CONNECTICUT SITING COUNCIL

HEARING:
PETITION NO. 1347A
TUESDAY JULY 14, 2020
AT 1:00 P.M.
VIA ZOOM MEETING/TELECONFERENCE

COUNCIL MEMBERS PRESENT:

Robert Silvestri, Presiding Officer
Robert Hannon, Designee for
Commissioner Katie Dykes of DEEP
Linda Guliuzza, Designee for
Chairman Marissa Paslick Gillett of PURA
John Morissette
Michael Harder
Melody Bachman, Esq., Executive Director
and Staff Attorney
Robert Mercier, Siting Analyst
Lisa Fontaine, Fiscal Administrative Officer

Reporter: Theresa Bergstrand, CSR #406

A P P E A R A N C E S

GREENSKIES:
Lee D. Hoffman, Esq.
Pullman & Comley, LLC
90 State House Square
Hartford, CT 06103-3702

Witnesses:
Jean-Paul La Marche, Director of Project Development, Greenskies Renewable Energy, LLC

Ryan Linares, Vice President, Business Development and Land Acquisitions, Greenskies Renewable Energy, LLC

Jeffrey Shamas, Director Environmental Services, Vanasse Hangen Brustlin, Inc.

Steve Kochis, Professional Engineer, Vanasse Hangen Brustlin, Inc.

TOWN OF WATERFORD:
Robert A. Avena, Esq.
Suisman Shapiro
75 State Street
New London, CT 06320

SAVE THE RIVER-SAVE THE HILLS:
Emily Gianquinto, Esq.
EAG Law, LLC
437 Naubuc Ave, Ste 107
Glastonbury, CT 06033

(The hearing commenced at 1:00 p.m.)

MR. SILVESTRI: Okay. This remote public hearing is called to order this Tuesday July 14th, 2020 at 1:00 p.m. My name is Robert Silvestri, member and presiding officer of the Connecticut Siting Council. I'll ask the other members of the Council to acknowledge that they are present when introduced for the benefit of these who are only on audio.

So we will start with Mr. Robert Hannon, who is the designee for Commissioner Katie Dykes of the Department of Energy and Environmental Protection. Mr. Hannon?

MR. HANNON: I am here.

MR. SILVESTRI: Thank you. Ms. Linda Guliuzza, designee for Chairman Marissa Paslick Gillett of the Public Utilities Regulatory Authority.

MS. GULIUZZA: Present. Sorry.

MR. SILVESTRI: Thank you. Mr. John Morissette.

MR. MORISSETTE: Good afternoon. Present.

MR. SILVESTRI: Thank you. And Mr. Michael Harder.

MR. HARDER: Present.

MR. SILVESTRI: Thank you. Members of the staff with us today are Ms. Melody Bachman, Executive Director and Staff Attorney.

MS. BACHMAN: Present. Thank you.

MR. SILVESTRI: Thank you. Mr. Robert Mercier, our siting analyst.

MR. MERCIER: Present.

MR. SILVESTRI: Thank you. And Ms. Lisa Fontaine, our fiscal administrative officer.

MS. FONTAINE: Present.

MR. SILVESTRI: Thank you. As we are all keenly aware, please notice that there is currently a statewide effort to prevent the spread of Coronavirus, this is why the Council is holding this remote public hearing and we ask for your patience. If you haven't done so already, I ask that everyone please mute their computer audio and/or telephone now.

This hearing is held pursuant to the provisions of title 16 of the Connecticut General Statutes and of the Uniform Administrative Procedure Act, upon a motion to reopen a petition from GRE GACRUX, LLC, which I'll refer to going forward as GRE, for the declaratory ruling for the proposed construction, maintenance and operation of a 16.78 megawatt solar photovoltaic electric generating facility indicated at 117 Oil Mill Road in Waterford, Connecticut.

On February 27, 2020, the Council, pursuant to a request filed by GRE and the provisions of Connecticut General Statutes Section 4-181(a)(b), reopened the

October 26th, 2018 and December 24th, 2018 final decisions that were rendered in this matter. The Council's legal notice of the date and time of this rescheduled remote public hearing was published in The Day on June 28th, 2020. Upon this Council's request the petitioner erected a sign at the proposed site so as to inform the public of the name of the petitioner, the type of facility, the rescheduled remote public hearing date and contact information for the Council.

As a reminder to all, off the record communication with a member of the council or a member of the Council's staff upon the merits of this petition is prohibited by law.

The parties and interveners of the proceeding are as follows; the Petitioner, GRE, its representative is Lee D. Hoffman, Esquire; the Town of Waterford as an intervener, its representative is Robert A. Avena, Esquire; and we have Save the Rivers, Save the Hills, its representative, Emily A. Gianquinto, Esquire.

We will proceed in accordance with the prepared agenda, a copy of which is available on the Council's petition 1347A web page, along with a record of this matter, the public hearing notice, instructions for public access to this remote public hearing and the Council's citizen guide to Siting Council procedures.

Interested persons may join any session of this public hearing to listen, but no comments will be received during the 1:00 p.m. evidentiary session. At the end of the evidentiary session, we will recess until 6:30 p.m. for the remote public comment session. Please be advised that any person may be removed from this remote evidentiary session or the public comment session at the discretion of the Council.

The 6:30 p.m. remote public comment session is reserved for the public to make brief statements into the record. I wish to note that the petitioner, parties and interveners, including the representatives, witnesses and members, are not allowed to participate in the public comment session. I also wish to note for those who are listening and for the benefit of your friends and neighbors who are unable to join us for the remote public comment session, that you or they may send written comment to the Council within 30 days of the date hereof, either by mail or by e-mail, and such written statements will be given the same weight as if spoken during the remote public comment session. A verbatim transcript of this remote public hearing willing be posted on the Council's petition 1347A web page and deposited with the Town Clerk's office in Waterford for the convenience of the public.

Please be advised that the Council does not issue permits for storm water management. If the proposed project is approved by the Council, the Department of Energy and Environmental Protection storm water permit is independently required. DEEP, which is the Department of Energy and Environmental Protection, could hold a public hearing on any storm water permit application.

I also wish to note that the Council will take roughly a 10 to 15 minute break at a convenient junction around 3:00 p.m. this afternoon. The Council has a number of motions to address. Actually, I have three. We will start with number one, which is on June 10th, 2020, Save the Rivers, Save the Hills submitted an additional request for party status and CEPA, C-E-P-A, intervener status and Attorney Bachman my wish to comment.

MS. BACHMAN: Thank you, Mr. Silvestri. Save the Rivers, Save the Hills requested and was granted intervener status in the original petition in 2018. Save the Rivers certainly meets the criteria for party status under General Statute Section 16-50(n), and also CEPA intervener status under General Statutes Section 22(a)-19, as an association that was formed to protect the environment, therefore staff recommends

approval.

MR. SILVESTRI: I'll ask for a motion from our council members.

MR. MORISSETTE: John Morissette for approval.

MR. SILVESTRI: Thank you, Mr. Morissette.

MR. HANNON: Bob Hannon, I'll second.

MR. SILVESTRI: Thank you, Mr. Hannon. We do have a motion and a second, and while I would normally ask the Council members if there is any discussion at an in-person hearing, I will ask one by one to avoid any communication problems or more than one person speaking at a time.

So going one-by-one, Mr. Hannon, any discussion?

MR. HANNON: No.

MR. SILVESTRI: Ms. Guliuzza, any discussion?

MS. GULIUZZA: No, thank you, Chair.

MR. SILVESTRI: Thank you. Mr. Morissette, any discussion?

MR. MORISSETTE: No discussion. Thank you.

MR. SILVESTRI: Thank you. And, Mr. Harder any discussion?

MR. HARDER: No comments.

MR. SILVESTRI: And I have none. And again, we will go one-by-one for voting purposes. We do have a motion and a second for approval for party status,

starting with Mr. Hannon. What say thee?

MR. HANNON: Approve.

MR. SILVESTRI: Ms. Guliuzza?

MS. GULIUZZA: Approve.

MR. SILVESTRI: Mr. Morissette?

MR. MORISSETTE: Approve.

MR. SILVESTRI: And Mr. Harder?

MR. HARDER: Approve.

MR. SILVESTRI: And I'll also vote for approval. So we are unanimous in granting party status and CEPA intervener status to Save the Rivers, Save the Hills. Thank you.

Item number two under motions. On June 18, 2020, Save the Rivers, Save the Hills submitted an objection to the Council's administrative notice, notice list, and Attorney Bachman may wish to comment.

MS. BACHMAN: Thank you, Mr. Silvestri. Save the Rivers objects to four items on the Council's administrative notice list. Item number 51, the recusal memoranda for former Council members Clements and Stein, because they are irrelevant to the petition.

Item number 52, objection to the inclusion of the content of petition number 1056, because other local and state agencies have issued orders related to those projects.

Item number 54, the objection to the inclusion of the content of petition number 1312.

And item number 57, an objection to the inclusion of Michael Clements' resignation letter because it is not relevant.

Section 40178 of the UAPA and Section 1650(j)28, subsection F, the regulations of state agencies, allow this Council to take administrative notice of facts, including public record and prior decisions of the Council. All of these items are public records and/or prior decisions of the Council.

With respect to items 52 and 54, these are prior decisions of the Council that were rendered on similarly situated solar facility matters, such as selection and a DEEP RFP and similar generating capacity.

With respect to items 51 and 57, this proposed solar facility has a history from 2018. These are public records and they are relevant for the following purposes; one, to allow any interested person, such as the media, to follow the history of the matter from 2018 to the future final decision on this reopened petition; two, to allow staff to efficiently cite to the procedural history of the matter in the findings of fact of the final decision; three, to combat any claims of bias on the part of any current or former council member

and any appeal of the final decision in this matter; and number four, to notify interested persons that Dr. Clements cannot be retained for his expertise in wetlands in vernal pools for the matter, due to state ethics restrictions. And therefore, Mr. Silvestri, staff recommends that this objection be overruled.

MR. SILVESTRI: Thank you, Attorney Bachman. Is there a motion by the council members?

MR. HARDER: Mike Harder, I move that the request be disapproved.

MR. SILVESTRI: Thank you, Mr. Harder. Is there a second?

MR. MORISSETTE: Second.

MR. SILVESTRI: Thank you. Mr. Morissette, we do have a motion and a second to deny, again I will go one-by-one for council members for discussion purposes, starting with Mr. Hannon.

MR. HANNON: I will approve the motion to -- I'll approve to deny the motion.

MR. SILVESTRI: Right now I was just looking for any discussion.

MR. HANNON: Okay. I am not sure why it was brought in the first place, that is my comment.

MR. HOFFMAN: Chairman Silvestri, I apologize --

MR. SILVESTRI: Mr. Hoffman.

MR. HOFFMAN: I apologize for interrupting. But in looking at the hearing program, I think there has been a slight error in the transcription of the Administrative Notice items. Because item 51 in the hearing program is listed as the decision in docket 192(b), I just think that we need to make sure that we get those documents to jive, so that the Administrative Notice is correct everywhere.

