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 Joint ABWR, Material and Metallurgy and
 Thermal-Hydraulic Subcommittees
 Open Sesion

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6 ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

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10 proceeding of the United States Nuclear Regulatory
11 Commission Advisory Committee on Reactor Safeguards,
12 as reported herein, is a record of the discussions
13 recorded at the meeting.

14
15 This transcript has not been reviewed,
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2 NUCLEAR REGULATORY COMMISSION

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4 ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

5 (ACRS)

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7 JOINT ABWR, MATERIAL AND METALLURGY AND

8 THERMAL-HYDRAULIC SUBCOMMITTEES

9 + + + + +

10 TUESDAY, OCTOBER 19, 2010

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12 ROCKVILLE, MARYLAND

13 + + + + +

14 The Advisory Committee met at the Nuclear
15 Regulatory Commission, Two White Flint North, Room
16 T2B1, 11545 Rockville Pike, at 8:30 a.m., Sanjoy
17 Banerjee, Chairman, presiding.

18 SUBCOMMITTEE MEMBERS:

19 SANJOY BANERJEE, Chairman

20 SAID ABDEL-KHALIK, Member

21 J. SAM ARMIJO, Member

22 DENNIS C. BLEY, Member

23 JOY REMPE, Member

24 MICHAEL T. RYAN, Member

25 JOHN D. SIEBER, Member

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P-R-O-C-E-E-D-I-N-G-S

8:30 a.m.

CHAIRMAN BANERJEE: Okay. The meeting will now come to order. The court reporter is ready. This is a joint ABWR thermal hydraulic phenomena materials and metallurgy and reactor fuels Subcommittee meeting.

I'm Sanjoy Banerjee, the Chairman of this Subcommittee for some obscure reason. The Chairman of the Joint Subcommittees are also present. ACRS members in attendance are Said Abdel-Khalik, Sam Armijo, Mario Bonaca is supposed to be here, I guess.

Dennis Bley, Joy Rempe, Jack Sieber, and John Stetkar. Oh, Mike. Are you filling in for John? Sorry for the chaos. And, of course, Mike Ryan.

The ACRS consultant who will help us is Graham Wallis, a former Chairman of the ACRS. Zenya Abdullahi of the ACRS staff is the designated Federal official for this meeting.

In today's meeting, Westinghouse and the Licensees for the South Texas project will brief us on eleven topical reports, six of which are under NRO staff review, and the other five are projected to be submitted in the future.

These topical reports cover Westinghouse's fuel dependent analyses methodologies and codes that

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1 would be applied to the licensing of the South Texas
2 Project. As you are all aware, safety analyses
3 supporting licensing and operation of new power plant
4 designs extend beyond the limited reload set of
5 analyses.

6 Therefore, one of the objectives of these
7 topical reports is to establish the methodology that
8 would be used to identify and perform the safety
9 analyses that, that would be documented in the final
10 safety analysis report.

11 The topical reports also need to
12 demonstrate that the licensing methodology and the
13 codes used to perform the fuel dependent calculations
14 are applicable to the operating conditions and the
15 design of ABWRS.

16 It is our understanding that Westinghouse
17 is requesting dual application of these topical
18 reports to BWRs operating in extended domains as well
19 as ABWRS. We expect to hear what Westinghouse plans in
20 terms of scope, use, and the review process for these
21 LTRS.

22 At the moment, we have preliminary, a
23 preliminary ACRS review schedule from the new reactor
24 staff for the ABWR application. A transcript of the
25 meeting is being kept, and will be made available as

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1 stated in the Federal Register notice. We
2 request that participants in this meeting use the
3 microphones located throughout the meeting room when
4 addressing the Subcommittee. The participants should
5 first identify themselves and speak with sufficient
6 clarity and volume so that they may be readily heard.

7
8 We have received no requests from the
9 public to make a statement at today's meeting. The
10 rules for participation in today's meeting have been
11 announced as part of the notice of this meeting,
12 previously published in the Federal Register.

