1	BEFORE THE
2	FEDERAL ENERGY REGULATORY COMMISSION
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5	x
6	IN THE MATTER OF: : Docket Number
7	TRANSCANADA HYDRO GENERATING NORTHEAST: P-1892-026
8	x
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10	Marlboro College Graduate School
11	28 Vernon Street
12	Brattleboro, VT 05301
13	9:10 a.m.
14	
15	Tuesday, November 26, 2013
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17	The above-entitled matter came on for scoping meeting,
18	pursuant to notice, at 9:10 a.m.
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PROCEEDINGS 1 2 MR. HOGAN: I want to thank everybody for 3 coming. My name is Ken Hogan with the Federal Energy 4 Regulatory Commission. I'm the project coordinator for the 5 five projects on the Connecticut Riverbank through the hydro 6 re-licensing. 7 I want to start this morning by having us go 8 around the room and do introductions. I'll start back here 9 with Julia. 10 MS. WOOD: Good morning. Julia Wood, 11 re-licensing counsel for FirstLight. 12 MR. HOWARD: John Howard, FirstLight. 13 MR. SULLIVAN: Tom Sullivan, Gomez and Sullivan, counsel for FirstLight. 14 MR. WAMSER: Mark Wamser, Gomez and Sullivan. 15 MR. BENNETT: John Bennett with Windham 16 17 Regional Commission. 18 MS. BLAUG: Elisabeth Blaug, FERC Office of 19 General Counsel. 20 MR. SEARS: Mike Sears, HDR, consultant for the 21 FERC. 22 MR. DEVINE: John Devine, HDR, consultant to 23 FERC. 24 Nick Ettema, FERC. MR. ETTEMA: Steve Arnold, HDR, consultant for 25 MR. ARNOLD:

1 FERC. 2 MS. KENNEDY: Katie Kennedy, Nature 3 Conservancy's. 4 MR. DAVID: Owen David, NHDES. 5 MR. GRIES: Gabe Gries, New Hampshire Fish and 6 Game. 7 MS. GRADER: Melissa Grader, U.S. Fish and 8 Wildlife Service. 9 MR. SPRANKLE: Ken Sprankle, U.S. Fish and Wildlife Service. 10 11 MR. BRUSH: Tim Brush, Normandeau Associates. 12 MR. SKIBNIOWSKY: Steve Skibniowsky, Entergy -Vermont Yankee and the environmental program, radioactive 13 14 effluents and environmental monitoring. MS. DE WALD: Lynn DeWald, Vermont Yankee. 15 16 MR. HANSON: Brian Hanson, Normandeau 17 Associates. 18 MR. SIMMONS: Rick Simmons, Normandeau 19 Associates. 20 MR. TRESTED: Drew Trested, Normandeau 21 Associates. 22 MR. FISK: Andy Fisk, Connecticut River 23 Watershed Council. 24 MS. FISCHER: Maryalice Fischer, Normandeau Associates. 25

1 MS. O'DEA: Erin O'Dea, in-house counsel for 2 TransCanada. 3 MR. RAGONESE: John Ragnese, TransCanada. MS. GRIFFIN: Jennifer Griffin, TransCanada. 4 5 MR. CROCKER: Jeff Crocker, Vermont Agency Natural Resources. 6 7 MS. WILL: Lael Will, Vermont Fish and Wildlife 8 Department. 9 MR. DAVIS: Eric Davis, Vermont Department of Environmental Conservation. 10 11 MR. HOGAN: Thank you. 12 We do have a court reporter here today. 13 Actually, folks on the phone, introduce yourselves, please. 14 MR. DEAN: David Dean, Connecticut River 15 16 Watershed Council. 17 UNIDENTIFIED PARTICIPANT: Rob Mitchell with HDR for FERC. 18 19 MS. MC CANN: Mary McCann, HDR, consultant to 20 FERC. 21 MR. HOGAN: Thank you. 22 So we do have a court reporter here today. So if you, when speaking, if you could please start with your 23 24 name, that would be great just so we can keep the record straight. Everything that's said here today will be placed 25

in the Commission's record so we'll know who said what and 1 2 what they said. And I have given him instructions that if he 3 has a hard time hearing anybody, we want -- he's got 4 5 permission to stop the meeting and say, 'Can you repeat 6 that, please?' So... 7 I have no idea where the restrooms are. 8 Outside; not in the corner. 9 So the reason we're here today is, as everybody 10 knows, you know, the Vermont Yankee Nuclear Power Plant 11 announced on August 27th that they're going to be shutting 12 down at the end of 2015. 13 Where we are in the Commission's integrated licensing process that creates a situation where we have a 14 15 changing baseline for our environmental studies. And we wanted to look at and have a good understanding of what that 16 17 may mean for our studies and how studies may need to be 18 addressed. And that's the reason we're having the technical 19 meeting today. One thing I want to point out is that this is 20 21 not a forum for discussion of how Entergy proposes to close 22 down the Vermont Yankee. It's a forum for discussion of 23 what that means to the river and when, and what the 24 magnitudes are. 25 Now with that said, what I've -- I have invited

1 Entergy here today to give us an overview of what that 2 shutdown is as they perceive it today, and specifically what it means for the river and timing and magnitude of the 3 environmental effects. 4 5 So with that, I would like to turn the meeting 6 over to Lynn. And we'll get you a mike. 7 MS. DE WALD: I can talk loud. 8 I feel like it's largely the same crowd that was here yesterday, except for maybe Gabe and Tim. 9 10 MR. HOGAN: And David Dean on the phone. 11 MS. DE WALD: And David on the phone. 12 My name is Lynn DeWald. I am the 13 non-radiological environmental specialist at Vermont Yankee. 14 And, as Ken said, Entergy announced at the end of August 15 that it was planning to close Vermont Yankee. The date has been selected as December 29th, 16 17 2014, at which point the discharge of water from the Connecticut -- or from the discharge structure into the 18 19 Connecticut River will be reduced by something close to 98 percent. The thermal discharge will be at least that and 20 21 maybe even more. And over time, from the time we shut down 22 until we take the spent fuel out of the spent fuel pool, it will continue to go down. 23 24 Beyond that we really don't have a lot of 25 details right now about the decommissioning plan or any of

the timing of things. It's -- the 29th of December is sort 1 2 of the hard and fast date for the end of operation of VY. Lynn, I'm guessing -- I have a 3 MR. HOGAN: 4 question. As far as the maximum discharge the plant 5 currently has -- I believe the answer was 120,000 gallons 6 per minute. 7 MS. DE WALD: So right now our NPDS permit 8 permits us to use up to three circulating water pumps, which we have. They're not variable speed pumps so they're either 9 on or off. And each one is capable of 120,000 gallons a 10 11 minute, for a total of 360,000 gallons a minute. 12 In addition to that we have what's called the 13 service water system, which provides cooling to -- it's a safety-related cooling system that also feeds our fire 14 15 protection and cools motor jackets and things like that. There are four pumps, that each can pump about 3000 gallons 16 17 per minute. 18 So I think I said the total permitted discharge 19 volume we could possibly have is 373,000 gallons a minute. When we shut down on the 29th of December next 20 21 year we'll only need two service water pumps at most. So 22 that's a total of 6000 gallons per minute; therefore the 98 percent reduction. And that 6000 gallons per minute is 23 24 somewhere between 16 and 17 cfs going out. 25 MR. HOGAN: And so you predict that temperature

1 would also have that 98 percent reduction? 2 MS. DE WALD: Yeah, probably more than that. 3 That's something that's probably going to have to be -- it's 4 going to have to be figured out over time and maybe even 5 modeled. 6 MR. HOGAN: Okay. 7 MS. DE WALD: I don't know we are going to get 8 our hands around that other than to say it's going to be a heat reduction. 9 10 MR. HOGAN: Any other -- Any questions for Lynn 11 or Entergy? 12 (No response.) 13 MR. HOGAN: Anybody on the phone? MR. DEAN: Just asking -- maybe if Lynn could 14 move a little closer to the phone. I missed some of the 15 message of what she said. 16 17 MR. HOGAN: Let me try to summarize, David. 18 Currently Vermont Yankee is capable of 19 discharging -- or is authorized to discharge up to 373,000 gallons per minute. Under the decommissioning, that would 20 be reduced to a maximum of 6000 gallons per minute, which is 21 22 about the equivalent of 16 to 17 cfs. And it's anticipated that the thermal reduction would be at 98 percent or less as 23 24 a result of the reduction in the volume of the water. 25 MS. DE WALD: 98 percent or more.

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                     MR. HOGAN:
                                 I'm sorry, 98 percent or more
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        reduction.
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                     MR. DEAN:
                                Or more.
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                     MR. HOGAN:
                                 Yeah.
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                     MR. DEAN:
                                Okay.
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                     MS. DE WALD: Or the other thing I guess to
 7
        point out is that, although we're permitted to discharge
 8
        373,000 gallons a minute, we don't always do that; maybe in
 9
        the summertime under certain conditions. But it's often
        less than that.
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                     MR. HOGAN: Any questions about that?
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                     (No response.)
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                     MR. HOGAN: Okay.
                     I think that helps us, though, in understanding
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15
        of when the effects of the decommissioning may influence the
        baseline conditions of the river. And so I appreciate that.
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17
                     Entergy is not planning to be here the whole
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        day.
              So if you have any questions regarding the information
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        or if you have any other information interests, ask now.
                     MS. DE WALD: We're actually able to stay for a
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21
        little while this morning. So I think we're can address
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        comments.
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                     MR. HOGAN:
                                  Oh.
                                       Okay.
                                              Perfect.
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                     So on the agenda today at this point in time I
        have an opportunity for a stakeholder caucus, if you want to
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baseline.

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digest what was just heard and think about how that may 1 2 affect the proposed studies. But the caucus is optional. I'll just see if folks want to move on or if they want to 3 4 take the caucus. 5 (No response.) 6 MR. HOGAN: Okay. I'm hearing nothing. 7 MS. DONLAN: Move on. 8 MR. HOGAN: Okay. So we're going to move on. 9 Yesterday we got a lot of questions about so how does the VY closure affect the FERC licensing process 10 11 and how would potential delays or modifications to studies 12 that would result in schedule shifts affect FERC and the 13 integrated licensing process for the licensing of the projects. Just to give you some ideas, right now we don't 14 15 have any specific ideas about how the projects should be -or how the process should be modified. 16 17 We're here at these meetings to gain 18 information. We're looking at what the suggestions are for 19 study schedules as a result of the VY closure. And we're going to come out with a process to move forward with those 20 21 schedules and in appropriate manner to collect data that's 22 appropriate for the licensing and documenting the predicted

That said, the Commission has several tools available to itself to manipulate the schedule, let's say.

And that can be anything from, you know, requiring the license application on time with studies that haven't been completed, and then having the applications modified or updated to include any study data that was pending when the applications were filed.

6 Regarding the license applications, we do not 7 have the authority to adjust the deadlines for filing of the 8 applications. That's a statutory requirement and therefore 9 are required by law. But we do have the ability on four of 10 the projects, if we deem it appropriate, to, you know, 11 extend the license term as a last case -- last result. I 12 don't think anybody wants us to do that.

13 But generally speaking, from what we heard 14 yesterday, I think we're probably going to be looking at, depending on what we hear today, but from what we heard 15 yesterday we'll probably be looking at just requiring 16 studies on the timelines that were discussed yesterday and 17 18 then -- which was mostly shifting many of them into 2015 --19 some would go into 2015 and 2016 as they were two-year studies -- and then dealing with that through the 20 21 augmentation of the license applications after they were 22 filed.

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23 Any questions regarding that?
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24 (No response.)

25 MR. HOGAN: And if -- One thing about the

Commission's integrated licensing process, I believe it's 1 2 Section 5.21 says that the Commission will not accept the license applications or issue an REA notice until all of the 3 4 required studies -- let me rephrase that -- all of the 5 required environmental studies that were required by the 6 study plan determinations have been completed. 7 So basically, once the applications were filed 8 they would be sitting in a holding pattern until the studies were done. 9 10 Okay. Any questions? (No response.) 11 12 MR. HOGAN: And I hope to, once I bring back 13 the information from these meetings to D.C., have some type of process outlined, developed with my team and management, 14 15 and then notify stakeholders as to what that process is before Christmas. All right. 16 17 So on the agenda it's just a matter of going 18 through each of the studies one by one, as outlined in the 19 -- well, they're attached to the agenda -- or for David out here on the phone, we're going through one at a time as 20 21 outlined by Appendix C of the study plan determination. 22 MR. RAGONESE: Ken, remember you asked me to --23 MR. HOGAN: Oh, yes. Thank you. I asked you 24 to remind me, too, didn't I? 25 MR. RAGONESE: Yes.

1 MR. HOGAN: So one thing that came up specific 2 with the Vernon project in discussions internally at FERC was we were curious to know if TransCanada had any license 3 4 requirements currently imposed upon them because of the 5 presence of Vermont Yankee and its discharge. And if so, 6 now that Vermont Yankee is closing, we came up with another 7 question: 8 Does TransCanada's proposed operations for the 9 new license, are they now entertaining any changes. And I've asked John to address that. 10 11 So go ahead, John. 12 MR. RAGONESE: No and no. 13 (Laughter.) 14 MR. RAGONESE: That's basically it. There are 15 license conditions that may have been at one point in time, you know, designed around cooling needs or whatever. 16 But 17 there's no --18 MR. HOGAN: Hold on, John. 19 MR. RAGONESE: Thank you. 20 John Ragnese, TransCanada. 21 MR. HOGAN: You're still going to have to speak 22 up, though. That's just to him. 23 MR. RAGONESE: There are some license 24 conditions associated with minimum flow. They may have been derived in part from discussions about - - . But there's 25

1 nothing specific in our license requiring us to operate in 2 any manner related to Vermont Yankee. And, no, we are not 3 changing our proposed future operation at this stage in the 4 re-licensing application. 5 Thank you, John. MR. HOGAN: MS. GRADER: Melissa Grader, Fish and Wildlife 6 7 Service. 8 Did you just say that you would -- you think 9 FERC will be issuing a study plan determination before Christmas? 10 11 MR. HOGAN: No. 12 MS. GRADER: Okay. 13 What I said is I hope to have a MR. HOGAN: 14 clear process forward out to the stakeholders before 15 Christmas; so, you know, to give you an idea of when we plan to issue the study plan determination. If there's any 16 17 studies that we deem are appropriate for consultation as a 18 result of these meetings then maybe -- and revision -- we 19 have two approaches. One, we could handle those in the study plan 20 determination or we could ask for those to be revised in 21 22 advance of the study plan determination files. And they can be approved or approved with modification in the 23

24 determination.

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So we've got a lot of moving parts and we just

want to figure out how they best shake out and what's best 1 2 for the process, the stakeholders, and our information 3 But we recognize that right now everything's kind of needs. 4 in limbo. And we just want to end that limbo and get a 5 process to move forward and let you guys know what that 6 process is. 7 Okay? 8 MS. GRADER: Yes. Thank you. 9 MR. HOGAN: Any questions on the phone? 10 (No response.) 11 MR. HOGAN: Okay. 12 So let's go ahead and start with going through 13 study by study. 14 The first one -- Oh. The first -- Well, the 15 first one that we identified is study 6, Water Quality Monitoring and Continuous Temperature Monitoring. Generally 16 17 we've got three questions. One is, you know, should the 18 study be delayed or can it move forward as is. Should it be 19 modified based on methodologies or timing or whatever it may 20 be. 21 So those are the -- you know, we understand 22 there's still a need for water quality study. I think clearly this is one that probably ought to be delayed. But 23 24 I also don't know if it should also be modified in 25 methodology, if it was designed in such a way to address

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        issues that are associated with Vermont Yankee and Vernon
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        particularly.
                     MR. CROCKER:
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                                   Jeff Crocker, Vermont ANR.
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                     We felt that the study should be delayed until
 5
        2015, and that no modifications were needed to the original
 б
        study plan.
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                     MR. HOGAN:
                                 Owen.
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                     MR. DAVID: Owen David, NHTES.
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                     We concur with Vermont that this should be
        delayed.
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                     MR. HOGAN: Okay.
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                     MR. DAVID: We don't see any need for any
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        modification.
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                     MS. WILL: And that would be for all three
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        projects.
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                     MR. HOGAN:
                                 Right.
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                     And I think, you know, from the Commission's
        perspective, unless it's really appropriate to do otherwise,
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        we're not interested in splitting the study seasons among
20
        the projects in studies.
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                     John.
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                     MR. RAGONESE: John Ragnese, TransCanada.
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                     And our recommendation is to put all of the
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        three projects, water quality studies, into the second study
        year, 2015.
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1 We do think there is some need for some 2 discussion on the methodology, and I'm going to turn it over to Jennifer. 3 4 Jennifer Griffin, TransCanada. MS. GRIFFIN: 5 We have one transect in the Vernon four bay 6 that was set --7 MR. HOGAN: Can folks on the phone hear 8 Jennifer? 9 MR. DAVID: Yes. MS. GRIFFIN: There's a transect in the four 10 11 bay of Vernon that was set in particular to look at or see 12 if there is a temperature change there, or a different 13 temperature there. So we suggest that that does not need to 14 be included in the revised. 15 MR. HOGAN: And would you still collect temperature in the four bay? 16 17 MS. GRIFFIN: Yes. The temperature collection 18 for the Vernon impoundment would be the same as the other 19 two impoundments. 20 MR. RAGONESE: In terms of design and 21 placement? 22 MR. HOGAN: Any thoughts on that? 23 (No response.) 24 MR. HOGAN: Is it something that folks want to be able to consult on and discuss further? 25

(Chorus of 'Yes.') 1 2 MS. DONLAN: I'd like a five-minute conference. MS. GRIFFIN: I can direct you to where it is. 3 4 This is Jennifer Griffin again. 5 I can direct you to where it is in the revised 6 study plan. Page 68. It's the second to last paragraph. 7 Under Methods it's the -- one, two -- third paragraph, 8 towards the end of it. 9 MR. HOGAN: And just to be clear, I'm not asking for any commitments here today. You know, if it's 10 11 something that folks want to consult with after this 12 meeting, you know, for a period of time, that's an option, 13 too. 14 MS. DONLAN: Yeah. That may be what we 15 determine after our little caucus. But we might be able to 16 give an answer. 17 MR. RAGONESE: Can you describe the difference, 18 you know, what's unique about - - . MS. GRIFFIN: Yeah. Okay. 19 20 So we say that in addition to the transects 21 that we're putting out similar to wilder - - falls, in 22 addition transects will be established at the Vernon Project 23 four bay with up to give stations, temperature, data 24 loggers, steps of one meter below the water surface, 25 mid-depth, and one meter from the bottom, to continuously

1 record data.

2 And that was April 1 through November 15. And 3 that was in there because there was a request from 4 stakeholders to look at temperature based on Vermont Yankee 5 -- or affected by Vermont Yankee. MR. RAGONESE: How the intakes and the variable 6 7 operation would affect the movement of the water, the 8 thermal plume -- I don't know what you want to call it --9 from where it is not. And if it's going away it doesn't seem that we need that kind of resolution or - - . 10 11 MR. HOGAN: Okay. 12 So let's go ahead and break for a ten-minute 13 caucus and a restroom break. 14 (Recess.) 15 MR. HOGAN: It looks like the resource agencies 16 have come back. 17 Oh, did someone join us on the phone? 18 (No response.) 19 MR. HOGAN: Okay. 20 MS. MC CANN: Hey, Ken, this is Mary. I think that David dropped off. 21 22 UNIDENTIFIED PARTICIPANT: Yeah, he did. MR. HOGAN: Okay. 23 24 All right. So we had a caucus to confer on the need for a modification to the water quality study, 25

1	particularly at Vernon as described just before the caucus,
2	and the agencies had asked for a caucus.
3	MR. CROCKER: Jeff Crocker.
4	We discussed it and we agree with TransCanada
5	that it can be removed, that's transect V-01, I believe.
6	But that just to confirm that all the other transects will
7	be monitored and that temperature will be collected from
8	April 1st to November 15th.
9	MR. HOGAN: So do folks have a preference as to
10	how to handle this? I mean, John, would you like to file a
11	I'm thinking a simple way would be for TransCanada to
12	file an amendment to that study plan and then perhaps have a
13	two-week comment period on that amendment. And we can
14	probably wrap
15	MR. RAGONESE: What if before we file the study
16	plan we circulated the revision to the agencies and have
17	them I'm just trying to figure out the I would like
18	to have the study determination before the end of the year,
19	so I'm trying to reduce your time. I know it's not going to
20	happen, you're saying.
21	MR. HOGAN: Yeah, that's
22	MR. RAGONESE: But I would like to
23	(Laughter.)
24	MR. RAGONESE: I know. I know.
25	But I would like to have the most expedient way

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1 We're fine with filing one if that's what you want we can. 2 us to do. MR. HOGAN: Well, I'm just --3 4 MR. RAGONESE: I'm trying to find the most --5 the easiest way because you're saying you can't in your 6 study determination revisions do it without it in writing. 7 MR. HOGAN: No. We've got it in the record 8 right now. 9 MR. RAGONESE: Yeah. 10 MR. HOGAN: If you agree that that's the exact 11 change that needs to be done as recommended by the agencies 12 right now, we may be able to just do that in the study plan 13 determination. MR. RAGONESE: All right. We'll give you 14 15 something in writing. And I think we're going to -- just for our --16 17 because that's kind of the way we do things, we'll circulate 18 it around to the agencies to make sure they're understanding 19 what it is. If they want to write a concurrence statement or whatever -- e-mail or whatever they might want to do --20 21 saying, 'This is what we understood you were talking about,' 22 that's what -- we may give that a shot. I mean because there are -- like I 23 MR. HOGAN: 24 said, there are a couple of options. To me this seemed like 25 a simple fix.

1 MR. RAGONESE: Yes. 2 MR. HOGAN: This could be very fast. 3 MR. RAGONESE: Okay. 4 MR. HOGAN: You put something together --5 MR. RAGONESE: Sure. MR. HOGAN: -- and then, you know... 6 7 MR. RAGONESE: Two weeks is probably fine. 8 MR. HOGAN: And then, you know, we would ask 9 for, you know, comments in two weeks. And then that's all 10 set. So when we do get to the study plan determination 11 we're just either approving it or approving --12 MR. RAGONESE: Sure. 13 MR. HOGAN: -- with modifications. MR. RAGONESE: We're going to do that. 14 MR. HOGAN: Does that work for folks? 15 The other option is, you know, we provide 16 17 consultation time; file a revised study plan, and then 18 comments on that, and then move forward. Or we require the 19 modification in the study plan determination. That's another option. 20 21 MS. GRADER: This is Melissa Grader, Fish and Wildlife Service. 22 23 From our perspective the most expedient thing 24 for the Service is either us going on the record now saying 25 we are okay with removing that particular transect from

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1 Vernon impoundment; everything else in the study plan will 2 remain the same. 3 If TransCanada wants to circulate something to the agencies by email, and if we could provide and the 4 5 Commission would accept an email response from us to the same effect, those would be the most expedient ways for us 6 7 to get on record or on --8 MR. HOGAN: I'll tell you what. You provide an 9 email to TransCanada. You incorporate the emails into the filing and we'll call it good. 10 11 MR. RAGONESE: We'll get something to you. 12 MR. HOGAN: Okay. 13 MR. RAGONESE: The thing is we just don't have 14 that number in front of us. We're assuming it's the right. 15 MR. HOGAN: Or - - . Yeah. Yeah. 16 MR. RAGONESE: 17 MR. HOGAN: And I kind of wanted to avoid 18 getting into methodologies. 19 MR. RAGONESE: Yeah. 20 MR. HOGAN: But it sounds pretty simple on this 21 one. 22 All right. As long as the emails are in your 23 filing, John, or the communications are in your filing, 24 we'll just call it good based on the -- I want verbal yeses from all the agencies in the room. 25

1 MR. DAVID: Owen David, yes. 2 MR. GRIES: Gabe Gries, yes. Service, yes. Fish and Wildlife 3 MS. GRADER: Service, yes. 4 5 MR. SPRANKLE: Yes, Fish and Wildlife Service. 6 MR. CROCKER: Vermont Agency of Natural 7 Resources, yes. 8 MS. WILL: Vermont Fish and Wildlife 9 Department, yes. 10 MR. DAVIS: DEC, yes. MR. HOGAN: Okay. Moving on. 11 12 Aquatic habitat mapping, study 7. 13 MR. RAGONESE: And can I make one more 14 statement while we are on that particular one, water quality? And it really -- it sort of goes to -- there was a 15 lot of sort of detailed analysis of the tasks, sub-tasks, 16 17 and sub-sub-tasks yesterday. 18 And even in, for example -- and a good example 19 is the water quality one. You know, even though we wouldn't be doing the field work ahead of time, we will try to have a 20 21 timely, you know, consultation with the agencies on the 22 specific, as our study plan requires. But we will engage 23 that potentially in the year before. 24 So whatever language -- however you guys craft 25 the shift, just do it in a way that gives us the flexibility

1 and not necessarily prescribes exactly when the consultation 2 will start because we're going to have to refigure all of our work and resources to do that. 3 4 MR. HOGAN: Are you --5 MR. RAGONESE: But an example in the water quality is that we're saying delay the study until 2015. 6 7 But that doesn't preclude us wanting to do the consultation 8 for the sites. 9 You're right. MR. HOGAN: MR. RAGONESE: And that covers all -- it sort 10 of covers all of it the same way. 11 12 MR. HOGAN: Yeah. 13 I think our intent is field work, you know, would be applied in 2015 and we'll craft some language 14 15 regarding that in the study plan determination if we deem the shifting of schedule inappropriate. 16 17 MR. RAGONESE: Correct. Thanks. 18 MR. DEVINE: I have a question. John Devine 19 HDR. 20 Has the QA/QC plan already been provided to the 21 agencies? That was what was contemplated in the study plan. 22 UNIDENTIFIED PARTICIPANT: It has not. 23 MR. DEVINE: Okay. So that would happen in 24 2014, then? 25 MR. RAGONESE: That's what we're saying would

be an example of something that could happen in 2014. 1 2 MR. DEVINE: Okay. 3 MR. HOGAN: Okay. 4 Study 7, Aquatic Habitat Mapping. 5 MR. RAGONESE: I'll just make a comment on that now that it's too late but we've already done it. 6 7 (Laughter.) 8 MR. RAGONESE: As we said we were going to do it. 9 We don't really want to do it again. So maybe 10 11 I could have Rick just comment briefly on just what -- the 12 elements that we have done. And we don't -- it's not, you 13 know and water temperature-dependent, though it's -- we're 14 hoping very strongly that we can do it --15 MR. RAGONESE: -- on the schedule that we anticipated doing it. 16 17 MR. SIMMONS: Yeah, we're out of the field on 18 We've collected the field data already in all three that. 19 impoundments. And right now we're actually doing the polygon work back in the lab. 20 MR. RAGONESE: So we intend to share stuff 21 22 early in 2014 with folks on this. 23 MR. HOGAN: Folks have any concerns with that 24 mapping already having been done, or... 25 (No response.)

