES.
9	MR. CLOUSER: It's on, you're okay.
10	MR. MASHIO: We do look at V&V. And this
11	information describes not only the process of our
12	procedure but also how to verify project procedure,
13	inquiry that EOP.
14	And this describe the process of the
15	schedule issue which, based on the engineering
16	procurement contract action, we set a date, then we
17	back-up those schedule to reach a maximum. So that
18	means scheduling issue depends on that.
19	CHAIR STETKAR: Thank you. I come back to
20	this concern, that Emergency Operating Procedures, I
21	think, we're finding are an important part of plant
22	life.
23	And certainly one would expect that the
24	Emergency Operating Procedures would be fully verified
25	and validated with respect to any human factors
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1	engineering concerns, man/machine interface,
2	procedural flow, et cetera long before three months
3	before the operators start training on the EOPs.
4	Now you might start training the
5	operators, whatever you said, four years and nine
6	months before hand but some of that training is, this
7	is a pump, this is a valve, electricity flows from
8	positive to negative, that sort of stuff.
9	Training on the Emergency Operating
10	Procedures may come along later in the training
11	program, once the control room staff, licensed ROs and
12	SROs, become a little more proficient on the design
13	and actual systems and things like that.
14	So indeed, the EOPs might be later in that
15	whole training schedule anyway by natural flow. But
16	it strikes me that a lot of that work, about
17	verification and validation of the procedures, and the
18	human factors engineering of the procedures and their
19	interface, needs to be well before this committed time
20	schedule.
21	On the other hand, if you just stick to
22	the commitment and say, now see our commitment says
23	here we are, three months before the time that our
24	time-line says we are going to train our operators, it
25	really doesn't leave people an awful lot of time to
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1	think about how well those procedures might or might
2	not work.
3	I'll just leave that. I think we have
4	belabored it enough. As I said, we don't get involved
5	in timing but it is a bit of a concern. And I will
6	just leave it there. Dennis, do you have anything
7	else? Thanks.
8	MEMBER BLEY: I agree with you.
9	CHAIR STETKAR: One of the reasons I bring
10	this up, by the way, we had a question, I think MHI,
11	and MNES, and Luminant will find out that we don't
12	forget because we write things down.
13	Back in one of our discussions about, one
14	of the other chapters had a question about how are you
15	going to organize your strategies for cool-down under
16	station blackout situations.
17	Because it's not at all clear your
18	batteries, your two-hour batteries can handle the
19	cool-down cycling, the steam relief valves. So what
20	are you going to tell the operators to do?
21	And the answer is well, we will need to
22	develop that in the Emergency Operating Procedures
23	when we get a little more information. Well, some of
24	those decisions will need to be made at some time and
25	they could have real safety implications. Thank you.
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1	MR. WOODLAN: Are you ready to move on?
2	CHAIR STETKAR: Yes.
3	MR. WOODLAN: Sorry.
4	MR. REIBLE: Section 13.6, Security. The
5	CP 3 and 4 security plan is based on the NEI 03-12,
6	Rev. 6 template. The security plan includes the
7	physical security, training, qualifications plan, and
8	the safeguards contingency plan.
9	The R-COLA IBRs, the DCD vital equipment
10	list, and the R-COLA defensive strategies are
11	demonstrated in the DCD Appendix A to their high-
12	assurance evaluation technical report. Section 13.7,
13	Fitness for Duty
14	MEMBER BROWN: Did you all just pass the
15	part
16	CHAIR STETKAR: No, no, we have two more
17	slides.
18	MR. REIBLE: Well, 13.7, Fitness for Duty.
19	There is going to be two-phase implementation of the
20	fitness for duty construction and an operational
21	program.
22	The construction fitness for duty plan is
23	based on NEI 06-06, Rev. 5, FFD program guidance, and
24	the CPNPP uses an offsite contractor for licensed
25	testing facility. You do not have an onsite licensed
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1	testing facility.
2	Section 13.8, Cyber Security. Cyber
3	security for CP 3 and 4 incorporates the guidance of
4	Reg Guide 5.71 and Appendices A, B, and C. It uses
5	the template with no deviations and exceptions. The
6	BOP SSCs are also included in the template from the
7	SRM.
8	And the one difference from the template
9	is organizational difference of having our cyber
10	security report up to our engineering versus our
11	security organization.
12	MEMBER BROWN: Okay, is it not turned on?
13	CHAIR STETKAR: Charlie, do you have a
14	question?
15	MEMBER BROWN: I brought this up, I think
16	it has been a couple years ago when we looked at the
17	DCD Chapter 13. My memory fails me a little bit on
18	that. And I brought it up at that time. If you
19	looked at the DCD that was issued it had three now,
20	I lost my place. That's not too cool. I'll give it
21	back.
22	CHAIR STETKAR: I had a question so I'll
23	give you
24	MEMBER BROWN: I'm ready.
25	CHAIR STETKAR: so you can find
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1	MEMBER BROWN: I'm ready.
2	CHAIR STETKAR: Did you find it?
3	MEMBER BROWN: Yes, I'm ready. Anyways
4	the DCD goes through and in Section, I don't know,
5	13.3, it talks, as the following countermeasures are
6	applied to prevent cyber security threats.
7	And it says they were going to have one-
8	way communication links, doesn't talk about RG 5.71.
9	I acknowledge everything you say in here but that's
10	not arguing about that.
11	There are three specific items in there
12	where it talked about communication, if you look at
13	the architecture, which we haven't seen yet for
14	Chapter 7, and what the buses and although, there is
15	a picture in Chapter 7, which I have looked at.
16	It says communication from the unit
17	management computer, which is outside, to the station
18	bus is restricted to one direction. Supposedly it's
19	from a plant out to the outside world.
20	But it says dedicated transmission
21	protocols is used, which is not general purpose, such
22	as transmission control protocol, TCPIP. In other
23	words, datagram protocols, et cetera. That is a
24	software-based methodology of one-way communication.
25	Another part talks about, if you have a