13 As shown in the agenda, portions of
14 today's meeting will be closed to the public in order
15 to protect material that is proprietary to
16 Westinghouse. WE did receive requests for telephone,
17 the telephone conference line. We provided the closed
18 session grid numbers to representatives of the South
19 Texas project.

20 WE asked that the telephone participants
21 identify themselves before the start of the meeting.
22 We will now proceed with the meeting, and I think we
23 are going to have STP staff to do an introduction, or
24 is it going to be Westinghouse?

25 MS. GOVAN: Actually, good morning, my name

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1 is Tekia Govan. South Texas has graciously given us a
2 minute to introduce where the staff is currently on
3 their safety evaluation of these topical reports.

4 In January 2009, South Texas Project held
5 a meeting here at the NRC with the staff to request
6 that we begin the review of ten topical reports
7 related to fuel in preparation for their anticipated
8 fuel Amendment request.

9 I would like to note that none of these
10 topicalals will be needed to make a safety finding for
11 the South Texas COLA, which is currently under review.
12 The staff accepted, or, or began their acceptance
13 review for the first ABWR fuel related topical report
14 in September 2009.

15 As the Chairman noted, we are currently
16 reviewing six out of the ten topical reports. We have
17 one topical report which is currently under acceptance
18 review, and We're awaiting three additional topical
19 reports, which we should be receiving within the
20 month.

21 Seven of those ten topicalals, as the
22 Chairman noted, do require dual applicability review
23 from, for ABWRs as well as BWR topicalals. The staff
24 plans to complete the review of all the topicalals, as
25 requested by South Texas in June of 2012, or by June

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1 2012.

2 The result for the staff for this meeting
3 today will be for the Committee to provide some
4 clarity on which topicalals they would like to review in
5 detail before we issue the final SE.

6 Thank you very much, and with that, I'll
7 turn it over to Scott Head, from South Texas.

8 MR. HEAD: Okay. Thank, you, Tekia. My name
9 is Scott Head. I'm the regulatory affairs manager at
10 STP units three and four. And in one of our, our
11 briefings today, CRS for South Texas, we did agree to,
12 you know, make this presentation, and we appreciate
13 the opportunity to make this presentation today.

14 As Tekia indicated, it's, we want to
15 present an overview of the topicalals that are necessary
16 to support the transition to the Westinghouse fuel for
17 STP three and four and to provide you the necessary
18 information which, to decide which topical reports
19 should be in your review scope. That's, that's our
20 understanding of the desired outcome of this meeting.

21 And to support that, we have a, a number
22 of people here today from Japan and Sweden and, and
23 Westinghouse here domestically with, to help us with
24 our presentation, and we look forward to the
25 discussions today.

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1 I thought it was important just to present
2 the background of, of, of, for new members or even for
3 those that have been in the Subcommittee discussions.
4 The ABWR was certified with GE-7 fuel. And STP is
5 being licensed with GE-7 fuel.

6 We've made, taken no departures that
7 impact that licensing aspect. But our plans are, are
8 to use more modern fuel for STP three and four for the
9 first fuel load. Certification took place in the mid-
10 90's. Here we are, you know, in, a number of years
11 later, and it's just a logical place for us to be to,
12 to want to use, take advantage of more recent fuel
13 developments.

14 And, our current plan is for Westinghouse
15 to supply SVFA 96 Optima 2 fuel. That's, that's where
16 We're headed, and that's a lot of what the discussion
17 that you'll, you'll hear today. Any questions on the
18 background, at least that aspect of it?

19 (No Response.)

20 MR. HEAD: We did hold an initial meeting
21 with NRC where this was discussed, back in January of
22 2009, and, you know, the schedule of what we've
23 submitted and We're on track for the three that
24 there's to be submitted this October.

25 And as Tekia mentioned, we requested

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1 approval by June of 2012 to support the fuel Amendment
2 that would be submitted to the transition to the, the
3 Optima 2 fuel. And there's the fuel load date that
4 we'll be, we'll be targeting.

5 So, that's the, that's something of the
6 background of the, why we're here and the schedule
7 aspect. The, the fuel Amendment will be submitted post
8 COL and, and there's the contents.