1 MR. HOGAN: No? 2 MS. WILL: Lael Will, Vermont Fish and Wildlife. 3 4 You had the pressure transducers --5 MR. SIMMONS: Yes, we --MS. WILL: -- that included the temperature? 6 7 MR. SIMMONS: Yes. Yes, yes. 8 MS. WILL: How would that be affected? I mean 9 are you going to use that data for ... MR. SIMMONS: Well, we could -- the unit 10 11 collects it anyways and we can use it. So we have 12 temperature data at 82 units, you know, throughout the three 13 impoundments and riverine reaches. And also we -- we're actually pulling those 14 units the first week in December, the majority of them. 15 So we've been downloading them. You can put them up in July 16 17 and we moved some around and added some more. And we've 18 been downloading them monthly. 19 And that's been going well with only loss of 20 maybe three. We had an embankment collapse in one storm that kind of buried our unit. And we were too close to a 21 22 swimming hole in another one. That one disappeared. But most of them are still there. So we'll pull those in 23 24 December. 25 And we're talking to TransCanada about leaving

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some in for the winter. We have to move them to deeper water because of, ice scour and other things that are going to happen there. But, you know, that's been done. And all of them collected temperature. MR. HOGAN: And how many of those are influenced by Vermont Yankee and the thermal pool, plume? MR. SIMMONS: Well, not that many. I think we have three down below Vernon, and I don't think we have any in the lower pool. MR. RAGONESE: I'm not sure. I'm not -- I mean we can... MR. HOGAN: Well, then is there a plan to collect that data also in 2015? I'm not -- Well, sorry, I'm not real familiar MR. RAGONESE: Well, I think that this -- And I may be mis-speaking, so help me here. But the primary purpose of getting those units in this year was for the development of hydrologic conditions. And then we responded that maybe it made sense to just put thermistors in as well, which we did. And so they would support a number of different things, including the water quality site.

To the extent that we need to revisit the 25

1 monitoring of water temperature with these units, I don't 2 think it's a huge deal if we were to do that. I'm not sure exactly how we would want to craft the revision right now. 3 4 MR. SIMMONS: Right. 5 MR. RAGONESE: So we may have a second one 6 we'll send you. But we have water quality monitoring that 7 will pick up some of this as well. I'm just not sure how 8 they're... 9 This wasn't designed for the MR. SIMMONS: 10 temperature piece of it. But we knew it was a great data 11 set to get. The units come with it; it's not like you can 12 get a pressure transducer without the temperatures. It just 13 comes with it. So it's on; we have the data. And in '14 we're going to pull this data and 14 15 share it with the agencies this winter. And there was more so that we could start to sub-sample on some of the 16 17 tributary access pieces, some of the backwater pieces. 18 We have some of these pressure transducers in 19 the main stem; we have some in backwater areas; we have some in trip models that look very shallow and we needed to get 20 21 information on that. 22 MR. RAGONESE: When we get to that Study 13 there is a backwater area where we have one of these units 23 24 that's recording temperature. I know it's of interest to Gabe and other 25

folks. We may want to repeat not necessarily I'd say the operation, but we probably would just have the same type of unit operation of in terms of - - the backwater. We know that that is an area that's likely to be affected. It's a shad spawning area.

6 But most of them are for a number of different 7 purposes than the purposes of why we placed them: hydraulic 8 modeling, access, erosion, anything.

9 MR. SIMMONS: And to find the shallow water 10 gravel areas and spawning areas all worked in with our 11 habitat mapping and our bathymetry. It's just going to help 12 us clearly see where -- areas that we have to focus on for 13 fish spawning.

And these units, when we get into those studies, will be moved to colonial nesting sites like we talked about. So the units are going to be back out there in another year, but moved to certain locations that we really need to look at where there could be impacts.

19 MR. GRIES: Gabe Gries.

I think our main concern was just if that temperature data was going to be -- you know, if it was influenced by the discharge it was going to be used to inform other studies' locations, that sort of stuff.

24 MR. RAGONESE: Yeah. To the extent that 25 temperature was a critical element of analysis and we were

monitoring pre-Yankee shutdown conditions, we would not 1 2 consider that what we would want to use for anything else 3 because - - . 4 MR. HOGAN: So it sounds like folks are okay 5 with the study being ongoing and no reason to delay it Study 7, Aquatic Habitat Mapping? 6 7 (No response.) 8 MR. HOGAN: Study 8, Channel Morphology and 9 Benthic Habitat Study. Thoughts on... Okay. Hearing from Lael Will that moving 10 forward is okay in 2014. 11 12 Any other thoughts? 13 (No response.) 14 MR. HOGAN: Okay. 15 Study 9, Instream Flow Study. MS. WILL: I think we thought that this one 16 could also move forward. 17 18 MR. HOGAN: Being general agreement in the room, okay. 19 20 Study 10, Fish Assemblage Study. MS. WILL: We felt that this one needed to be 21 22 delayed because of the entrainment issue and also 23 distribution and abundances of fish may shift post-VY. 24 MR. HOGAN: Okay. And a delay to 2015? 25 MS. WILL: Yes.

1 MR. HOGAN: Yes? 2 MR. RAGONESE: Agree. All three projects. 3 MR. HOGAN: Right. Yeah. I guess we don't 4 have an interest in ... 5 MS. WILL: Yeah. And we talked yesterday that б we want all the data to be collected in the same year. 7 So... 8 MR. HOGAN: Okay. 9 So American Eel Survey, Study 11. MS. WILL: We felt that this one should also be 10 delayed. 11 12 MR. RAGONESE: Agree. 13 MR. DEAN: Repeat that, Lael. 14 MS. WILL: We thought that this one should also 15 be delayed. 16 David, did you hear that? 17 MR. DEAN: Yes, no, I got it. Thanks. There 18 was just a little break-up there. 19 MR. HOGAN: Do you have thoughts on that, 20 David? 21 MR. DEAN: Huh? 22 MS. WILL: Are you okay with that? 23 MR. DEAN: Yes. 24 MR. HOGAN: All right. 25 Study 12, Tessellated Darter Survey.

MS. GRADER: Melissa, Fish and Wildlife 1 2 Service. 3 We felt this should be delayed in part because of the high entrainment caused by Vermont Yankee on 4 5 tessellated darter. 6 MR. HOGAN: Okay. 7 Anybody object to that? 8 (No response.) 9 2015 is acceptable? Okay. MR. HOGAN: 10 Study 13, Tributary and Backwater Fish Access 11 and Habitats Study. 12 MR. RAGONESE: This is TransCanada. 13 This is the one we were talking about where we 14 had one -- we looked over the sites that we were planning to 15 monitor in our study plan. There was one in the backwater across from Vernon. 16 17 MR. HOGAN: Yeah. 18 MR. RAGONESE: So we don't think the study 19 should be delayed; but we do think there may be an element 20 for the water quality monitoring of that site that we would 21 want to just continue into the following year. 22 MS. WILL: I think that's what we decided as 23 well because that was often more of a physical study, but 24 then there was also the water quality component that we felt should be addressed post-VY. 25

1 MR. HOGAN: So does that require an amendment 2 to the revised study plan? 3 MR. RAGONESE: We'll look at it and file something similarly - - just to clarify what we would plan 4 5 to do there, yeah. MR. HOGAN: And everybody's okay with that 6 7 approach? 8 (No response.) 9 MR. HOGAN: Okay. 10 So my notes on this are water quality 11 component, potential delay; the rest is moving forward in 12 2014. Right? 13 (No response.) 14 UNIDENTIFIED PARTICIPANT: A delay, or was it 15 an extension? UNIDENTIFIED PARTICIPANT: An extension. 16 17 They're just going to keep operating for an additional year. 18 MR. HOGAN: They're going to look at it. 19 MR. RAGONESE: Yeah. I mean that's the intent. 20 Whatever the temperature element would be carried into the 21 post-VY shutdown period. 22 MS. WILL: Yeah. 23 Well, just to clarify, the study plan talked 24 about if you guys found that passage was impeded that you 25 would do additional water quality monitoring, not just the

temperature part of it but dissolved oxygen, et cetera. 1 So 2 that would go along the same lines of revisiting that 3 post-VY. 4 MR. HOGAN: And this is at one site, not for all three projects, one site at Vernon. Okay. 5 MR. RAGONESE: Well, the study kind of applies 6 7 to all areas. But the one there --8 MR. HOGAN: But the modification or amendment 9 to the study plan that you're thinking about looking at. MR. RAGONESE: The one that would carry to the 10 second year here, yeah. 11 12 MR. HOGAN: Okay. 13 MR. DEAN: So do I understand properly -- this is David Dean -- that we'll see a rewrite of this? 14 15 MR. RAGONESE: This is John Ragnese in response to David. 16 17 David, we're not going to rewrite the whole 18 study plan. We're going to file what we think are the --19 would be the necessary amendments to the study plan. So we might cite the location --20 21 MR. DEAN: We'll see these changes in writing. 22 MR. RAGONESE: Yes. We will circulate them in writing before we file them. 23 24 The idea behind that would be to look for concurrence email back and we would try to, for the purposes 25

of consolidating the record and having the agencies provide 1 2 everything to FERC. That doesn't preclude you from doing it on your own -- but we would try to facilitate that 3 consultation before we file the amendment with FERC so that 4 5 we were making sure we were filing something that you were in agreement with. That's what we are going --6 7 MR. DEAN: Okay. Good. 8 MR. HOGAN: A similar approach is going to occur with the water quality study, study 6, David, if you 9 10 weren't on the phone at that time. 11 MR. RAGONESE: And the way I'm looking at, just 12 from the mechanics, is that there's a working group that 13 this study is associated with. That's really what our intent was, to circulate the revisions or the draft 14 15 revisions to that working group. Is that satisfactory? 16 17 MR. HOGAN: Is everybody in this room on that 18 working group? 19 MR. RAGONESE: Not everybody, but some of these 20 are on that. MR. HOGAN: Well, if someone's not on that 21 22 working group and wants to be on that working group, I 23 suggest you get your name to John today. 24 MR. RAGONESE: Or file it on the website. 25 We'll be happy to have you. But, yes, do that.

1 MR. HOGAN: Okay. 2 MS. WILL: Sign up on paper? John Devine, HDR. 3 MR. DEVINE: Is there an element of Study 14 that informs 4 5 And 14 would be related to spawning, resident fish 13? 6 spawning. Is that coordinated with or integrated into 13 at 7 all 8 The fish assemblage study might kind MS. WILL: 9 of inform spawning. MR. HOGAN: According to our notes, John --10 11 well... 12 MR. RAGONESE: With respect to 13, we've 13 identified the locations in the study plan itself. So 14 they've already been identified as the ones without monitor. 15 So we're not adjusting that based on.. But maybe to what Lael is referring to is that 16 17 the fish assemblage may assist us in part identifying where 18 spawning and species distribution occurs for spawning --19 target species or whatever we might want to call that. 20 I thought that -- Melissa, Fish MS. GRADER: and Wildlife Service. 21 22 I thought that you were going to be choosing -a group was going to select a sub-set --23 24 MR. RAGONESE: Yes. MS. GRADER: -- of those sites that were deemed 25

to be most influenced by project operation --1 2 MR. RAGONESE: That is --3 MS. GRADER: -- pursuant to the data that 4 you're collecting --5 MR. RAGONESE: That's correct. б MS. GRADER: -- right now. So they haven't all 7 been selected yet, right? But the whole body has, but then 8 there's going to --9 MR. RAGONESE: Yeah. Yeah, yeah. That's what I'm talking about. We're not 10 11 identifying the whole body for assemblages. That's fine. 12 You did fine. 13 MR. HOGAN: Did you get your answer? 14 MR. RAGONESE: I think so. 15 MR. HOGAN: Okay. 16 So Study 14, Resident Fish Spawning in 17 Impoundments. 18 UNIDENTIFIED PARTICIPANT: Delay. 19 MR. HOGAN: Delay? 20 UNIDENTIFIED PARTICIPANT: Delay. 21 MR. HOGAN: 2015? 22 UNIDENTIFIED PARTICIPANT: Yeah. 23 MR. HOGAN: Okay. 24 Study 15, Resident Fish Spawning in Riverine Sections of the study. 25

UNIDENTIFIED PARTICIPANT: Delay.
UNIDENTIFIED PARTICIPANT: Delay.
MR. RAGONESE: Agreed.
MR. HOGAN: Study 16, Sea Lamprey Spawning
Assessment.
UNIDENTIFIED PARTICIPANT: Delay.
UNIDENTIFIED PARTICIPANT: Delay.
MR. RAGONESE: Agreed.
MR. HOGAN: Also 2015?
(No response.)
MR. HOGAN: 17, Upstream Passage of Riverine
Fish Species Assessment.
MS. WILL: Delay.
MR. RAGONESE: Agreed.
MR. HOGAN: Study 18, American Eel Upstream
Passage Assessment.
MS. GRADER: Oh, this is the upstream eel
passage assessment. Okay.
MR. SIMMONS: We recommend delay.
MR. DAVIS: I think there was some Eric
Davis, Vermont ANR. There were some reconnaissance efforts
associated with the study that we felt could go forward, but
the field work would be delayed until
MR. HOGAN: Okay.
Thoughts about that?

MR. SIMMONS: What reconnaissance? I just - -1 2 MR. DAVIS: I'll have to find it in my study --3 4 in the plan. 5 I think the first year we were MR. SIMMONS: 6 going to go out and do the searches. And then the second 7 year we would put in eel trap houses was that study plan. 8 I think the recon would probably be put off 9 also. 10 MR. DAVIS: Okay. That sounds good. 11 I'm sorry, I didn't hear that. MR. DEAN: 12 MR. HOGAN: Rick, could you repeat for David? 13 MR. SIMMONS: Yeah. We're going to delay until 14 2015. 15 Vermont had mentioned that there was a reconnaissance effort as part of that study. That's true. 16 17 There was a nighttime -- nighttime surveys below the dams to 18 see where the eels were congregating possibly and where they 19 might be working up. And we're saying that needs to be delayed, too, because of Vernon, basically. 20 So the whole timeline would move 21 MR. SIMMONS: from 2015 to 2016. 22 23 We're fine with that. I think we MS. GRADER: 24 had said that -- We had consulted with Alex Harrow and he 25 had felt that if there were potential temperature

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differentials along the base of the dam then that could 1 2 influence upstream passage study. 3 And I'm aware that VY in the past has collected 4 data. And I believe they said that those data indicated 5 that there wasn't a temperature differential. But I don't believe we ever saw those data. So it's probably, just to 6 7 be conservative, best to hold off and wait. 8 MR. HOGAN: Okay. 9 Katie. 10 MS. KENNEDY: I just had a question -- Katie 11 Kennedy with the Nature Conservancy -- maybe asking, since I 12 think that we had discussed going forward with the eel 13 studies at one point. And the eel study at Turners is 14 scheduled to go forward. 15 Are there any differences that can occur on an annual basis that would bring concern in terms of doing 16 17 these studies at different times? I don't know. 18 MR. SPRANKLE: If we were going to be looking 19 at the two as a whole. I think it's more project-specific. I mean I'm --20 21 MS. KENNEDY: Okay. So abundance isn't going 22 to matter either way. 23 MS. GRADER: I think it's within a project. 24 MS. KENNEDY: Okay. MS. GRADER: You know, it's going to be so 25

specific to the project and where the, you know --1 2 MS. KENNEDY: Okay. 3 MS. GRADER: -- points of leakage and other 4 points of attraction are going to be --5 MS. KENNEDY: Okay. MS. GRADER: -- at a given project. 6 7 MS. KENNEDY: Okay. 8 MR. HOGAN: And the thought process on Turners 9 moving forward was because it's all mixed at that point. 10 MR. SPRANKLE: Yes. 11 MS. KENNEDY: Right. 12 MR. HOGAN: So you don't have the temperature 13 differentials across the face --14 MS. KENNEDY: Right. 15 MR. HOGAN: -- of the dam that you may have at 16 Turners. 17 MS. KENNEDY: Right. 18 MS. DE WALD: If I could just like throw out 19 some recent modeling that we did last -- this past summer 20 that suggests that the thermal pool from Vermont Yankee, by the time you get to the face of the Turners Falls dam the 21 22 river is back to within a degree of ambient. 23 MS. GRADER: Right. So temperature is still elevated, but there's likely not a depth differential along 24 the face of the dam, which is the primary concern for this 25

1 specific study.

2 MR. RAGONESE: We ought to maybe just reserve on this one. 3 4 I'm not totally sure we want to not try to 5 attempt to do this in one year with both those elements I know that we've heard that this is what the 6 somehow. 7 agencies would like. We would like to have had 2014 and 8 2015 to do this. But because the monitoring would then extend into the fall of 2016, it becomes somewhat 9 10 problematic from a timing standpoint. So we want to think about that a little bit. 11 12 And maybe there's another approach that may be workable to 13 do it all in 2015. I don't know. 14 But that's our challenge. We would like to 15 have the studies, if at all possible, done in 2015 and not any extended past our application. 16 17 That said, it warrants potentially looking at 18 that there's another approach on this to not extend the 19 second half into 2016. So I'm throwing it out there. MS. GRADER: But isn't that a difference in --20 21 I mean trying to do it all in one year is different than 22 saying which year you want to do it in. 23 So I think we had commented that we wanted to 24 have a full season of surveying for areas of concentrations 25 before deploying the eel passage through collections. So it

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in the study. MR. RAGONESE: That's exactly what I'm saying. We may want to revisit that and see if there is a way to design a study that can do everything at the end of 2015. And I don't know if there is. But I'm just suggesting that we may want to do that. I would like to avoid having only one study that requires 2016. MR. HOGAN: All right. MR. RAGONESE: So I'm --MS. GRADER: Well, if one of those ways is to MR. RAGONESE: I'd like to not do that here, though, because I don't think they want to, put a placeholder in there. I'm not agreeing to 2016 yet. I'd like to find an opportunity to look at this between now and when we try to file something for you on any amendments. MR. HOGAN: Okay. And if you can't reach concurrence on it, that will be very important for us to know. MR. RAGONESE: Yeah. No, no. MR. HOGAN: So if there's no agreement on the approach we can either look at stakeholder consultation and

sounds like you're saying something different than what was

study plan development, you know, similar to what we've gone 25

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through this summer, you know, or have a simple -- having 1 2 the agencies respond in comments to what needs to be done -meaning 2015-2016 as written. 3 4 But I don't think it would -- it doesn't sound 5 like we're going to resolve it here --6 MR. RAGONESE: No. 7 MR. HOGAN: -- at this meeting. MS. GRADER: But I guess the only question I 8 have is if when you look at ways that you can try to get all 9 the information before the fall of 2016, if one of those 10 ways is by doing phase one in 2014 --11 12 MR. RAGONESE: That's not what we're proposing. 13 MS. GRADER: Okay. MR. RAGONESE: We think it should go to 2015. 14 15 What we're trying to figure out, if maybe there is another broader design that might enable us to do all the work in 16 17 2015. I don't know. I'm not even --18 MS. GRADER: Okay. 19 MR. RAGONESE: I'm not even trying to suggest what it is except that if we were trying to do the first 20 21 phase to limit something in the second phase, but we chose 22 not to limit the second phase, then you potentially in 23 theory could do it all in one year. I don't know. 24 I'm just -- Just philosophically, I'm trying to 25 figure out if there's a way that we can sit down -- not in a

vacuum -- and look at this in a way, we would appreciate the 1 2 opportunity to look at it. Maybe we caucus and five minutes 3 later we say there's no way we can do that. 4 But I'm not prepared at this point to say we 5 will not do this in 2016. 6 MR. HOGAN: Understood. 7 So it sounds like you're going to take the 8 opportunity in the next couple of weeks to meet with the 9 agencies to discuss it. And TransCanada may or may not come 10 up with an alternative plan. And if there's concerns with 11 that alternative plan, we'll learn about it. 12 But even if we learn about the concerns --13 let's say there are concerns -- we may put it back on stakeholders and the licensees to come in either with a 14 15 revised study plan or we will just address it in the determination -- Okay? -- depending on the magnitude -- what 16 17 we think, you know, if we feel that we just need some more 18 input. 19 MR. GRIES: Gabe Gries. 20 Just a general question. And you might not 21 have an answer to this one. 22 So with this, I mean obviously due to timing and such there are some issues with, you know, for example, 23 24 trying to do a full field study in 2016 with this particular 25 study.

1 What if we get to 2015 and, you know, there's 2 just horrific weather events; you know, we feel that some of the studies might not be representative. It's a very weird 3 I mean where does that lead us towards 2016. 4 year. 5 If we can demonstrate that the MR. HOGAN: 6 anomalous conditions influenced the study results and the 7 study results were not representative of the normal 8 condition of the system, the integrated licensing process 9 does contemplate that and suggests that that's a cause for 10 conducting the studies again. You know, that's something 11 that we would look at. 12 We certainly need to understand that, you know, 13 just because you have high water doesn't mean it's going to affect the terrestrial studies. 14 15 MR. GRIES: Sure. MR. HOGAN: Let's say above the high water 16 17 mark. 18 You know, so I mean it's -- what was the 19 anomaly and did it have an effect on the data that was being collected, you know, or likely effect; can you make those 20 21 connections. 22 But, yeah, we recognize that as a cause for a 23 re-do. 24 And I more just bring that up MR. GRIES: 25 because of, you know, the obvious delay of, you know,

missing out on 2014. 1 2 MR. HOGAN: Yeah. 3 I will say, you know, because TransCanada doesn't want to conduct studies in 2016 is not a reason not 4 5 to conduct studies in 2016. 6 (Laughter.) 7 MR. HOGAN: But I'm more than happy to look at 8 other ways of setting the cap; if we can meet the data needs 9 and their desires, great. Okay? 10 MR. GRIES: Thank you. 11 MR. HOGAN: So my notes on American eel are 12 we're going to look at it. 13 (Laughter.) 14 MS. WILL: A delay and then --MR. DEVINE: And not to start in 2014. 15 MR. HOGAN: Right. Not in 2014. 16 17 MR. DEVINE: A delay to at least 2015. And 18 TransCanada wants to consider a study being done all in 2015 19 so that might require a change in study plan. But that's --20 TransCanada would like to have some time to consider that. 21 MR. HOGAN: I'm glad I made you note-taker. 22 (Laughter.) 23 MR. HOGAN: All right. All right. Study 19, American Eel Downstream 24 25 Passage Assessment.

1 MS. GRADER: Delay. 2 MR. HOGAN: 2015? MS. GRADER: Yeah, to 2015. I think -- I quess 3 4 we need to have a conversation about -- so the telemetry 5 portion would be delayed and Vermont Fish and Wildlife might -- has -- maybe we should have a discussion --6 7 MS. WILL: Questions. 8 MS. GRADER: -- Yeah, a question --9 MS. WILL: Yeah. 10 MS. GRADER: -- about methodology on the High-Z 11 tag component and whether that also should be delayed. 12 MS. WILL: I guess my question was the 13 methodology with the balloon tagging and the added stress of the temperature component of it. To remove that added 14 15 stressor would that affect mortality or survival. MS. GRADER: Relative to -- at post-tagging tag 16 17 acclimation in the ambient river water. Is that so that 18 they're being collected somewhere that's, you know, not 19 influenced by VY discharge? Them getting held in heated water, could that then affect something that, you know, 20 would influence the results of a turbine survival study? 21 22 MS. WILL: Yeah. That was my concern. I mean it seems like an obvious 23 MS. GRADER: 24 way to get around that is to acclimate them to non-VY-influenced water. But I do know how feasible that 25

1 is. 2 MR. RAGONESE: Not acclimating them in the 3 pool? MS. GRADER: Yeah, and pull those somewhere 4 off, you know, river that is in ambient --5 6 MR. RAGONESE: And then put them through --7 MS. GRADER: Yeah --8 MR.RAGNESE: -- the same --9 MS. GRADER: Yeah. Because if you're just putting them through the rapids and the --10 MR. RAGONESE: Yeah, but there's a --11 MS. GRADER: What about --12 13 MR. RAGONESE: I'm not sure how you can split 14 that. You either go one way or the other. 15 MS. GRADER: Well, if they're only in it for a 16 few seconds --17 MR. RAGONESE: Well, they're not going to tell us -- they're going to tell us. You're collecting them; 18 19 you've got to physically find them. You know, they're in 20 there for a little while. 21 MS. GRADER: Right. Right. After they've 22 been... But --23 MR. RAGONESE: Well, I'm just trying to 24 comment. 25 MS. GRADER: Could I ask you --

MR. RAGONESE: Actually, that's a good 1 2 question. Because I don't know what the answer would be. 3 MR. SPRANKLE: I've got a question on that. 4 It's Ken Sprankle, Fish and Wildlife Service. 5 I'm thinking that it is problematic because of 6 the tailrace question. So you could say -- potentially not 7 have them acclimated, but they would have to become 8 acclimated because you're going to the tailrace. And so you're subjecting them --9 MR. HOGAN: That shock. 10 MR. SPRANKLE: -- to additional stress. 11 So I'm 12 feeling less comfortable. 13 MR. RAGONESE: And we're fine with it all 14 getting pushed out. The only question that kind of -- I 15 mean I made a note that we could do it in the survival component at all three - - but there was this numbers issue 16 17 that we couldn't get enough eels. So you've got to let us 18 know about that. Because if there's not enough eels to do 19 all these studies, this is the one to probably do in 2014. MR. HOGAN: 20 Tim. 21 MR. BRUSH: Tim Brush. 22 MR. RAGONESE: And let me just add: And we 23 want to do it at all three projects. Not that we think that 24 they're -- it's just that it's a -- we'd like to do that. 25 This is a very expensive study and -- just the set-ups and

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the ordering and everything, we'd like to do it at all three at the same time.

3 MR. BRUSH: Tim Brush with Normandeau. 4 We'd be doing that study for TransCanada. And 5 just a couple of points. I'm not advocating delay or not in б this set of comments here. 7 But it's a controlled study. So you have a set 8 of control fish that sort of account for the environmental 9 conditions, say, for the treatment variable. And we were comfortable moving ahead with it if Vermont Yankee was 10 11 continuing to operate.

So we didn't see any particular risks to have an unsuccessful study at Vernon. We've done studies on smolts there; we've done some small studies, small-scale studies on juvenile shad there.

So the conditions with Vermont Yankee
operating, we didn't see any particular study failure risks
going -- you know, had Vermont Yankee continued to operate.

So I don't see a particular problem with it. And the fact that we have a control group as part of this experiment then has broken out environmental variables to a degree.