MS. BACHMAN: Attorney Hoffman, if I can just draw your attention to the description under docket number 192(b), it indicates the recusal memoranda of --

MR. HOFFMAN: My apologies.

MS. BACHMAN: Thank you.

MR. SILVESTRI: We all set, Attorney Hoffman?

MR. HOFFMAN: Yes.

MR. SILVESTRI: Okay. Thank you. Again, going through our council members, Mr. Hannon had a comment, but no discussion further. Ms. Guliuzza, do you have any discussion?

MS. GULIUZZA: No discussion.

MR. SILVESTRI: Thank you. Morissette?

MR. MORISSETTE: No discussion.

MR. SILVESTRI: Thank you. And, Mr. Harder, any discussion?

MR. HARDER: No comments.

MR. SILVESTRI: Thank you. I will again do one-by-one for voting purposes. Again on the motion to deny, starting with Mr. Hannon?

MR. HANNON: I will approve the motion to deny.

MR. SILVESTRI: Thank you. Ms. Guliuzza?

MS. GULIUZZA: I'll vote to deny, as well.

MR. SILVESTRI: Mr. Morissette?

MR. MORISSETTE: I vote to deny, as well.

MR. SILVESTRI: And, Mr. Harder.

MR. HARDER: Deny.

MR. SILVESTRI: And I will agree and deny also for my vote. So we are unanimous in denying that motion.

Moving on to motion number three. We have that on June 22nd, 2020, GRE submitted a motion to compel Save the Rivers, Save the Hills to provide its membership list under seal. And Attorney Bachman may wish to comment.

MS. BACHMAN: Thank you, Mr. Silvestri. Given that Save the Rivers, Save the Hills has submitted the declaration of Debra Moshier-Dunn, President of Save the Rivers, Save the Hills, Incorporated on June 24th, and the fact that our public comment hearing is at 6:30 this afternoon, and we still retain the same 17 speakers that had signed up in advance, the staff recommends that the motion be denied.

MR. SILVESTRI: Thank you, Attorney Bachman. Do I have a motion from our council members?

MS. MOSHIER-DUNN: For the record, Vice President, not President. I know the President is listening.

MR. SILVESTRI: I wasn't sure who that was, and names don't pop up on my screen, so could you just say who that was, please?

MS. MOSHIER-DUNN: This is Deb Moshier-Dunn, Vice President of Save the Rivers, Save the Hills.

MR. SILVESTRI: Super. Thank you. Yes, for any type of speaker that might come in, I will ask you to say your name, so at least we can recognize it for the transcript. And again, thank you for the correction.

Going back to our council members, do we have a motion?

MR. HARDER: Mike Harder, motion to deny.

MR. SILVESTRI: Do we have a second?

MR. MORISSETTE: Second.

MR. SILVESTRI: Thank you. Again, I will go one-by-one for council members for discussion purposes at this point. Again, starting with Mr. Hannon, any discussion?

MR. HANNON: Yes, more of a question. So when the 17 people that signed up speak tonight, if I am understanding that correctly, they are not associated

with any of the parties; is that correct?

MR. SILVESTRI: I'll have to ask Attorney Bachman because I don't have the list right in front of me at this point.

MS. BACHMAN: Thank you, Mr. Silvestri. The individuals listed on our public comment speaker list are not associated with Save the Rivers, Save the Hills.

MR. HANNON: Okay. Thank you. That was my only comment.

MR. SILVESTRI: Thank you, Mr. Hannon. Ms. Guliuzza, any discussion purposes?

MS. GULIUZZA: No discussion, thank you.

MR. SILVESTRI: Thank you. Mr. Morissette?

MR. MORISSETTE: Thank you for the clarification. I have no further questions.

MR. SILVESTRI: Thank you. And, Mr. Harder, any discussion?

MR. HARDER: No discussion.

MR. SILVESTRI: Thank you. Again, going one-by-one for voting purposes. We will start with Mr. Hannon.

MR. HANNON: I will approve the motion to deny.

MR. SILVESTRI: Thank you. Ms. Guliuzza?

MS. GULIUZZA: Approve of the denial.

MR. SILVESTRI: Thank you. Mr. Morissette?

MR. MORISSETTE: Approve the motion to deny.

MR. SILVESTRI: Mr. Harder?

MR. HARDER: Approve the motion.

MR. SILVESTRI: To deny?

MR. HARDER: Yes.

MR. SILVESTRI: Thank you. And I will also follow suit. So we are unanimous on that motion.

Looking through, again, on my agenda, that is all the motions that we have in front of us, and I will now proceed. I wish to call your attention to those items shown on the hearing program that are marked as Roman Number 1D, items one through 117 that the Council has administratively noticed. Does any party or intervener have an additional objection to the items that the Council has administratively noticed? And Attorney Hoffman, I'll ask you first.

MR. HOFFMAN: No objection, Mr. Chairman.

MR. SILVESTRI: Thank you.

MR. HOFFMAN: Actually, Mr. Silvestri would suffice, as I am presiding officer, not a chairman, but thank you. Attorney Avena?

MR. AVENA: No objection.

MR. SILVESTRI: Thank you. And Attorney Gianquinto.

MS. GIANQUINTO: No objection. I do just want to note, I think it is Item 1C, not 1D, unless I am wrong.

MR. SILVESTRI: Let me go back to the agenda so we have that clear. Bear with me.

MS. GIANQUINTO: I don't really see a 1D, though, so.

MR. SILVESTRI: Attorney Bachman, do you have that in front of you?

MS. BACHMAN: Mr. Silvestri, I believe Attorney Gianquinto is correct. We seem to have made a mistake, and it should be 1C.

MR. SILVESTRI: Attorney Gianquinto, thank you for your observation and again, that would be Roman Numeral 1C, items one through 117. Thank you.

Accordingly, with no objection, and no further objections, the Council hereby administratively notices these items. Thank you.

I'll now move to the appearance by the Petitioner, and will the Petitioner please present its witness panel for the purpose of taking the oath?

MR. HOFFMAN: Yes. Thank you, Mr. Silvestri. With us today on behalf of GRE, we have Jean-Paul La Marche of GRE and Ryan Linares of GRE. In addition, we have Steve Kochis and Jeff Shamas, both of VHB who are consultants on the project. They will be our witness panel this afternoon.

MR. SILVESTRI: Thank you, Attorney Hoffman. And

before I ask Attorney Bachman to administer the oath, again, because we are doing this remotely, she will give the oath and if you would, on your response, identify yourself and signal yay or nay. Attorney Bachman.

MS. BACHMAN: Thank you, Mr. Silvestri. Will the witnesses please raise their right hands.

(Whereupon the oath was administered.)

MR. SILVESTRI: Did we get everybody? Just for convenience purposes, if we could go one-by-one, please state your name and give a yes.

MR. LA MARCHE: This is Jean-Paul, yes.

MR. SILVESTRI: Thank you.

MR. SHAMAS: Jeff Shamas, yes.

MR. SILVESTRI: Thank you.

MR. LINARES: Ryan Linares, yes.

MR. SILVESTRI: Thank you.

MR. KOCHIS: Steve Kochis, yes.

MR. SILVESTRI: Thank you. Attorney Hoffman, did we cover everybody?

MR. HOFFMAN: Yes, Mr. Silvestri, we did.

MR. SILVESTRI: Super. Could you also begin by verifying all exhibits by the appropriate sworn witnesses.

MR. HOFFMAN: We could, but before that there is two suggested additions to administrative notice. We can take this in any order you want, but I am happy to do the identification of the exhibits first, if you would rather.

MR. SILVESTRI: Well, you are going to have to verify whatever you are going to have additionally, so what do we have additionally?

MR. HOFFMAN: Well, no it is two items for administrative notice that we sought to add to the administrative notice list. They are a United Department of Agriculture bulletin, entitled Urban Hydrology for Small Watersheds. And also, the Minnesota Pollution Control Agency, Minnesota Storm Water Manual. We sought that, these are not exhibits for identification, but rather two items that we wish the Council to take administrative notice of.

MR. SILVESTRI: Thank you. I do have those on the hearing notice. I'll ask Attorney Avena, do you have any objection to that administrative notice that GRE just mentioned?

MR. AVENA: No objection.

MR. SILVESTRI: Thank you. Attorney Gianquinto, any objections?

MS. GIANQUINTO: No objection.

MR. SILVESTRI: Thank you, also. Please continue, Attorney Hoffman.

MR. HOFFMAN: Certainly. So what I will do for the sake of simplicity is I will start with Mr. La Marche, continue to Mr. Linares, then Mr. Kochis, and then Mr. Shamas. And I will refer you to the exhibits that appear for identification purposes in Roman Numeral 2B, and I will ask if you are familiar with those objects and have you swear to their veracity.

So, Mr. La Marche, in looking at the exhibits that are listed for identification in Roman Numeral 2B, did you prepare or cause to be prepared the exhibits that are located there, including the motion to reopen your pretrial testimony and the responses to Siting Council's interrogatories listed therein?

MR. LA MARCHE: Yes, I do.

MR. HOFFMAN: And are those documents true and correct to the best of your information and belief.

MR. LA MARCHE: Yes, they are, with one note that we have also previously corrected in the interrogatories that we initially referred to the site in one location as previously disrupted industrial, and acknowledge that that is not the case.

MR. HOFFMAN: And with that acknowledgement that was filed in a subsequent interrogatory, are those

documents all correct to the best of your information and belief?

MR. LA MARCHE: That is correct.

MR. HOFFMAN: And do you adopt those as your sworn testimony here today?

MR. LA MARCHE: I do.

MR. HOFFMAN: Thank you. Mr. Linares, I'll ask you the same questions. Are you familiar with the exhibits that are listed in Roman Numeral 2B, including the motion for reopening the petition, the revised petition and the responses to the Council's interrogatories.

MR. LINARES: That's correct, yes.

MR. HOFFMAN: And did you prepare or cause to be prepared those documents?

MR. LINARES: Yes.

MR. HOFFMAN: And are they correct to the best of your information and belief?

MR. LINARES: Yes.

MR. HOFFMAN: And do you have any changes to those documents, other than what has already been discussed?

MR. LINARES: No changes.

MR. HOFFMAN: And do you adopt those as your sworn testimony here today?

MR. LINARES: Yes.

MR. HOFFMAN: Very good. Mr. Kochis, I'll ask the

same questions of you. Are you familiar with the exhibits in Roman Numeral 2B?

MR. KOCHIS: Yes.

MR. HOFFMAN: And did you prepare or cause to be prepared those exhibits, including the motion to reopen the petition, the revised petition, the response to the Siting Council's interrogatories and the prefiled testimony that is attributed to you?

MR. KOCHIS: Yes.

MR. HOFFMAN: And are those documents correct to the best of your information and belief?

MR. LINARES: Yes.

MR. HOFFMAN: Okay. Other than what has been discussed above, are there any other changes or edits to those documents?