9 It will be based on Optima 2 fuel, it will
10 be, obviously, revised technical specifications, and
11 as you would expect, Chapters four, six, and fifteen
12 would have significant changes to reflect this, this
13 fuel design. And then some minor changes to chapters
14 one and nine.

15 The, as we, I think we've demonstrated
16 before, but certainly we'll make it clear today, that
17 Westinghouse is qualified to provide the reload
18 analysis for the BWR fuel. There are ten topical
19 reports, and I know you had mentioned eleven, and in
20 fact, you'll see nine today.

21 We'll discuss, we'll have to weave through
22 the different numbers, but there hasn't been anything
23 lost, it's just, some topicals are actually now
24 technical reports that have ended up supporting the
25 actual licensing. One of the topicals that you'll see

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1 today is actually in two.

2 So, we'll, we'll go through the bean
3 counting, but it, it's, it'll be clear by the end of
4 the day, I'm sure. But, there, there are a number of
5 reports that are required to extend the qualification
6 of the ABWR and provide the analysis for the initial
7 core.

8 That's, that's a crucial part, is the
9 initial core. And, three new topical and seven
10 supplements to the existing topical, and I'll have a,
11 I'll have a chart that shows you that, you know, for,
12 for your, I think, use, as you go through the review
13 today.

14 And, these topical qualify the methods
15 and hardware, in the case of control rods, for the
16 ABWR. And, and as you, well, I just, they do not
17 submit any specific STP three and four specific
18 results. These are generic, these are topical reports
19 meant to be used generically.

20 MEMBER ARMIJO: Scott, just, just for
21 information, is there any SVEA 96 Optima 2 fuel
22 currently in operation, or licensed with it for
23 operation in the United States? Or is this a--I'm
24 trying to find out, is this a more advanced design, or
25 is this a current design?

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1 MR. KING: Yes, sir. This, this type of
2 fuel, this SVEA 96 Optima 2, is licensed in the U.S.
3 and it's currently operating in--

4 MEMBER ARMIJO: Okay.

5 MR. KING: --several reactors.

6 MR. HEAD: And we have some slides on that.
7 Okay, here is the agenda, and, and, with the
8 participants. The point I wanted to make here is the,
9 obviously this meeting is, is for your benefit, and
10 we've provided some preliminary information and you,
11 you had our, our presentation today.

12 We want to make sure and focus on the
13 areas that are of interest, and some of these, you
14 know, you might not have quite as much interest. And
15 so, we're, we're quite flexible. If you would like us
16 to adjust our focus, adjust the schedule, if people
17 have other schedules today that you need to support,
18 we're going to, we'll do whatever you need to focus on
19 the ones that, that you, of most interest.

20 And so, please keep that in mind as, as we
21 go through, that if, if we want to, if control rods is
22 not--you know, obviously we put control rods based on
23 some previous feedback that, at the end of this,
24 because of, it may not be quite as interesting. But
25 if, someone does have a, something they want to focus

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1 on that, and needs to, needs to move it up, we
2 certainly can do that.

3 So that's the, I guess, our ground rules
4 for today is that we'll support whatever detailed
5 discussions you need. I expect that those--

6 MEMBER ARMIJO: Do you have a, a, WCAP or
7 licensing topical report on the thermal mechanical
8 design of the proposed fuel for the ABWR?

9 MR. KING: Yes, sir. In one of the, one of
10 the upcoming slides, I'll show you a box diagram that
11 references all of our current licensed topicals. And
12 it includes thermal hydraulic nuclear design.

13 MEMBER ARMIJO: Okay. Okay, so, I, you
14 know, somewhere along the line, I'd like to request
15 copies of some of those.

16 MR. HEAD: Okay.

17 MEMBER ARMIJO: That's the plan.

18 MR. HEAD: Okay. And then, this is, I
19 think, actually mirroring what Tekia had mentioned.
20 This is the status of the topical reports, their
21 applicability. You'll see three new ones that are
22 being created to support the, our licensing
23 activities. And then, there's the review status and
24 the desired approval date.

25 (Whereupon, the proceedings went into

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1 Closed Session.)

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3 ***(No Separate Open Slides)***

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