23That was my primary comment. I'll leave it at24that.

MS. KENNEDY: This is Katie Kennedy with the

1 Nature Conservancy.

2 I think that a lot of these studies we could, you know, go forward with them and include some element of 3 4 control. But from a bioenergetic standpoint we know that 5 most fish -- and I'm not an eel expert -- but most fish have 6 different stress levels that are different temperatures. So 7 whether or not you have a control, the mortality that occurs 8 at Vernon under the current temperature regime is going to be different than it would occur under a normal temperature 9 10 regime. MR. RAGONESE: Maybe. 11 12 MS. KENNEDY: Exactly. And that's the big --13 whenever you don't know, it's just possible that it's not. But if -- and I'm not an eel expert, but there are some fish 14 15 that were definitely there, the potential for them to have higher mortality under different temperatures is likely. 16 17 Whether or not eel would, I don't know. 18 MR. RAGONESE: We're fine with this all getting 19 That was our preference. It was only until fleshed out. you said something yesterday that we thought there might be 20 21 a problem moving forth from a numbers issue. 22 So just let us know. 23 MS. GRADER: It may be an issue, although it, 24 you know -- FirstLight is going forward in 2014 with that. So that alleviates some of the, you know, numbers issue. 25

1 I don't want to leave this. I mean I understand Tim's point that if they're both being control 2 and test fish in warm water then any effects of the turbine 3 4 survival, you know, you could tease that out whether you've 5 controlled for the temperature effect. 6 I figure that with a lot of the studies, 7 though. And we're --8 MR. RAGONESE: Exactly. I just think -- We're a firm believer. We need to think of this -- we want to be 9 10 doing these studies in the appropriate baseline condition 11 regardless of whether or not we predict that there's a 12 problem or not. 13 MR. HOGAN: So let me ask a question. I'11 start with a statement. 14 15 The study plan says that the study will be utilized to also assess the passage route selection of eels 16 17 through the facilities. Does anybody think temperature 18 would affect passage route selection? 19 MS. GRADER: Well, that's why the telemetry -we were always wanting the telemetry portion to be delayed. 20 21 MR. RAGONESE: Correct. So telemetry we all 22 are on the same page. We're all on the same page with both It's just a matter of whether or not you are able 23 of them. 24 to do the entrainment portion. 25 MS. GRADER: So everything's going to get

1 delayed. Right? 2 And hope we get enough eels to do the studies. MR. HOGAN: Okay. 2015. 3 4 So Study 20, American Eel Downstream Migration 5 Timing Assessment. Influenced by temperature? MR. RAGONESE: Okay. Let me just -- So this is 6 7 a sort of a --8 Well, it is. But we do not want to do the 9 report -- we don't want to complete this until after we've had the other studies, eel studies in the projects. But we 10 11 may be able to conduct the desktop at any time going 12 forward. But we don't want to write the report absent the 13 other studies being completed. And those are being delayed. 14 So it's the report element that we would... 15 So how you want to characterize this -- but this is a sort of 2014-2015 period we need to do the study. 16 17 MR. HOGAN: Okay. So this one where the 18 desktop work can move forward and we'll do -- report on the 19 progress at the ISR and file a final report --20 MR. RAGONESE: But I'm suggesting it doesn't actually need to be done in 2014 either. We could do this 21 22 all in 2015 and avoid having to spend money on an interim 23 report. 24 MR. HOGAN: Thoughts? 25 MS. GRADER: The interim report wouldn't say a

whole lot, I don't think, other than a literature review 1 2 versus having great data which is, you know, Connecticut 3 River-specific, which is going to be informed by all these 4 studies that are getting delayed. 5 MR. DAVIS: Does the data in this report at all б depend on the Turners Falls, the data collected at Turners 7 Falls? 8 MS. GRADER: Some does, right? Wasn't the 9 hydro-acoustic portion, weren't you going to use some of 10 those data in this study? Or not? I thought I'd read that. 11 UNIDENTIFIED PARTICIPANT: What hydro-acoustic 12 _ _ MR. DEAN: Yeah, it does. It says specifically 13 14 that --15 MS. GRADER: Not your hydro-acoustic. MR. DEAN: -- data collected --16 17 MR. HOGAN: David, could you say that again? 18 MR. DEAN: I'm sorry, Ken? 19 MR. HOGAN: We didn't hear it on the phone. 20 The study says that it would be MR. DEAN: augmented by field data collected at Cabot Station. 21 22 MS. GRADER: Yes. 23 MR. HOGAN: Okay. So just go ahead and final 24 report in 2015. You got it. 25 MR. RAGONESE: That statement says the same

thing for our data. 1 2 MR. HOGAN: Okay. 3 So Study 20, 2015 also? 4 (No response.) 5 MR. HOGAN: Study 21, American Shad Telemetry б Study. I think the answer to that is 2015, correct? 7 MS. WILL: Correct. 8 MR. HOGAN: Study 22, Downstream Migration of Juvenile American Shad. 9 2015? 10 11 (No response.) 12 MR. HOGAN: Study 23, Impingement, Entrainment, 13 and Survival Study. 14 MS. WILL: This study relies on data from the fish assemblage study. So does that -- it needs to be 15 16 delayed. I know a lot of it's lit review; so probably the 17 lit review part could go forward. MR. HOGAN: Right. I know --18 19 MR. RAGONESE: Just for the record, this is 20 proposed for spring of 2015. So it's already proposed for '15, I believe, because of that reason right there. 21 22 MS. WILL: Okay. 23 MR. HOGAN: So does that make that 2016? 24 MR. RAGONESE: No. 25 (Laughter.)

MR. RAGONESE: We may just do it -- We may do 1 2 it at the end -- the other end of 2015 when we have the assemblage study. 3 You know, originally we had it, so we were 4 5 following the fish assemblage. We can still do this because it is a desktop lit review. We're just going to do it 6 7 after. So if you're going to prescribe what month we'll do 8 it in, I can give you the month. But it's a 2015 study 9 already. 10 MR. HOGAN: I am. MS. WILL: You can do it late 2015. 11 12 (Simultaneous discussion.) 13 MR. HOGAN: Doesn't it also incorporate the - -14 • 15 MR. HOGAN: And that's occurring in 2015. 16 17 MR. RAGONESE: We can amend --18 because our study now probably does say spring. Do you want 19 us to amend it and say fall? MR. HOGAN: 20 Sure. 21 MR. RAGONESE: That's what I was afraid of. 22 (Laughter.) MR. HOGAN: Well, no, no I mean --23 24 MR. RAGONESE: No, that's fine. That's fine. MR. HOGAN: Well, I'm happy just to make a note 25

1 here to move it to the fall, a change from spring. MR. RAGONESE: We said spring because we wanted 2 to do it after the other one. 3 4 MR. HOGAN: But this -- My recollection is --5 and my team will correct me if I'm wrong -- that the study also incorporates the entrainment data from the shad and the 6 7 eels to verify the literature data from the EPRI studies. 8 So we've got to look at that timing, when those things are 9 occurring and reporting. That's what I was... MR. CROCKER: Jeff Crocker, Vermont ANR. 10 11 I think one of the shad studies is already two 12 So 2016 might be in play, too, as we are discussing years. 13 things. 14 MR. HOGAN: I think it's requested for two 15 years and we are debating on that. 16 MR. CROCKER: Okay. 17 MR. HOGAN: It's an item in dispute before the Commission, right? 18 19 MR. RAGONESE: Which one is? 20 MR. HOGAN: The Study 20 -- I'm sorry, Study 19. 21 22 UNIDENTIFIED PARTICIPANT: Isn't it 21? 23 MR. HOGAN: My report shows for the shad 24 telemetry studies there was a request for two years. 25 But I don't believe that was supported by

TransCanada. And that should take -- the two-year versus 1 2 one year is the dispute before the Commission firmly. 3 And whatever we decide it will be, it will be. So we're on 23. Well, what was the result from 4 5 23, fish impingement? That was going to be just fall but 6 taking into consideration --7 MR. RAGONESE: We'll send in something to the 8 effect that we would be doing this at the end of the --9 having the results of those other studies, supporting studies, it will likely be in the fall or the late -- the 10 second half of 2015. I'm not sure what month. 11 12 MR. HOGAN: Okay. I just wanted to make sure 13 that --14 (Laughter.) 15 MR. DEVINE: John Devine with HDR. The USR is due on September 30th -- Oh, we 16 17 don't know yet, I guess, because of the -- when the USR 18 would be due because that's going to depend on when the 19 study plan determination --20 MR. HOGAN: No, I... 21 MR. DEVINE: USR -- sorry. 22 MR. HOGAN: The updated --23 MR. DEVINE: The updated study report. 24 MR. HOGAN: Or the interim. 25 MR. RAGONESE: The ISR.

1 MR. DEVINE: Yeah. 2 MR. HOGAN: The first study season is the updated study report. The second study season is the -- or, 3 4 I'm sorry, the interim study report and then the updated 5 study report. 6 John raises a good question. And process-wise, 7 you know, those deadlines are triggered off of the issuance 8 of the study plan determination. 9 In the past when we have had the split, which 10 is a sample size of one, the study plan determinations, the 11 interim study report and the updated study reports were due 12 one year from -- one and two years, respectively, from the 13 first study plan determination. So September, you know, 14 2013. And that basically brought everything back together 15 to the original --MR. RAGONESE: It's fine with us. 16 17 MR. HOGAN: -- process plans. 18 So rather than getting a dual process moving 19 forward with, you know, study reports coming twice a year, you know, we just --20 Or whenever the second --21 MS. Will: 22 It's kind of like accounting: Last in, first 23 up. 24 The first one. MR. HOGAN: UNIDENTIFIED PARTICIPANT: Of September. 25

1 MR. HOGAN: It puts it all back onto the 2 original schedule for the ILP. Do you have a preference? 3 MR. RAGONESE: Again, just so we're clear and 4 5 understanding this as we're talking about this, the interim 6 study report is not necessarily the report on the study 7 results. It's an interim report on your studies that you're 8 - - . The ISR -- the interim study report 9 MR. HOGAN: is a progress report of, 'We are conducting the studies; 10 11 this is what we've done. We have done them the way that we 12 are required to, ' 'We have not done them the way we were required to; we had a -- made a modification or had a 13 variance for these reasons. As a result of that variance 14 15 the data that we collected was either adequate to meet the goals and objectives of the study or it was not.' 16 17 But that said, if the study has been completed 18 and the report is ready, typically the ISR would have an 19 individual study's report attached to it. And that would be able to be commented on and weighed on in full. 20 21 MR. RAGONESE: If it wasn't provided prior. 22 MR. HOGAN: Right. 23 And usually the USRs do have more reports 24 because it's the second year and a lot of the one-year 25 studies, the reports have embedded all the data has been

QA/QC'd and the report has been prepared. 1 2 Any questions on that? MR. DEVINE: Well, the point I was bringing up 3 4 there, too, Ken, was for that study 23 was that it was 5 originally going to be in the spring of 2015, which means it 6 would have been available for the updated study report. And 7 now it will be after that. So if that's the change, it 8 would not be available for the updated study report. So it's just a change of availability. 9 10 MR. HOGAN: Okay. MR. RAGONESE: I'm not sure what they will do 11 12 at any - - . I mean we may have a lot that will fall into 13 that category. And clearly for the schedules that 14 MR. HOGAN: 15 are interrelated, John, we're going to have to pay close attention developing our study plan determinations to make 16 17 sure that we are not asking TransCanada to do something that 18 is in conflict with other studies, and, you know, really 19 making sure everything flows together the way it's supposed 20 to. 21 MR. RAGONESE: Ideally -- and I don't know if 22 the Commission has the latitude -- but I would not choose September 13th and find the right date to do these in. 23 And 24 that is probably at the end of the study season, like October, the end of October/first of November so that we can 25

avoid having this kind of three different dates that are not
 meshing.

3 So if it just -- you know, I don't know if you have the latitude or not. But it seems to me that September 4 5 13th is kind of arbitrary and it kind of screws everything 6 up because half the -- so many of these are fall migratory 7 species that it just, you know, we can report, 'Yeah, it's 8 ongoing and we'll be done in two weeks, but we don't have anything to give you.' You know, and it will be kind of 9 10 that kind of thing, whereas we might have more to give you if it were just a little later. 11

MR. HOGAN: FirstLight, do you have a thoughton it?

MR. SULLIVAN: Well, just process wise we're real surprised when you said that they -- if I understood you correctly, you were going to hold the individual study report date and get the study report date of September of next year or September the year after. Did I understand that?

20 MR. HOGAN: Yeah. Typically it would be 21 triggered off of the original study plan determination. 22 MR. SULLIVAN: Well, actually there would be

23 two aspects of that. He said you had a sample size of one.
24 And we were just trying to remember if this session came out
25 in Conowingo. And we're trying to remember whether or not

it all consolidated into one --1 2 MR. HOGAN: All right. Let me rephrase that. I know of a sample size of one. And Conowingo 3 4 was not it. 5 MR. SULLIVAN: It's right in -- and I'm being on the record. It was like four years ago. 6 7 MR. HOGAN: Okay. 8 MR. SULLIVAN: Our concern is we are 9 short-changed particularly this year on timing. All right? 10 So there were some studies that we agreed 11 yesterday were 2014 studies. So our concern is being 12 short-changed a little bit on time this year. That means 13 that we also recognize that the initial study report is 14 basically kind of a progress report. 15 So I guess the take-home message for us is we need to go back and think about that a little bit and we 16 17 want to look at Conowingo and some of the other examples. It may not be an issue for us at all. 18 19 MR. HOGAN: Yeah. 20 MR. SULLIVAN: But we need --21 MR. HOGAN: And on my sample size of one it was 22 Susitna. 23 MR. SULLIVAN: Susitna. 24 MR. HOGAN: And the licensees came in and they provided an updated process plan that was consistent with 25

why I said where all the future dates were triggered off of 1 2 the initial study plan determination. So I do think we may have some flexibility here 3 4 if folks -- I can promise you it won't be more than a year 5 from the next determination. 6 MR. SULLIVAN: Okay. 7 MR. HOGAN: Okay. 8 MR. SULLIVAN: Well, that would be after our license draft because you're not getting it done until... 9 10 MR. HOGAN: No, the next study plan 11 determination, this one pending. Anyway... 12 MS. GRADER: I mean from the Fish and Wildlife 13 Service's perspective, I think it -- especially not so much for the interim, but for the updated study report it seems 14 15 to make more sense to have it be tied to the end of appeals because then -- I think for field biologists in the room, 16 17 ideally it would be maybe when this next study plan 18 determination comes out, which will be in maybe January, 19 which is not a field season. So -- I mean that's just what's most convenient 20 for us. But it also makes sense to wait until the field 21 season's over. 22 23 I'm going to put it on the MR. HOGAN: 24 licensees. We want to keep the schedules on track between both -- for both sets of projects. 25

You guys coordinate a schedule for the process 1 2 plan, something between September 13th and the next study 3 plan determination, which will probably be in January, 4 somewhere in there. Come up with a process plan for moving 5 And we'll look at it; we'll either approve it or forward. deny it. 6 7 You make good points. I just can't say. 8 For us --9 MR. RAGONESE: There's latitude. MR. HOGAN: For us it's nice and neat when it's 10 11 triggered off of one of the study plan determination-base. 12 I'm not saying that that's -- that doesn't necessarily mean 13 that it has to be that way. But I mean we'll look at it and we'll try to figure it out. And, you know, it could be 14 November first, December first, January first -- well, not 15 January first. 16 17 Actually, after Christmas for me would be much 18 better. 19 (Laughter.) 20 MR. HOGAN: It's because I don't want to be 21 working at Christmas each year. 22 (Laughter.) 23 MR. RAGONESE: Tell me if I'm wrong -- I mean 24 maybe I'm not -- maybe I don't have the right calendar in my But if it's triggered on the second determination 25 head.

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then the updated study report is after we file a draft
 1
 2
        license.
 3
                     MR. HOGAN: I'd have to do all the math.
                     MR. RAGONESE: That's the challenge.
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 5
                     MR. HOGAN: Yes, it is.
                     MR. RAGONESE: So it's got to be prior, but
 6
 7
        just more in line with when the studies are going to be
 8
        completed in 2015. Otherwise it's just impossible.
 9
                     MR. HOGAN: Yeah, and that's what we need to go
10
        over.
                                  The draft is December first.
11
                     MR. DEVINE:
                                                                 The
12
       draft would be no later than December first of 2015.
13
                     MS. GRADER:
                                  What?
                                         The preliminary licensing
14
       proposal?
15
                     MR. HOGAN:
                                 Yes.
                     MR. DEVINE: Or a draft, whatever.
16
17
                     MR. HOGAN: But you have ninety days.
18
                     MS. GRADER: For the PLD.
19
                     What about for the USR? What's the comment
20
       period for those?
                     MR. HOGAN: A lot of times they come out at the
21
22
        same time.
                    That's 15 days for the meeting and 15 days for
        the comments, I think. I'd have to go back to check.
23
24
                     MR. DEVINE:
                                  45.
25
                     MR. HOGAN:
                                 45?
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MR. DEVINE: Yeah. 1 2 MR. HOGAN: So 45 days. MS. GRADER: Anybody ever say that these ILP 3 4 time frames are just insane? I just want to go on record. 5 (Laughter.) б MR. HOGAN: We've never been accused of being 7 soft. 8 MR. RAGONESE: I'll cook a turkey in 2015. Ι 9 mean I don't do donuts, but I will do a turkey if you need to, you know, work through Thanksgiving. 10 11 (Laughter.) 12 MS. GRADER: Turkey makes people sleepy, John. 13 MR. RAGONESE: Okay. That's great. 14 (Laughter.) 15 MR. HOGAN: So there is a legitimate concern associated with the new schedules and timing of the ISRs, 16 the USRs, PLP. And we'll look at that. 17 18 Julia. 19 MS. WOOD: Ken, I would add the concern also 20 with the study reports is we'd like to avoid filing two different sets of initial study reports and updated study 21 22 reports. 23 You mean one that handles the first MR. HOGAN: 24 determination and then one that handles the --25 MS. WOOD: Yes.

MR. HOGAN: -- the next pending. 1 2 We agree. And that's why I was saying, you know, in the past my experience has been it's all -- it was 3 4 triggered with Susitna, it was all triggered off of the 5 first study plan determination. And that's what brought it all back onto the same schedule. 6 7 Yeah, I know. We agree. 8 MS. WOOD: Okay. So our proposal, we'll try to 9 coordinate. And we will coordinate it with TransCanada. We'll address all these issues. 10 11 MR. HOGAN: Okay. 12 Does that sound fair to folks who are going to 13 look at the schedules, how they fall out. We'll get a proposal from the licensees. We'll consider whether or not 14 we can live with that or not. 15 Okay. Does anybody -- Let me see. How many do 16 17 we have left? We've got three left. 18 Anybody need a break? 19 (No response.) 20 MR. HOGAN: Okay. Okay. Study 24, Dwarf Wedgemussel and 21 22 Co-Occurring Mussel study. 23 MS. WILL: We thought that this one could move 24 forward. 25 2014, no change. MR. HOGAN: Yes.

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Study 25, Dragonfly and Damselfly Inventory and
 1
 2
        Assessment.
 3
                     MR. CROCKER: Jeff Crocker.
 4
                     Based on yesterday's conversation, we feel it
 5
        should be delayed until 2015.
                     MR. HOGAN: Okay. We're getting --
 6
 7
                     MR. RAGONESE: Agreed.
 8
                     MR. HOGAN: -- affirmative from TransCanada
 9
        also.
                     All right. So the next item was kind of an
10
11
        error on my part in the study plan determination. It's the
12
        -- We got requests for modification to TransCanada's studies
13
        to incorporate -- to a number of TransCanada's movement
14
        studies to incorporate hydro-acoustics at Vernon. I
15
        inadvertently included it as a stand-alone study request,
        but it was really a modification to other studies.
16
17
                     What I've learned, and Lynn, you can correct me
18
        if I'm wrong, is in -- Let me back up.
19
                     In TransCanada's study plan for Vernon there's
        a proposal to acknowledge that Entergy is planning to do
20
21
        hydro-acoustics in the Vernon four bay.
22
                     MR. DE WALD: Were planning, or are planning?
        I don't know if that's the plan.
23
24
                     (Laughter.)
                     MR. HOGAN: But the intent, which was not real
25
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clear was that -- from our perspective was that it was 1 2 implied that TransCanada was going to utilize that data in its study plan. Maybe that was not your intent. But there 3 4 was acknowledgement that that study was going to be ongoing. 5 So was that your intent or not? MR. RAGONESE: It was not our intent. 6 Our 7 intent, to the extent that we identified that, is suggesting 8 that the study request was basically made to two different 9 parties for the same purpose, and that the purpose was more 10 a purpose for Yankee than TransCanada. 11 MR. HOGAN: Okay. 12 MR. RAGONESE: So we did not propose it. 13 MR. HOGAN: All right. MR. RAGONESE: And we would continue to suggest 14 15 that all of the study meeting language was associated with the need for a more refined picture through the use of 16 17 hydro-acoustics for a number of migrating species because of 18 the effect or the potential effect of decisionmaking based 19 on where the thermal changes in the river were. So by eliminating the root issue, we think there's even less need 20 for hydro-acoustics. We also don't think that there is 21 22 enough evidence that this is a proven technology and purpose for that. 23 24 MR. HOGAN: I'm not -- Okay. I don't want to get into --25

MR. RAGONESE: So that's -- I know. But that's 1 -- No, but I'm trying -- You asked me why we didn't do this 2 and why we did it. 3 4 MR. HOGAN: Okay. MR. RAGONESE: And those are the reasons why. 5 6 MR. HOGAN: All right. 7 Now, Lynn, my understanding is that Entergy is 8 no longer proposing to go forward with this or maybe other environmental studies that they were planning to do, is that 9 --\ 10 MS. DE WALD: That's correct. 11 12 MR. HOGAN: Okay. So a quick question for I guess Ken. 13 With Vermont Yankee -- I guess two questions --14 15 Vermont Yankee shutdown is hydro-acoustics still an interest of the agencies? 16 17 MR. SPRANKLE: It is, as it is with FirstLight. 18 We had questions on the timing, magnitude, duration. 19 Yes, with Vermont Yankee of course we were interested; in the absence of Vermont Yankee that data is 20 still we feel of importance and value for our concerns for, 21 22 you know, evaluating project --23 MR. HOGAN: Follow-up question, because this is 24 not even what we are dealing with in the dispute. Does that apply -- is 2015 more relevant or 25

1 2014 to your request for this data? 2 MR. SPRANKLE: 2015, yes. 3 MR. HOGAN: Any questions with our last study? 4 MR. RAGONESE: I would like just a little 5 clarification on the process because questions came up vesterday and now it's more in my basket than theirs so I 6 7 had to pay more attention. 8 MR. HOGAN: Well --9 MR. RAGONESE: So if a determination is made 10 that hypothetically includes hydro-acoustic technologies in 11 studies and we disagree, what is our option in this changing 12 environment? We have no option to dispute or anything along 13 those lines --14 The Commission --MR. HOGAN: MR. RAGONESE: -- because of the environmental 15 change in baseline that we think was the root cause for the 16 17 hydro-acoustics since the exact same study was suggested to 18 be provided by the nuclear operator. 19 MR. HOGAN: I see. So you're wanting an 20 opportunity to augment your discussion as to why 21 hydro-acoustics continues not to be appropriate or is no 22 longer --23 MR. RAGONESE: Hypothetically, yes. 24 MR. HOGAN: File a letter. I mean, you know, 25 the record's open. I can't -- I assume the arguments are

If they're different because of the VY closure, 1 the same. 2 feel free to augment the arguments as well. 3 MS. GRADER: Beyond what Ken just put on the 4 record -- I mean --5 Well, those are the same arguments MR. HOGAN: 6 that have already been made. I'm saying if there's a new 7 argument that's a result of the VY closure, we'll entertain 8 all the information. 9 You know, if there's more support for why now 10 it's even more important, we're happy to entertain that. 11 Support for why it's less important, we're happy to 12 entertain it. I mean it's --13 MS. GRADER: Okay. Got it. MR. HOGAN: -- you know -- but I want it tied 14 15 to Vermont Yankee; I don't want it tied to -- or just a reiteration of what's already in our record. 16 17 MS. GRADER: Right. And we'll review what we 18 provided in the past. If we think supplementing our 19 comments would be beneficial, then we'll do that. 20 MR. HOGAN: All right. Is there a schedule for 21 MR. SULLIVAN: 22 supplementing the plan? I heard that --23 MR. HOGAN: I would do it quickly. Like I 24 said, I plan to -- if you can do it before Christmas, that would be great. The study plan determination is not going 25

to go out before Christmas -- unless I'm told otherwise. 1 2 (Laughter.) MR. HOGAN: But I would highly doubt that. And 3 what I would -- Well, like I said, before Christmas I do 4 5 hope to have a schedule out for moving forward. And that б moving forward may or may not include a comment period; I 7 don't know yet. 8 MR. RAGONESE: The discharge is we should 9 review what's in the record and not repeat it, but we can augment what's in the record. 10 MS. GRADER: If it's relevant to VY. 11 12 MR. RAGONESE: I'm not sure I would agree that 13 it has to be; it's just not in the record. 14 Because you're not -- Are you limiting me, what 15 I can --MR. HOGAN: 16 No. 17 MR. RAGONESE: Okay. That's what I thought. 18 MR. HOGAN: No, no, no. I --19 MR. RAGONESE: Good. Thank you. 20 MR. HOGAN: You can file whatever you want. 21 But all I'm saying is to make your comments more efficient, 22 you don't need to refile --23 MR. RAGONESE: What we've already filed. 24 MR. HOGAN: -- what you've already filed. And like I said yesterday, the last study here 25

1 not being -- is a requested study that was not adopted. My 2 mistake was the way I incorporated it here. But it is an issue that is in dispute. 3 4 I wanted to make sure we discussed these 5 components that maybe influence -- this could almost be a 6 stand-alone study. We're discussing them equally as if they 7 were proposed or not proposed. 8 It should not imply any support or non-support 9 by the Commission right now. We just want to make sure we have the information so should we choose to agree with the 10 11 request, we have the data that we need to move forward on it in that event. So... Okay? 12 13 Yes, sir. MR. FISK: Andy Fisk from the Connecticut River 14 15 Watershed Council. I just wanted to cycle back to an issue that 16 17 was brought up yesterday. It's regarding ice and the erosion studies. 18 19 MR. HOGAN: Yes. 20 So I wanted to bring that forward MR. FISK: 21 because I think there are stations TransCanada is doing 22 below Vernon that may be affected with the change in VY. So I wasn't present yesterday; David wasn't part of that. So 23 24 if we could just bring that back around for conversation. Ι think it's Study 3. 25

And then I had another issue on 7q10 that I 1 2 wanted to just pose. MR. HOGAN: Another issue on -- what was it? 3 4 MR. FISK: On 7q10, water quality monitoring. 5 Excuse me, I could not hear any MS. MC CANN: of that conversation. 6 7 MR. HOGAN: Okay. 8 Mary, the request is from Andy Fisk, who wants 9 to discuss Study 3, which is erosion and regarding specifically ice. 10 11 And then I didn't -- what was the study 7? 12 Okay. So Study 3. 13 Go ahead, Andy. MR. RAGONESE: Well, yeah. Maybe I can help 14 with this. 15 So generally speaking, we look at Studies 1, 2, 16 17 and 3 as one big study because they relate in the final 18 report on one or three or whatever it is, they're all going 19 to bring in elements together. I'm not -- I can't say I'm totally familiar with the distinctions between what the 20 21 issue was at FirstLight. 22 But we do have transects proposed and we have a monitoring schedule that goes into 2015 as well. It's a 23 24 two-year monitoring. So we have every intention of bringing ice into the discussion from day one. And it hasn't changed 25

1 one bit. Not just below Vernon, but anywhere. 2 So I think we're covered. I don't know if 3 there's any element that wasn't already, you know, 4 incorporated in one or all three of these studies that are 5 associated with, you know, ice mechanics and effects that are associated with erosion. So I don't think it was 6 7 absent. 8 We did not select transects on the basis of 9 ice. We didn't necessarily select the transects that we provided you guys with this fall on the basis of active 10 11 erosion, necessarily. We have a broad sample of different 12 kinds of conditions that we want to monitor. And that's 13 what we proposed. 14 MR. HOGAN: What's the -- I'm sorry, go ahead. MR. RAGONESE: The transects are identified in 15 one -- isn't that identified in one? 16 17 UNIDENTIFIED PARTICIPANT: Two. 18 MR. RAGONESE: Two. I'm sorry. 19 MR. HOGAN: No, the duration of three, Study 20 Plan three, is that a --21 MR. RAGONESE: I think they're all go until 22 2015 --23 MR. HOGAN: Two years. 24 MR. RAGONESE: -- in our minds, you know. 25 MR. HOGAN: Two years.