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1	firewall, it's an adequate gateway processor-type with
2	a firewall function which again, is a software-based
3	firewall.
4	And then it talks, in the last bullet,
5	about the firewall program currently used, is a 128-
6	bit code key. It's safer than the data encryption
7	standard code and all this other kind of good stuff.
8	Again, that's a software-based firewall.
9	And the real issue is the use of software
10	in order to provide the one-way direction
11	restrictions, as opposed to a hardware diode. And if
12	you go look at your COL, you don't address that. You
13	just say you will submit the safety plan.
14	And the safety plan has been submitted.
15	And there is an SER and the staff doesn't really
16	address that, other than to say you have done what you
17	have said. They reviewed your safety. I guess they
18	are going to talk about that later in their SER.
19	So I'm still struck by the absence of any
20	real strict hardware architecture that is going to
21	guarantee that there will be no external access into
22	this plant. There is nothing that illustrates how
23	that will be accomplished.
24	I brought this up before. You are not the
25	first to have this question asked. And I guess when
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1	we get to Chapter 7, I will be expecting to see some
2	type of more definition in the designing which does
3	not, even though the DCD says it, allow a software
4	that somebody can come in and hack through.
5	And all of a sudden say hey, look, now I
6	am going to go the other way, not because I am going
7	to change the protocol restrictions.
8	And it's going to be very very hard to
9	convince, and I know what the vendors are going to
10	say, oh, we have this marvelous algorithm that we have
11	developed, which actually is absolutely impervious to
12	anybody ever hacking in.
13	And I would like to see, if they are that
14	good, they ought to go talk to the DoD and maybe they
15	should give the Pentagon some help at keeping their
16	computers from being hacked, which they are fighting
17	on a daily basis.
18	CHAIR STETKAR: That's right.
19	MEMBER BROWN: With limited success, by
20	the way. Those firewalls area breached and they are
21	reported, unfortunately, the rest of us to know that.
22	So this is really not, right now, there is little, if
23	any, definition.
24	And in order to really feel comfortable
25	and be able to, at least from my standpoint, I can't
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1	speak for the Committee as a whole, to pony-up and
2	agree with the approach being taken, I really need to
3	see a good hardware diode-based interface between the
4	plant, at station bus, and all external
5	communications.
6	One of the difficulties I noticed in the
7	one limited diagram you had, the overall big diagram,
8	the EOF is connected outside. It doesn't connect
9	directly off the other buses, it looks like it is fed
10	separately.
11	And I will be asking that question when we
12	get to Chapter 7. But whereas, the TFC and MCR main
13	control room come off of the internal parts of it. So
14	anyway, just wanted to give you a heads up.
15	What you have got in here is what you've
16	got in here. But it is largely procedural. When you
17	follow Reg Guide 5.1 it does give a preference for
18	data diodes. In other words, one-way hardware.
19	And then it provides in one section, well,
20	if you don't do that here is a list of, I don't know,
21	27 things or something like that, and that you have to
22	have really fancy this and fancy that and whatever.
23	And it's unfortunate that it is in there.
24	I didn't realize it when we agreed with that. But
25	that is just a heads up, on letting you all know now
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1	for when and if we ever get to Chapter 7.
2	CHAIR STETKAR: A lot of this is Chapter
3	7. And a lot of it is design certification, Chapter
4	7.
5	MEMBER BROWN: And DCD, Chapter 7.
6	CHAIR STETKAR: But there is that
7	interface. You will establish your Emergency
8	Operating Facility and I guess be responsible for the
9	communications between the internal part of the plant
10	and that facility. And I actually, Charlie, I
11	struggle, I don't know how that interface is made in
12	practice.
13	MEMBER BROWN: Totally
14	CHAIR STETKAR: Now I understand the
15	programs. I understand MHI's part of the certified
16	design. But where that design interconnects with the
17	semi-outside world and the outside world, I'm not sure
18	where does that responsibility lay.
19	And if it is Chapter 7, fine, we'll
20	address it in Chapter 7, certainly with MHI for the
21	certified design, but to the extent that we need to
22	understand those interfaces with Luminant because you
23	will ultimately be responsible for making those
24	connections.
25	MR. WOODLAN: I think we understand the