MR. KOCHIS: No changes.

MR. HOFFMAN: And do you adopt those as your sworn testimony here today?

MR. KOCHIS: I do.

MR. HOFFMAN: Mr. Shamas, are you familiar with the documents listed in Roman Numeral 2B?

MR. SHAMAS: Yes.

MR. HOFFMAN: And did you prepare or cause to be prepared those documents, including the motion for reopening the petition, the revised petition and the

response to interrogatories?

MR. SHAMAS: Yes.

MR. HOFFMAN: And are they correct to the best of your information and belief?

MR. SHAMAS: Yes.

MR. HOFFMAN: And other than what has been discussed previously, do you have any changes to those documents?

MR. SHAMAS: I do not.

MR. HOFFMAN: And do you adopt them as your sworn testimony today?

MR. SHAMAS: Yes.

MR. HOFFMAN: With that, Mr. Silvestri, I would ask that all of the exhibits in Roman Number 2B be adopted as full exhibits.

MR. SILVESTRI: Thank you, Attorney Hoffman. Does any party or intervener object to the admission of the petitioners exhibits? Attorney Avena?

MR. AVENA: No objection, no.

MR. SILVESTRI: Thank you. Attorney Gianquinto?

MS. GIANQUINTO: No objection.

MR. SILVESTRI: Thank you, also. The exhibits are admitted. We will now begin with cross-examination of the petitioner by the Council, starting with staff person, Mr. Robert Mercier.

MR. MERCIER: Thank you. Just the first order of business would have to be, deal with the photograph of the sign that was submitted as Exhibit Number 11. Can GRE submit a sign posting affidavit to the Council that describes when the sign was initially posted and when it was changed to the rescheduled public hearing?

MR. LA MARCHE: I am fine with submitting that.

MR. SILVESTRI: Again, in response to any questions, if you could please state your name and then provide your answer.

MR. HOFFMAN: Mr. Mercier, we can provide that as an affidavit, or I think that Mr. Kochis who installed the sign could testify to it here today. Which is your preference?

MR. MERCIER: I suppose we could just testify to it as to when it was initially installed, do you have that date?

MR. KOCHIS: I would just have to find that, Lee.

MR. HOFFMAN: We could get that for you after the break, Mr. Mercier.

MR. MERCIER: Okay. Thank you. Now referring to the site access, I am going to be looking at site plan 4.0, which was appendix A of the petition, just it gives a nice overview of the site.

Now as the access leaves Oil Mill Road, it follows

an existing logging path, as shown. It goes up to the elevated wetlands. For this section from Oil Mill Road to the wetland crossing, besides the addition of gravel, what other improvements are needed to that road?

MR. KOCHIS: This is Steve Kochis, there are no other improvements proposed for that road, in terms of regrading or widening.

MR. MERCIER: Okay. What, I understand that you will be installing the interconnection cable within the road; is that correct?

MR. LA MARCHE: This is Jean-Paul, I can answer that. The very exact location of the feeder is yet to be final determined by Eversource. So we will have to work with them in their final engineering space to define that.

MR. MERCIER: Okay. Thank you. One other feature of the road, I am not sure if it is going to be installed; are there any need for water bars or drainage swales on either side of the road?

MR. KOCHIS: No water bars or diversion swales are proposed for the access road between the onsite wetland and Oil Mill Road.

MR. MERCIER: Okay. Thank you. Now for the elevated logging road crossing that exists today, it crosses right by vernal pool three, in the consideration

of the initial petition by the Council, GRE stated that it would evaluate the suitability of the crossing for potential project use. So was there any evaluation done of this existing elevated crossing to date?

MR. KOCHIS: Steve Kochis here, we have evaluated that crossing. In combination, due to the fact of how it was constructed and the proximity to the wetlands, we have previously committed to not using that wetland crossing as our primary site access, and the plans will be revised to go across the utility right-of-way in a different location further to the north that will not involve the wetland crossing.

MR. MERCIER: Okay. I don't think I clearly heard you. You said it was evaluated and determined that it was not suitable; is that correct?

MR. KOCHIS: In combination of the construction of it, as a timber haul road and due to the proximity to the wetlands, it was determined that it would be beneficial to have an ulterior site access farther to the north which does not cross that wetland.

MR. MERCIER: Thank you. Now referring to site plan 4.0, I believe you are going to be following the route of the existing logging road that extends along the east side of the wetland; is that correct? And then it will turn to the north into the little northern solar

field area; is that correct?

MR. KOCHIS: Steve Kochis again, referring to site plan C-4.0, there's a turnaround currently proposed immediately to the south of basin one. The intent will be to revise the plans to have a new road come to the southeast from that turnaround perpendicular across the right-of-way and connect to the road that is already proposed in that area on the other side, on the east of the right-of-way.

MR. MERCIER: Yes. Thank you. Staying with that site plan, I see how the proposed access road will go around the vernal pool to the north and then around basin one to the north and then will go to the cul-de-sac to the south and then cross the right-of-way as you sit. Now looking at that proposed access road on the west side of the wetland, do you plan to use this configuration that is shown or are you going to straighten out the curves and potentially remove it from the 100-foot buffer zone around that wetland?

MR. KOCHIS: It is currently -- this is Steve Kochis again -- it is currently proposed to keep the road as currently shown on the west side of the wetlands and to reuse the existing road in that area.

MR. MERCIER: What is the state of the existing road? Is it a logging, grassy logging path or is it a

gravel-type road?

MR. KOCHIS: Steve Kochis, again. It is more of a grassy logging road, currently.

MR. MERCIER: Okay. It is possible just to move it away from the 100-foot buffer along the east side -- excuse me -- the west side of that wetland? Just realign the road and maybe straighten it out?

MR. KOCHIS: It is possible. It would just have to be investigated further and some minor regrading might be necessary of the existing slopes to make that happen.

MR. MERCIER: Okay. Thank you. Now for the right-of-way crossing, would there need to be any approval from Eversource to go across the right-of-way extending south from the basin one area?

MR. LA MARCHE: This Jean-Paul. We do have to work with Eversource on approval for crossing their easements.

MR. MERCIER: Have you had any preliminary discussions regarding this issue with Eversource?

MR. LA MARCHE: We have.

MR. MERCIER: And were they receptive or is there some kind of issue that has to be resolved regarding clearance requirements?

MR. LA MARCHE: They were receptive. We have not had that conversation in a significant amount of time.

But there are no known issues to my knowledge at this time.

MR. MERCIER: Okay. Thank you. Now going back to the vernal pool area, vernal pool three which we just talked about by the elevated road crossing, referring to the response to Council interrogatory 15, I asked about the vernal pool envelope and critical terrestrial habitat pre and post development. And just trying to determine, was the analysis done just for the property itself or did those, did the critical terrestrial habitat figure extend onto the adjacent property? Did you can limit the analysis just to the onsite property itself or, you know, in some cases these buffers extend to, onto adjacent properties. I was wondering if those figures included the adjacent properties also.

MR. KOCHIS: This is Steve Kochis again. I do not believe those figures included adjacent properties. The limit of the vernal pool study was on the target site.

MR. MERCIER: Okay. Thank you. Were the logged areas within the critical terrestrial habitat and the vernal pool envelopes considered as disturbed or was your post development analysis only in relation to the solar field itself?

MR. KOCHIS: The areas that were marked as the areas that have been disturbed by the timber harvest

were considered to be disturbed for the sake of the existing and proposed disturbance numbers.

MR. MERCIER: Okay. Now, do you have any numbers that would just give the disturbance in relation only to the solar field itself, leaving the logged areas as nondisturbed?

MR. KOCHIS: We do not have any figures of that, at this time, but we could prepare that.

MR. MERCIER: Okay. The only reason I ask is because the initial analysis done back in 2018, I believe, that was in response to, I don't have that information in front of me -- but in any case, it was done that the, only the solar field itself was considered the disturbed area and not any forested or currently logged areas. So I just wanted to have the numbers that were consistent.

MR. KOCHIS: Okay. We can commit to preparing those numbers.

MR. MERCIER: Thank you.

MR. KOCHIS: Also just like to say, put on the record -- this is Steve Kochis -- I was the one that put the sign up at the site and I was also the one that edited the sign when the public hearing needed to be rescheduled. The original sign was put up on June 9th, and the sign was updated on June 26th, and I was there

for both times.

MR. MERCIER: Okay. Thank you very much. Now referring to Council interrogatory 42, and this talks about the storm water basins that were in proximity to vernal pool three. Now I understand that the two basins, I think it is basin one and basin 16, are going to be designed as pond type basins, and that way they will hold water in the spring. And although you, the response states, they are unlikely to act as decoy pools, this possibility does exist; is that correct?

MR. KOCHIS: Do you have a response to that?

MR. SHAMAS: This is Jeff Shamas. I am sorry, could you just repeat that question?

MR. MERCIER: Yes. I believe that basin one and basin 16 are designed as pond type storm water basins in that they hold water typically in the spring, according to your response. And although the response states that the two basins may not act as decoy pools, that possibility does still exist, correct?

MR. SHAMAS: It is feasible that they could act that way -- yes.

MR. MERCIER: Okay. Thank you. Now, of the two basins, is it more likely that spotted salamander would use storm water basin one as a decoy vernal pool, given that it is only 280 feet from the vernal pool, whereas

basin 16 is slightly more uphill and over, across an Eversource right-of-way?

MR. SHAMAS: Depends on their migratory path, to answer that. But, you know, I would say not necessarily that the closer it is could be, but if it is in the migratory route of the specie, yes, it could.

MR. MERCIER: Okay. Thank you. Now, in the event that they do act as decoy pools, would GRE be willing to develop a post-construction monitoring protocol for those two basins to assess the potential for decoy pool breeding by the spotted salamander? And if post-construction breeding is found, could a wildlife exclusion be installed around the basin to reduce the potential for the basin to act as a decoy pool?

MR. LA MARCHE: This is Jean-Paul. I believe that we can commit to that. I don't want to commit to any specific details, because I don't know what that plan includes, but in concept we can work to develop that.

MR. MERCIER: Okay. Thank you. Now referring to the DEEP letter, dated February 29th, 2020 in regard to the Easter Ribbon Snake, does GRE intend to employ the protected measures that are listed in the letter?

MR. LA MARCHE: This is Jean-Paul. We intend to employ the protective measures that are included in the management plan that VHB prepared, as well as what was

provided to DEEP for their concurrence. I don't know if Steve or Jeff if you can confirm that that is the same as the DEEP letter.

MR. KOCHIS: This is Steve. I can hop in. The proposed conservation measures for the Eastern Ribbon Snake that were recommended by DEEP were incorporated into our revised site plan that was provided to CT DEEP as part of our storm water permit application. Those plans can be provided to the Siting Council after this hearing.

MR. MERCIER: Do the plans include any type of an environmental monitor to do any inspections for snakes, such as, you know, prior to the commencement of earthwork in areas up to 300 feet from the wetland?