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1
                     MR. RAGONESE: Yeah.
 2
                     MR. HOGAN: Okay.
 3
                     Andy, does that --
 4
                     MR. RAGONESE: I mean we're going to get them
        with historical documentation earlier than that. But it
 5
 6
        won't really be incorporated into a report.
 7
                     MR. HOGAN: No, my question was just more tied
 8
        to the VY closure and when was the study being conducted.
 9
                     So, Andy, it sounds like it's being conducted
        in '14 and '15. Does that satisfy the concern?
10
11
                     MR. FISK: Yes, sir.
12
                     MR. HOGAN:
                                 Okay.
13
                     And then you had another one?
                     MR. FISK: And again, Andy Fisk, Connecticut
14
15
        River Watershed Council.
                     Bringing it back around -- Mary, can you hear
16
17
        me?
             Is it picking up on the phone?
                     MS. MC CANN: Most of it; not all of it.
18
19
                     MR. FISK:
                                Stand up.
                     Apologies for bringing it back around to some
20
21
        of the earlier conversation. It's really a question and it
22
        relates to my admittedly unfamiliarity with critical
        conditions on the river.
23
24
                     So seconding John's observation about looking
25
        for flexibility in the water quality monitoring, so
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deferring it, as we've said, makes sense; it has to do with the question of stations above VY that TransCanada would be monitoring for water quality. So the question relates to there's an opportunity in having an additional year, as well as a detriment.

I'm wondering how likely are you to hit 7q10 or critical conditions, and is there an opportunity to stay flexible for stations above the influence of VY to be monitored if critical conditions show up in 2014 and are likely not to show up in '15, because, again, any time you have a window and you're looking for critical conditions at 7q10, sometimes you'll get them, sometimes you won't.

So will the monitoring have an opportunity to capture a condition above VY in those years -- in the first year that would otherwise be delayed? And that's just a question whether it makes sense to include that type of flexibility. I'm not conversant enough with how often you're going to hit 7q10 or critical flow conditions.

MR. RAGONESE: Actually, I may leave that forKatie because I think we're probably on the same page.

It goes back to I guess what the goal is. If we wanted to measure water quality at a particular outflow or something that was very specific and unique. But we're really talking about, by doing all this NEPA analysis, we're talking about cumulative effects. And we need the same

1 conditions going on to be able to make the parallels. 2 We have water quality data that we have collected. We think it's also appropriate -- and it's in 3 4 the record. And we have done monitoring at Vernon, above 5 and below Vernon as well with -- as associated with our 6 upgrade at Vernon. And that was more along your lines. We 7 weren't allowed to do that until we got to the worst 8 conditions, to do exactly what you're asking for. And 9 that's in the record as well. 10 So I think our water quality study, though, 11 that we've designed here is really trying to look at the 12 same conditions in the river. And so we're not terribly --13 I don't know -- amenable to splitting and having a lot of flexibility in terms of when we do the study in certain 14 places and then do the other. It doesn't meet our goals. 15 But I know that -- you may have the same 16 17 perspective or not; I'm not sure. 18 MS. KENNEDY: This is Katie Kennedy, the Nature 19 Conservancy. I just want to make sure I understood what Andy 20 21 was saying. 22 Are you saying that you're wanting to ensure that we don't reach critical conditions in 2014 --23 24 MR. FISK: No. 25 MS. KENNEDY: -- or -- Okay.

1 MR. FISK: The observation is here your 2 monitoring strategy is considering critical conditions. And 3 so you may get them; you may not. And so now we actually 4 have a two-year window with an opportunity to hit critical conditions in some of the stations. 5 6 And I recognize it makes the sampling strategy 7 a little less coherent if you split. But the question is can you -- I mean if -- you may have under a one-year window 8 no critical conditions and you don't hit those. And that's 9 10 where my lack of detailed understanding of the likelihood of missing critical conditions in a one-year monitoring window. 11 12 Now we have two. So could we at least get half the baby or have more opportunity to at least get half the 13 baby for those stations above the influence of VY. 14 15 MS. KENNEDY: And you wouldn't want to split 16 the data because then you can't compare it. So you want to 17 make sure you have one full data set; otherwise you're 18 looking at apples and oranges. 19 And then the other thing is that you don't have 20 two years -- right? -- because the study just proposes a 21 one-year study. So unless we change the fundamental study 22 all together, it is just a one-year study, I think, if that's what I'm understanding. 23 24 So we really can't split it unless we start from scratch. 25

Is that kind of right? 1 2 MR. RAGONESE: Well, it's a one-year study. 3 MS. KENNEDY: Right. 4 MR. RAGONESE: You would have to start from 5 some level of scratch -- okay? And then we don't have two 6 years because we're postponing one in order to keep the same 7 conditions in the river that we're monitoring and basing a 8 study on that the effects that our projects have on water 9 quality. 10 That's what our purpose is. It's not try to 11 capture 7q10 because it's very hard to capture 7q10 in the 12 Connecticut River. It doesn't happen very often -- very, 13 very often. 14 MR. HOGAN: Let me get ask a question. 15 Andy -- Let me ask a question, please. 16 You know, you keep saying now we have an 17 opportunity for two years. The Commission's ILP provides 18 for two years of studies. We've gone through study plan 19 development phases, you know, over the last year that, you know, the study plan was developed for one year. 20 21 I'm curious, is your two-year request now tied 22 to Vermont Yankee closure? MR. FISK: 23 I'm not asking for two years of 24 What I'm just saying is within now what is a two-year data. window, if there is --25

1 MR. HOGAN: The two-year window has always 2 existed until we got the revised study plans. So I'm wondering why the issue wasn't brought up, you know, nine 3 4 months ago in the development of the study plans. Unless 5 it's new because of the Vermont Yankee. I'm trying to keep the meeting on track for --6 7 MR. FISK: Yes. 8 I'm reflecting on the fact that the water quality monitoring study was changed in respect to VY's 9 closure announcement. And so it's asking if there is an 10 11 opportunity to allow for flexibility to capture 7q10 12 conditions that might otherwise be missed because there are 13 now two windows to do that. It means separating the study -- and I understand that introduces some analytical 14 15 difficulties to it. 16 And so it's a -- and again, I'm not the expert. 17 But I do know it's difficult to capture 7q10. So it would 18 be great if 7q10 showed up, and we missed the opportunity 19 for half the stations above the influence of VY, well, I think that you can account for that in your analysis. But 20 21 again, that's not my field. 22 MS. GRADER: I believe -- Isn't the way the study plan is worded that -- so it's a one-year study. But 23 24 if in that study year it was a wet year, then that you would -- the study would be repeated --25

1 -- in that additional study year. And 2 hopefully that would be a drier year. But --3 UNIDENTIFIED PARTICIPANT: Or vice-versa. MS. GRADER: But I don't -- I mean the chances 4 5 of catching 7q10 type, you know, probably wouldn't even 6 happen in a two-year study window. But the intent is not to 7 evaluate data that is --8 MS. KENNEDY: Anomalous, right. MS. GRADER: Yeah, anomalous. And I can't 9 remember what the specific -- It was does it have to within 10 11 the 27th to 75th percentile or what the exact wording was. 12 But I think that's the case, right? 13 MS. GRADER: So there would still be that opportunity to collect data --14 15 MR. RAGONESE: The post-license operation --MS. GRADER: -- that's not representative 16 17 eventually. But I don't think it's meant to capture those 18 7q10 type of things that you're hoping to catch. 19 MR. FISK: So I'd just like to frame my 20 question so I understand that. So by moving the study forward -- because again 21 22 part of the conversation we've had today is, well, all right, moving forward we're bumping up against some other 23 24 internal deadlines. So do you still have two-year windows 25 to be able to capture a range of conditions by moving the

water quality study forward in time one year? 1 2 You still have that two-year window in order to 3 capture some anomalous --4 MR. HOGAN: I think what I've said is, you 5 know, the Commission is interested in quality data to inform 6 its environmental analysis needs. If in 2015, because we've 7 shifted the schedule or because we shift the schedule for, 8 you know, limitation of the study in 2015, if there are anomalous conditions in 2015, our -- just because we're up 9 10 against process schedules and license application filing 11 deadlines is not a reason for us not to collect the data 12 that we need to do our analysis. So, you know, 2016 is on 13 the table; 2017 may be on the table. I'm just saying, you know, the data drives the 14 15 process first and our schedules come second. So just to -- I don't want to drive 16 MR. FISK: this on forever and ever. So let me flip it back. 17 18 If in 2014 it appears to be that we could see 19 7q10 conditions -- which I think is interesting to be able to look for - is there an opportunity to capture those at 20 21 stations not subject to the influence of VY? 22 MR. HOGAN: If we were to capture 7q10 conditions, that would be justification for doing another 23 24 year of study. 25 MS. KENNEDY: So -- This is Katie Kennedy.

1 So the purpose of the study is not to have 2 interesting information. I mean you've got to write that off at the beginning that the point is not -- this is not 3 4 just for the sake of science. Otherwise I think you all 5 would be doing all these studies in two years if our purpose 6 was to get as much information as we could because everybody would like to know what the difference is before and after 7 8 VY. But that's not -- unfortunately, from a 9 scientific point of view, that's not the purpose of these 10 11 studies. So we're not looking for interesting conditions. 12 We're looking for normal conditions, I think. MR. HOGAN: Andy, I will say --13 14 MR. FISK: But the study plans reference 7q10. 15 And I'm not looking for -- to analyze the effect of VY. What I'm doing is trying to figure out, if we 16 17 get an appropriate condition of the river that informs the 18 water quality monitoring strategy in 2014, can we take 19 advantage of that? Or is the difficulty in the study design such that splitting apart the stations, grabbing data about 20 the river at stations above VY, if that's going to just do 21 22 too much violence to the study, that's fine. 23 MR. HOGAN: I think part of the problem is 24 you're saying, 'If we get conditions in 2014.' Those decisions need to be made -- if we were going to monitor for 25

1 2014, we'd have to be monitoring now and awaiting to 2 determine whether those conditions are going to represent themselves to the deployment of the equipment to collect the 3 4 water quality. You probably wouldn't capture anything. 5 So I guess at this point what I'm saying, Andy, is it you want to file a letter with the Commission and ask 6 7 for this modification that it be done in 2014 and 2015, or 8 if that's your recommendation on the record, you know, we'll take that back and consider it. But I don't think you're 9 10 going to get agreement from TransCanada. 11 I'm not going to tell you right now, 'yeah, 12 that's a great idea.' I mean we're looking at what the 13 study plan was. Does it make sense to move it or not as a result of the VY decommissioning. 14 15 Our record is always open. And, you know, if you feel strongly that you'd like to see the data collected 16 17 in both years because of the VY decommissioning, then, you 18 know --19 MR. FISK: Okay. MR. HOGAN: -- I believe - - . 20 21 John. 22 MR. BENNETT: John --23 MR. HOGAN: Hold on. We're going to get you a 24 mike. John Bennett with Windham 25 MR. BENNETT:

1 Regional Commission.

2 I actually wanted to just return briefly to the first point Andy raised about the ice and --3 4 MR. DEAN: Excuse me. I can't hear any of this 5 conversation. 6 MR. HOGAN: All right. 7 Come on up, John. 8 MR. BENNETT: I just wanted to return to the 9 issue that Andy raised first about the ice. And John 10 responded that they had contemplated addressing it in 11 studies one, two and three. But I don't see anything in the 12 methodology there specifying it. 13 And we're not looking to bring it up anyplace else except for Vernon pool and downstream so it's not a 14 15 huge tweak to anything that you're doing. But there isn't any methodology that I saw in the study proposals to deal 16 17 with the ice. 18 MR. RAGONESE: I guess what I was trying to say 19 is that it's not specified to deal with ice caused by Vermont Yankee because - - whatever -- The absence of having 20 21 VY is an effect of VY, in my opinion. But we have erosion 22 studies that's going 100-and-some-odd miles upstream on both 23 shorelines. And there is ice up there. So it's not -- we're not limiting it to the 24 change that's occurring at VY. We're saying our study will 25

1 inevitably be looking at ice. We're not -- I'm not 2 interested in understanding what the changes caused by VY 3 are; I'm just interested in looking at the cause or the effect that ice has. 4 5 So that --MR. HOGAN: 6 MR. RAGONESE: And that's inherently one 7 element of many --8 MR. HOGAN: And the methodology above VY is the 9 same as being applied below VY. MR. BENNETT: And I would just say that some of 10 11 us are interested in the changes that are happening from VY and downstream of it as a result of the change in 12 13 conditions. And trying to coordinate what you may or may not be doing or what FirstLight may or may not be doing with 14 15 ice seems to be a relevant concern. How might we try to advance this interest? A 16 17 letter to you? 18 MR. HOGAN: Well, I think, John, we're not 19 interested in the change either. We're interested in capturing the new baseline. And that's the whole intent of 20 these meetings is to identify when is it appropriate to 21 22 initiate the monitoring of whatever is to be monitored to capture the new baseline as a result of Vermont Yankee's 23 24 decommissioning. 25 For TransCanada's studies for erosion, you

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know, the geographic scope is from just below Vernon dam up 2 through the Wilder impoundment. Clearly upstream of Vermont 3 Yankee there's ice on the reservoirs and their erosion 4 studies will capture eroding conditions there. And they're 5 applying the same methodology downstream. So I think the idea is that it's already 6 7 encompassed. So I'm not sure that to capture that new 8 baseline condition there needs to be a modification to that 9 study. We'll take a look at it and consider it, but I'm not interested in capturing what was it before and what is it 10 11 after. I want to know what it is going to be, you know, to 12 the extent that we can, you know, moving into the future, 13 what will that baseline condition be. Okay? 14 MR. BENNETT: I just didn't see anything in the 15 study proposal. And ice is -- and make sure that 16 MR. HOGAN: 17 we're looking at it appropriately. 18 Okay. Any other questions or comments or 19 studies? Or did we not identify all the studies today that someone thinks should be addressed? 20 21 (No response.) 22 MR. HOGAN: Okay. 23 With that, John, do you want to give a summary 24 of...

> Starting with Study 6, MR. DEVINE: Okay.

1 Water Quality Monitoring and Continuous Temperature 2 Monitoring, the recommendation there was to delay the study; 3 no modifications. And TransCanada felt that there might be 4 potential change in sampling method at the Vernon intake. 5 And I think it was generally agreed to, but TransCanada will 6 make a filing including some record of consultation to 7 address any changes that they suggest in number 6, Study 6. 8 MR. HOGAN: All agree? 9 (No response.) 10 MR. DEVINE: All right. Seven, Aquatic Habitat Mapping. Much of that 11 12 is already done. It's ongoing. No delay suggested, so no 13 schedule change. Study 8, Channel Morphology and Benthic Habitat 14 15 Study. No change in schedule; proceed in 2014. Study 9, Instream Flow Study, no change in 16 17 schedule. 18 10, Fish Assemblage, delay to 2015. 19 11, American Eel Survey, delay to 2015. 12, Tessellated Darter Survey, delay to 2015. 20 21 13, Tributary and Backwater Area Fish Access 22 and Habitats Study, no delay proposed, but a possible 23 amendment to study plan related to temperature -- or the temperature element of the study at Vernon site. And 24 25 TransCanada will circulate prior any suggested changes, will

circulate to stakeholders prior to filing with FERC. 1 2 MR. HOGAN: John, are you good on this piece? MR. RAGONESE: Amendments -- if there's any 3 4 changes they'll all come together as one packet. 5 I did not hear that comment. MR. DEAN: 6 MR. RAGONESE: Yeah. We're going to try to 7 provide any amendments or suggested language or whatever --8 MR. DEAN: Yes. 9 MR. RAGONESE: -- the two or three studies, 10 whatever it might be, in one package. 11 MS. WILL: Not just the temperature but the 12 water quality component of that, too. 13 MR. DEVINE: So Study 13, Tributary and 14 Backwater Area Fish Access and Habitats Study, no delay 15 proposed. So we'll proceed on the original schedule. There's a possible amendment to the study plan 16 17 related to temperature and water quality components 18 specifically related to a study at the Vernon site. And 19 TransCanada will suggest changes or look at the potential for changes and circulate any they might propose to 20 21 stakeholders prior to filing that with FERC. 22 14, Resident Fish Spawning in Impoundments Study, delayed to 2015. 23 24 Study 15, Resident Fish Spawning in Riverine Sections Study, delayed to 2015. 25

1 Study 16, Sea Lamprey Spawning Assessment, 2 delayed to 2015. 3 Study 17, Upstream Passage of Riverine Fish Species Assessment, delayed to 2015. 4 5 Study 18, American Eel Upstream Passage Assessment, agreed not to start in 2014, delayed at least to 6 7 2015. 8 TransCanada would like to consider a study 9 being done all in the 2015 year instead of 2015-2016. That would potentially result in a change in study design if the 10 11 study were to be performed in one year. TransCanada wants 12 to take some time to consider if it's possible to conduct 13 that study in one year. 14 Okay? MR. DEAN: And any amended changes would --15 Sorry, this is David Dean. 16 17 Any amended changes or timing or whatever, that would be circulated to the stakeholders in the consultation 18 19 process prior to implementation. 20 GROUP PARTICIPANTS: Yes. 21 MR. RAGONESE: Prior to filing with FERC, any 22 suggested changes. 23 (Group speaking) 24 MR. RAGONESE: I think we'll -- Yes. Yes, David. 25

Study 19, American Eel Downstream 1 MR. DEVINE: 2 Passage Assessment, delay the entire study to 2015, both the High-Z tag and the telemetry components. 3 4 Study 20, American Eel Downstream Migration 5 That's a literature study. Timing Assessment. TransCanada 6 would like to delay that to 2015 so as to have the results 7 available from other studies to incorporate into that 8 literature study. So delayed to 2015. 9 Study 21, American Shad Telemetry Study at Vernon, delayed to 2015. 10 11 Study 22, Downstream Migration of Juvenile 12 American Shad, delayed to 2015. 13 Study 23, Fish Impingement, Entrainment, and Survival Study. That's already a -- Is that already a 2015 14 study report? -- delayed to the fall of 2015. This is where 15 we got into the discussion about the ISR -- initial study 16 17 report and updated study report schedules. 18 And TransCanada and FirstLight will look at 19 potential schedules for filing of those ISRs and USRs and then coordinate between -- or with each other. And if they 20 21 are suggesting some changes to FERC, they'd file for 22 suggested changes to ISR and USR schedules. 23 MR. HOGAN: Yes. 24 MR. DEVINE: Study 24, Dwarf Wedgemussel and --25 I won't even try the Latin name -- and Co-Occurring Mussel

Study. No change to that schedule. 1 2 Study 25, Dragonfly and Damselfly Inventory and Assessment, delay to 2015. 3 4 New study, potentially: Vernon Acoustic Study, 5 which has not been -- which is a study that's before FERC. And the agencies prefer that study to be done in 2015 if it 6 7 were to be agreed to by FERC. And the suggestion is to file 8 any updated comments prior to Christmas, either for -- in 9 favor of study or not in favor of the study. I think that was it. 10 11 MS. WILL: Just to clarify, for the 12 hydroacoustic study as it's working it forward, we would 13 want it done post-NUI. 2015. The agencies would prefer 14 MR. DEVINE: 15 the study to be done in 2015 if it were to be agreed by FERC. 16 17 MR. HOGAN: Okay. So we did something a little bit different here 18 19 today than we did yesterday, where we kind of have these allowed -- for two of the three studies - - minor 20 amendments that everybody kind of agreed to that would be 21 22 circulated. The third one is a little bit more complicated probably on the American eel. 23 24 We had a similar situation with ice processes and things of that nature. 25

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1 Generally speaking, what I think may happen is, 2 you know, to the extent that there is a concurrence on how to move forward with an amendment to a study, you know, you 3 4 want to get that in and get it filed pretty quickly. And 5 it's probably not going to be an issue at all as far as 6 process-wise. 7 But if there's a lack of concurrence, I -- and I don't want to speak for, you know -- what I'm anticipating 8 is that there will probably be a comment period so that we 9 have -- to make sure that we have a full set of comments 10 regarding the concerns with the amendment or things of that 11 12 nature. So that may create a little more process for folks. But that's what I'm anticipating. I've still 13 14 got to take it back to my supervisors. But I'm just letting folks now, you know, that... 15 MR. RAGONESE: Don't look for it in your 16 17 stocking. 18 (Laughter.) 19 MR. HOGAN: So to the extent that we can -- the 20 sooner we have any amendments that you want to get and we 21 know where the issues are, where they aren't, we'll be able 22 to move more quickly on the process forward. So, you know, 23 time is helpful. I guess that I'd plan to have something 24 out in the next -- I'll say by Christmas as far as a process

moving forward. And so I'd like to have something before

1 then -- or by then. 2 It's not even Thanksgiving yet. MR. RAGONESE: Could you give me five minutes? 3 4 There was maybe one other item we wanted to bring up while 5 we're here. 6 MR. HOGAN: Okay. 7 A five minute caucus-slash-bio break. 8 (Recess.) 9 MR. HOGAN: One thing clear to everybody, and 10 then we'll go back to John regarding whatever reason it was for the caucus. 11 12 But what I plan to do is take the information 13 back to my management regarding the idea or concept of filing amended studies by Christmas with stakeholder 14 15 comments before coming out with a process moving forward. Ι may be told next week, 'No, you're going to write the 16 17 process of moving forward and issue it next week.' 18 So the hope is that we will, with the 19 information I provide them, they'll say, 'Okay, that seems reasonable.' But I can't promise you that. So -- Okay? 20 21 John. 22 MR. RAGONESE: Okay. Yeah. 23 So there was something that we had run 24 across when we were sort of pulling together early effects 25 and which study should do what. And one of the -- Let's

1 see, what study is this. 19.