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1	issue. I think he explained it quite well. It does
2	sound to me like a Chapter 7 and I don't know, we
3	should take as a heads up
4	CHAIR STETKAR: Yes.
5	MR. WOODLAN: for Chapter 7. But had
6	our the audience, so is this something we can add to
7	today? Or is this just wait until Chapter 7?
8	MR. REIBLE: I can add some things
9	MR. WOODLAN: Come over to the mike.
10	CHAIR STETKAR: Okay. I don't want to get
11	too far off topic. You need to come up to a
12	microphone and identify yourself. But I don't want to
13	get too far off into the Chapter 7 area
14	MR. WOODLAN: Okay.
15	CHAIR STETKAR: because we will have a
16	meeting, I'm confident, at some time. I'm not
17	confident this year. At some time, I am confident
18	that we will have a meeting.
19	MR. WOODLAN: Just to summarize before Jay
20	responds. Basically, the question is, we appear to be
21	relying mostly on software.
22	MEMBER BROWN: Totally on software.
23	MR. WOODLAN: Totally on software, why
24	have we not considered, and will we consider using
25	hardware to ensure that it is only one-way
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1	communications?
2	MEMBER BROWN: Literally that you have to
3	take a module out of some cabinet somewhere and put
4	another two-way or reverse, it's very hard to do. I
5	can look at it that way.
6	MR. AMIN: Okay, my name is Jay Amin and
7	I am the plant cyber security and digital programs
8	manger at Comanche Peak for operating as well as the
9	new bills.
10	Your question, Charlie, was valid. The
11	current architecture and the MNES cyber security plan
12	has the same defense in that five-layer approach that
13	we have for the operating plant.
14	But the plant I&C is isolated via data
15	diodes, actually two of them that goes from the unit
16	bus to the station bus, that is one diode. So that
17	isolates the plant completely.
18	And so the EOF, the ERGs, and all that is
19	another layer, level three, and that is also isolated
20	via data diode from the so-called business LAN or
21	business applications. So these physical hardware-
22	based data diode that provides logical and physical
23	isolation.
24	MEMBER BROWN: That is in your existing
25	plants, correct?

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1	MR. AMIN: Yes.
2	CHAIR STETKAR: What I want to be careful
3	about here is we need to be a bit cautious about
4	details of design, when we talk about cyber security.
5	This is for Units 1 and 2.
6	And I think we ought to be a little
7	careful about not continuing too much discussion about
8	design details in this open session. If we want to
9	close it and talk and obviously it is up to Luminant
10	because it is your site. I will just raise that
11	question.
12	MEMBER BROWN: Okay, I would argue that
13	the architecture, that part, I'm
14	CHAIR STETKAR: Architecture is one thing.
15	But if you talk about details
16	MEMBER BROWN: Well, he's talking about
17	CHAIR STETKAR: of how it is
18	implemented.
19	MEMBER BROWN: If you looked at the DCD it
20	literally says, the comprehensive physical security
21	program, and if you read the next few lines down,
22	cyber security plan, are the responsibility of the COL
23	applicant.
24	So regardless of what it says in the DCD,
25	that doesn't mean that as part of your COL