MR. KOCHIS: This is Steve, again. I would have to check on that and get back to you on that answer and the specific details of what is included in the plans.

MR. MERCIER: If there is no provision for a monitor to those plans, would GRE be accepting of having a monitor to inspect areas that are within 300 feet of the wetland prior to the commencement of construction?

MR. LA MARCHE: This is Jean-Paul, we are okay working on a monitoring plan.

MR. MERCIER: Okay. Thank you. In the petition attachment one, there was a US Fish and Wildlife letter

dated September 17th, 2019. It stated that the project site was within the range of the Northern Long Eared Bat, but no critical habitat was identified in the area and no known roost trees were found. Based on this document, does the petitioner have to take any further action or submit any additional information to the U.S. Fish and Wildlife Service?

MR. SHAMAS: This is Jeff Shamas. At this time, no, there is no intent to have to submit anything back to the U.S. Fish and Wildlife.

MR. MERCIER: Okay. So there is no requirement, not an intent, right?

MR. SHAMAS: Correct. There is no requirement.

MR. MERCIER: Got it. Okay. For the U.S. Fish and Wildlife Survey -- excuse me -- Service, have recommended tree clearing restrictions for the Northern Long Eared Bat in Connecticut? And if so, did they specify those restrictions for this site?

MR. SHAMAS: This is Jeff Shamas. We have not received any of those types of requirements.

MR. MERCIER: Okay. Thank you. Moving on to Council interrogatory number 40, this pertains to the dam safety question. Now I understand that no one from DEEP Storm Water asked GRE to reach out to the dam safety division, but was there any examination of

criteria that defines a dam for the storm water basins on site?

MR. KOCHIS: This is Steve Kochis, again. There was no specific examination into the status of the storm water basins to be classified as dams. However, I am familiar with the dam safety regulations and they are unclear about what needs to be classified as a dam. So you would typically have to go through their process to determine what is a dam and what isn't, and it is not readily available information.

MR. MERCIER: Okay. Well, does GRE intend to meet with the Dam Safety Division?

MR. KOCHIS: GRE -- sorry I'll -- sorry, this is Steve Kochis. GRE is going through the CT DEEP Storm Water Permit Application and we will go through all the divisions that are required to go through to achieve that storm water permit.

MR. MERCIER: Okay. So I, you are, so you are going to meet with the Dam Safety Division then, correct?

MR. KOCHIS: If we are requested to -- this is Steve, again -- if we are requested to by CT DEEP Storm Water staff.

MR. MERCIER: Based on your experience, do they typically referred you to that division for certain

projects?

MR. KOCHIS: Steve, again. Based on my experience, in the past, they have not referred projects through the dam safety program. However, very recently they have been. This would come only in the last month or two since COVID regulation haves changed their preapplication format.

MR. MERCIER: Okay. Thank you. Now just referring to site plan C-4.6. There is storm water basin four. It is a pond-type basin near the eastern side of the site and it shows, the site plan there shows a gravel road leading directly downhill to a gate just above the basin. Now, given the orientation of the gravel road and the slope exceeding 50 percent of part of this road, is there any concern of storm water flowing downhill generally on the impervious gravel road and potentially causing road erosion and depositing sediment into the basin?

MR. KOCHIS: Steve Kochis, again. It is feasible that this road could create erosion, however, a swale specifically to protect against that has been proposed as proposed swale 4.1 on the downhill side of that road, which will carry any sediments there.

MR. MERCIER: Is there any other type of road surfacing material that can be used in this area, such

as grass pavers, which I have seen at some sites? Just to reduce the amount of potential erosion and flooding from vehicles using it?

MR. KOCHIS: There are definitely alternatives that are feasible to be to used, which could alter the performance of the site. So we could look into, into that for specific areas of the site.

MR. MERCIER: When you say alter the performance of the site, what do you mean by that?

MR. KOCHIS: By that I mean, as you eluded to, the chance that sediment erosion may happen in specific areas.

MR. MERCIER: And just looking at the fence alignment that kind of surrounds the road as it descends in the turnaround and there's a gate, is there any need to have a fence in that location, or can you just move up the hill to where the corner of the solar field is?

MR. KOCHIS: This is Steve, again. I believe the fence can be changed in that location as you requested without any significant project impacts.

MR. MERCIER: Thank you. Now referring to the petitioner's response to Council's set to interrogatory 43, this had to do with solar panels within 200 feet of identified wetlands. If the solar field was reconfigured and the two identified areas in the

response, so that no panels are within 200 feet of the identified wetlands, could the storm water basins in these two areas be relocated to create a larger undisturbed buffer to nearby wetland? That would be basin five and six and the eastern portion of the site and basins 12 and 13 on the wester portion of the site.

MR. KOCHIS: This is Steve Kochis, again. Regarding basins five and six, they would be challenging to relocate due to the nature of the topography in that area. Those are the areas where the storm water naturally channelizes, so placing the basins in (inaudible) not able to capture all of the runoff from the project area. Regarding, it is the same, that is the same situation with basins 12 and 13, as well. They are placed in areas where storm water naturally channelizes prior to leaving the development. So it would be a bit challenging to relocate those basins and have them be just as effective as they are currently proposed.

MR. MERCIER: Okay. For basins 12 and 13, I see there is, you know, grading just above them. And if you remove the panels, you just can't move them up the hill slightly and regrade the area just above the relocated portion to make sure the water drains into them? It just seems like those basins potentially could be moved

back from the wetland area?

MR. KOCHIS: It is something we can certainly look into. 12 happens to have a natural swale that have, that exists discharging from the east to the west into the basin. And 13 is located in a natural low spot. So relocating the basins would just be moving them away from those existing features, is the only issue with that. But we can look at that.

MR. MERCIER: Okay. Thank you. Now referring to the response to Council interrogatory 46, in set two, it discusses the design details of several infiltration basins. And just to clarify the response, does the DEEP Storm Water Division examine the construction details of storm water basins when you submit the general permit?

MR. KOCHIS: This is Steve Kochis. Yes, they do review the design details of storm water basins.

MR. MERCIER: And with that, do they examine the sub surface information provided with the request for general permit?

MR. KOCHIS: This is Steve, again. CT DEEP does consider the geotechnical investigations as part of the review of storm water basin design.

MR. MERCIER: Okay. So in this case, for basins three, five and 10, which are the infiltration basins, DEEP Storm Water will be the entity to determine if the

basins are designed properly, correct?

MR. KOCHIS: I believe that is the anticipation, yes.

MR. MERCIER: Just because in the initial response to this question it basically said the Council would have that responsibility, so I am unsure why that statement was made if DEEP Storm Water are the ones that would review it and approve it as part of the general permit. I don't know if you have any comment on that.

MR. KOCHIS: I think the intent of that is, is suggesting that if the Council had a wish that the basins should be redesigned, the petitioner would be amenable to doing so. And on a completely separate track, we will also be working with CT DEEP on the storm water permit and incorporating their comments in the project, as well.

MR. MERCIER: Okay. Thank you. Now, regarding the storm water calculations that were provided in Appendix B. The model preexisting conditions, was woods in fair condition. And I am just trying to determine why, what criteria was used to determine that woods in fair condition as the appropriate one to use for the calculation?

MR. KOCHIS: This is Steve Kochis, again. The selection of, woods, fair, was used based on a review of

the site as a whole. Obviously we did not have the benefit of seeing what the site looked like prior to the timber harvest being performed by the landowner. But in an effort to be more conservative, we assumed a, how the site would have looked based on the portions of the site that were not affected by the timber harvest and assumed a land cover that the timber harvest, in the event that the timber harvest had not been performed, and we were aiming to be conservative in doing so.

MR. MERCIER: Okay. So what you are stating is, by modelling the entire site as woods in fair condition, that is more conservative than woods in good condition?

MR. KOCHIS: No. But it is more conservative than modeling the site as having approximately 50 or 60 acres of which have had their trees cleared for timber harvest.

MR. MERCIER: Okay. So what you -- okay. So you wouldn't say, you know, a certain percentage of the site is in good condition the other percent is in fair condition; you are stating that that is not representative of the existing conditions and flow paths?

MR. KOCHIS: So our analysis of the portions of the site which were not cleared by the timber harvest was

that it exhibited most closely a woods fair condition.

MR. MERCIER: Okay. What is that, exactly?

MR. KOCHIS: That assumption was made based on the land cover, the general rockiness and the amount of underbrush and the spacing of the trees.

MR. MERCIER: Okay. So the nontimbered areas, which actually are shown on site plan 5.0, you are stating the land cover there is poor, the forest is in a poor state, fair state because probably poor soil?

MR. KOCHIS: That is correct. It is generally tied to the underbrush.

MR. MERCIER: Okay. Thank you for clarifying that. Okay. For, talk about clearing for a second. Now I understand you already discussed this project with DEEP Storm Water and the initial construction sequence, including clearing and grubbing of the site with subsequent seeding prior to the winter months and then construction would proceed in the following spring. Now, just to be clear, this initial phasing schedule was not a DEEP Storm Water Division requirement for this project, or was it?

MR. KOCHIS: This is Steve, again. I wouldn't call it a requirement, but it was requested of us to clear the site and allow it to go through a growing season prior to construction.

MR. MERCIER: Have you had any subsequent discussions with DEEP regarding the potential schedule, given that it most likely won't be able to be cleared or seeded this year if this site was approved?

MR. KOCHIS: JP, do you have any thoughts on that?

MR. LA MARCHE: No, I have not had any further conversations with DEEP on that schedule. It's, it's a little bit of a challenge in that between when we had these initials conversations and now the world has changed quite immensely and our schedules have had to change, as well, and because of that we have not created or requested finalized schedules for the clearing, grubbing and reseeding. We do fully intend to maintain that concept once we do have visibility into approval time frame and when we are able to move forward.

MR. MERCIER: Okay. Thank you. Now, just in general, I understand that you are not sure of the phasing, but how would site phasing proceed in that, you know, when you start the logging operation, are you, do you plan to use the existing logging roads and the elevated crossing for that activity or are you going to construct a new access road around the wetlands, as we talked about previously?

MR. KOCHIS: This is Steve Kochis, I believe the anticipation would be that any access roads, permanent

access roads would be constructed as early as possible and we would not intend to use the existing haul road for the purposes of clearing the site.

MR. MERCIER: Okay. So any clearing necessary for the road, new roads you are going to establish, you will take care of and then hold off for the rest of the site until the roads are established, that would not serve the site when it is done?

MR. KOCHIS: The intent -- this is Steve, again -- the intent will be to construct those roads as early as feasible and use them to the maximum extent possible. Just by the nature of construction, I don't believe we can commit to using that 100 percent of the time as they will have to get to certain areas in certain ways. But, the intent will be to use those roads as early and as often as possible.

MR. MERCIER: Now, once the grubbing and logging is complete, the phasing include 10 acres increments, such that you work an area with grading and installing racking, and then you move onto the next area, or how would the phasing proceed once you want to start with the main areas of the solar field?