2 So under Study 19 in our current -- and so what I'm -- the context of what I'm talking about here is a 3 4 potential need to revise our study plan a little more 5 relative to what we wrote down. And this is directly related to sort of baseline change of baseline conditions. 6 7 So we had anticipated using the 2012 data and the 2011 data to some extent, if it was --8 Yeah. So we're talking about Adult Shad 9 Oh. Telemetry Study. 10 11 And so we had been participating in the last 12 year or two with the USGS to monitor shad coming up the 13 Connecticut River. The same thing -- FirstLight is doing 14 the same thing. 15 We are no longer interested in using that data because of the change in baseline conditions that it was 16 17 collected under. We may still want to use the data for 18 potentially analyzing the mechanics of monitoring and the 19 fallback issues or where we might want to, you know, sample size and the placement of receivers. But we don't think 20 21 it's appropriate to rely on that information as a comparable 22 for what we're looking at to collect in our 21, unfortunately. 23 24 So right now we say things like, in our plan,

25 it is expected that once the 2012 data has been analyzed in

1 2013 and that data may contribute to existing information to indicate the timing of shad. Well, it will, but it won't 2 necessarily be valid information. 3 So we initiated the review of that data. 4 And 5 because of the concern over the data itself and the effort 6 it would take to try to look at that data and make some 7 sense of it, it's not even worth it because it's a different baseline condition. So we're suggesting we don't want to do 8 9 that. 10 MR. HOGAN: Well, will that be an amendment to the study plan you plan to file with the comments? 11 12 MR. RAGONESE: Sure. 13 MR. HOGAN: Okay. 14 Do folks have any concerns with that approach? 15 MS. GRADER: Was FirstLight, you're also -you're evaluating that same data set separately, is that ...? 16 17 MR. HOGAN: And how is FirstLight using that 18 data? I know this isn't your meeting. Are you using it to 19 MR. SULLIVAN: I think - - if you wanted to 20 21 evaluate their methods, you know, we had focused on the 22 baseline condition, you know, from our perspective. And we would look at - - . License application, but - - . 23 24 MR. HOGAN: Well, we have a similar concern. 25 FirstLight will look at how they plan to use

the data from the USGS. 1 2 So in response to the question about how will FirstLight be planning to utilize the USGS shad migration 3 4 data, telemetry data at their facilities, generally speaking 5 at it they will be looking at it for methodologies, for how that data was collected. And they will also now take into 6 7 consideration any other proposed uses of that data beyond 8 that, given the VY decommissioning and the appropriateness 9 of that data. Is that a fair assessment? 10 (Participant off mike.) 11 12 MR. HOGAN: The answer was yes. 13 So I think we've kind of covered the licensing process schedule, you know, approaches forward, the next 14 15 steps. Any questions before we convene the meeting? 16 17 (Laughter.) 18 MR. HOGAN: All right. 19 Well, thank you everybody. I appreciate all 20 the hard work and time. Have a great day. 21 UNIDENTIFIED PARTICIPANT: Enjoy the holiday. 22 MR. HOGAN: Yeah. And happy Thanksgiving. (Whereupon, at 11:45 a.m., the Vermont Yankee 23 24 Technical Meeting was adjourned.) 25

1	BEFORE THE
2	FEDERAL ENERGY REGULATORY COMMISSION
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5	x
6	IN THE MATTER OF: : Docket Number
7	TRANSCANADA HYDRO GENERATING NORTHEAST: P-1892-026
8	x
9	
10	Marlboro College Graduate School
11	28 Vernon Street
12	Brattleboro, VT 05301
13	9:10 a.m.
14	
15	Tuesday, November 26, 2013
16	
17	The above-entitled matter came on for scoping meeting,
18	pursuant to notice, at 9:10 a.m.
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PROCEEDINGS 1 MR. HOGAN: I want to thank everybody for 2 3 coming. My name is Ken Hogan with the Federal Energy 4 Regulatory Commission. I'm the project coordinator for the 5 five projects on the Connecticut Riverbank through the hydro б re-licensing. 7 I want to start this morning by having us go around the room and do introductions. I'll start back here 8 9 with Julia. 10 MS. WOOD: Good morning. Julia Wood, re-licensing counsel for FirstLight. 11 12 MR. HOWARD: John Howard, FirstLight. 13 MR. SULLIVAN: Tom Sullivan, Gomez and 14 Sullivan, counsel for FirstLight. 15 MR. WAMSER: Mark Wamser, Gomez and Sullivan. 16 MR. BENNETT: John Bennett with Windham 17 Regional Commission. 18 MS. BLAUG: Elisabeth Blaug, FERC Office of 19 General Counsel. MR. SEARS: Mike Sears, HDR, consultant for the 20 21 FERC. 22 MR. DEVINE: John Devine, HDR, consultant to 23 FERC. 24 MR. ETTEMA: Nick Ettema, FERC. 25 MR. ARNOLD: Steve Arnold, HDR, consultant for

1 FERC. 2 MS. KENNEDY: Katie Kennedy, Nature 3 Conservancy's. 4 MR. DAVID: Owen David, NHDES. 5 MR. GRIES: Gabe Gries, New Hampshire Fish and 6 Game. 7 MS. GRADER: Melissa Grader, U.S. Fish and 8 Wildlife Service. 9 MR. SPRANKLE: Ken Sprankle, U.S. Fish and 10 Wildlife Service. MR. BRUSH: Tim Brush, Normandeau Associates. 11 12 MR. SKIBNIOWSKY: Steve Skibniowsky, Entergy -Vermont Yankee and the environmental program, radioactive 13 14 effluents and environmental monitoring. 15 MS. DE WALD: Lynn DeWald, Vermont Yankee. MR. HANSON: Brian Hanson, Normandeau 16 17 Associates. 18 MR. SIMMONS: Rick Simmons, Normandeau 19 Associates. MR. TRESTED: Drew Trested, Normandeau 20 21 Associates. 22 MR. FISK: Andy Fisk, Connecticut River 23 Watershed Council. 24 MS. FISCHER: Maryalice Fischer, Normandeau 25 Associates.

1 MS. O'DEA: Erin O'Dea, in-house counsel for 2 TransCanada. 3 MR. RAGONESE: John Ragnese, TransCanada. 4 MS. GRIFFIN: Jennifer Griffin, TransCanada. 5 MR. CROCKER: Jeff Crocker, Vermont Agency б Natural Resources. 7 MS. WILL: Lael Will, Vermont Fish and Wildlife 8 Department. 9 MR. DAVIS: Eric Davis, Vermont Department of 10 Environmental Conservation. MR. HOGAN: Thank you. 11 12 We do have a court reporter here today. 13 Actually, folks on the phone, introduce 14 yourselves, please. 15 MR. DEAN: David Dean, Connecticut River Watershed Council. 16 17 UNIDENTIFIED PARTICIPANT: Rob Mitchell with 18 HDR for FERC. 19 MS. MC CANN: Mary McCann, HDR, consultant to 20 FERC. 21 MR. HOGAN: Thank you. 22 So we do have a court reporter here today. So 23 if you, when speaking, if you could please start with your 24 name, that would be great just so we can keep the record 25 straight. Everything that's said here today will be placed

1 in the Commission's record so we'll know who said what and 2 what they said. 3 And I have given him instructions that if he 4 has a hard time hearing anybody, we want -- he's got 5 permission to stop the meeting and say, 'Can you repeat б that, please?' So... 7 I have no idea where the restrooms are. 8 Outside; not in the corner. 9 So the reason we're here today is, as everybody 10 knows, you know, the Vermont Yankee Nuclear Power Plant 11 announced on August 27th that they're going to be shutting down at the end of 2015. 12 Where we are in the Commission's integrated 13 14 licensing process that creates a situation where we have a 15 changing baseline for our environmental studies. And we 16 wanted to look at and have a good understanding of what that 17 may mean for our studies and how studies may need to be 18 addressed. And that's the reason we're having the technical 19 meeting today. 20 One thing I want to point out is that this is 21 not a forum for discussion of how Entergy proposes to close 22 down the Vermont Yankee. It's a forum for discussion of 23 what that means to the river and when, and what the magnitudes are. 24 25 Now with that said, what I've -- I have invited

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1 Entergy here today to give us an overview of what that 2 shutdown is as they perceive it today, and specifically what 3 it means for the river and timing and magnitude of the 4 environmental effects. 5 So with that, I would like to turn the meeting б over to Lynn. And we'll get you a mike. 7 MS. DE WALD: I can talk loud. 8 I feel like it's largely the same crowd that 9 was here yesterday, except for maybe Gabe and Tim. 10 MR. HOGAN: And David Dean on the phone. MS. DE WALD: And David on the phone. 11 My name is Lynn DeWald. I am the 12 13 non-radiological environmental specialist at Vermont Yankee. 14 And, as Ken said, Entergy announced at the end of August 15 that it was planning to close Vermont Yankee. 16 The date has been selected as December 29th, 17 2014, at which point the discharge of water from the Connecticut -- or from the discharge structure into the 18 19 Connecticut River will be reduced by something close to 98 20 percent. The thermal discharge will be at least that and 21 maybe even more. And over time, from the time we shut down 22 until we take the spent fuel out of the spent fuel pool, it 23 will continue to go down. Beyond that we really don't have a lot of 24

details right now about the decommissioning plan or any of

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the timing of things. It's -- the 29th of December is sort of the hard and fast date for the end of operation of VY. MR. HOGAN: Lynn, I'm guessing -- I have a question. As far as the maximum discharge the plant currently has -- I believe the answer was 120,000 gallons per minute.

7 MS. DE WALD: So right now our NPDS permit 8 permits us to use up to three circulating water pumps, which 9 we have. They're not variable speed pumps so they're either 10 on or off. And each one is capable of 120,000 gallons a 11 minute, for a total of 360,000 gallons a minute.

12 In addition to that we have what's called the 13 service water system, which provides cooling to -- it's a 14 safety-related cooling system that also feeds our fire 15 protection and cools motor jackets and things like that. 16 There are four pumps, that each can pump about 3000 gallons 17 per minute.

So I think I said the total permitted discharge volume we could possibly have is 373,000 gallons a minute. When we shut down on the 29th of December next year we'll only need two service water pumps at most. So that's a total of 6000 gallons per minute; therefore the 98 percent reduction. And that 6000 gallons per minute is somewhere between 16 and 17 cfs going out.

MR. HOGAN: And so you predict that temperature

1 would also have that 98 percent reduction? 2 MS. DE WALD: Yeah, probably more than that. 3 That's something that's probably going to have to be -- it's 4 going to have to be figured out over time and maybe even 5 modeled. б MR. HOGAN: Okay. MS. DE WALD: I don't know we are going to get 7 our hands around that other than to say it's going to be a 8 9 heat reduction. 10 MR. HOGAN: Any other -- Any questions for Lynn 11 or Entergy? 12 (No response.) MR. HOGAN: Anybody on the phone? 13 14 MR. DEAN: Just asking -- maybe if Lynn could 15 move a little closer to the phone. I missed some of the message of what she said. 16 17 MR. HOGAN: Let me try to summarize, David. 18 Currently Vermont Yankee is capable of 19 discharging -- or is authorized to discharge up to 373,000 gallons per minute. Under the decommissioning, that would 20 21 be reduced to a maximum of 6000 gallons per minute, which is 22 about the equivalent of 16 to 17 cfs. And it's anticipated 23 that the thermal reduction would be at 98 percent or less as a result of the reduction in the volume of the water. 24 25 MS. DE WALD: 98 percent or more.

1 MR. HOGAN: I'm sorry, 98 percent or more 2 reduction. 3 MR. DEAN: Or more. 4 MR. HOGAN: Yeah. 5 MR. DEAN: Okay. б MS. DE WALD: Or the other thing I guess to 7 point out is that, although we're permitted to discharge 373,000 gallons a minute, we don't always do that; maybe in 8 9 the summertime under certain conditions. But it's often 10 less than that. MR. HOGAN: Any questions about that? 11 12 (No response.) MR. HOGAN: Okay. 13 14 I think that helps us, though, in understanding 15 of when the effects of the decommissioning may influence the baseline conditions of the river. And so I appreciate that. 16 17 Entergy is not planning to be here the whole So if you have any questions regarding the information 18 day. 19 or if you have any other information interests, ask now. MS. DE WALD: We're actually able to stay for a 20 21 little while this morning. So I think we're can address 22 comments. MR. HOGAN: Oh. Okay. Perfect. 23 24 So on the agenda today at this point in time I 25 have an opportunity for a stakeholder caucus, if you want to

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digest what was just heard and think about how that may
 affect the proposed studies. But the caucus is optional.
 I'll just see if folks want to move on or if they want to
 take the caucus.

5 (No response.)

MR. HOGAN: Okay. I'm hearing nothing.

7 MS. DONLAN: Move on.

8 MR. HOGAN: Okay. So we're going to move on. 9 Yesterday we got a lot of questions about so 10 how does the VY closure affect the FERC licensing process 11 and how would potential delays or modifications to studies that would result in schedule shifts affect FERC and the 12 13 integrated licensing process for the licensing of the 14 projects. Just to give you some ideas, right now we don't 15 have any specific ideas about how the projects should be --16 or how the process should be modified.

We're here at these meetings to gain information. We're looking at what the suggestions are for study schedules as a result of the VY closure. And we're going to come out with a process to move forward with those schedules and in appropriate manner to collect data that's appropriate for the licensing and documenting the predicted baseline.

That said, the Commission has several toolsavailable to itself to manipulate the schedule, let's say.

1 And that can be anything from, you know, requiring the 2 license application on time with studies that haven't been 3 completed, and then having the applications modified or 4 updated to include any study data that was pending when the 5 applications were filed.

6 Regarding the license applications, we do not 7 have the authority to adjust the deadlines for filing of the 8 applications. That's a statutory requirement and therefore 9 are required by law. But we do have the ability on four of 10 the projects, if we deem it appropriate, to, you know, 11 extend the license term as a last case -- last result. I 12 don't think anybody wants us to do that.

13 But generally speaking, from what we heard yesterday, I think we're probably going to be looking at, 14 15 depending on what we hear today, but from what we heard 16 yesterday we'll probably be looking at just requiring 17 studies on the timelines that were discussed yesterday and 18 then -- which was mostly shifting many of them into 2015 --19 some would go into 2015 and 2016 as they were two-year 20 studies -- and then dealing with that through the 21 augmentation of the license applications after they were 22 filed.

23	Any	question	s re	egar	din	g th	nat?		
24	(No	response	.)						
25	MR.	HOGAN:	And	if		One	thing	about	the

1 Commission's integrated licensing process, I believe it's 2 Section 5.21 says that the Commission will not accept the 3 license applications or issue an REA notice until all of the 4 required studies -- let me rephrase that -- all of the 5 required environmental studies that were required by the б study plan determinations have been completed. 7 So basically, once the applications were filed 8 they would be sitting in a holding pattern until the studies 9 were done. 10 Okay. Any questions? 11 (No response.) MR. HOGAN: And I hope to, once I bring back 12 13 the information from these meetings to D.C., have some type 14 of process outlined, developed with my team and management, 15 and then notify stakeholders as to what that process is 16 before Christmas. All right. 17 So on the agenda it's just a matter of going through each of the studies one by one, as outlined in the 18 19 -- well, they're attached to the agenda -- or for David out 20 here on the phone, we're going through one at a time as 21 outlined by Appendix C of the study plan determination. 22 MR. RAGONESE: Ken, remember you asked me to --23 MR. HOGAN: Oh, yes. Thank you. I asked you to remind me, too, didn't I? 24 MR. RAGONESE: Yes. 25

1 MR. HOGAN: So one thing that came up specific 2 with the Vernon project in discussions internally at FERC 3 was we were curious to know if TransCanada had any license 4 requirements currently imposed upon them because of the 5 presence of Vermont Yankee and its discharge. And if so, б now that Vermont Yankee is closing, we came up with another 7 question: 8 Does TransCanada's proposed operations for the 9 new license, are they now entertaining any changes. And 10 I've asked John to address that. 11 So go ahead, John. 12 MR. RAGONESE: No and no. 13 (Laughter.) 14 MR. RAGONESE: That's basically it. There are 15 license conditions that may have been at one point in time, you know, designed around cooling needs or whatever. But 16 17 there's no --18 MR. HOGAN: Hold on, John. 19 MR. RAGONESE: Thank you. 20 John Ragnese, TransCanada. 21 MR. HOGAN: You're still going to have to speak 22 up, though. That's just to him. 23 MR. RAGONESE: There are some license conditions associated with minimum flow. They may have been 24 25 derived in part from discussions about - - . But there's

1 nothing specific in our license requiring us to operate in 2 any manner related to Vermont Yankee. And, no, we are not 3 changing our proposed future operation at this stage in the 4 re-licensing application. 5 MR. HOGAN: Thank you, John. б MS. GRADER: Melissa Grader, Fish and Wildlife 7 Service. 8 Did you just say that you would -- you think 9 FERC will be issuing a study plan determination before 10 Christmas? MR. HOGAN: No. 11 12 MS. GRADER: Okay. MR. HOGAN: What I said is I hope to have a 13 14 clear process forward out to the stakeholders before 15 Christmas; so, you know, to give you an idea of when we plan 16 to issue the study plan determination. If there's any 17 studies that we deem are appropriate for consultation as a result of these meetings then maybe -- and revision -- we 18 19 have two approaches. 20 One, we could handle those in the study plan 21 determination or we could ask for those to be revised in 22 advance of the study plan determination files. And they can 23 be approved or approved with modification in the determination. 24 25 So we've got a lot of moving parts and we just

1 want to figure out how they best shake out and what's best 2 for the process, the stakeholders, and our information 3 needs. But we recognize that right now everything's kind of 4 in limbo. And we just want to end that limbo and get a 5 process to move forward and let you guys know what that б process is. 7 Okay? 8 MS. GRADER: Yes. Thank you. 9 MR. HOGAN: Any questions on the phone? 10 (No response.) MR. HOGAN: Okay. 11 So let's go ahead and start with going through 12 study by study. 13 14 The first one -- Oh. The first -- Well, the 15 first one that we identified is study 6, Water Quality Monitoring and Continuous Temperature Monitoring. Generally 16 17 we've got three questions. One is, you know, should the study be delayed or can it move forward as is. Should it be 18 19 modified based on methodologies or timing or whatever it may 20 be. 21 So those are the -- you know, we understand 22 there's still a need for water quality study. I think 23 clearly this is one that probably ought to be delayed. But I also don't know if it should also be modified in 24 25 methodology, if it was designed in such a way to address

1 issues that are associated with Vermont Yankee and Vernon 2 particularly. 3 MR. CROCKER: Jeff Crocker, Vermont ANR. 4 We felt that the study should be delayed until 5 2015, and that no modifications were needed to the original б study plan. 7 MR. HOGAN: Owen. 8 MR. DAVID: Owen David, NHTES. 9 We concur with Vermont that this should be 10 delayed. MR. HOGAN: Okay. 11 12 MR. DAVID: We don't see any need for any 13 modification. 14 MS. WILL: And that would be for all three 15 projects. 16 MR. HOGAN: Right. 17 And I think, you know, from the Commission's 18 perspective, unless it's really appropriate to do otherwise, we're not interested in splitting the study seasons among 19 the projects in studies. 20 21 John. 22 MR. RAGONESE: John Ragnese, TransCanada. 23 And our recommendation is to put all of the 24 three projects, water quality studies, into the second study 25 year, 2015.

1 We do think there is some need for some discussion on the methodology, and I'm going to turn it over 2 3 to Jennifer. 4 MS. GRIFFIN: Jennifer Griffin, TransCanada. 5 We have one transect in the Vernon four bay б that was set --7 MR. HOGAN: Can folks on the phone hear 8 Jennifer? 9 MR. DAVID: Yes. 10 MS. GRIFFIN: There's a transect in the four bay of Vernon that was set in particular to look at or see 11 if there is a temperature change there, or a different 12 temperature there. So we suggest that that does not need to 13 14 be included in the revised. MR. HOGAN: And would you still collect 15 temperature in the four bay? 16 17 MS. GRIFFIN: Yes. The temperature collection 18 for the Vernon impoundment would be the same as the other 19 two impoundments. 20 MR. RAGONESE: In terms of design and 21 placement? 22 MR. HOGAN: Any thoughts on that? 23 (No response.) 24 MR. HOGAN: Is it something that folks want to 25 be able to consult on and discuss further?

1 (Chorus of 'Yes.') MS. DONLAN: I'd like a five-minute conference. 2 3 MS. GRIFFIN: I can direct you to where it is. 4 This is Jennifer Griffin again. 5 I can direct you to where it is in the revised б study plan. Page 68. It's the second to last paragraph. 7 Under Methods it's the -- one, two -- third paragraph, 8 towards the end of it. 9 MR. HOGAN: And just to be clear, I'm not 10 asking for any commitments here today. You know, if it's 11 something that folks want to consult with after this meeting, you know, for a period of time, that's an option, 12 13 too. 14 MS. DONLAN: Yeah. That may be what we 15 determine after our little caucus. But we might be able to 16 give an answer. 17 MR. RAGONESE: Can you describe the difference, you know, what's unique about - - . 18 19 MS. GRIFFIN: Yeah. Okay. 20 So we say that in addition to the transects 21 that we're putting out similar to wilder - - falls, in 22 addition transects will be established at the Vernon Project 23 four bay with up to give stations, temperature, data 24 loggers, steps of one meter below the water surface, 25 mid-depth, and one meter from the bottom, to continuously

1 record data. 2 And that was April 1 through November 15. And 3 that was in there because there was a request from 4 stakeholders to look at temperature based on Vermont Yankee 5 -- or affected by Vermont Yankee. б MR. RAGONESE: How the intakes and the variable 7 operation would affect the movement of the water, the thermal plume -- I don't know what you want to call it --8 9 from where it is not. And if it's going away it doesn't 10 seem that we need that kind of resolution or - - . MR. HOGAN: Okay. 11 12 So let's go ahead and break for a ten-minute caucus and a restroom break. 13 14 (Recess.) 15 MR. HOGAN: It looks like the resource agencies have come back. 16 17 Oh, did someone join us on the phone? 18 (No response.) 19 MR. HOGAN: Okay. MS. MC CANN: Hey, Ken, this is Mary. I think 20 21 that David dropped off. 22 UNIDENTIFIED PARTICIPANT: Yeah, he did. 23 MR. HOGAN: Okay. 24 All right. So we had a caucus to confer on the 25 need for a modification to the water quality study,

1 particularly at Vernon as described just before the caucus, 2 and the agencies had asked for a caucus. 3 MR. CROCKER: Jeff Crocker. 4 We discussed it and we agree with TransCanada 5 that it can be removed, that's transect V-01, I believe. б But that just to confirm that all the other transects will 7 be monitored and that temperature will be collected from 8 April 1st to November 15th. 9 MR. HOGAN: So do folks have a preference as to 10 how to handle this? I mean, John, would you like to file a -- I'm thinking a simple way would be for TransCanada to 11 file an amendment to that study plan and then perhaps have a 12 two-week comment period on that amendment. And we can 13 14 probably wrap --MR. RAGONESE: What if before we file the study 15 plan we circulated the revision to the agencies and have 16 17 them -- I'm just trying to figure out the -- I would like to have the study determination before the end of the year, 18 19 so I'm trying to reduce your time. I know it's not going to 20 happen, you're saying. 21 MR. HOGAN: Yeah, that's --22 MR. RAGONESE: But I would like to --23 (Laughter.) MR. RAGONESE: I know. I know. 24 25 But I would like to have the most expedient way

1 we can. We're fine with filing one if that's what you want 2 us to do. 3 MR. HOGAN: Well, I'm just --4 MR. RAGONESE: I'm trying to find the most --5 the easiest way because you're saying you can't in your б study determination revisions do it without it in writing. 7 MR. HOGAN: No. We've got it in the record 8 right now. 9 MR. RAGONESE: Yeah. 10 MR. HOGAN: If you agree that that's the exact change that needs to be done as recommended by the agencies 11 right now, we may be able to just do that in the study plan 12 13 determination. 14 MR. RAGONESE: All right. We'll give you 15 something in writing. And I think we're going to -- just for our --16 17 because that's kind of the way we do things, we'll circulate it around to the agencies to make sure they're understanding 18 19 what it is. If they want to write a concurrence statement 20 or whatever -- e-mail or whatever they might want to do --21 saying, 'This is what we understood you were talking about,' 22 that's what -- we may give that a shot. 23 MR. HOGAN: I mean because there are -- like I 24 said, there are a couple of options. To me this seemed like 25 a simple fix.

1	MR. RAGONESE: Yes.
2	MR. HOGAN: This could be very fast.
3	MR. RAGONESE: Okay.
4	MR. HOGAN: You put something together
5	MR. RAGONESE: Sure.
6	MR. HOGAN: and then, you know
7	MR. RAGONESE: Two weeks is probably fine.
8	MR. HOGAN: And then, you know, we would ask
9	for, you know, comments in two weeks. And then that's all
10	set. So when we do get to the study plan determination
11	we're just either approving it or approving
12	MR. RAGONESE: Sure.
13	MR. HOGAN: with modifications.
14	MR. RAGONESE: We're going to do that.
15	MR. HOGAN: Does that work for folks?
16	The other option is, you know, we provide
17	consultation time; file a revised study plan, and then
18	comments on that, and then move forward. Or we require the
19	modification in the study plan determination. That's
20	another option.
21	MS. GRADER: This is Melissa Grader, Fish and
22	Wildlife Service.
23	From our perspective the most expedient thing
24	for the Service is either us going on the record now saying
25	we are okay with removing that particular transect from

1 Vernon impoundment; everything else in the study plan will 2 remain the same. 3 If TransCanada wants to circulate something to 4 the agencies by email, and if we could provide and the 5 Commission would accept an email response from us to the б same effect, those would be the most expedient ways for us 7 to get on record or on --8 MR. HOGAN: I'll tell you what. You provide an 9 email to TransCanada. You incorporate the emails into the 10 filing and we'll call it good. MR. RAGONESE: We'll get something to you. 11 12 MR. HOGAN: Okay. MR. RAGONESE: The thing is we just don't have 13 that number in front of us. We're assuming it's the right. 14 15 MR. HOGAN: Or - - . MR. RAGONESE: Yeah. Yeah. 16 17 MR. HOGAN: And I kind of wanted to avoid getting into methodologies. 18 19 MR. RAGONESE: Yeah. 20 MR. HOGAN: But it sounds pretty simple on this 21 one. 22 All right. As long as the emails are in your 23 filing, John, or the communications are in your filing, we'll just call it good based on the -- I want verbal yeses 24 25 from all the agencies in the room.

1 MR. DAVID: Owen David, yes. 2 MR. GRIES: Gabe Gries, yes. 3 MS. GRADER: Service, yes. Fish and Wildlife 4 Service, yes. 5 MR. SPRANKLE: Yes, Fish and Wildlife Service. б MR. CROCKER: Vermont Agency of Natural 7 Resources, yes. 8 MS. WILL: Vermont Fish and Wildlife 9 Department, yes. 10 MR. DAVIS: DEC, yes. MR. HOGAN: Okay. Moving on. 11 Aquatic habitat mapping, study 7. 12 MR. RAGONESE: And can I make one more 13 14 statement while we are on that particular one, water 15 quality? And it really -- it sort of goes to -- there was a 16 lot of sort of detailed analysis of the tasks, sub-tasks, 17 and sub-sub-tasks yesterday. 18 And even in, for example -- and a good example 19 is the water quality one. You know, even though we wouldn't be doing the field work ahead of time, we will try to have a 20 21 timely, you know, consultation with the agencies on the 22 specific, as our study plan requires. But we will engage 23 that potentially in the year before. 24 So whatever language -- however you guys craft 25 the shift, just do it in a way that gives us the flexibility

1 and not necessarily prescribes exactly when the consultation will start because we're going to have to refigure all of 2 3 our work and resources to do that. 4 MR. HOGAN: Are you --5 MR. RAGONESE: But an example in the water б quality is that we're saying delay the study until 2015. 7 But that doesn't preclude us wanting to do the consultation 8 for the sites. 9 MR. HOGAN: You're right. 10 MR. RAGONESE: And that covers all -- it sort 11 of covers all of it the same way. 12 MR. HOGAN: Yeah. 13 I think our intent is field work, you know, 14 would be applied in 2015 and we'll craft some language 15 regarding that in the study plan determination if we deem the shifting of schedule inappropriate. 16 17 MR. RAGONESE: Correct. Thanks. 18 MR. DEVINE: I have a question. John Devine 19 HDR. Has the QA/QC plan already been provided to the 20 21 agencies? That was what was contemplated in the study plan. 22 UNIDENTIFIED PARTICIPANT: It has not. 23 MR. DEVINE: Okay. So that would happen in 2014, then? 24 25 MR. RAGONESE: That's what we're saying would

1 be an example of something that could happen in 2014. 2 MR. DEVINE: Okay. 3 MR. HOGAN: Okay. 4 Study 7, Aquatic Habitat Mapping. 5 MR. RAGONESE: I'll just make a comment on that б now that it's too late but we've already done it. 7 (Laughter.) 8 MR. RAGONESE: As we said we were going to do 9 it. 10 We don't really want to do it again. So maybe I could have Rick just comment briefly on just what -- the 11 elements that we have done. And we don't -- it's not, you 12 know and water temperature-dependent, though it's -- we're 13 14 hoping very strongly that we can do it --15 MR. RAGONESE: -- on the schedule that we 16 anticipated doing it. 17 MR. SIMMONS: Yeah, we're out of the field on 18 that. We've collected the field data already in all three 19 impoundments. And right now we're actually doing the 20 polygon work back in the lab. 21 MR. RAGONESE: So we intend to share stuff 22 early in 2014 with folks on this. 23 MR. HOGAN: Folks have any concerns with that mapping already having been done, or... 24 25 (No response.)