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41 1 presentation, relative to the Chapter 7 architecture, doesn't mean you can't provide the illumination of how 2 3 that is going to be done so that it is literally 4 impervious and is impervious to software. 5 In other words, it does not rely on 6 software. Every time you put a processor in that data 7 exchange process, it's just like putting a pipeline 8 from the outside into the inside plant. 9 And if you look at the way those are 10 constructed, and it's not peculiar to you, particularly, once you get into that station bus, you 11 can mess with all of the stuff in the main control 12 room and everything else. You have access, smart 13 14 people will do that. So I will leave it at that and we will --15 CHAIR STETKAR: We will pick it up in 16 17 Chapter 7. MEMBER BROWN: -- pick it up in Chapter 7. 18 19 Thank you very much for your --CHAIR STETKAR: Chapter 7, we have a 20 little bit more flexibility because there will be more 21 discussion of details. 22 And probably in closed 23 MR. WOODLAN: 24 session like you suggested. CHAIR STETKAR: Right, yes. 25 I'm just a

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1	little bit, we can talk about programmatic issues in
2	an open session. But if we start to talk about too
3	much details of design specifics, I get a bit
4	concerned.
5	MEMBER BROWN: My chairman is trying to
6	constrain me right here since I am so passionate and
7	enthusiastic. And figures illustrating this, when you
8	get to the, whether it is the COL part of it, or
9	whether it is the DCD part of it, illustrate what
10	those are and call that out.
11	Because if it is in the DCD, then it
12	becomes part of the licensing basis. And you want
13	some of these smart guys, when they're building this
14	stuff four years from now, that is a big concern.
15	And say oh, man, we've have come up with
16	this great algorithm. And nobody is going to be able
17	to decipher that thing that it is safe. Thank you
18	very much for being patient, John.
19	CHAIR STETKAR: Thank you, sir. Enjoy
20	your comments.
21	MEMBER BROWN: Sorry for phone.
22	CHAIR STETKAR: That's okay.
23	MEMBER BROWN: I forgot to mute my phone
24	when I came in. I apologize for that.
25	CHAIR STETKAR: That's all right. You owe

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1	me. I had another question regarding cyber security.
2	And I am not sure where this is in the interface. But
3	I noted in the SER it says, in its response to RAI
4	6.013 dated September 16th, 2011, Luminant revised its
5	cyber security plan to include the following
6	paragraph.
7	Within the scope of the NRC's cyber
8	security rule at 10 CFR 73.54, systems or equipment
9	that perform important safety functions include
10	structure systems and components in the balance of
11	plant, that could directly or indirectly affect
12	reactivity in a nuclear power plant, and could result
13	in an unplanned reactor shutdown or transient.
14	What that means is that you have committed
15	to extend the cyber security plan to include SSCs that
16	are "important to safety," out in the balance of
17	plant, non-safety related equipment.
18	Who determines and how is it determined
19	what that complement of SSCs, that are important to
20	safety, is? And when is it determined? Because this
21	could be an important issue.
22	MR. REIBLE: I think that
23	CHAIR STETKAR: Because you have made the
24	commitment to include that.
25	MR. REIBLE: Right.

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1	CHAIR STETKAR: And the architecture of
2	how you protect that information
3	MR. REIBLE: Right, and I would like to
4	CHAIR STETKAR: depends on what the
5	scope of it is.
6	MR. REIBLE: call on Jay Amin, our SME
7	for cyber security code at Comanche Peak.
8	MR. AMIN: Okay, to answer your question,
9	you are referring to the FERC 706-B order that the
10	NRC, now ends up regulating the balance of plant
11	equipment, the other reactivity excursion which
12	results due to any interruption in power, whether it's
13	a full plant trip or reduction.
14	So what would happen there is the defense
15	in-depth philosophies would be similar. Because it is
16	a plant system, it will all be within the same layers,
17	provided, afforded the same protection of Reg Guide
18	5.71, across the board applies to those activity of
19	power assets and would be treated as such.
20	When the BOP designs get finalized, those
21	CDAs, when I say finalized or meaning in early design
22	phases, they would have to be identified. Because the
23	way we work at Comanche Peak is that we want to make
24	sure that many of the technical security controls,
25	that are required, are implemented as much as part of
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1	the original equipment that it is going to support.
2	So that's how we would evolve and
3	characterize the CDAs within the plant. I hope that
4	answers the question.
5	MR. WOODLAN: Well, let my try some words,
6	Jay, and then you correct me if I am wrong.
7	MR. AMIN: Okay.
8	MR. WOODLAN: First of all, who is
9	responsible? It will be Luminant.
10	MR. AMIN: It will be.
11	MR. WOODLAN: But since it will include
12	both plant-specific designed NSSS, we would be working
13	with Mitsubishi in a joint effort, I'm sure.
14	MR. AMIN: Right.
15	MR. WOODLAN: The exact criteria that we
16	are going to use, we don't have that laid out yet.
17	But it will be based on the words that you just read
18	about scenarios that could lead to changes in
19	reactivity control.
20	CHAIR STETKAR: What I am interested in,
21	Don, is these words, important to safety, get tossed
22	around a lot in a various parts of design
23	certification and the COLA.
24	And I am a bit concerned that they're
25	going to be perhaps misinterpreted in different places