MR. KOCHIS: This is Steve. The way the project is proposed to be phased is that all the tree clearing and the road installation and the installation of the

erosion control measures, including all of the temporary sediment traps and silt fence, will be installed in the first phase of the project. And then any portion of the site that we are disturbing for construction will fall within a protected erosion control zone.

MR. MERCIER: Right. But how would you divide up the actual site into sections where you are installing racking and driving posts, things of that nature? Are you going to work north to south in certain increments, 10 acres or 15 acres or five acres, or are you going to work in different areas at the same time?

MR. KOCHIS: I believe -- this is Steve, again. And I believe the intent will be, most likely, to work from south to north, as far as the rack construction. The first thing that will happen will be that the posts are driven in, then within a couple of weeks of that happening, in that, in those same areas, the tables for the solar panels will be installed on those piles and then the last thing that will happen is that panels are installed on the tables, in a three phase, sort of, construction way, moving, moving in one direction on the site. I do not believe it is anticipated to work in multiple locations on the site at one time.

MR. MERCIER: Okay. How would stabilization of the disturbed areas proceed, and as construction proceeds.

You know, once you grub the site, are you going to have the entire site, are you going to have the entire site pretty much disturbed, so how are going to stabilize that area?

MR. KOCHIS: The intent will be to use erosion control blankets and hydro seed with tackifier, which is a CT DEEP approved method for temporary stabilization. And we will be looking to do that as soon as we can once the racks are installed, we will be there to hydro seed the site.

MR. MERCIER: So as racking proceeds and there is equipment driving up and down the row areas, I'll call them, you know, the soil disturbance, are you going to hydro seed in increments?

MR. KOCHIS: That is correct.

MR. MERCIER: Okay.

MR. KOCHIS: The hydro seeding will follow the rack installation.

MR. MERCIER: Gotcha. Thank you. And so once you want to install the panels, would you have to hydro seed again because there is equipment and vehicles driving up and down the road areas installing panels?

MR. KOCHIS: This is Steve, again. By the construction sequence, we committed to hydro seeding that as necessary for areas that are redisturbed.

However, it's also not anticipated that that heavy equipment is going to be used to install the panels once the tables are up. They are typically installed by using pick-up trucks and they are installed by hand. So it is not the same level of equipment once the tables for the panels are up.

MR. MERCIER: Okay.

MR. KOCHIS: However, we will reseed as necessary.

MR. MERCIER: Okay. Thank you. Now as you discussed before, some of the nonlogged areas, you know, had probably exposed bedrock and ledge and, you know, shallow soils to bedrock. And actually it is shown pretty much on site plan BS1, in the Appendix A, on the site plans. How will construction occur in these areas? You are going to have pretty much exposed rock, how are you going to control water or anything that is flowing, you know, off these hard surfaces to adjacent areas if there is really no soil that is usable to have seed grow?

MR. KOCHIS: This is Steve, again. The intent will be to the maximum extent possible to use the onsite stone and crush it onsite and use that stone where we can for access roads and for rip rap stabilization areas.

MR. MERCIER: Okay. So for the bedrock areas where

you are going to install the posts, you are going to tear some of that up and use it elsewhere, is what you are stating, correct?

MR. KOCHIS: This is Steve, again. For some of these areas, that is correct. It is going to vary by area to area, as far as the level of rock removal and.

MR. MERCIER: Okay. I guess my question is, how are you going to promote seed growth in these areas that have shallow soils or actually exposed bedrock, you know, to cut down on water flowing from the hard surfaces to softer surfaces that could erode?

MR. KOCHIS: This is Steve, again. This was kind of something that has, that has been discussed with CT DEEP to date. And the intent is that we will be monitoring the site for vegetative growth as is required for the storm water, the CT DEEP Storm Water General permit process and we will have to work to find solutions for the areas that, that were not achieving the vegetative growth that will be required as part of the CT DEEP Storm Water General Permit.

MR. MERCIER: In these areas, if some of the perimeter areas on the east side of the site are exposed ledge, that is shown that site plan BS1, how would a permitter controls be installed there, erosion fencing and things of that nature?

MR. KOCHIS: For the areas of the site where the perimeter fencing is installed, we don't, they don't have to be installed to have particular concern that will be able to get the silt fence in. And then furthermore, on fairly extensive geotechnical area of the storm water basins, and then to bring in the bedrock and ledge in those areas, and we designed the basins to stay out of them.

MR. MERCIER: Thank you. I understood the basin part. Could you please repeat the erosion control fence installation along the ledge areas, how would that be accomplished? Your voice cut out for a moment.

MR. KOCHIS: Sure. Sorry about that. The silt fence does not need to be installed very deep. Where necessary we will remove rock to get the silt fence in, but we don't anticipate having significant concerns about being able to get the silt fence in with the rock where the silt fence is proposed.

MR. MERCIER: I am just curious how you are going to install it on the rock. If you remove the rock, wouldn't there be more rock under it?

MR. KOCHIS: We would have to replace the rock with over burn material.

MR. MERCIER: Okay. Thank you for the clarification. Thank you, I have no further questions

at this time.

MR. SILVESTRI: Thank you, Mr. Mercier. We will continue with cross-examination of the petitioner by Mr. Morissette.

MR. MORISSETTE: Thank you, Mr. Silvestri. Can you hear me okay?

MR. SILVESTRI: I can.

MR. LA MARCHE: I can hear you, as well, this is Jean-Paul.

MR. MORISSETTE: Great. Thank you. I am going to site with Siting Council's first set of interrogatories. The first interrogatory indicates that the life of the facility is 35 years. Does this mean that the panels themselves will last 35 years, or is there some sort of repowering that will occur over the period of its life?

MR. LA MARCHE: Their, I am going to answer this in a couple of different ways -- this is Jean-Paul -- just to be as clear as possible. The initial term of the PPA contract is 20 years. We expect afterwards, (inaudible) in a different manner, therefore the project will continue on past that.

MR. MORISSETTE: I am sorry, but you cut out there for a second.

MR. LA MARCHE: Sorry. The initial term of the PPA is 20 years. We intend to sell the power on a different

market after those 20 years. It may not be 35 years, it may be a little bit more, it may be a little bit less, that is an estimate.

In terms of the life of the modules, there is some uncertainty, of course, in how long they exactly will last. The expectation is generally that they degrade at half a percent a year. And we assume this linearly. The module manufacturers will typically guarantee power output for in the order of 20 to 25 years. If we are continuing to sell power after that 25-year period and there is a decrease in power output that becomes too problematic, we could consider a repowering, but at this time there is no expectation of the need to do that. In that we expect the modules will last longer.

MR. MORISSETTE: Very good. Thank you for clarifying that. Okay. Moving onto number 16 in the same set of interrogatories. Is it, is it possible to provide a revised site plan with your proposed access roads identified on the plan?

MR. KOCHIS: This is Steve Kochis. Yes, we can provide that.

MR. MORISSETTE: That would be very helpful. Thank you. Now, moving to the response to number 26. Now, Connecticut DEEP considers the panels themselves as being impervious. And it says here that your design is

based on the Minnesota public drainage manual as being conservative. By being conservative, does, would it equate to the panels being pervious, or is that, can you not draw that parallel conclusion?

MR. KOCHIS: This is Steve Kochis. So, I think what you meant was that the panels were impervious, to be conservative. So, how we are being conservative is that the guidance document regarding the construction of solar arrays prepared by CT DEEP, which is out for public comment right now, suggests that there is a list of criteria that you can meet that mean that you do not have to consider the panels as impervious for the sake of water quality volume computation. We meet those criteria in our site design. However to be conservative on top of that, we are using the Minnesota guidelines to provide water quality treatment, even when the guidance suggests that we do not have to.

MR. MORISSETTE: Very good. That is helpful. Okay. Okay. My next question, and we can probably go to the stump grubbing map attached to this first set of interrogatories. Although my question is not associated with grubbing, it is really associated with the -- actually, why don't we do this. Let's go to set, Siting Council set two, response to number 43. Okay. In that response you say that there is approximately 300 panels

that can be relocated to increase the buffer to 200 feet close to storm water basins 12 and 13 and five and six. This is a two-part question. Where, if you, in fact, did that, where would the 300 panels go? Let's start there. Where would the 300 panels be distributed to?

MR. LA MARCHE: This is Jean-Paul. I can respond. We would not redistribute the 300 modules.

MR. MORISSETTE: Oh, you would not. So you would take a derating on the facility?

MR. LA MARCHE: There would be a potentially minor reduction in the DC power output by the reduction of those 300 modules.

MR. MORISSETTE: Okay. Okay. Considering the wetland two, I think this question is for Mr. Shamas as to, you know, having those panels close to wetlands, wetland number two, and not being 200 feet, giving the value of that wetland, do you see that as a detriment to the wetland?

MR. SHAMAS: I don't see it being a detriment to the wetland. I see the, we are still maintaining a buffer to the wetlands and not, and managing the storm water that is coming off the developed areas. So I don't see that being as an adverse impact to those wetland systems.

MR. MORISSETTE: All right. Given that Mr.

Davidson's function and values of wetland two seem to indicate that, you know, it was pretty minor wetland, doesn't appear that having those panels there would be an impact. Those are all the questions that I have at this time. Thank very much.

MR. SILVESTRI: Thank you Mr. Morissette. Just before we proceed, Jean-Paul, I did have a quick clarifying question for you. When you say repowering, what does repowering mean?

MR. LA MARCHE: Well, I use that same term because I believe that was what was in the question. But my intent there was, you know, it was in relation to degradation of performance of the solar panels themselves. So it would be a targeted approach of replacing or addressing performance issues on the modules. Most likely in trying to predict the future, it would be using, using new modules, rather than a repair or anything like that.

MR. SILVESTRI: Okay. Thank you for the clarification. I'd like to proceed with Mr. Harder for continued cross-examination.

MR. HARDER: Thank you. Just really one question at this point, and a comment. Question refers to the dam safety discussion we had earlier this afternoon. And I guess it seemed that the answers that were given

were all along the lines of the old, you look at the dam safety issues if the storm water people suggested or directed to. But that seems like a circuitous route to take. Why not just ask the dam safety people directly? Why not get the answer from the horses mouth?

MR. KOCHIS: This is Steve, again. I'll answer that question. The best answer I can give there, is that, you know, we are looking to meet the regulations and requirements of the Siting Council petition process and the CT DEEP Storm Water General Permit process. And that storm water permit process does not necessarily require you to go to dam safety. It is only in their judgement that they may refer you to them.

MR. HARDER: Okay. I guess I understand that. But separate from the storm water requirements and the Siting Council requirements, you may be required to comply with dam safety requirements. Whether storm water staff tell you that or not, I would think the last thing you would want to find out is well into the process of construction or operating the system, you find out that you should have gotten a dam safety permit and you didn't. So why not ask them directly?

MR. KOCHIS: We are amenable -- this is Steve, again -- we are amenable to talking to dam safety. We can do that.