1 MR. HOGAN: No? MS. WILL: Lael Will, Vermont Fish and 2 3 Wildlife. 4 You had the pressure transducers --5 MR. SIMMONS: Yes, we -б MS. WILL: -- that included the temperature? 7 MR. SIMMONS: Yes. Yes, yes. 8 MS. WILL: How would that be affected? I mean 9 are you going to use that data for ... 10 MR. SIMMONS: Well, we could -- the unit 11 collects it anyways and we can use it. So we have temperature data at 82 units, you know, throughout the three 12 impoundments and riverine reaches. 13 14 And also we -- we're actually pulling those 15 units the first week in December, the majority of them. So 16 we've been downloading them. You can put them up in July 17 and we moved some around and added some more. And we've been downloading them monthly. 18 19 And that's been going well with only loss of 20 maybe three. We had an embankment collapse in one storm 21 that kind of buried our unit. And we were too close to a 22 swimming hole in another one. That one disappeared. But 23 most of them are still there. So we'll pull those in December. 24 25 And we're talking to TransCanada about leaving

1 some in for the winter. We have to move them to deeper 2 water because of, ice scour and other things that are going 3 to happen there. 4 But, you know, that's been done. And all of 5 them collected temperature. б MR. HOGAN: And how many of those are 7 influenced by Vermont Yankee and the thermal pool, plume? 8 MR. SIMMONS: Well, not that many. I think we 9 have three down below Vernon, and I don't think we have any 10 in the lower pool. 11 MR. RAGONESE: I'm not sure. I'm not -- I mean 12 we can... MR. HOGAN: Well, then is there a plan to 13 collect that data also in 2015? 14 15 I'm not -- Well, sorry, I'm not real familiar 16 _ _ MR. RAGONESE: Well, I think that this -- And I 17 may be mis-speaking, so help me here. 18 19 But the primary purpose of getting those units 20 in this year was for the development of hydrologic 21 conditions. And then we responded that maybe it made sense 22 to just put thermistors in as well, which we did. And so 23 they would support a number of different things, including 24 the water quality site. 25 To the extent that we need to revisit the

1 monitoring of water temperature with these units, I don't 2 think it's a huge deal if we were to do that. I'm not sure 3 exactly how we would want to craft the revision right now. 4 MR. SIMMONS: Right. 5 MR. RAGONESE: So we may have a second one б we'll send you. But we have water quality monitoring that 7 will pick up some of this as well. I'm just not sure how 8 they're... 9 MR. SIMMONS: This wasn't designed for the 10 temperature piece of it. But we knew it was a great data 11 set to get. The units come with it; it's not like you can get a pressure transducer without the temperatures. It just 12 comes with it. So it's on; we have the data. 13 14 And in '14 we're going to pull this data and 15 share it with the agencies this winter. And there was more

16 so that we could start to sub-sample on some of the 17 tributary access pieces, some of the backwater pieces.

We have some of these pressure transducers in the main stem; we have some in backwater areas; we have some in trip models that look very shallow and we needed to get information on that.

22 MR. RAGONESE: When we get to that Study 13 23 there is a backwater area where we have one of these units 24 that's recording temperature.

25 I know it's of interest to Gabe and other

folks. We may want to repeat not necessarily I'd say the operation, but we probably would just have the same type of unit operation of in terms of - - the backwater. We know that that is an area that's likely to be affected. It's a shad spawning area.

6 But most of them are for a number of different 7 purposes than the purposes of why we placed them: hydraulic 8 modeling, access, erosion, anything.

9 MR. SIMMONS: And to find the shallow water 10 gravel areas and spawning areas all worked in with our 11 habitat mapping and our bathymetry. It's just going to help 12 us clearly see where -- areas that we have to focus on for 13 fish spawning.

And these units, when we get into those studies, will be moved to colonial nesting sites like we talked about. So the units are going to be back out there in another year, but moved to certain locations that we really need to look at where there could be impacts.

19 MR. GRIES: Gabe Gries.

I think our main concern was just if that temperature data was going to be -- you know, if it was influenced by the discharge it was going to be used to inform other studies' locations, that sort of stuff. MR. RAGONESE: Yeah. To the extent that temperature was a critical element of analysis and we were

1 monitoring pre-Yankee shutdown conditions, we would not consider that what we would want to use for anything else 2 3 because - - . 4 MR. HOGAN: So it sounds like folks are okay 5 with the study being ongoing and no reason to delay it Study б 7, Aquatic Habitat Mapping? 7 (No response.) 8 MR. HOGAN: Study 8, Channel Morphology and 9 Benthic Habitat Study. Thoughts on... 10 Okay. Hearing from Lael Will that moving forward is okay in 2014. 11 12 Any other thoughts? 13 (No response.) 14 MR. HOGAN: Okay. 15 Study 9, Instream Flow Study. MS. WILL: I think we thought that this one 16 17 could also move forward. 18 MR. HOGAN: Being general agreement in the 19 room, okay. Study 10, Fish Assemblage Study. 20 21 MS. WILL: We felt that this one needed to be 22 delayed because of the entrainment issue and also 23 distribution and abundances of fish may shift post-VY. 24 MR. HOGAN: Okay. And a delay to 2015? 25 MS. WILL: Yes.

1 MR. HOGAN: Yes? 2 MR. RAGONESE: Agree. All three projects. MR. HOGAN: Right. Yeah. I guess we don't 3 4 have an interest in ... 5 MS. WILL: Yeah. And we talked yesterday that б we want all the data to be collected in the same year. 7 So... 8 MR. HOGAN: Okay. 9 So American Eel Survey, Study 11. MS. WILL: We felt that this one should also be 10 delayed. 11 12 MR. RAGONESE: Agree. 13 MR. DEAN: Repeat that, Lael. 14 MS. WILL: We thought that this one should also be delayed. 15 16 David, did you hear that? MR. DEAN: Yes, no, I got it. Thanks. There 17 18 was just a little break-up there. 19 MR. HOGAN: Do you have thoughts on that, 20 David? MR. DEAN: Huh? 21 22 MS. WILL: Are you okay with that? 23 MR. DEAN: Yes. 24 MR. HOGAN: All right. 25 Study 12, Tessellated Darter Survey.

1 MS. GRADER: Melissa, Fish and Wildlife 2 Service. 3 We felt this should be delayed in part because 4 of the high entrainment caused by Vermont Yankee on 5 tessellated darter. б MR. HOGAN: Okay. 7 Anybody object to that? 8 (No response.) 9 MR. HOGAN: 2015 is acceptable? Okay. 10 Study 13, Tributary and Backwater Fish Access and Habitats Study. 11 12 MR. RAGONESE: This is TransCanada. This is the one we were talking about where we 13 14 had one -- we looked over the sites that we were planning to 15 monitor in our study plan. There was one in the backwater across from Vernon. 16 MR. HOGAN: Yeah. 17 18 MR. RAGONESE: So we don't think the study should be delayed; but we do think there may be an element 19 20 for the water quality monitoring of that site that we would 21 want to just continue into the following year. 22 MS. WILL: I think that's what we decided as 23 well because that was often more of a physical study, but then there was also the water quality component that we felt 24 25 should be addressed post-VY.

1 MR. HOGAN: So does that require an amendment 2 to the revised study plan? 3 MR. RAGONESE: We'll look at it and file 4 something similarly - - just to clarify what we would plan 5 to do there, yeah. б MR. HOGAN: And everybody's okay with that 7 approach? 8 (No response.) 9 MR. HOGAN: Okay. 10 So my notes on this are water quality component, potential delay; the rest is moving forward in 11 12 2014. Right? 13 (No response.) 14 UNIDENTIFIED PARTICIPANT: A delay, or was it 15 an extension? 16 UNIDENTIFIED PARTICIPANT: An extension. 17 They're just going to keep operating for an additional year. 18 MR. HOGAN: They're going to look at it. 19 MR. RAGONESE: Yeah. I mean that's the intent. 20 Whatever the temperature element would be carried into the 21 post-VY shutdown period. 22 MS. WILL: Yeah. 23 Well, just to clarify, the study plan talked about if you guys found that passage was impeded that you 24 25 would do additional water quality monitoring, not just the

1 temperature part of it but dissolved oxygen, et cetera. So 2 that would go along the same lines of revisiting that 3 post-VY. 4 MR. HOGAN: And this is at one site, not for 5 all three projects, one site at Vernon. Okay. б MR. RAGONESE: Well, the study kind of applies 7 to all areas. But the one there --8 MR. HOGAN: But the modification or amendment 9 to the study plan that you're thinking about looking at. 10 MR. RAGONESE: The one that would carry to the 11 second year here, yeah. 12 MR. HOGAN: Okay. MR. DEAN: So do I understand properly -- this 13 is David Dean -- that we'll see a rewrite of this? 14 15 MR. RAGONESE: This is John Ragnese in response 16 to David. 17 David, we're not going to rewrite the whole study plan. We're going to file what we think are the --18 19 would be the necessary amendments to the study plan. So we 20 might cite the location --21 MR. DEAN: We'll see these changes in writing. 22 MR. RAGONESE: Yes. We will circulate them in writing before we file them. 23 24 The idea behind that would be to look for 25 concurrence email back and we would try to, for the purposes

1 of consolidating the record and having the agencies provide 2 everything to FERC. That doesn't preclude you from doing it 3 on your own -- but we would try to facilitate that 4 consultation before we file the amendment with FERC so that 5 we were making sure we were filing something that you were б in agreement with. That's what we are going --7 MR. DEAN: Okay. Good. 8 MR. HOGAN: A similar approach is going to 9 occur with the water quality study, study 6, David, if you 10 weren't on the phone at that time. 11 MR. RAGONESE: And the way I'm looking at, just from the mechanics, is that there's a working group that 12 this study is associated with. That's really what our 13 14 intent was, to circulate the revisions or the draft 15 revisions to that working group. 16 Is that satisfactory? 17 MR. HOGAN: Is everybody in this room on that working group? 18 19 MR. RAGONESE: Not everybody, but some of these 20 are on that. 21 MR. HOGAN: Well, if someone's not on that 22 working group and wants to be on that working group, I 23 suggest you get your name to John today. 24 MR. RAGONESE: Or file it on the website. 25 We'll be happy to have you. But, yes, do that.

1 MR. HOGAN: Okay. 2 MS. WILL: Sign up on paper? 3 MR. DEVINE: John Devine, HDR. 4 Is there an element of Study 14 that informs 5 13? And 14 would be related to spawning, resident fish б spawning. Is that coordinated with or integrated into 13 at 7 all 8 MS. WILL: The fish assemblage study might kind 9 of inform spawning. 10 MR. HOGAN: According to our notes, John -well... 11 12 MR. RAGONESE: With respect to 13, we've identified the locations in the study plan itself. So 13 14 they've already been identified as the ones without monitor. 15 So we're not adjusting that based on.. 16 But maybe to what Lael is referring to is that 17 the fish assemblage may assist us in part identifying where 18 spawning and species distribution occurs for spawning --19 target species or whatever we might want to call that. MS. GRADER: I thought that -- Melissa, Fish 20 21 and Wildlife Service. 22 I thought that you were going to be choosing --23 a group was going to select a sub-set --24 MR. RAGONESE: Yes. 25 MS. GRADER: -- of those sites that were deemed

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    to be most influenced by project operation --
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                 MR. RAGONESE: That is --
 3
                 MS. GRADER: -- pursuant to the data that
 4
    you're collecting --
 5
                 MR. RAGONESE: That's correct.
 б
                 MS. GRADER: -- right now. So they haven't all
7
    been selected yet, right? But the whole body has, but then
8
    there's going to --
9
                 MR. RAGONESE: Yeah. Yeah, yeah.
10
                 That's what I'm talking about. We're not
    identifying the whole body for assemblages. That's fine.
11
12
    You did fine.
13
                 MR. HOGAN: Did you get your answer?
                 MR. RAGONESE: I think so.
14
15
                 MR. HOGAN: Okay.
                 So Study 14, Resident Fish Spawning in
16
17
     Impoundments.
18
                 UNIDENTIFIED PARTICIPANT: Delay.
19
                 MR. HOGAN: Delay?
                 UNIDENTIFIED PARTICIPANT: Delay.
20
21
                 MR. HOGAN: 2015?
22
                 UNIDENTIFIED PARTICIPANT: Yeah.
23
                 MR. HOGAN: Okay.
24
                 Study 15, Resident Fish Spawning in Riverine
25
    Sections of the study.
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1	UNIDENTIFIED PARTICIPANT: Delay.
2	UNIDENTIFIED PARTICIPANT: Delay.
3	MR. RAGONESE: Agreed.
4	MR. HOGAN: Study 16, Sea Lamprey Spawning
5	Assessment.
6	UNIDENTIFIED PARTICIPANT: Delay.
7	UNIDENTIFIED PARTICIPANT: Delay.
8	MR. RAGONESE: Agreed.
9	MR. HOGAN: Also 2015?
10	(No response.)
11	MR. HOGAN: 17, Upstream Passage of Riverine
12	Fish Species Assessment.
13	MS. WILL: Delay.
14	MR. RAGONESE: Agreed.
15	MR. HOGAN: Study 18, American Eel Upstream
16	Passage Assessment.
17	MS. GRADER: Oh, this is the upstream eel
18	passage assessment. Okay.
19	MR. SIMMONS: We recommend delay.
20	MR. DAVIS: I think there was some Eric
21	Davis, Vermont ANR. There were some reconnaissance efforts
22	associated with the study that we felt could go forward, but
23	the field work would be delayed until
24	MR. HOGAN: Okay.
25	Thoughts about that?

1 MR. SIMMONS: What reconnaissance? I just - -2 3 MR. DAVIS: I'll have to find it in my study --4 in the plan. 5 MR. SIMMONS: I think the first year we were б going to go out and do the searches. And then the second 7 year we would put in eel trap houses was that study plan. 8 I think the recon would probably be put off 9 also. 10 MR. DAVIS: Okay. That sounds good. MR. DEAN: I'm sorry, I didn't hear that. 11 MR. HOGAN: Rick, could you repeat for David? 12 MR. SIMMONS: Yeah. We're going to delay until 13 14 2015. 15 Vermont had mentioned that there was a reconnaissance effort as part of that study. That's true. 16 17 There was a nighttime -- nighttime surveys below the dams to see where the eels were congregating possibly and where they 18 19 might be working up. And we're saying that needs to be 20 delayed, too, because of Vernon, basically. 21 MR. SIMMONS: So the whole timeline would move 22 from 2015 to 2016. 23 MS. GRADER: We're fine with that. I think we had said that -- We had consulted with Alex Harrow and he 24 25 had felt that if there were potential temperature

1 differentials along the base of the dam then that could 2 influence upstream passage study. 3 And I'm aware that VY in the past has collected 4 data. And I believe they said that those data indicated 5 that there wasn't a temperature differential. But I don't б believe we ever saw those data. So it's probably, just to 7 be conservative, best to hold off and wait. 8 MR. HOGAN: Okay. 9 Katie. 10 MS. KENNEDY: I just had a question -- Katie Kennedy with the Nature Conservancy -- maybe asking, since I 11 think that we had discussed going forward with the eel 12 studies at one point. And the eel study at Turners is 13 14 scheduled to go forward. 15 Are there any differences that can occur on an annual basis that would bring concern in terms of doing 16 17 these studies at different times? I don't know. 18 MR. SPRANKLE: If we were going to be looking 19 at the two as a whole. I think it's more project-specific. 20 I mean I'm --21 MS. KENNEDY: Okay. So abundance isn't going 22 to matter either way. 23 MS. GRADER: I think it's within a project. MS. KENNEDY: Okay. 24 25 MS. GRADER: You know, it's going to be so

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1
     specific to the project and where the, you know --
 2
                 MS. KENNEDY: Okay.
 3
                  MS. GRADER: -- points of leakage and other
 4
    points of attraction are going to be --
 5
                  MS. KENNEDY: Okay.
 б
                  MS. GRADER: -- at a given project.
 7
                  MS. KENNEDY: Okay.
 8
                  MR. HOGAN: And the thought process on Turners
9
    moving forward was because it's all mixed at that point.
10
                  MR. SPRANKLE: Yes.
                  MS. KENNEDY: Right.
11
                  MR. HOGAN: So you don't have the temperature
12
    differentials across the face --
13
14
                 MS. KENNEDY: Right.
15
                  MR. HOGAN: -- of the dam that you may have at
16
    Turners.
17
                  MS. KENNEDY: Right.
18
                  MS. DE WALD: If I could just like throw out
    some recent modeling that we did last -- this past summer
19
20
     that suggests that the thermal pool from Vermont Yankee, by
21
    the time you get to the face of the Turners Falls dam the
22
    river is back to within a degree of ambient.
23
                  MS. GRADER: Right. So temperature is still
    elevated, but there's likely not a depth differential along
24
25
    the face of the dam, which is the primary concern for this
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1 specific study.

2 MR. RAGONESE: We ought to maybe just reserve 3 on this one.

4 I'm not totally sure we want to not try to 5 attempt to do this in one year with both those elements 6 somehow. I know that we've heard that this is what the 7 agencies would like. We would like to have had 2014 and 8 2015 to do this. But because the monitoring would then 9 extend into the fall of 2016, it becomes somewhat 10 problematic from a timing standpoint.

11 So we want to think about that a little bit. 12 And maybe there's another approach that may be workable to 13 do it all in 2015. I don't know.

14 But that's our challenge. We would like to 15 have the studies, if at all possible, done in 2015 and not 16 any extended past our application.

17 That said, it warrants potentially looking at 18 that there's another approach on this to not extend the 19 second half into 2016. So I'm throwing it out there.

20 MS. GRADER: But isn't that a difference in --21 I mean trying to do it all in one year is different than 22 saying which year you want to do it in.

23 So I think we had commented that we wanted to 24 have a full season of surveying for areas of concentrations 25 before deploying the eel passage through collections. So it

1 sounds like you're saying something different than what was 2 in the study. 3 MR. RAGONESE: That's exactly what I'm saying. 4 We may want to revisit that and see if there is a way to 5 design a study that can do everything at the end of 2015. б And I don't know if there is. But I'm just suggesting that 7 we may want to do that. 8 I would like to avoid having only one study 9 that requires 2016. 10 MR. HOGAN: All right. MR. RAGONESE: So I'm --11 MS. GRADER: Well, if one of those ways is to 12 13 14 MR. RAGONESE: I'd like to not do that here, 15 though, because I don't think they want to, put a placeholder in there. I'm not agreeing to 2016 yet. I'd 16 17 like to find an opportunity to look at this between now and when we try to file something for you on any amendments. 18 19 MR. HOGAN: Okay. And if you can't reach 20 concurrence on it, that will be very important for us to 21 know. 22 MR. RAGONESE: Yeah. No, no. 23 MR. HOGAN: So if there's no agreement on the approach we can either look at stakeholder consultation and 24 25 study plan development, you know, similar to what we've gone

1 through this summer, you know, or have a simple -- having 2 the agencies respond in comments to what needs to be done --3 meaning 2015-2016 as written. 4 But I don't think it would -- it doesn't sound 5 like we're going to resolve it here -б MR. RAGONESE: No. 7 MR. HOGAN: -- at this meeting. MS. GRADER: But I guess the only question I 8 9 have is if when you look at ways that you can try to get all 10 the information before the fall of 2016, if one of those ways is by doing phase one in 2014 --11 12 MR. RAGONESE: That's not what we're proposing. MS. GRADER: Okay. 13 14 MR. RAGONESE: We think it should go to 2015. 15 What we're trying to figure out, if maybe there is another 16 broader design that might enable us to do all the work in 17 2015. I don't know. I'm not even --18 MS. GRADER: Okay. 19 MR. RAGONESE: I'm not even trying to suggest 20 what it is except that if we were trying to do the first 21 phase to limit something in the second phase, but we chose 22 not to limit the second phase, then you potentially in 23 theory could do it all in one year. I don't know. 24 I'm just -- Just philosophically, I'm trying to 25 figure out if there's a way that we can sit down -- not in a

1 vacuum -- and look at this in a way, we would appreciate the 2 opportunity to look at it. Maybe we caucus and five minutes 3 later we say there's no way we can do that. 4 But I'm not prepared at this point to say we 5 will not do this in 2016. б MR. HOGAN: Understood. 7 So it sounds like you're going to take the opportunity in the next couple of weeks to meet with the 8 9 agencies to discuss it. And TransCanada may or may not come 10 up with an alternative plan. And if there's concerns with that alternative plan, we'll learn about it. 11 12 But even if we learn about the concerns --13 let's say there are concerns -- we may put it back on 14 stakeholders and the licensees to come in either with a 15 revised study plan or we will just address it in the determination -- Okay? -- depending on the magnitude -- what 16 17 we think, you know, if we feel that we just need some more 18 input. 19 MR. GRIES: Gabe Gries. Just a general question. And you might not 20 21 have an answer to this one. 22 So with this, I mean obviously due to timing 23 and such there are some issues with, you know, for example, trying to do a full field study in 2016 with this particular 24

25 study.

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1 What if we get to 2015 and, you know, there's 2 just horrific weather events; you know, we feel that some of 3 the studies might not be representative. It's a very weird 4 year. I mean where does that lead us towards 2016. 5 MR. HOGAN: If we can demonstrate that the б anomalous conditions influenced the study results and the 7 study results were not representative of the normal 8 condition of the system, the integrated licensing process 9 does contemplate that and suggests that that's a cause for 10 conducting the studies again. You know, that's something 11 that we would look at. 12 We certainly need to understand that, you know, just because you have high water doesn't mean it's going to 13 14 affect the terrestrial studies. 15 MR. GRIES: Sure. 16 MR. HOGAN: Let's say above the high water 17 mark. 18 You know, so I mean it's -- what was the 19 anomaly and did it have an effect on the data that was being collected, you know, or likely effect; can you make those 20 21 connections. 22 But, yeah, we recognize that as a cause for a 23 re-do. 24 MR. GRIES: And I more just bring that up 25 because of, you know, the obvious delay of, you know,

1 missing out on 2014. 2 MR. HOGAN: Yeah. 3 I will say, you know, because TransCanada 4 doesn't want to conduct studies in 2016 is not a reason not 5 to conduct studies in 2016. б (Laughter.) 7 MR. HOGAN: But I'm more than happy to look at other ways of setting the cap; if we can meet the data needs 8 9 and their desires, great. Okay? 10 MR. GRIES: Thank you. MR. HOGAN: So my notes on American eel are 11 we're going to look at it. 12 13 (Laughter.) MS. WILL: A delay and then --14 MR. DEVINE: And not to start in 2014. 15 MR. HOGAN: Right. Not in 2014. 16 17 MR. DEVINE: A delay to at least 2015. And 18 TransCanada wants to consider a study being done all in 2015 so that might require a change in study plan. But that's --19 TransCanada would like to have some time to consider that. 20 21 MR. HOGAN: I'm glad I made you note-taker. 22 (Laughter.) 23 MR. HOGAN: All right. 24 All right. Study 19, American Eel Downstream 25 Passage Assessment.

1 MS. GRADER: Delay. MR. HOGAN: 2015? 2 3 MS. GRADER: Yeah, to 2015. I think -- I guess 4 we need to have a conversation about -- so the telemetry 5 portion would be delayed and Vermont Fish and Wildlife might б -- has -- maybe we should have a discussion --7 MS. WILL: Questions. MS. GRADER: -- Yeah, a question --8 9 MS. WILL: Yeah. 10 MS. GRADER: -- about methodology on the High-Z 11 tag component and whether that also should be delayed. 12 MS. WILL: I guess my question was the methodology with the balloon tagging and the added stress of 13 14 the temperature component of it. To remove that added 15 stressor would that affect mortality or survival. 16 MS. GRADER: Relative to -- at post-tagging tag 17 acclimation in the ambient river water. Is that so that 18 they're being collected somewhere that's, you know, not influenced by VY discharge? Them getting held in heated 19 water, could that then affect something that, you know, 20 21 would influence the results of a turbine survival study? 22 MS. WILL: Yeah. That was my concern. 23 MS. GRADER: I mean it seems like an obvious way to get around that is to acclimate them to 24 25 non-VY-influenced water. But I do know how feasible that

1 is. 2 MR. RAGONESE: Not acclimating them in the 3 pool? 4 MS. GRADER: Yeah, and pull those somewhere 5 off, you know, river that is in ambient -б MR. RAGONESE: And then put them through --7 MS. GRADER: Yeah --8 MR.RAGNESE: -- the same --9 MS. GRADER: Yeah. Because if you're just 10 putting them through the rapids and the --MR. RAGONESE: Yeah, but there's a --11 12 MS. GRADER: What about --MR. RAGONESE: I'm not sure how you can split 13 14 that. You either go one way or the other. 15 MS. GRADER: Well, if they're only in it for a few seconds --16 MR. RAGONESE: Well, they're not going to tell 17 us -- they're going to tell us. You're collecting them; 18 you've got to physically find them. You know, they're in 19 there for a little while. 20 21 MS. GRADER: Right. Right. After they've 22 been... But --23 MR. RAGONESE: Well, I'm just trying to 24 comment. 25 MS. GRADER: Could I ask you --

1	MR. RAGONESE: Actually, that's a good
2	question. Because I don't know what the answer would be.
3	MR. SPRANKLE: I've got a question on that.
4	It's Ken Sprankle, Fish and Wildlife Service.
5	I'm thinking that it is problematic because of
6	the tailrace question. So you could say potentially not
7	have them acclimated, but they would have to become
8	acclimated because you're going to the tailrace. And so
9	you're subjecting them
10	MR. HOGAN: That shock.
11	MR. SPRANKLE: to additional stress. So I'm
12	feeling less comfortable.
13	MR. RAGONESE: And we're fine with it all
14	getting pushed out. The only question that kind of I
15	mean I made a note that we could do it in the survival
16	component at all three but there was this numbers issue
17	that we couldn't get enough eels. So you've got to let us
18	know about that. Because if there's not enough eels to do
19	all these studies, this is the one to probably do in 2014.
20	MR. HOGAN: Tim.
21	MR. BRUSH: Tim Brush.
22	MR. RAGONESE: And let me just add: And we
23	want to do it at all three projects. Not that we think that
24	they're it's just that it's a we'd like to do that.
25	This is a very expensive study and just the set-ups and

1 the ordering and everything, we'd like to do it at all three 2 at the same time. 3 MR. BRUSH: Tim Brush with Normandeau. 4 We'd be doing that study for TransCanada. And 5 just a couple of points. I'm not advocating delay or not in б this set of comments here. 7 But it's a controlled study. So you have a set 8 of control fish that sort of account for the environmental 9 conditions, say, for the treatment variable. And we were 10 comfortable moving ahead with it if Vermont Yankee was 11 continuing to operate. 12 So we didn't see any particular risks to have an unsuccessful study at Vernon. We've done studies on 13 14 smolts there; we've done some small studies, small-scale 15 studies on juvenile shad there. So the conditions with Vermont Yankee 16 17 operating, we didn't see any particular study failure risks going -- you know, had Vermont Yankee continued to operate. 18 19 So I don't see a particular problem with it. 20 And the fact that we have a control group as part of this 21 experiment then has broken out environmental variables to a 22 degree. 23 That was my primary comment. I'll leave it at that. 24 25 MS. KENNEDY: This is Katie Kennedy with the

1 Nature Conservancy.

2 I think that a lot of these studies we could, 3 you know, go forward with them and include some element of 4 control. But from a bioenergetic standpoint we know that 5 most fish -- and I'm not an eel expert -- but most fish have б different stress levels that are different temperatures. So 7 whether or not you have a control, the mortality that occurs 8 at Vernon under the current temperature regime is going to 9 be different than it would occur under a normal temperature 10 regime.