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1 or create an infrastructure that is so complex because 2 for one part of, either the certified design, or your 3 security plan, or operating procedures, this 4 particular component is considered important to safety 5 for those features. But it is not considered 6 important to safety for some other features. And 7 that's a bit of my concern.

8 And from what Ι am hearing, the 9 interpretation of important to safety for the purposes 10 of this narrowly defined reactivity transient function, under the cyber security plan, might be 11 different than important to safety, for example, for 12 rule, the deign reliability 13 the maintenance or 14 assurance program or other programs that are finally 15 implemented at the site.

And that's a bit disconcerting because we ought to understand what is important to safety and what is not important to safety. And have programs and procedures in place to ensure that we protect, and maintain, and operate the important safety equipment accordingly. And that's the reason I asked that question.

23 MR. WOODLAN: Yes, I agree with your 24 comments. We got into this a little bit the last time 25 when we talked GDC-5.

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1	CHAIR STETKAR: And you're going to hear
2	it again.
3	MR. WOODLAN: And from a licensing
4	manager's point of view, we recognize the ambiguity
5	when you're talking important to safety. For the
6	newer plants, there is almost an overlay between
7	safety-related and important to safety but there are
8	some things that are important to safety that are not,
9	it's not like the older plants where there was a lot
10	of difference.
11	CHAIR STETKAR: Not the DRAP list, which
12	is
13	MR. WOODLAN: Yes.
14	CHAIR STETKAR: populated by important
15	to safety equipment.
16	MR. WOODLAN: I believe what it comes down
17	to and this is talking broadly now, not just limiting
18	to cyber security. Where that becomes important is
19	when the programs are developed. And we don't task
20	the operators or the people in the field to determine,
21	is something important to safety.
22	CHAIR STETKAR: Right, sure.
23	MR. WOODLAN: That is done up front when
24	the program is developed. So here, in the case of
25	cyber security, when we develop the program we will
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1	identify the components that this applies to.
2	And then so as far as implementation they
3	have a list of components. Same thing is true with
4	the maintenance rule. Same thing is true with GDC-5.
5	That will all be defined at that level. And that is
6	where we will struggle and try to deal with that
7	definition.
8	CHAIR STETKAR: Well, struggle is a bit
9	what I am concerned about. Because obviously there
10	needs to be discussion between Luminant, and MNES, and
11	MHI I guess, because determination that a particular
12	component, let's say in the turbine building, is
13	"important to safety," has implications about
14	procedure development. I'll grant you, that is one
15	issue.
16	But how that particular piece of
17	equipment, if it's got local indications of feedback
18	circuits that communicate through an open bus network,
19	back into the plant, how that information is protected
20	can be important in terms of the design of real
21	systems, Charlie's issues.
22	MR. WOODLAN: Yes.
23	CHAIR STETKAR: So early on identification
24	that that piece of equipment is important to safety
25	can have real design implications in terms of how
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49 1 people design this hardware, I won't say software, and also programs, to provide appropriate cyber security 2 3 protection in terms of communications from that 4 particular piece of equipment. 5 And that's not just a procedure related That isn't just putting something in the 6 issue. maintenance rule again, or a different reliability 7 8 assurance program. So that's why I am a bit concerned 9 about how that will really work and when those 10 determinations will be made. They can't be made at the eleventh hour. 11 MR. WOODLAN: Agreed. 12 CHAIR STETKAR: Anything that can affect 13 14 the fundamental design can't be made at the eleventh 15 So I'll just leave that on the table. hour. But I think we would be interested to hear more about that. 16 And that's not particularly a Chapter 7 issue. 17 MR. WOODLAN: No. 18 19 CHAIR STETKAR: That's more of an integration of the transition from the certified 20 design into something that you own and operate. 21 Anything more on cyber security? 22 Next? 23 MR. CONLY: In summary --

CHAIR STETKAR: Didn't think it was goingto be this long, did you?