MR. HARDER: Okay. I think that would make sense. I guess the other thing, like I said, I just had a comment. I think it is good that you've, in the revised petition you pulled back some of the areas on the southern part of the site from some of the steep slopes. And I guess this is a kind of application that highlights some of the overlap between Siting Council concerns and storm water concerns, storm water permit requirements. But I guess I have to say, I am still concerned about the proximity of parts of the proposed system and the storm water controls to those areas. I am concerned about, you know, in significant storm events that, you know, sudden large volumes of rainfall and runoff, you know, being fairly close to the receiving waters down slope. Again, recognizing that you have to get a storm water permit and those requirements, those issues will be dealt with in that process, also. But I have to say, I am still concerned about that. And that is all the comments I have right now. Thank you.

MR. SILVESTRI: Thank you, Mr. Harder. We will continue cross-examination with Mr. Hannon.

MR. HANNON: So I guess I am going to be the pebble in the shoe today.

MR. SILVESTRI: I never looked at you that way Mr.

Hannon.

MR. HANNON: Well, they might. I do have a bunch of questions. Starting on page two of the introduction. There is a comment that says infiltration testing was performed in the location of the proposed infiltration basins, and 50 percent of the lowest rate at each basin was used for the hydrologic modeling. You also had a geotechnic engineering company prepare documents, a Connecticut-based company. You talked about soil conditions, geotechnical characteristics, geotechnical overview, earth worm, pile foundations, roadways, but yet on Mr. Trinkaus' prefiled testimony, page five, he states in question 11, parenthesis four, although GRE has conducted some soil testing in connection with the reopening of the original position, that testing was inadequate to capture the soil properties of the site. Would you care to explain or comment on that?

MR. LA MARCHE: Steve, can you comment on that?

MR. KOCHIS: Yes. This is Steve Kochis. I believe we had followed the 2004 Storm Water Quality Manual in terms of preparing geotechnical investigation that meets the requirements of the manual for the design of storm water basins.

MR. HANNON: I just thought there might be more of an answer there, but he is basically saying that he

thinks the testing was done, was inadequate. I mean, I don't know if you have got somebody there from the company that did the geotechnic work, but I would think that, again, being a Connecticut company they might have something to say about that. So I am, I mean, you got two opposing views here. I am just trying to get what your position is, not whether or not you think you complied with the State standards. I was just looking for a little more detail.

MR. KOCHIS: Yes. This is Steve. I understand your concern. We do not have a representative of the firm as a witness today that prepared the boring log pits. However, I personally was out there with another, with soil scientists and did all the storm water geotechnical investigations. And as stated, we feel that they were done in concordance with what the manual prescribes.

MR. HANNON: I got some other questions I'll come back to, as it relates to the geotechnic stuff.

Looking at map C-4.0. The map shows basin locations and some site grading. So what is being proposed on that map, is that the extent of the proposed grading on site?

MR. KOCHIS: This is Steve. That is correct. The grading that is shown on C4.0 is the only grading we are

proposing on the site. Generally speaking, the existing grades are acceptable for construction tolerances and also for the tolerances of the solar panel equipment. So we are only proposing to regrade areas that are in excess of a 15 percent slope. And the storm water basins, of course.

MR. HANNON: Okay. Do you know, off the top of your head or somewhere in the documents, what the area of preconstruction grades, 15 percent and therefore preconstruction grades in excess of 15 percent? I am just trying to get a rough idea as to the percentage of the area that you are talking about regrading.

MR. KOCHIS: This is Steve, again. I don't have the exact number in front of me. I could certainly get that to you. However, I do know that after we pulled the project back from some of the steeper slopes around the perimeter of the project, the area of regrading which is currently above 15 percent is approximately five to six acres, which represents less than 10 percent of the overall project limits. Once we do that, and like I said, it is intended to regrade any areas in excess of 15 percent. Anything within the project limits should be under 15 percent, so that would be effectively zero. Zero acres.

MR. HANNON: Okay. Then an issue was raised a

little bit earlier regarding the panels and whether or not they are considered impervious, pervious. I know that there were some issues associated with Mr. Trinkaus' comments about that, but I am just kind of curious because I thought that DEEP had in their guidance that panels could be considered pervious if there were certain criteria met, and I am not sure if you do or don't meet that criteria, and can you explain whether or not you do meet that criteria? I think there were like four components to it.

MR. KOCHIS: Yes. This is Steve, again. That's correct. There, I believe there are four components to meeting the criteria that allows you to not consider the panels impervious. And that is only for the sake of water quality treatment. That is not for the purposes of the grade of runoff attenuation. And we do believe that we meet those -- are you looking for me to go that, through them line-by-line to say how we are meeting them, is that the question.

MR. HANNON: Well, again, you know, part of the issue that may come up later is you have somebody saying that the panels should be considered impervious. I don't think you are treating them as impervious. You may have your reasons why, but I think this is going to end up being a dialogue that we are going to have to

show why you are taking your position and somebody else is going to be raising the issue why they are taking their position. So I don't know if you want to do it now or you want to do it later.

MR. SILVESTRI: Well, from my standpoint -- if I could interject -- Mr. Hannon is right on line with a number of questions that I was going to ask you later. Why don't we do it now.

MR. KOCHIS: Sure. This is Steve. I'll tackle that issue. You know, as a professional general, I have researched how to model these panels. I have not seen literature in the State that has suggested that the panels need to be impervious for the sake of the grade of runoff attenuation. But as I noted before, we do meet the criteria to waive the panels being impervious for the sake of water quality volume computation. So, you know, in my experience and to my knowledge, this project has been designed in accordance with State regulations on how to model solar panels for the sake of storm water.

MR. HANNON: I mean, there may be some other folks that we, you know, want to follow up on that, too.

Okay. GRE has conducted soil survey for the site, that is correct, yes?

MR. KOCHIS: That's correct. VHB performed the

storm water geotechnical investigations for the basin locations.

MR. HANNON: And there was also work done to try and determine the infiltrated capacity of the site and also as it relates to where certain storm water management measures were being proposed; is that correct?

MR. KOCHIS: That is correct.

MR. HANNON: Okay. And DEEP guidelines call for the reduction of the hydraulic soil group present on site by one step to account for compaction of soils at the site resulting in machinery traffic, you know, things of that nature. And I know that Mr. Trinkaus states that with respect to that, it should be two soil classifications. So can you please speak to that?

MR. KOCHIS: Sure. This is Steve, again. We are, as part of the redesign of the project from petition 1347 to 1347A, we have incorporated a one, a loss of one hydraulic soil group from existing to proposed, in accordance with the CT DEEP Storm Water Modeling Guidance. We have not seen any guidance for the State that has suggested, that required use of a loss of two groups, and so we haven't done that on this project.

MR. HANNON: Okay. Sort of following along the lines with the storm water basins; on Mr. Trinkaus'

submittal page 8, question 12, the multiple types of storm water basins proposed be GRE are not in compliance with the design standards in the 2004 manual. Talks about four bays, long flow paths from inlet to outlet, micropools, things of that nature; how do you respond to that?

MR. KOCHIS: This is Steve, again. The response to that is that we do believe that the site plans were done in conformance with all state guidance and regulations for storm water modeling and design and we are going through the CT DEEP Storm Water General Permit process, as we responded to Mr. Mercier's questions, for the specific design of the basins, as well. And they will be reviewing those specific designs.

MR. HANNON: Now, the basins that are proposed on this plan, are they more for, sort of, general location and general design and that the material that would ultimately be submitted for storm water general permit is much more detailed in scope?

MR. KOCHIS: Generally, these same plans were submitted to the CT DEEP Storm Water General Permit.

MR. HANNON: Sticking on the basin issue, one example that was given was basin five was an infiltration basin. The bottom of the basin is below the seasonal high ground water table. Jerry attempted

to put together some infiltrated practices on the site, but in reading in a couple of different locations, I think there was response to Save the Water, Save the Hills, I think there was question 82, I thought the comment was that you don't expect to get a whole lot of infiltration out of the basins so you are not including any of the infiltration in your calculations. But if that is the case, why are you proposing to put in infiltration basins?

MR. KOCHIS: Sure. This is Steve, again, it's, it's a global theme for storm water design in Connecticut for many reasons to promote infiltration to the maximum extent possible. And in my experience, I found that to be beneficial in site design, as well. So, we have made, we have taken the geotechnical investigations that we have done into consideration in the design of the basins, and to the maximum extent practicable, have tried to promote infiltration as much as we can.

MR. HANNON: Okay. And then there are also some sand filters, I guess, that are proposed in some of the basins. And again, in reading the response question 82, I think, state, or your response stated that sand filters screen storm water runoff before collected and subsequently discharging through an under drain pipe,

but I didn't see that in any of the designs, where there any under drain pipes or things of that nature. And all I remember seeing are spillways, things of that nature. So I am a little confused as to where that came from.

MR. KOCHIS: This is Steve, again. The sand filter designs are to be constructed per the detail, on the details page. And that is correct. That the sand filter designs have generally been proposed in areas of shallow ledge where we are will not get any infiltration to serve as a water quality treatment measure. And the intent will be to put the under drain out into the Riprap spillway.

MR. HANNON: Okay. And then going back to the introduction area, page 13. Says, no tree clearing will take place within 100 feet of the designated wetlands except minor selected clearing. I am assuming that that is clearing, not grubbing, grading, things of that nature, but it is just taking down trees associated with shading issues?

MR. KOCHIS: This is Steve, again. I'll respond to that one. I believe the answer to that one is that the selected clearing areas would be very minor areas for access roads, such as the existing access road, just to make sure that they are usable and truck traffic won't hit those trees. All the tree clearing has been kept

outside of the 100 foot buffers to wetlands. So we are not anticipating any tree clearing within 100 foot of the wetland.

MR. HANNON: Now on page 14, you talk about areas between perimeter fence and limits of clearing received amidst the native, low lying plants, shrubs and ground cover. Has anybody looked at including pollinator species in that mixture?

MR. LA MARCHE: This is Jean-Paul. We intend to have the seed mixture have flowers that are valuable to pollinator species.

MR. HANNON: Okay.

MR. LA MARCHE: One of the other interrogatories that were asked of us was, would this, would we work with the, I believe it was Massachusetts approved pollinator habitat, and our answer there, too, was that we intend to follow the guidelines and incorporate as much as we possibly can, although there are small aspects that are different between what is correct for that location and what is correct for this location.

MR. HANNON: Okay. Thank you. On page 17 there is a paragraph in this that talks about removing snow and there maybe in some extreme events, you need to remove it. But it also talks about module washing is performed on both a scheduled basis, as well as corrective measure

if there is a major soiling event, but you don't provide any details on how you would be cleaning the panels. Can you please provide some guidance.

MR. LA MARCHE: Sure. Typically module are washed with, I mean, similar to how you would wash windows, but on a large scale. It can be done with a water truck, with a hose, with a wiper. It is really just an act of removing debris from the module surface.