11 MR. RAGONESE: Maybe.

MS. KENNEDY: Exactly. And that's the big -whenever you don't know, it's just possible that it's not. But if -- and I'm not an eel expert, but there are some fish that were definitely there, the potential for them to have higher mortality under different temperatures is likely. Whether or not eel would, I don't know.

18 MR. RAGONESE: We're fine with this all getting 19 fleshed out. That was our preference. It was only until 20 you said something yesterday that we thought there might be 21 a problem moving forth from a numbers issue.

22 So just let us know.

MS. GRADER: It may be an issue, although it,
you know -- FirstLight is going forward in 2014 with that.
So that alleviates some of the, you know, numbers issue.

1 I don't want to leave this. I mean I 2 understand Tim's point that if they're both being control 3 and test fish in warm water then any effects of the turbine 4 survival, you know, you could tease that out whether you've 5 controlled for the temperature effect. б I figure that with a lot of the studies, 7 though. And we're --8 MR. RAGONESE: Exactly. I just think -- We're 9 a firm believer. We need to think of this -- we want to be 10 doing these studies in the appropriate baseline condition regardless of whether or not we predict that there's a 11 problem or not. 12 MR. HOGAN: So let me ask a question. I'll 13 start with a statement. 14 15 The study plan says that the study will be 16 utilized to also assess the passage route selection of eels 17 through the facilities. Does anybody think temperature would affect passage route selection? 18 19 MS. GRADER: Well, that's why the telemetry --20 we were always wanting the telemetry portion to be delayed. 21 MR. RAGONESE: Correct. So telemetry we all 22 are on the same page. We're all on the same page with both 23 of them. It's just a matter of whether or not you are able to do the entrainment portion. 24 MS. GRADER: So everything's going to get 25

1 delayed. Right? 2 And hope we get enough eels to do the studies. 3 MR. HOGAN: Okay. 2015. 4 So Study 20, American Eel Downstream Migration 5 Timing Assessment. Influenced by temperature? б MR. RAGONESE: Okay. Let me just -- So this is 7 a sort of a --8 Well, it is. But we do not want to do the 9 report -- we don't want to complete this until after we've 10 had the other studies, eel studies in the projects. But we 11 may be able to conduct the desktop at any time going 12 forward. But we don't want to write the report absent the other studies being completed. And those are being delayed. 13 14 So it's the report element that we would... 15 So how you want to characterize this -- but this is a sort of 2014-2015 period we need to do the study. 16 17 MR. HOGAN: Okay. So this one where the 18 desktop work can move forward and we'll do -- report on the 19 progress at the ISR and file a final report --20 MR. RAGONESE: But I'm suggesting it doesn't 21 actually need to be done in 2014 either. We could do this 22 all in 2015 and avoid having to spend money on an interim 23 report. 24 MR. HOGAN: Thoughts?

25 MS. GRADER: The interim report wouldn't say a

1 whole lot, I don't think, other than a literature review 2 versus having great data which is, you know, Connecticut 3 River-specific, which is going to be informed by all these 4 studies that are getting delayed. 5 MR. DAVIS: Does the data in this report at all б depend on the Turners Falls, the data collected at Turners 7 Falls? 8 MS. GRADER: Some does, right? Wasn't the 9 hydro-acoustic portion, weren't you going to use some of 10 those data in this study? Or not? I thought I'd read that. UNIDENTIFIED PARTICIPANT: What hydro-acoustic 11 12 _ _ MR. DEAN: Yeah, it does. It says specifically 13 14 that --15 MS. GRADER: Not your hydro-acoustic. MR. DEAN: -- data collected --16 17 MR. HOGAN: David, could you say that again? 18 MR. DEAN: I'm sorry, Ken? MR. HOGAN: We didn't hear it on the phone. 19 MR. DEAN: The study says that it would be 20 21 augmented by field data collected at Cabot Station. 22 MS. GRADER: Yes. MR. HOGAN: Okay. So just go ahead and final 23 report in 2015. You got it. 24 25 MR. RAGONESE: That statement says the same

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1 thing for our data. 2 MR. HOGAN: Okay. 3 So Study 20, 2015 also? 4 (No response.) 5 MR. HOGAN: Study 21, American Shad Telemetry б Study. I think the answer to that is 2015, correct? 7 MS. WILL: Correct. MR. HOGAN: Study 22, Downstream Migration of 8 9 Juvenile American Shad. 2015? 10 11 (No response.) 12 MR. HOGAN: Study 23, Impingement, Entrainment, 13 and Survival Study. 14 MS. WILL: This study relies on data from the fish assemblage study. So does that -- it needs to be 15 delayed. I know a lot of it's lit review; so probably the 16 17 lit review part could go forward. 18 MR. HOGAN: Right. I know --MR. RAGONESE: Just for the record, this is 19 proposed for spring of 2015. So it's already proposed for 20 21 '15, I believe, because of that reason right there. 22 MS. WILL: Okay. 23 MR. HOGAN: So does that make that 2016? 24 MR. RAGONESE: No. 25 (Laughter.)

1 MR. RAGONESE: We may just do it -- We may do it at the end -- the other end of 2015 when we have the 2 3 assemblage study. 4 You know, originally we had it, so we were 5 following the fish assemblage. We can still do this because б it is a desktop lit review. We're just going to do it 7 after. So if you're going to prescribe what month we'll do 8 it in, I can give you the month. But it's a 2015 study 9 already. 10 MR. HOGAN: I am. MS. WILL: You can do it late 2015. 11 12 (Simultaneous discussion.) MR. HOGAN: Doesn't it also incorporate the - -13 14 . 15 MR. HOGAN: And that's occurring in 2015. 16 17 MR. RAGONESE: We can amend -because our study now probably does say spring. Do you want 18 19 us to amend it and say fall? 20 MR. HOGAN: Sure. 21 MR. RAGONESE: That's what I was afraid of. 22 (Laughter.) 23 MR. HOGAN: Well, no, no I mean --MR. RAGONESE: No, that's fine. That's fine. 24 25 MR. HOGAN: Well, I'm happy just to make a note

1 here to move it to the fall, a change from spring. MR. RAGONESE: We said spring because we wanted 2 3 to do it after the other one. MR. HOGAN: But this -- My recollection is --4 5 and my team will correct me if I'm wrong -- that the study б also incorporates the entrainment data from the shad and the 7 eels to verify the literature data from the EPRI studies. 8 So we've got to look at that timing, when those things are 9 occurring and reporting. That's what I was... 10 MR. CROCKER: Jeff Crocker, Vermont ANR. I think one of the shad studies is already two 11 years. So 2016 might be in play, too, as we are discussing 12 13 things. 14 MR. HOGAN: I think it's requested for two 15 years and we are debating on that. 16 MR. CROCKER: Okay. 17 MR. HOGAN: It's an item in dispute before the Commission, right? 18 19 MR. RAGONESE: Which one is? MR. HOGAN: The Study 20 -- I'm sorry, Study 20 21 19. 22 UNIDENTIFIED PARTICIPANT: Isn't it 21? 23 MR. HOGAN: My report shows for the shad telemetry studies there was a request for two years. 24 25 But I don't believe that was supported by

1 TransCanada. And that should take -- the two-year versus 2 one year is the dispute before the Commission firmly. 3 And whatever we decide it will be, it will be. 4 So we're on 23. Well, what was the result from 5 23, fish impingement? That was going to be just fall but б taking into consideration --7 MR. RAGONESE: We'll send in something to the effect that we would be doing this at the end of the --8 9 having the results of those other studies, supporting 10 studies, it will likely be in the fall or the late -- the second half of 2015. I'm not sure what month. 11 12 MR. HOGAN: Okay. I just wanted to make sure 13 that --14 (Laughter.) 15 MR. DEVINE: John Devine with HDR. 16 The USR is due on September 30th -- Oh, we 17 don't know yet, I guess, because of the -- when the USR 18 would be due because that's going to depend on when the 19 study plan determination --20 MR. HOGAN: No, I... 21 MR. DEVINE: USR -- sorry. 22 MR. HOGAN: The updated --23 MR. DEVINE: The updated study report. MR. HOGAN: Or the interim. 24 25 MR. RAGONESE: The ISR.

1 MR. DEVINE: Yeah. 2 MR. HOGAN: The first study season is the 3 updated study report. The second study season is the -- or, 4 I'm sorry, the interim study report and then the updated 5 study report. б John raises a good question. And process-wise, 7 you know, those deadlines are triggered off of the issuance 8 of the study plan determination. 9 In the past when we have had the split, which 10 is a sample size of one, the study plan determinations, the 11 interim study report and the updated study reports were due one year from -- one and two years, respectively, from the 12 first study plan determination. So September, you know, 13 14 2013. And that basically brought everything back together 15 to the original --MR. RAGONESE: It's fine with us. 16 17 MR. HOGAN: -- process plans. 18 So rather than getting a dual process moving 19 forward with, you know, study reports coming twice a year, 20 you know, we just --21 MS. Will: Or whenever the second --22 It's kind of like accounting: Last in, first 23 up. MR. HOGAN: The first one. 24 25 UNIDENTIFIED PARTICIPANT: Of September.

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MR. HOGAN: It puts it all back onto the
 original schedule for the ILP.

Do you have a preference?

MR. RAGONESE: Again, just so we're clear and understanding this as we're talking about this, the interim study report is not necessarily the report on the study results. It's an interim report on your studies that you're ---.

9 MR. HOGAN: The ISR -- the interim study report 10 is a progress report of, 'We are conducting the studies; this is what we've done. We have done them the way that we 11 are required to, ' 'We have not done them the way we were 12 required to; we had a -- made a modification or had a 13 14 variance for these reasons. As a result of that variance 15 the data that we collected was either adequate to meet the goals and objectives of the study or it was not.' 16

17 But that said, if the study has been completed 18 and the report is ready, typically the ISR would have an 19 individual study's report attached to it. And that would be 20 able to be commented on and weighed on in full.

21 MR. RAGONESE: If it wasn't provided prior.22 MR. HOGAN: Right.

And usually the USRs do have more reports because it's the second year and a lot of the one-year studies, the reports have embedded all the data has been

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1 QA/QC'd and the report has been prepared.

2 Any questions on that? 3 MR. DEVINE: Well, the point I was bringing up 4 there, too, Ken, was for that study 23 was that it was 5 originally going to be in the spring of 2015, which means it б would have been available for the updated study report. And 7 now it will be after that. So if that's the change, it would not be available for the updated study report. So 8 9 it's just a change of availability. 10 MR. HOGAN: Okay. MR. RAGONESE: I'm not sure what they will do 11 at any - - . I mean we may have a lot that will fall into 12 13 that category. 14 MR. HOGAN: And clearly for the schedules that 15 are interrelated, John, we're going to have to pay close 16 attention developing our study plan determinations to make 17 sure that we are not asking TransCanada to do something that is in conflict with other studies, and, you know, really 18 19 making sure everything flows together the way it's supposed 20 to. 21 MR. RAGONESE: Ideally -- and I don't know if 22 the Commission has the latitude -- but I would not choose

September 13th and find the right date to do these in. And

October, the end of October/first of November so that we can

that is probably at the end of the study season, like

avoid having this kind of three different dates that are not
 meshing.

3 So if it just -- you know, I don't know if you 4 have the latitude or not. But it seems to me that September 5 13th is kind of arbitrary and it kind of screws everything б up because half the -- so many of these are fall migratory 7 species that it just, you know, we can report, 'Yeah, it's 8 ongoing and we'll be done in two weeks, but we don't have 9 anything to give you.' You know, and it will be kind of 10 that kind of thing, whereas we might have more to give you if it were just a little later. 11

MR. HOGAN: FirstLight, do you have a thought on it?

MR. SULLIVAN: Well, just process wise we're real surprised when you said that they -- if I understood you correctly, you were going to hold the individual study report date and get the study report date of September of next year or September the year after. Did I understand that?

20 MR. HOGAN: Yeah. Typically it would be 21 triggered off of the original study plan determination. 22 MR. SULLIVAN: Well, actually there would be 23 two aspects of that. He said you had a sample size of one. 24 And we were just trying to remember if this session came out 25 in Conowingo. And we're trying to remember whether or not

1 it all consolidated into one --2 MR. HOGAN: All right. Let me rephrase that. 3 I know of a sample size of one. And Conowingo 4 was not it. 5 MR. SULLIVAN: It's right in -- and I'm being б on the record. It was like four years ago. MR. HOGAN: Okay. 7 8 MR. SULLIVAN: Our concern is we are 9 short-changed particularly this year on timing. All right? 10 So there were some studies that we agreed 11 yesterday were 2014 studies. So our concern is being short-changed a little bit on time this year. That means 12 that we also recognize that the initial study report is 13 14 basically kind of a progress report. 15 So I guess the take-home message for us is we need to go back and think about that a little bit and we 16 17 want to look at Conowingo and some of the other examples. 18 It may not be an issue for us at all. 19 MR. HOGAN: Yeah. MR. SULLIVAN: But we need --20 21 MR. HOGAN: And on my sample size of one it was 22 Susitna. 23 MR. SULLIVAN: Susitna. 24 MR. HOGAN: And the licensees came in and they 25 provided an updated process plan that was consistent with

1 why I said where all the future dates were triggered off of 2 the initial study plan determination. 3 So I do think we may have some flexibility here 4 if folks -- I can promise you it won't be more than a year 5 from the next determination. б MR. SULLIVAN: Okay. 7 MR. HOGAN: Okay. 8 MR. SULLIVAN: Well, that would be after our 9 license draft because you're not getting it done until... 10 MR. HOGAN: No, the next study plan 11 determination, this one pending. Anyway... MS. GRADER: I mean from the Fish and Wildlife 12 Service's perspective, I think it -- especially not so much 13 14 for the interim, but for the updated study report it seems 15 to make more sense to have it be tied to the end of appeals 16 because then -- I think for field biologists in the room, 17 ideally it would be maybe when this next study plan determination comes out, which will be in maybe January, 18 19 which is not a field season. So -- I mean that's just what's most convenient 20 21 for us. But it also makes sense to wait until the field 22 season's over. 23 MR. HOGAN: I'm going to put it on the licensees. We want to keep the schedules on track between 24 25 both -- for both sets of projects.

1 You guys coordinate a schedule for the process 2 plan, something between September 13th and the next study 3 plan determination, which will probably be in January, 4 somewhere in there. Come up with a process plan for moving 5 forward. And we'll look at it; we'll either approve it or б deny it. 7 You make good points. I just can't say. 8 For us --9 MR. RAGONESE: There's latitude. 10 MR. HOGAN: For us it's nice and neat when it's 11 triggered off of one of the study plan determination-base. I'm not saying that that's -- that doesn't necessarily mean 12 that it has to be that way. But I mean we'll look at it and 13 14 we'll try to figure it out. And, you know, it could be 15 November first, December first, January first -- well, not January first. 16 17 Actually, after Christmas for me would be much 18 better. 19 (Laughter.) MR. HOGAN: It's because I don't want to be 20 21 working at Christmas each year. 22 (Laughter.) 23 MR. RAGONESE: Tell me if I'm wrong -- I mean maybe I'm not -- maybe I don't have the right calendar in my 24 25 head. But if it's triggered on the second determination

1 then the updated study report is after we file a draft 2 license. 3 MR. HOGAN: I'd have to do all the math. 4 MR. RAGONESE: That's the challenge. 5 MR. HOGAN: Yes, it is. б MR. RAGONESE: So it's got to be prior, but 7 just more in line with when the studies are going to be completed in 2015. Otherwise it's just impossible. 8 9 MR. HOGAN: Yeah, and that's what we need to go 10 over. MR. DEVINE: The draft is December first. 11 The draft would be no later than December first of 2015. 12 MS. GRADER: What? The preliminary licensing 13 proposal? 14 15 MR. HOGAN: Yes. MR. DEVINE: Or a draft, whatever. 16 17 MR. HOGAN: But you have ninety days. 18 MS. GRADER: For the PLD. What about for the USR? What's the comment 19 20 period for those? 21 MR. HOGAN: A lot of times they come out at the 22 same time. That's 15 days for the meeting and 15 days for 23 the comments, I think. I'd have to go back to check. 24 MR. DEVINE: 45. 25 MR. HOGAN: 45?

1 MR. DEVINE: Yeah. 2 MR. HOGAN: So 45 days. 3 MS. GRADER: Anybody ever say that these ILP 4 time frames are just insane? I just want to go on record. 5 (Laughter.) б MR. HOGAN: We've never been accused of being 7 soft. 8 MR. RAGONESE: I'll cook a turkey in 2015. I 9 mean I don't do donuts, but I will do a turkey if you need to, you know, work through Thanksgiving. 10 11 (Laughter.) 12 MS. GRADER: Turkey makes people sleepy, John. MR. RAGONESE: Okay. That's great. 13 14 (Laughter.) MR. HOGAN: So there is a legitimate concern 15 associated with the new schedules and timing of the ISRs, 16 the USRs, PLP. And we'll look at that. 17 18 Julia. MS. WOOD: Ken, I would add the concern also 19 with the study reports is we'd like to avoid filing two 20 21 different sets of initial study reports and updated study 22 reports. 23 MR. HOGAN: You mean one that handles the first 24 determination and then one that handles the --25 MS. WOOD: Yes.

1 MR. HOGAN: -- the next pending. 2 We agree. And that's why I was saying, you 3 know, in the past my experience has been it's all -- it was 4 triggered with Susitna, it was all triggered off of the 5 first study plan determination. And that's what brought it б all back onto the same schedule. 7 Yeah, I know. We agree. MS. WOOD: Okay. So our proposal, we'll try to 8 9 coordinate. And we will coordinate it with TransCanada. 10 We'll address all these issues. MR. HOGAN: Okay. 11 12 Does that sound fair to folks who are going to look at the schedules, how they fall out. We'll get a 13 14 proposal from the licensees. We'll consider whether or not 15 we can live with that or not. Okay. Does anybody -- Let me see. How many do 16 17 we have left? We've got three left. 18 Anybody need a break? 19 (No response.) MR. HOGAN: Okay. 20 21 Okay. Study 24, Dwarf Wedgemussel and 22 Co-Occurring Mussel study. 23 MS. WILL: We thought that this one could move 24 forward. 25 MR. HOGAN: Yes. 2014, no change.

1 Study 25, Dragonfly and Damselfly Inventory and 2 Assessment. 3 MR. CROCKER: Jeff Crocker. 4 Based on yesterday's conversation, we feel it 5 should be delayed until 2015. б MR. HOGAN: Okay. We're getting --7 MR. RAGONESE: Agreed. 8 MR. HOGAN: -- affirmative from TransCanada 9 also. 10 All right. So the next item was kind of an error on my part in the study plan determination. It's the 11 -- We got requests for modification to TransCanada's studies 12 to incorporate -- to a number of TransCanada's movement 13 14 studies to incorporate hydro-acoustics at Vernon. I 15 inadvertently included it as a stand-alone study request, but it was really a modification to other studies. 16 What I've learned, and Lynn, you can correct me 17 if I'm wrong, is in -- Let me back up. 18 In TransCanada's study plan for Vernon there's 19 20 a proposal to acknowledge that Entergy is planning to do 21 hydro-acoustics in the Vernon four bay. 22 MR. DE WALD: Were planning, or are planning? I don't know if that's the plan. 23 24 (Laughter.) 25 MR. HOGAN: But the intent, which was not real

1 clear was that -- from our perspective was that it was 2 implied that TransCanada was going to utilize that data in 3 its study plan. Maybe that was not your intent. But there 4 was acknowledgement that that study was going to be ongoing. 5 So was that your intent or not? б MR. RAGONESE: It was not our intent. Our 7 intent, to the extent that we identified that, is suggesting that the study request was basically made to two different 8 9 parties for the same purpose, and that the purpose was more 10 a purpose for Yankee than TransCanada. MR. HOGAN: Okay. 11 MR. RAGONESE: So we did not propose it. 12 MR. HOGAN: All right. 13 14 MR. RAGONESE: And we would continue to suggest 15 that all of the study meeting language was associated with 16 the need for a more refined picture through the use of 17 hydro-acoustics for a number of migrating species because of 18 the effect or the potential effect of decisionmaking based 19 on where the thermal changes in the river were. So by 20 eliminating the root issue, we think there's even less need 21 for hydro-acoustics. We also don't think that there is 22 enough evidence that this is a proven technology and purpose 23 for that. 24 MR. HOGAN: I'm not -- Okay. I don't want to

25 get into --

1 MR. RAGONESE: So that's -- I know. But that's 2 -- No, but I'm trying -- You asked me why we didn't do this 3 and why we did it. 4 MR. HOGAN: Okay. 5 MR. RAGONESE: And those are the reasons why. б MR. HOGAN: All right. 7 Now, Lynn, my understanding is that Entergy is 8 no longer proposing to go forward with this or maybe other 9 environmental studies that they were planning to do, is that 10 --\ MS. DE WALD: That's correct. 11 MR. HOGAN: Okay. 12 So a quick question for I guess Ken. 13 14 With Vermont Yankee -- I guess two questions --15 Vermont Yankee shutdown is hydro-acoustics still an interest of the agencies? 16 17 MR. SPRANKLE: It is, as it is with FirstLight. We had questions on the timing, magnitude, duration. 18 19 Yes, with Vermont Yankee of course we were 20 interested; in the absence of Vermont Yankee that data is 21 still we feel of importance and value for our concerns for, 22 you know, evaluating project --23 MR. HOGAN: Follow-up question, because this is 24 not even what we are dealing with in the dispute.

25 Does that apply -- is 2015 more relevant or

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2014 to your request for this data?

2 MR. SPRANKLE: 2015, yes. 3 MR. HOGAN: Any questions with our last study? 4 MR. RAGONESE: I would like just a little 5 clarification on the process because questions came up б yesterday and now it's more in my basket than theirs so I 7 had to pay more attention. 8 MR. HOGAN: Well --9 MR. RAGONESE: So if a determination is made 10 that hypothetically includes hydro-acoustic technologies in studies and we disagree, what is our option in this changing 11 environment? We have no option to dispute or anything along 12 13 those lines --14 MR. HOGAN: The Commission --MR. RAGONESE: -- because of the environmental 15 change in baseline that we think was the root cause for the 16 17 hydro-acoustics since the exact same study was suggested to 18 be provided by the nuclear operator. 19 MR. HOGAN: I see. So you're wanting an 20 opportunity to augment your discussion as to why 21 hydro-acoustics continues not to be appropriate or is no 22 longer --23 MR. RAGONESE: Hypothetically, yes. 24 MR. HOGAN: File a letter. I mean, you know, 25 the record's open. I can't -- I assume the arguments are

1 the same. If they're different because of the VY closure, 2 feel free to augment the arguments as well. 3 MS. GRADER: Beyond what Ken just put on the 4 record -- I mean --5 MR. HOGAN: Well, those are the same arguments б that have already been made. I'm saying if there's a new 7 argument that's a result of the VY closure, we'll entertain 8 all the information. 9 You know, if there's more support for why now 10 it's even more important, we're happy to entertain that. 11 Support for why it's less important, we're happy to entertain it. I mean it's --12 MS. GRADER: Okay. Got it. 13 14 MR. HOGAN: -- you know -- but I want it tied 15 to Vermont Yankee; I don't want it tied to -- or just a reiteration of what's already in our record. 16 17 MS. GRADER: Right. And we'll review what we provided in the past. If we think supplementing our 18 19 comments would be beneficial, then we'll do that. 20 MR. HOGAN: All right. MR. SULLIVAN: Is there a schedule for 21 22 supplementing the plan? I heard that --23 MR. HOGAN: I would do it quickly. Like I said, I plan to -- if you can do it before Christmas, that 24 25 would be great. The study plan determination is not going

1 to go out before Christmas -- unless I'm told otherwise. 2 (Laughter.) 3 MR. HOGAN: But I would highly doubt that. And 4 what I would -- Well, like I said, before Christmas I do 5 hope to have a schedule out for moving forward. And that б moving forward may or may not include a comment period; I 7 don't know yet. 8 MR. RAGONESE: The discharge is we should 9 review what's in the record and not repeat it, but we can 10 augment what's in the record. MS. GRADER: If it's relevant to VY. 11 12 MR. RAGONESE: I'm not sure I would agree that it has to be; it's just not in the record. 13 14 Because you're not -- Are you limiting me, what 15 I can --MR. HOGAN: No. 16 17 MR. RAGONESE: Okay. That's what I thought. MR. HOGAN: No, no, no. I --18 19 MR. RAGONESE: Good. Thank you. 20 MR. HOGAN: You can file whatever you want. 21 But all I'm saying is to make your comments more efficient, 22 you don't need to refile --23 MR. RAGONESE: What we've already filed. MR. HOGAN: -- what you've already filed. 24 25 And like I said yesterday, the last study here

1 not being -- is a requested study that was not adopted. My 2 mistake was the way I incorporated it here. But it is an 3 issue that is in dispute. 4 I wanted to make sure we discussed these 5 components that maybe influence -- this could almost be a б stand-alone study. We're discussing them equally as if they 7 were proposed or not proposed. 8 It should not imply any support or non-support 9 by the Commission right now. We just want to make sure we 10 have the information so should we choose to agree with the 11 request, we have the data that we need to move forward on it in that event. So... Okay? 12 Yes, sir. 13 14 MR. FISK: Andy Fisk from the Connecticut River 15 Watershed Council. 16 I just wanted to cycle back to an issue that 17 was brought up yesterday. It's regarding ice and the 18 erosion studies. 19 MR. HOGAN: Yes. 20 MR. FISK: So I wanted to bring that forward 21 because I think there are stations TransCanada is doing 22 below Vernon that may be affected with the change in VY. So I wasn't present yesterday; David wasn't part of that. So 23 if we could just bring that back around for conversation. I 24 25 think it's Study 3.