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1	MR. CONLY: The COL information items
2	specified in the US-APWR DCD are addressed in the
3	Comanche Peak FSAR for Units 3 and 4. And the FSAR
4	takes no departures from the US-APWR DCD. Are there
5	any other further questions?
6	CHAIR STETKAR: Anything else from any of
7	the members? If not, thank you. We appreciate it
8	very much. And I guess we will hear from the staff.
9	MR. TAKACS: Good morning, Chairman
10	Stetkar and Subcommittee members. My name is Mike
11	Takacs. I am the chapter PM for this chapter, Conduct
12	of Operations, Chapter 13. And I am going to provide
13	you with the overview of the Safety Evaluation with
14	Open Items.
15	MEMBER BROWN: Can I make one observation
16	before, and this is back on the cyber security of
17	Luminant. One of my concerns one of my concerns
18	when I read the DCD was, and I didn't know how
19	Luminant would respond to this, was that that's not
20	a negative comment from a technical standpoint, was
21	that it was pretty specific in terms of what was
22	called out for providing the isolation. It was all
23	software-based.
24	It did not talk about data diodes or
25	anything like that, as RG 5.71 does in its guidance.

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1	One of the reasons for bringing the issue up and the
2	point was, and I didn't see anything in the COL that
3	modified it, like you did for some of the other
4	licensing items that were in Chapter 13.
5	So I was hoping you weren't saying oh,
6	gee, we're prohibited from doing something smarter,
7	and easier, and less management falforal we would have
8	to go through by using actual hardware one-way
9	restrictions as opposed to a software-based.
10	So I was worried about a restriction from
11	the DCD becoming a licensing basis item without having
12	any comment on it, relative to hey, we're going to do
13	something, we might do something different, or we
14	whatever, just in that context. So that was part of
15	the thought process. And I'm complete with that.
16	John, thank you very much for your patience again.
17	CHAIR STETKAR: Thanks. Mike?
18	MR. TAKACS: Okay. As was pointed out
19	earlier, Steve Monarque is the lead project manager.
20	And on this slide I list the technical reviewing
21	staff, from NRC, that are supporting this chapter.
22	Okay, as far as the Safety Evaluation with
23	Open Items, back in December 22nd of 2011 we provided
24	the Safety Evaluation with Open Items for Chapter 13,
25	Conduct of Ops. At the time, you will notice, there
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1	are eight subsections, we know, for Chapter 13.
2	Two sections are not submitted for this
3	safety evaluation. And those are 13.6, Physical
4	Security, and 13.7, Fitness for Duty. The snapshot in
5	time back then was those reviews were ongoing and had
6	not been completed. So in the safety evaluation they
7	are listed as two open items. And that information is
8	briefly expressed in this safety evaluation.
9	There is one additional open item. It is
10	a generic open item and that talks about again, at the
11	time of this review of the R-COLAs, the DCD, the IBR
12	US-APWR had not been completed. It was close to
13	completion.
14	But we have a generic open item throughout
15	the SE that states the review of the DCD is not yet
16	done. So those are the three open items listed in the
17	SE.
18	The one item of particular interest here,
19	for this presentation, is the one with emergency
20	planning. And I am going to go into that information
21	momentarily.
22	We provided this safety evaluation in
23	December 22nd of 2011. The following day, the
24	revision to the emergency planning rules, December
25	23rd, took effect. So I will just give a high-level
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1	account of what we're heading towards from there.
2	This slide just captures the fact, the two
3	sections that were currently under review, one point,
4	physical security, we generally don't present at the
5	meeting. However, we provide the full package of
6	eight subsections for the next meeting.
7	Okay. As I mentioned, the emergency
8	planning rules were revised, enhanced and the Federal
9	Register notice was issued November 23rd. It became
10	effective December 23rd.
11	The path forward now for both, first for
12	Luminant now, they are going to submit revised two
13	parts to their COLA, Part 2, the FSAR which contains
14	the Chapter 13 emergency planning information, and
15	Part 5, the comprehensive emergency plans of the COLA
16	as well. And that will address the revised enhanced
17	rules. And they will do that in March, March of this
18	year is the plan.
19	As far as the staff here, at the NRC, NSIR
20	will do the review and they will update their SE based
21	on the revised documents. They also have now an
22	internal document recently published, for their
23	internal use, to help them do that review of the
24	Interim Staff Guidance 01 for NSIR. Questions?
25	MEMBER BROWN: I don't need to repeat
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1	myself. I think he was sitting here for the last part
2	of the presentation.
3	CHAIR STETKAR: Anything else, from any of
4	the members?
5	MEMBER BROWN: Other than the expected
6	staff report.
7	CHAIR STETKAR: If not, do we have anybody
8	on the bridge-line? Stephen, did you want to say
9	something?
10	MR. MONARQUE: I wanted to review the
11	action items. But I will wait until you've concluded.
12	CHAIR STETKAR: Okay. Let me just ask
13	first, if we have any comments from the public, anyone
14	in the room?
15	It is open? If someone is out there, can
16	you just say something so that we can confirm that the
17	bridge-line is open, if you're listening in. It just
18	helps us confirm that the line is open. Okay, hearing
19	nothing. You said it is open for
20	MR. SHUKLA: Yes.
21	CHAIR STETKAR: incoming?
22	MR. SHUKLA: Yes.
23	CHAIR STETKAR: I would like to open the
24	bridge-line so that if there is a member of the
25	public, who would like to make a comment regarding to