MR. HANNON: Well, I need to go back a little, for a little clarification. We wash our windows, we use cleaners. It is not water. So I just want to make sure you are not using any type of chemicals, cleaner, things of that nature.

MR. LA MARCHE: That is correct. Water only.

MR. HANNON: Okay. Moving into some of the maps. Maps C-3.6. On the right-hand side, over by the permanent storm water basin number three. I can see you making the corner and there is a number of other areas like this, I can see you making the corner if you are on a bike, but I am not sure how you make that turn in a vehicle. So, I have seen a number of areas like this on the site where you have some corners, where there is a radius. You got others where at the sharp angle you could be clipping some of the solar panels. So I am not sure that the actual road layout is in area is that

good. Just like on page C, for map C-3.7, it is the same type of thing. You got a bunch of 90-degree turns, and I am not sure how equipment is going to make it in there. So can you explain that?

MR. KOCHIS: This is Steve Kochis. So we do have some right angles in the gravel access road. However, this is a 15-foot wide road and construction vehicles, or any other vehicles, could use the whole thing when they are driving around. So we do believe that they will be able to navigate the site due to the width, the actual width of the road.

MR. HANNON: Okay. On map C-4.8. The lower portion of the site, just above that little cul-de-sac, it talks about an area to be excavated to enlarge sediment trap 13A, as depicted. And to the left of that, along that, sort of, bottom row of panels, there is a note, proposed stabilized outlet from sediment area for sediment trap 13A area. I mean, are you putting in a pipe there? I don't see anything on the plans, other than a note. So I am just trying to figure out what exactly is that you are doing in that area.

MR. KOCHIS: This is Steve. The intent for that area is to use natural depression as a sediment trap, where the water, water goes today. That proposed stabilized outlet will be, is intended to be a Riprap

spillway of sorts, to allow water to cross the road without eroding the roadway.

MR. HANNON: Now is there a chance of collecting water in that sediment trap area, discharging it to a single point to create some erosion issues down slope there. Because not that far to the east, it looks as though you are doing a bunch of regrading in that area.

MR. KOCHIS: Based -- this is Steve, again. Based upon the review of the topography and site visits, that area naturally generalizes today. So we are not changing the functioning of that area as a drainage water course.

MR. HANNON: Okay. And then this is sort of a combination of the maps C-5 series, but also the C-4 series. In the C-5 series, you explain, at least there are notes in there, saying that your are proposing to put in the erosion control blankets on inside slopes of the storm water basins. In the C-4 point series, you are also talking about installing proposed Riprap armoring in certain areas, are you proposing to put the Riprap armoring over the erosion control blankets or are they just going in where there is no armored Riprap? I just want to make sure I understand what you are proposing.

MR. KOCHIS: This is Steve, again. The latter that

you said is correct. Where we, where we are proposing the Riprap armoring, it is not going to be proposed to put erosion control blankets. So the erosion control blankets will be in any inside area of the basin that is not protected by Riprap.

MR. HANNON: Okay. Then I may make a suggestion that you go ahead and correct the notes in the C-5 maps because that is not what it says. That is why I had a question there.

MR. KOCHIS: We can commit to making that revision.

MR. HANNON: Yeah, I mean, I don't think it is a big deal. I just think it is a good idea to kind of clarify what is going on in that area.

On map C-5.11, below the basin you have, looks like, what, 650-foot lengths of compost filter sock located down there. That looks like it is in an area that is outside your scope of work. So how are you proposing to get that stuff installed, and is that the only location that you are proposing to do something like that outside the scope of work?

MR. KOCHIS: This is Steve, again. So those, that inclusion of the compost filter sock outside of our limit of work was included on the plans at the recommendation of CT DEEP through preapplication meetings with them. They had particular concerns in

these couple of areas. I believe it is that area and there is also a sheet 5.8, with the compost filter socks. The compost filter socks can be installed by hand. So we may not be required to take heavy equipment out (inaudible) --

MR. SILVESTRI: Mr. Kochis, we can't hear you, at all.

MR. HANNON: You cutoff that last part of your statement.

MR. KOCHIS: Can you guys hear me know.

MR. SILVESTRI: Now we can.

MR. KOCHIS: Sorry about that. So, that there is that area where we are proposing compost filter socks, outside the limits of work. We are also proposing it on sheet 5.8, to the north of storm water basin 13, which came at the recommendation of CT deep Storm Water staff during preapplication meetings. The compost filter socks can be installed by hand and it will not be required to take heavy equipment past the limits of work. So the amount of disturbance outside the limits of work to install those compost filter socks, would only be foot traffic.

MR. HANNON: Okay. Thank you. And actually, staying on that map page, I did finally find one of the notices that talks about, and has silt fence backed by

wood chip mulch berm. So at least I am getting an idea of where some of the wood chip berms are, but I am a little confused in terms of, then you go in and state there is areas around the project or on the perimeter where you install e-fence in lieu of silt fence for drainage path, you are down stream, but in looking at the details for that e-fence, I mean, that looks to me more like a wildlife exclusion fence. Because if you look at the details, some of them look like if there is erosion coming down, that's, that isn't going to do much of anything. So I am not sure if that is intended to try to keep wildlife out, because there are some areas where I am not sure that you are proposing to maintain other types of erosion control measures, because I didn't find anything related to the wood chip berm that you are proposing. So can you explain the use of the e-fence and what its intended use is for and verify whether it is or is not erosion control measure?

MR. KOCHIS: Sure. This is Steve, again. You are correct in your assumption that the e-fence is pretty much primarily as a construction barrier and also a wildlife exclusionary barrier. The theory behind the use of that downstream of the storm water basins, is that the water coming out of the storm water basins in the sediment traps is clean. And if we had used

traditional silt fence in those areas, the silt fence would be ripped away by the level of water coming out of the basins. So the e-fence, having larger holes, will allow those flows to pass through without damaging the material and really, that e-fence is only intended to be a wildlife exclusionary barrier, because it is downstream of the water quality treatment.

MR. HANNON: Then sort of following up along those lines, and I just want to verify something. So I have seen a couple of notes on the plans, and this is in the C-5 series, where a couple of notes come up say, silt fence backed by wood chip mulch berm. Is it the intent to use the wood chip mulch berm along the entire perimeter and then in some areas, in conjunction with silt fence, and other areas in conjunction with the e-fence?

MR. KOCHIS: This is Steve, again. The intent, we won't know, the problem is, we won't know exactly how much wood chip mulch we'll have. It is going to be tied to how many trees will be taken down as part of the project. The use of the wood chip mulch berm will be targeted at the most sensitive areas, by looking at it in the combination of contractor says, is the engineer of record and the site inspector. It is not necessarily to use it around the entire perimeter unless we have the

luxury of having, you know, wood chip mulch to do so. And it is not proposed to put the wood chip mulch berm downstream of the e-fence.

MR. HANNON: And then if you have areas where you are not using the wood chip mulch berm, is it your intent to use just silt fence?

MR. KOCHIS: That is correct. It would just be silt fence. But furthermore, besides, besides just the silt fence, almost every area around the perimeter of the sit is also protected by a drainage swale that will carry storm water runoff from the project to a sediment basin. So the intent is not to rely, in many areas, the intent is not to rely solely on the silt fence, but rather to swale the water to a sediment control feature.

MR. HANNON: Okay. And then I do have a couple of questions, I don't know if you are going to be able to answer them or not, related to the geotechnic overview. So, for example, the company said they highly recommend a pile driving program being implemented to confirm the anticipated difficult pile driving conditions. Is that something that the company has thought through? I mean, there is a number of reasons why. They say they anticipate the piles will likely rotate vertically and horizontally when they encounter cobbles or boulders, so that is going to create some issues for trying to

install the panels. So have you thought any about that?

MR. LA MARCHE: I can respond there. This is Jean-Paul. What is typical process is shortly prior to final construction there will be, the provider, the manufacturer of the posts, the racking, will support in driving test piles to determine the exact design requirements and needs of the foundations that are driven into the earth. At that time, we will be able to know exactly what is required. There are multiple options between just simply driven piles of different thickness and types, as well as the ability to use a helical screw type foundation if that is required, as well.

MR. HANNON: Is there any thought going into, because as I mentioned earlier, that on this site, you got some exposed bedrock, things of that nature, are you talking about the possibility of using a ballast anywhere on the site, or is that something you haven't really thought of.

MR. LA MARCHE: Our expectation at this time is that we will not need to use a ballast, and that we can accomplish the foundation need through either driven pile or helical screw.

MR. HANNON: Okay. One of the other issues raised in the geo report is that the soils on the site are

frost susceptible, and can exert a heaving force on the piles. How are you guys going to address something like that.

MR. LA MARCHE: Yep. Again, the final design of those piles will come after the test, and the typical solution is depending on the frost depth, to drive the piles deep enough that they will be imbedded in the soil beneath the frost line, therefore frost heave will not be an issue.

MR. HANNON: I think that is about all I have right now. Thank you.

MR. SILVESTRI: Thank you Mr. Hannon. We are pretty close to 3:00 o'clock. Why don't we take a 15 minute break, come back here close to, say, 3:13, and we will continue cross-examination at that time with Ms. Guliuzza. Thank you. We will see you in about 15.

(Whereupon a short recess was take.)

MR. SILVESTRI: I have 3:14, and I would like to resume again with the cross-examination where we left off. And this time it would be with Ms. Guliuzza.

MS. GULIUZZA: Thank you, Mr. Silvestri. I just have one quick question for Mr. Kochis.

Mr. Kochis, you indicated early on in your

testimony that you had updated the sign, and I'd just like to ask you to identify for the record the manner in which the sign was updated.

MR. KOCHIS: Sure. The physical manner that the sign was updated was, I printed, I reprinted the new time and date that the virtual public hearing, and put it on with masking tape over the original sign.

MS. GULIUZZA: Thank you, sir. I have nothing further, Mr. Silvestri. Thank you.

MR. SILVESTRI: Thank you. I have a few questions. Some are going to be follow-ups to what other council members had asked. And in no particular order, let me start with, Mr. La Marche, you mentioned that removal of the 300 panels would result in a reduction in DC power output. Would it also affect AC power?

MR. LA MARCHE: No. We would not modify the inverter sizing or rating or AC output based on that small reduction in DC output. And just to further add, I think we mentioned this in the petition, as well, but the exact DC wattage of the modules, changes pretty rapidly as technology evolves. So we will be using the highest wattage modules that are available to this project that work for this project and its design at the time of procurement. So we don't exactly know the DC side until then.

MR. SILVESTRI: Okay. On the topic of panels. Right now is approximately 415 watts kind of the largest you could obtain?

MR. LA MARCHE: That is about the, a realistic assumption for the market right now, you know, depending on the exact technology and the manufacturer. There is some that are a little higher, some that are a little lower. Also depends on supply availability, but that is realistic.

MR. SILVESTRI: Okay. Thank you. Staying with panel structure, if you will, are the panels that you are looking at, would they be free of cadmium telluride.