1 And then I had another issue on 7q10 that I 2 wanted to just pose. 3 MR. HOGAN: Another issue on -- what was it? 4 MR. FISK: On 7q10, water quality monitoring. 5 MS. MC CANN: Excuse me, I could not hear any б of that conversation. 7 MR. HOGAN: Okay. 8 Mary, the request is from Andy Fisk, who wants 9 to discuss Study 3, which is erosion and regarding 10 specifically ice. And then I didn't -- what was the study 7? 11 12 Okay. So Study 3. Go ahead, Andy. 13 14 MR. RAGONESE: Well, yeah. Maybe I can help 15 with this. So generally speaking, we look at Studies 1, 2, 16 17 and 3 as one big study because they relate in the final 18 report on one or three or whatever it is, they're all going 19 to bring in elements together. I'm not -- I can't say I'm 20 totally familiar with the distinctions between what the 21 issue was at FirstLight. 22 But we do have transects proposed and we have a 23 monitoring schedule that goes into 2015 as well. It's a two-year monitoring. So we have every intention of bringing 24 25 ice into the discussion from day one. And it hasn't changed

1 one bit. Not just below Vernon, but anywhere. So I think we're covered. I don't know if 2 3 there's any element that wasn't already, you know, 4 incorporated in one or all three of these studies that are 5 associated with, you know, ice mechanics and effects that б are associated with erosion. So I don't think it was 7 absent. 8 We did not select transects on the basis of 9 ice. We didn't necessarily select the transects that we 10 provided you guys with this fall on the basis of active 11 erosion, necessarily. We have a broad sample of different kinds of conditions that we want to monitor. And that's 12 13 what we proposed. 14 MR. HOGAN: What's the -- I'm sorry, go ahead. 15 MR. RAGONESE: The transects are identified in one -- isn't that identified in one? 16 UNIDENTIFIED PARTICIPANT: Two. 17 18 MR. RAGONESE: Two. I'm sorry. MR. HOGAN: No, the duration of three, Study 19 Plan three, is that a --20 21 MR. RAGONESE: I think they're all go until 22 2015 --23 MR. HOGAN: Two years. MR. RAGONESE: -- in our minds, you know. 24 25 MR. HOGAN: Two years.

1	MR. RAGONESE: Yeah.
2	MR. HOGAN: Okay.
3	Andy, does that
4	MR. RAGONESE: I mean we're going to get them
5	with historical documentation earlier than that. But it
6	won't really be incorporated into a report.
7	MR. HOGAN: No, my question was just more tied
8	to the VY closure and when was the study being conducted.
9	So, Andy, it sounds like it's being conducted
10	in '14 and '15. Does that satisfy the concern?
11	MR. FISK: Yes, sir.
12	MR. HOGAN: Okay.
13	And then you had another one?
14	MR. FISK: And again, Andy Fisk, Connecticut
15	River Watershed Council.
16	Bringing it back around Mary, can you hear
17	me? Is it picking up on the phone?
18	MS. MC CANN: Most of it; not all of it.
19	MR. FISK: Stand up.
20	Apologies for bringing it back around to some
21	of the earlier conversation. It's really a question and it
22	relates to my admittedly unfamiliarity with critical
23	conditions on the river.
24	So seconding John's observation about looking
25	for flexibility in the water quality monitoring, so

deferring it, as we've said, makes sense; it has to do with the question of stations above VY that TransCanada would be monitoring for water quality. So the question relates to there's an opportunity in having an additional year, as well as a detriment.

I'm wondering how likely are you to hit 7q10 or critical conditions, and is there an opportunity to stay flexible for stations above the influence of VY to be monitored if critical conditions show up in 2014 and are likely not to show up in '15, because, again, any time you have a window and you're looking for critical conditions at 7q10, sometimes you'll get them, sometimes you won't.

13 So will the monitoring have an opportunity to 14 capture a condition above VY in those years -- in the first 15 year that would otherwise be delayed? And that's just a 16 question whether it makes sense to include that type of flexibility. I'm not conversant enough with how often 17 you're going to hit 7q10 or critical flow conditions. 18 19 MR. RAGONESE: Actually, I may leave that for 20 Katie because I think we're probably on the same page. 21 It goes back to I guess what the goal is. If we wanted to measure water quality at a particular outflow 22 23 or something that was very specific and unique. But we're 24 really talking about, by doing all this NEPA analysis, we're 25 talking about cumulative effects. And we need the same

1 conditions going on to be able to make the parallels. 2 We have water quality data that we have 3 collected. We think it's also appropriate -- and it's in 4 the record. And we have done monitoring at Vernon, above 5 and below Vernon as well with -- as associated with our б upgrade at Vernon. And that was more along your lines. We 7 weren't allowed to do that until we got to the worst 8 conditions, to do exactly what you're asking for. And 9 that's in the record as well. 10 So I think our water quality study, though, 11 that we've designed here is really trying to look at the same conditions in the river. And so we're not terribly --12 I don't know -- amenable to splitting and having a lot of 13 14 flexibility in terms of when we do the study in certain 15 places and then do the other. It doesn't meet our goals. 16 But I know that -- you may have the same perspective or not; I'm not sure. 17 18 MS. KENNEDY: This is Katie Kennedy, the Nature 19 Conservancy. 20 I just want to make sure I understood what Andy 21 was saying. 22 Are you saying that you're wanting to ensure that we don't reach critical conditions in 2014 $\mbox{--}$ 23 24 MR. FISK: No. 25 MS. KENNEDY: -- or -- Okay.

1 MR. FISK: The observation is here your 2 monitoring strategy is considering critical conditions. And 3 so you may get them; you may not. And so now we actually 4 have a two-year window with an opportunity to hit critical 5 conditions in some of the stations.

б And I recognize it makes the sampling strategy 7 a little less coherent if you split. But the question is 8 can you -- I mean if -- you may have under a one-year window 9 no critical conditions and you don't hit those. And that's 10 where my lack of detailed understanding of the likelihood of 11 missing critical conditions in a one-year monitoring window. Now we have two. So could we at least get half 12 13 the baby or have more opportunity to at least get half the 14 baby for those stations above the influence of VY.

MS. KENNEDY: And you wouldn't want to split the data because then you can't compare it. So you want to make sure you have one full data set; otherwise you're looking at apples and oranges.

And then the other thing is that you don't have two years -- right? -- because the study just proposes a one-year study. So unless we change the fundamental study all together, it is just a one-year study, I think, if that's what I'm understanding.

24 So we really can't split it unless we start 25 from scratch.

1 Is that kind of right? 2 MR. RAGONESE: Well, it's a one-year study. 3 MS. KENNEDY: Right. 4 MR. RAGONESE: You would have to start from 5 some level of scratch -- okay? And then we don't have two б years because we're postponing one in order to keep the same 7 conditions in the river that we're monitoring and basing a 8 study on that the effects that our projects have on water 9 quality. 10 That's what our purpose is. It's not try to capture 7q10 because it's very hard to capture 7q10 in the 11 Connecticut River. It doesn't happen very often -- very, 12 very often. 13 14 MR. HOGAN: Let me get ask a question. 15 Andy -- Let me ask a question, please. 16 You know, you keep saying now we have an 17 opportunity for two years. The Commission's ILP provides 18 for two years of studies. We've gone through study plan 19 development phases, you know, over the last year that, you 20 know, the study plan was developed for one year. 21 I'm curious, is your two-year request now tied 22 to Vermont Yankee closure? 23 MR. FISK: I'm not asking for two years of data. What I'm just saying is within now what is a two-year 24 25 window, if there is --

MR. HOGAN: The two-year window has always existed until we got the revised study plans. So I'm wondering why the issue wasn't brought up, you know, nine months ago in the development of the study plans. Unless it's new because of the Vermont Yankee. I'm trying to keep the meeting on track for --MR. FISK: Yes.

I'm reflecting on the fact that the water 8 9 quality monitoring study was changed in respect to VY's 10 closure announcement. And so it's asking if there is an opportunity to allow for flexibility to capture 7q10 11 conditions that might otherwise be missed because there are 12 now two windows to do that. It means separating the study 13 14 -- and I understand that introduces some analytical 15 difficulties to it.

And so it's a -- and again, I'm not the expert. But I do know it's difficult to capture 7q10. So it would be great if 7q10 showed up, and we missed the opportunity for half the stations above the influence of VY, well, I think that you can account for that in your analysis. But again, that's not my field.

MS. GRADER: I believe -- Isn't the way the study plan is worded that -- so it's a one-year study. But if in that study year it was a wet year, then that you would -- the study would be repeated --

1 -- in that additional study year. And 2 hopefully that would be a drier year. But --3 UNIDENTIFIED PARTICIPANT: Or vice-versa. 4 MS. GRADER: But I don't -- I mean the chances 5 of catching 7q10 type, you know, probably wouldn't even б happen in a two-year study window. But the intent is not to 7 evaluate data that is --8 MS. KENNEDY: Anomalous, right. 9 MS. GRADER: Yeah, anomalous. And I can't 10 remember what the specific -- It was does it have to within 11 the 27th to 75th percentile or what the exact wording was. But I think that's the case, right? 12 MS. GRADER: So there would still be that 13 14 opportunity to collect data --15 MR. RAGONESE: The post-license operation --16 MS. GRADER: -- that's not representative 17 eventually. But I don't think it's meant to capture those 18 7q10 type of things that you're hoping to catch. MR. FISK: So I'd just like to frame my 19 20 question so I understand that. 21 So by moving the study forward -- because again 22 part of the conversation we've had today is, well, all 23 right, moving forward we're bumping up against some other internal deadlines. So do you still have two-year windows 24 25 to be able to capture a range of conditions by moving the

1 water quality study forward in time one year?

2 You still have that two-year window in order to
3 capture some anomalous --

4 MR. HOGAN: I think what I've said is, you 5 know, the Commission is interested in quality data to inform б its environmental analysis needs. If in 2015, because we've 7 shifted the schedule or because we shift the schedule for, you know, limitation of the study in 2015, if there are 8 9 anomalous conditions in 2015, our -- just because we're up 10 against process schedules and license application filing 11 deadlines is not a reason for us not to collect the data that we need to do our analysis. So, you know, 2016 is on 12 the table; 2017 may be on the table. 13

14 I'm just saying, you know, the data drives the 15 process first and our schedules come second.

16 MR. FISK: So just to -- I don't want to drive 17 this on forever and ever. So let me flip it back.

18 If in 2014 it appears to be that we could see 19 7q10 conditions -- which I think is interesting to be able 20 to look for - is there an opportunity to capture those at 21 stations not subject to the influence of VY? 22 MR. HOGAN: If we were to capture 7q10 23 conditions, that would be justification for doing another

24 year of study.

25

MS. KENNEDY: So -- This is Katie Kennedy.

1 So the purpose of the study is not to have 2 interesting information. I mean you've got to write that 3 off at the beginning that the point is not -- this is not 4 just for the sake of science. Otherwise I think you all 5 would be doing all these studies in two years if our purpose б was to get as much information as we could because everybody 7 would like to know what the difference is before and after 8 VY.

9 But that's not -- unfortunately, from a
10 scientific point of view, that's not the purpose of these
11 studies. So we're not looking for interesting conditions.
12 We're looking for normal conditions, I think.

13 MR. HOGAN: Andy, I will say --

MR. FISK: But the study plans reference 7q10. 14 15 And I'm not looking for -- to analyze the effect of VY. 16 What I'm doing is trying to figure out, if we get an appropriate condition of the river that informs the 17 water quality monitoring strategy in 2014, can we take 18 19 advantage of that? Or is the difficulty in the study design 20 such that splitting apart the stations, grabbing data about 21 the river at stations above VY, if that's going to just do too much violence to the study, that's fine. 22

23 MR. HOGAN: I think part of the problem is
24 you're saying, 'If we get conditions in 2014.' Those
25 decisions need to be made -- if we were going to monitor for

1 2014, we'd have to be monitoring now and awaiting to 2 determine whether those conditions are going to represent 3 themselves to the deployment of the equipment to collect the 4 water quality. You probably wouldn't capture anything. 5 So I guess at this point what I'm saying, Andy, б is it you want to file a letter with the Commission and ask 7 for this modification that it be done in 2014 and 2015, or if that's your recommendation on the record, you know, we'll 8 9 take that back and consider it. But I don't think you're 10 going to get agreement from TransCanada. 11 I'm not going to tell you right now, 'yeah, that's a great idea.' I mean we're looking at what the 12 13 study plan was. Does it make sense to move it or not as a 14 result of the VY decommissioning. 15 Our record is always open. And, you know, if 16 you feel strongly that you'd like to see the data collected 17 in both years because of the VY decommissioning, then, you know --18 19 MR. FISK: Okay. 20 MR. HOGAN: -- I believe - - . 21 John. 22 MR. BENNETT: John --23 MR. HOGAN: Hold on. We're going to get you a 24 mike. 25 MR. BENNETT: John Bennett with Windham

1 Regional Commission. I actually wanted to just return briefly to the 2 3 first point Andy raised about the ice and --4 MR. DEAN: Excuse me. I can't hear any of this 5 conversation. б MR. HOGAN: All right. 7 Come on up, John. 8 MR. BENNETT: I just wanted to return to the 9 issue that Andy raised first about the ice. And John 10 responded that they had contemplated addressing it in studies one, two and three. But I don't see anything in the 11 methodology there specifying it. 12 13 And we're not looking to bring it up anyplace 14 else except for Vernon pool and downstream so it's not a 15 huge tweak to anything that you're doing. But there isn't any methodology that I saw in the study proposals to deal 16 17 with the ice. 18 MR. RAGONESE: I guess what I was trying to say 19 is that it's not specified to deal with ice caused by 20 Vermont Yankee because - - whatever -- The absence of having 21 VY is an effect of VY, in my opinion. But we have erosion 22 studies that's going 100-and-some-odd miles upstream on both 23 shorelines. And there is ice up there. 24 So it's not -- we're not limiting it to the 25 change that's occurring at VY. We're saying our study will

1 inevitably be looking at ice. We're not -- I'm not 2 interested in understanding what the changes caused by VY 3 are; I'm just interested in looking at the cause or the 4 effect that ice has. 5 MR. HOGAN: So that -б MR. RAGONESE: And that's inherently one 7 element of many --8 MR. HOGAN: And the methodology above VY is the 9 same as being applied below VY. 10 MR. BENNETT: And I would just say that some of us are interested in the changes that are happening from VY 11 and downstream of it as a result of the change in 12 13 conditions. And trying to coordinate what you may or may not be doing or what FirstLight may or may not be doing with 14 15 ice seems to be a relevant concern. 16 How might we try to advance this interest? A 17 letter to you? 18 MR. HOGAN: Well, I think, John, we're not 19 interested in the change either. We're interested in capturing the new baseline. And that's the whole intent of 20 21 these meetings is to identify when is it appropriate to 22 initiate the monitoring of whatever is to be monitored to 23 capture the new baseline as a result of Vermont Yankee's decommissioning. 24 25 For TransCanada's studies for erosion, you

1 know, the geographic scope is from just below Vernon dam up 2 through the Wilder impoundment. Clearly upstream of Vermont 3 Yankee there's ice on the reservoirs and their erosion 4 studies will capture eroding conditions there. And they're 5 applying the same methodology downstream.

б So I think the idea is that it's already 7 encompassed. So I'm not sure that to capture that new 8 baseline condition there needs to be a modification to that 9 study. We'll take a look at it and consider it, but I'm not 10 interested in capturing what was it before and what is it 11 after. I want to know what it is going to be, you know, to the extent that we can, you know, moving into the future, 12 what will that baseline condition be. Okay? 13 14 MR. BENNETT: I just didn't see anything in the 15 study proposal. MR. HOGAN: And ice is -- and make sure that 16 we're looking at it appropriately. 17 18 Okay. Any other questions or comments or 19 studies? Or did we not identify all the studies today that 20 someone thinks should be addressed? 21 (No response.) 22 MR. HOGAN: Okay. 23 With that, John, do you want to give a summary 24 of... 25 MR. DEVINE: Okay. Starting with Study 6,

1 Water Quality Monitoring and Continuous Temperature 2 Monitoring, the recommendation there was to delay the study; 3 no modifications. And TransCanada felt that there might be 4 potential change in sampling method at the Vernon intake. 5 And I think it was generally agreed to, but TransCanada will б make a filing including some record of consultation to 7 address any changes that they suggest in number 6, Study 6. 8 MR. HOGAN: All agree? 9 (No response.) 10 MR. DEVINE: All right. 11 Seven, Aquatic Habitat Mapping. Much of that is already done. It's ongoing. No delay suggested, so no 12 schedule change. 13 14 Study 8, Channel Morphology and Benthic Habitat 15 Study. No change in schedule; proceed in 2014. 16 Study 9, Instream Flow Study, no change in 17 schedule. 10, Fish Assemblage, delay to 2015. 18 19 11, American Eel Survey, delay to 2015. 20 12, Tessellated Darter Survey, delay to 2015. 21 13, Tributary and Backwater Area Fish Access 22 and Habitats Study, no delay proposed, but a possible 23 amendment to study plan related to temperature -- or the temperature element of the study at Vernon site. And 24 25 TransCanada will circulate prior any suggested changes, will

1 circulate to stakeholders prior to filing with FERC. 2 MR. HOGAN: John, are you good on this piece? 3 MR. RAGONESE: Amendments -- if there's any 4 changes they'll all come together as one packet. 5 MR. DEAN: I did not hear that comment. б MR. RAGONESE: Yeah. We're going to try to 7 provide any amendments or suggested language or whatever --8 MR. DEAN: Yes. 9 MR. RAGONESE: -- the two or three studies, 10 whatever it might be, in one package. MS. WILL: Not just the temperature but the 11 water quality component of that, too. 12 MR. DEVINE: So Study 13, Tributary and 13 Backwater Area Fish Access and Habitats Study, no delay 14 15 proposed. So we'll proceed on the original schedule. 16 There's a possible amendment to the study plan 17 related to temperature and water quality components specifically related to a study at the Vernon site. And 18 19 TransCanada will suggest changes or look at the potential 20 for changes and circulate any they might propose to 21 stakeholders prior to filing that with FERC. 22 14, Resident Fish Spawning in Impoundments Study, delayed to 2015. 23 24 Study 15, Resident Fish Spawning in Riverine 25 Sections Study, delayed to 2015.

1 Study 16, Sea Lamprey Spawning Assessment, 2 delayed to 2015. 3 Study 17, Upstream Passage of Riverine Fish 4 Species Assessment, delayed to 2015. 5 Study 18, American Eel Upstream Passage б Assessment, agreed not to start in 2014, delayed at least to 7 2015. 8 TransCanada would like to consider a study 9 being done all in the 2015 year instead of 2015-2016. That 10 would potentially result in a change in study design if the study were to be performed in one year. TransCanada wants 11 to take some time to consider if it's possible to conduct 12 that study in one year. 13 14 0kay? 15 MR. DEAN: And any amended changes would --Sorry, this is David Dean. 16 17 Any amended changes or timing or whatever, that 18 would be circulated to the stakeholders in the consultation 19 process prior to implementation. GROUP PARTICIPANTS: Yes. 20 21 MR. RAGONESE: Prior to filing with FERC, any 22 suggested changes. 23 (Group speaking) 24 MR. RAGONESE: I think we'll -- Yes. Yes, 25 David.

1 MR. DEVINE: Study 19, American Eel Downstream 2 Passage Assessment, delay the entire study to 2015, both the 3 High-Z tag and the telemetry components. 4 Study 20, American Eel Downstream Migration 5 Timing Assessment. That's a literature study. TransCanada б would like to delay that to 2015 so as to have the results 7 available from other studies to incorporate into that literature study. So delayed to 2015. 8 9 Study 21, American Shad Telemetry Study at 10 Vernon, delayed to 2015. Study 22, Downstream Migration of Juvenile 11 American Shad, delayed to 2015. 12 13 Study 23, Fish Impingement, Entrainment, and Survival Study. That's already a -- Is that already a 2015 14 15 study report? -- delayed to the fall of 2015. This is where 16 we got into the discussion about the ISR -- initial study 17 report and updated study report schedules. 18 And TransCanada and FirstLight will look at 19 potential schedules for filing of those ISRs and USRs and 20 then coordinate between -- or with each other. And if they 21 are suggesting some changes to FERC, they'd file for 22 suggested changes to ISR and USR schedules. 23 MR. HOGAN: Yes. MR. DEVINE: Study 24, Dwarf Wedgemussel and --24 25 I won't even try the Latin name -- and Co-Occurring Mussel

1 Study. No change to that schedule. 2 Study 25, Dragonfly and Damselfly Inventory and 3 Assessment, delay to 2015. 4 New study, potentially: Vernon Acoustic Study, 5 which has not been -- which is a study that's before FERC. б And the agencies prefer that study to be done in 2015 if it 7 were to be agreed to by FERC. And the suggestion is to file 8 any updated comments prior to Christmas, either for -- in 9 favor of study or not in favor of the study. 10 I think that was it. MS. WILL: Just to clarify, for the 11 hydroacoustic study as it's working it forward, we would 12 want it done post-NUI. 13 14 MR. DEVINE: 2015. The agencies would prefer 15 the study to be done in 2015 if it were to be agreed by 16 FERC. 17 MR. HOGAN: Okay. 18 So we did something a little bit different here 19 today than we did yesterday, where we kind of have these allowed -- for two of the three studies - - minor 20 21 amendments that everybody kind of agreed to that would be 22 circulated. The third one is a little bit more complicated 23 probably on the American eel. 24 We had a similar situation with ice processes 25 and things of that nature.

Generally speaking, what I think may happen is, you know, to the extent that there is a concurrence on how to move forward with an amendment to a study, you know, you want to get that in and get it filed pretty quickly. And it's probably not going to be an issue at all as far as process-wise.

7 But if there's a lack of concurrence, I -- and 8 I don't want to speak for, you know -- what I'm anticipating 9 is that there will probably be a comment period so that we 10 have -- to make sure that we have a full set of comments 11 regarding the concerns with the amendment or things of that nature. So that may create a little more process for folks. 12 13 But that's what I'm anticipating. I've still got to take it back to my supervisors. But I'm just letting 14 15 folks now, you know, that...

16 MR. RAGONESE: Don't look for it in your 17 stocking.

18 (Laughter.)

MR. HOGAN: So to the extent that we can -- the sooner we have any amendments that you want to get and we know where the issues are, where they aren't, we'll be able to move more quickly on the process forward. So, you know, time is helpful. I guess that I'd plan to have something out in the next -- I'll say by Christmas as far as a process moving forward. And so I'd like to have something before

1 then -- or by then. 2 It's not even Thanksgiving yet. 3 MR. RAGONESE: Could you give me five minutes? 4 There was maybe one other item we wanted to bring up while 5 we're here. б MR. HOGAN: Okay. 7 A five minute caucus-slash-bio break. 8 (Recess.) 9 MR. HOGAN: One thing clear to everybody, and 10 then we'll go back to John regarding whatever reason it was 11 for the caucus. 12 But what I plan to do is take the information 13 back to my management regarding the idea or concept of 14 filing amended studies by Christmas with stakeholder 15 comments before coming out with a process moving forward. I may be told next week, 'No, you're going to write the 16 17 process of moving forward and issue it next week.' 18 So the hope is that we will, with the 19 information I provide them, they'll say, 'Okay, that seems 20 reasonable.' But I can't promise you that. So -- Okay? 21 John. 22 MR. RAGONESE: Okay. 23 Yeah. So there was something that we had run across when we were sort of pulling together early effects 24 25 and which study should do what. And one of the -- Let's

see, what study is this. 19.

2 So under Study 19 in our current -- and so what 3 I'm -- the context of what I'm talking about here is a 4 potential need to revise our study plan a little more 5 relative to what we wrote down. And this is directly б related to sort of baseline change of baseline conditions. 7 So we had anticipated using the 2012 data and the 2011 data 8 to some extent, if it was --9 Oh. Yeah. So we're talking about Adult Shad

10 Telemetry Study.

And so we had been participating in the last year or two with the USGS to monitor shad coming up the Connecticut River. The same thing -- FirstLight is doing the same thing.

15 We are no longer interested in using that data because of the change in baseline conditions that it was 16 collected under. We may still want to use the data for 17 potentially analyzing the mechanics of monitoring and the 18 19 fallback issues or where we might want to, you know, sample size and the placement of receivers. But we don't think 20 21 it's appropriate to rely on that information as a comparable for what we're looking at to collect in our 21, 22 23 unfortunately.

24 So right now we say things like, in our plan, 25 it is expected that once the 2012 data has been analyzed in

1 2013 and that data may contribute to existing information to 2 indicate the timing of shad. Well, it will, but it won't 3 necessarily be valid information. 4 So we initiated the review of that data. And 5 because of the concern over the data itself and the effort б it would take to try to look at that data and make some 7 sense of it, it's not even worth it because it's a different 8 baseline condition. So we're suggesting we don't want to do 9 that. 10 MR. HOGAN: Well, will that be an amendment to 11 the study plan you plan to file with the comments? 12 MR. RAGONESE: Sure. MR. HOGAN: Okay. 13 Do folks have any concerns with that approach? 14 15 MS. GRADER: Was FirstLight, you're also -you're evaluating that same data set separately, is that ...? 16 17 MR. HOGAN: And how is FirstLight using that data? I know this isn't your meeting. Are you using it to 18 19 _ _ MR. SULLIVAN: I think - - if you wanted to 20 21 evaluate their methods, you know, we had focused on the baseline condition, you know, from our perspective. And we 22 would look at - - . License application, but - - . 23 24 MR. HOGAN: Well, we have a similar concern. 25 FirstLight will look at how they plan to use

1 the data from the USGS.

2 So in response to the question about how will 3 FirstLight be planning to utilize the USGS shad migration 4 data, telemetry data at their facilities, generally speaking 5 at it they will be looking at it for methodologies, for how б that data was collected. And they will also now take into 7 consideration any other proposed uses of that data beyond that, given the VY decommissioning and the appropriateness 8 9 of that data. 10 Is that a fair assessment? (Participant off mike.) 11 12 MR. HOGAN: The answer was yes. So I think we've kind of covered the licensing 13 process schedule, you know, approaches forward, the next 14 15 steps. 16 Any questions before we convene the meeting? 17 (Laughter.) MR. HOGAN: All right. 18 19 Well, thank you everybody. I appreciate all the hard work and time. Have a great day. 20 21 UNIDENTIFIED PARTICIPANT: Enjoy the holiday. 22 MR. HOGAN: Yeah. And happy Thanksgiving. 23 (Whereupon, at 11:45 a.m., the Vermont Yankee Technical Meeting was adjourned.) 24 25

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