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1	this, that person can make that comment. We'll wait
2	for that. Stephen, in the interim
3	MR. MONARQUE: Okay. I have, I guess,
4	several concerns expressed by the staff. And I wanted
5	to go over them to make sure I understood them
6	correctly. One was a concern about being minimum
7	staffing, especially during significant events, which
8	could lead to difficulties. Did I term that
9	correctly?
10	CHAIR STETKAR: That's right, I know there
11	are constraints about what is written. But that was
12	a concern we were expressing, in particular, multi-
13	unit events.
14	MR. MONARQUE: Multi-unit events.
15	CHAIR STETKAR: We raised questions, it
16	went back pretty quickly. We heard Luminant's
17	administrative versus commitment. But it sounds like
18	their commitment and their administrative is they are
19	going to share a technical advisor. They are going to
20	share a rad protection technician, which are people
21	who could get involved in a multi-unit event.
22	And questions about staffing the fire
23	brigade, how are they going do that. Because that
24	could have an affect on the number of personnel that
25	they have available to deal with events that indeed do

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1 involve fires. 2 MR. MONARQUE: And then the second one I 3 have was a concern about the staff only having three 4 months to review the EOPs before operators started 5 training. 6 CHAIR STETKAR: Yes. And that is 7 something, as I said, we can't tread too much on 8 administrative issues, but it 9 MR. MONARQUE: It was a concern by the 10 Committee members. 11 CHAIR STETKAR: It's a concern by the 12 Committee members. 13 MR. MONARQUE: And then the last, the 14 third one was on cyber security, regarding more 15 hardware protection. And I think that some of you a 16 heads up that we will need to address in Chapter 7, 17 not relying solely on software protection but having 18 hardware. 19 MEMBER BROWN: Not relying any on 20 software. 21 MR. MONARQUE: Any on software. 22 MR. MONARQUE: Any on software. 23 hardware protection, but all hardware protection. And 24 the		56
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	25	know that is hardware but that is not the kind of

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1	hardware we are talking about.
2	MR. MONARQUE: I think that was at
3	CHAIR STETKAR: The one that I raised, and
4	Charlie has his pet issues, and one of my pet issues
5	is this notion of defining and identifying those SSCs
6	that are important to safety, for the purposes of all
7	integrated programs on the part of, eventually, the
8	applicant, Luminant.
9	But there are important interface issues
10	here that could affect design decisions that are made
11	by MHI in the certified design. In addition, to just
12	scope of equipment that are included on their
13	particular operating or maintenance procedures, or
14	things that are identified in the paper part of your
15	cyber security plan.
16	So the issue, because they have, at least
17	in that response to an RAI, for the COL applicant,
18	committed to, including under their cyber security
19	plan, SSCs in the balance of plant, non-safety-related
20	SSCs that are "important to safety."
21	Now I don't know whether that is a more
22	narrowly defined important to safety because it has
23	got a qualifier than can affect reactivity transients
24	or something like that. That is a different important
25	safety than SSCs that are important to safety, for
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1	example, that are identified under the DRAP program,
2	or under what will eventually evolve into the
3	maintenance rule program, that side.
4	So that was another issue that we raised.
5	And I think that was it. Was that everyone's
6	recollection? And now, if there is anyone on the
7	bridge-line, if you could indulge us and just say
8	something. I hear clicking which means it is usually
9	open but just say something so that we can confirm the
10	line is open. Anyone out there?
11	If you're self-conscious, if anyone is
12	actually listening in who wants to make a statement,
13	the line is open. Okay. Hearing nothing, I'll ask
14	again, do any of the members have any questions for
15	either the staff or Luminant?
16	With that, we will close this part of the
17	meeting. The next topic we are going to hear about is
18	GSI-191. And I think it would be best, we're
19	scheduled for break, well, it is a little early in the
20	morning for our normal breaks. But I think for
21	transition, it's best if we take a break. So we will
22	recess until 10:05.
23	(Whereupon, the meeting in the above-
24	entitled matter went off the record at 9:45 a.m.)
25	

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Luminant





LUMINANT GENERATION COMPANY

Comanche Peak Nuclear Power Plant, Units 3 and 4

ACRS US-APWR Subcommittee



FSAR Chapter 13 – Conduct of Operations

September 20, 2012







Agenda – FSAR Chapter 13, Conduct of Operations

□ Introduction

Discussion of Site-Specific Information

□ Summary







Introduction

- □ R-COLA uses "Incorporated by Reference" methodology
- No departures from the US-APWR DCD taken in FSAR Chapter 13
- □ No contentions pending before ASLB







13.1 Organization Structure of Applicant

- General education and experience requirements meet ANSI/ANS-3.1-1993
- □ Shift staffing meets NUREG-0737
- □ RO and SRO candidates meet ACAD 09-001























13.2 Training

□ NEI 06-13A incorporated by reference







- **13.3 Emergency Planning**
 - □ CPNPP 3&4 are within operating units EPZ
 - CPNPP 3&4 EP draws heavily from operating units EP, but is independent
 - □ EP meets both 10 CFR 50 and 52







13.4 Operational Program Implementation

- Table 13.4-201 identifies implementation of Operational Programs, which are fully described in the FSAR
- Single proposed License Condition for implementation of all Operational Programs







13.5 Plant Procedures

□ Administrative controls consistent with RG 1.33

Computer-based procedures meet NUREG-0700, -0711, -0899, and ISG-04, and are backed up by paper-based procedures







13.6 Security

- □ Security Plan based on NEI 03-12 Rev 6 template
- Security Plan includes Physical Security, Training and Qualification, and Safeguards Contingency
- □ R-COLA adopts DCD Vital Equipment List
- R-COLA Defensive Strategies are demonstrated in DCD Appendix







13.7 Fitness For Duty

- Two phase FFD Implementation Construction and Operational
- Construction FFD Plan based on NEI 06-06
- CPNPP uses an offsite contractor Licensed Testing Facility







13.8 Cyber Security

- Incorporates guidance of RG 5.71 and Appendices
 A, B, C
 - Includes BOP SSC's per SRM, CMWCO-10-0001
 - Addresses Luminant organizational differences from template






Summary

- COL Information Items specified in the US-APWR DCD are addressed in the CPNPP Units 3 and 4
- □ No departures from the US-APWR DCD



United States Nuclear Regulatory Commission

Protecting People and the Environment

Presentation to the ACRS Subcommittee

Comanche Peak Nuclear Power Plant, Units 3 and 4 COL Application Review

Safety Evaluation with Open Items

CHAPTER 13: Conduct of Operations

September 20, 2012

Staff Support



- Lead Project Manager Stephen Monarque
- Project Manager Mike Takacs
- Supporting Technical Staff:
 - Jim Kellum NRO
 - Rick Pelton NRO
 - Mark Lintz NRO
 - Ed Robinson NSIR
 - Monika Coflin NSIR

Sections Reviewed



- 13.1 Organizational Structure of Applicant
- 13.2 Training
- 13.3 Emergency Planning*
- 13.4 Operational Program Implementation
- 13.5 Plant Procedures
- 13.8 Cyber Security

* Revision to the emergency planning regulatory requirements effective December 23, 2011

Sections Under Review



- 13.6 Physical Security
- 13.7 Fitness for Duty

* Emergency Planning Rule Changes



- Changes to EP regulations in 10 CFR 50.47, "Emergency Plans," and Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to 10 CFR Part 50, were published in the Federal Register (FR) on November 23, 2011 (reference 76 FR 72560).
- Luminant expected to submit revised COLA Part 2-FSAR and Part 5-Emergency Plan based on the new EP rule requirements in March 2013.
- Staff will review the revised application and update the SER in accordance with guidance provided in NSIR/DPR-ISG-01.



Questions?