MR. LA MARCHE: That is correct. There is only one type of module that uses cadmium telluride, and we are absolutely not using that type of module.

MR. SILVESTRI: Would that also be the case for any lead or selenium compounds.

MR. LA MARCHE: There may be a small amounts of lead in some of the solder, and I cannot speak to selenium.

MR. SILVESTRI: Okay. And you said lead would be in soldered, wire components, that type of thing within the panel?

MR. LA MARCHE: It would be within the encapsulated section of the panel, correct. The individual cells.

MR. SILVESTRI: Okay. Thank you. Again, on the panels, I keep seeing lots of literature and concerns from various organizations and people on PFAS, P-F-A-S, Polyfluoroalkyl Substances. Are those, is that substance or are those substances in solar panels?

MR. LA MARCHE: I cannot say that there is no PFAS in all solar panels, that is too broad of a statement. We are asking our suppliers to provide that level of detail so we know exactly what, if there is PFAS in modules that people are trying to sell to us and we are targeting using modules that do not include it.

MR. SILVESTRI: Okay.

MR. LA MARCHE: Yes.

MR. SILVESTRI: With that, should PFAS still be within the panel for whatever reason it may be, would the suppliers not only give you a composition as to what is in the panel, but information or analyses as to what could leach?

MR. LA MARCHE: That is correct. There is no expectation that anything will leach and we are requesting leach reports or documentation to demonstrate that.

MR. SILVESTRI: Great. When might that information be available?

MR. LA MARCHE: Well, it wouldn't be available for

the specific module that we use for this project until we finalize that module, dual so I can't say exact time.

MR. SILVESTRI: And that would also depend on whether or not the project gets approved or not.

MR. LA MARCHE: Exactly.

MR. SILVESTRI: Okay. Let me turn to Mr. Kochis, if I am pronouncing your name correct.

MR. KOCHIS: You are. That's correct.

MR. SILVESTRI: Mr. Mercier posed a couple of questions to you, one of them was the potential of moving some basins, another was the potential looking at road, if there were different modifications that could be done on a road for preventing sedimentation or runoff, or the like. One of the things I wrote down on an answer you provided to both of those, is that, quote, unquote, we could look at that. What does, we could look at that mean?

MR. KOCHIS: The project team is amenable to reviewing options and showing a list of options to the Siting Council as potential alternative for designs.

MR. SILVESTRI: So in the time that we are together now and until we come back again, is that something that you are, quote, unquote, going to look at and provide us with additional information.

MR. KOCHIS: We can provide it between the time of

this hearing and the continued hearing.

MR. SILVESTRI: Very good. Thank you. Off the wall question, do storm water basins become a breeding ground for mosquitos?

MR. KOCHIS: Jeff, do you want to handle that one?

MR. SHAMAS: Can you hear me? This is Jeff.

MR. SILVESTRI: I can, yes. Go ahead.

MR. SHAMAS: They can be, yes. Any ponded water, whether it is in a bucket or in a basin can be, unless the water is moving. It is a simple answer, quick answer. I mean --

MR. SILVESTRI: Okay. Follow-up to that, then, could it be a concern, that you would have a breeding ground or breeding grounds for mosquitos that could cause, I'll say havoc, somewhere's.

MR. SHAMAS: I certainly understand the question, and I can't hypothesize on whether it is going to cause havoc or be a problem, but it is an area that is suitable. And whether they colonize and become an issue, you know, it's, it is something I really can't say that. You know, if this was a basin in a residential subdivision that is being developed, versus a solar field, closer to residents, maybe that, there is certain treatments that I have used before when I was in environmental planner for a municipality in Connecticut,

we performed that type of mosquito treatment using these little donut cakes that are thrown into the water and deal with the larva. But I haven't, you know, we haven't really gone into management for mosquitos on this.

MR. SILVESTRI: Just one other question on that topic. If you use these donuts or disks or whatever you want to call them to try to control the population, could there be residual material that comes off in the water, either runoff or the basins or whatever have you, that could cause problems elsewhere?

MR. SHAMAS: There's certainly restrictions and you wouldn't want to apply them before a storm event that could be washing those out before they have dissolved in the water. So I'm, I am not a certified pesticide applicator, so it is probably best answered by someone maybe who could address that with the end post usage and quantities that are in that material.

MR. SILVESTRI: To the best of your knowledge, if such a material had to be applied, would it have to be applied by a licensed company?

MR. SHAMAS: That is a good question. I can't recall what the requirement was for the usage of those cakes. I would say that, yes, it is. But I am not 100 percent certain.

MR. SILVESTRI: Okay. All right. I wanted to go back to Mr. Kochis. As a follow-up to what Mr. Hannon was talking about with the pervious, impervious type of slopes and materials and that type of thing. Going back to your testimony, I have line 18 where you provided an answer that says, generally they would be considered pervious because they consist of vegetative surfaces below the panels, which allow storm water to infiltrate to the ground, unlike roofs or roads which are considered impervious. Do you recall that testimony of yours?

MR. KOCHIS: Yes, I do.

MR. SILVESTRI: Okay. And then I am looking at what DEEP has for the Solar Appendix 1 for storm water, and bear with me on this one, it has a rating impervious if slopes are greater than 15 percent. Then it has slopes are less than 15 percent, a rating is impervious unless you have an increased stabilization as slopes increase, provide adequate spacing between rows, maintain sheet flow, 100 foot water course slash wetland buffer and the heights of the panel are less than or equal to 10 feet and there is routine inspections by a qualified PE.

So, again, going back to what you discussed with Mr. Hannon, but to try to make things a little bit

clearer for me, is it possible to answer these questions? Do you have, say, increased stabilization as slopes increase or provide adequate space in between the rows of the panels?

MR. KOCHIS: We do. We have, so the spacing between the panels is such that there is a larger clear spacing than the width, than the top down width of the panel, which meets the criteria effectively. It is less than 50 percent ground coverage ratio, which is the concern of CT DEEP. So we do meet that criteria, by our panel layout.

Regarding the stabilization, we are proposing to use erosion control blankets or hydro seed with tackifier within 72 hours of grading, as an elevated stabilization technique.

MR. SILVESTRI: Now where it says, maintain sheet flow, how does that apply to your proposed project?

MR. KOCHIS: So we are not proposing to channelize any flow, as has been stated prior. We are not changing any grades, except the areas that are in excess of 15 percent. So sheet flow will be maintained as much as it exists at the site today. We have also included some compost filter socks within the array to maintain sheet flow in specific locations.

MR. SILVESTRI: And as far as the 100 foot water

course slash wetland buffer?

MR. KOCHIS: We are meeting that requirement, as well. No portion of the project is within 100 feet of a wetland, an onsite wetland.

MR. SILVESTRI: And the height of the panels, less than or equal to 10 feet.

MR. KOCHIS: That is correct. I don't believe, I am not sure of the exact number, but I believe the number is nine feet at the top, given the tilt angle of these panels, but we can confirm that.

MR. SILVESTRI: And you think nine feet off grade?

MR. KOCHIS: Yes, that's correct.

MR. SILVESTRI: Okay. Then as far as the routine inspections by a qualified PE, how does that fit into your proposed project?

MR. KOCHIS: That fits into our proposed project as part of the CT Deep Storm Water General Permit, which requires inspections by either a licensed PE or certified soil scientist weekly during any periods of disturbance on the site, until the Notice of Termination is filed.

MR. SILVESTRI: Okay. By weekly, I just take it once a week, and that satisfies the criteria, or do you propose something else?

MR. KOCHIS: The criteria for the frequency of

inspections by a licensed professional is a minimum of one per week, but it is also required to go out after storms of a significant nature so it could result in multiple exceptions in the same week.

MR. SILVESTRI: What is the significant nature?

MR. KOCHIS: I believe it is with, a storm exceeding one inch, that would trigger an inspection within 24 hours.

MR. SILVESTRI: One inch in 24 hours? One inch in an hour?

MR. KOCHIS: One inch in 24 hours.

MR. SILVESTRI: Okay. How about deluge events where you might get, say, three inches in a two-hour time period.

MR. KOCHIS: Well, that would certainly qualify as greater than one inch within a 24-hour period, and would trigger an inspection from a qualified professional.

MR. SILVESTRI: How quickly would a qualified PE go out to inspect in an event that something like that happened?

MR. KOCHIS: The requirement is to perform the inspection within 24 hours of the rainstorm event.

MR. SILVESTRI: Does that provide adequate time in case there is something wrong to try to correct it?

MR. KOCHIS: That is the guidance of CT DEEP, and

we are deferring to that.

MR. SILVESTRI: I am kind looking at it from a practicality standpoint, and I'll tell you why. A couple years ago I had a tree come down in the wintertime, and hit the house, but that is irrelevant to what we are talking about, but I had to end up getting a number of, number of truckloads to put in some soil. And it is on slope, and I went and I got some seed and I did a really good job with erosion mats, the whole bit, and we got hit with seven inches of rain in a very, very short period of time. And all my dirt and all my seed kept running off. And it almost made it out to the curb, but if I had waited 24 hours, I don't know where it would have been at that point. So the point I am looking at is, I think if you have a situation like that, that it shouldn't be prudent to wait for 24 hours before it goes to get inspected, that it should be done in a very, very short period of time after that might happen, and I would hope you would agree with that.

MR. KOCHIS: I agree with that. And I can add to my statement before by saying that the inspector, part of the inspector's job is to monitor the incoming storm to try to predict when it is going to be a significant rainfall event. And on top of the requirements of the qualified inspector, you will have the contractor out on

the site who is required, you know, has to sign that they are upholding the erosion control methods of the State, as well. So they will be there full time inspecting the site, as well, on top of the qualified inspector.

MR. SILVESTRI: So there would training and qualifications for whoever might be working there and overseeing that?

MR. KOCHIS: That is correct. As part of the CT DEEP Storm Water General Permit, any general contract who works on the site has to attest that they have familiarized themselves with the slip that was prepared for the project prompt and sign that they testified to uphold to it.

MR. SILVESTRI: Thank you.

MR. LA MARCHE: This is Jean-Paul, I just want to add that we are also happy to do more frequent inspections than is required.

MR. SILVESTRI: Thank you. That's kind of the answer that I was hoping for.

Moving onto a different topic. Generally speaking, the topic is temperature. And I would like to get some information as to where you feel a temperature change might arise from, say, precipitation on a hot summer's day hitting the panels and running off, what you think a

temperature change might be, how the temperature might get dissipated, et cetera.

MR. SHAMAS: This is Jeff. As far as the exact temperature change, we haven't had really a study that indicated what that degree change could be. But in looking at how the storm water design is managed, or designed for the management of the storm water coming in, is to take those thermal impacts into consideration in addition to sediment and erosion. And the amount of time that it gets to the basin and then reaches, ultimately, the receiving waters, that that treatment train, if you will, is, helps in mitigating the thermal impacts, similarly mitigating the other inputs from storm water. The actual temperature and degrees that could change, as far as, you know, my work, I haven't modeled that stuff, but the, you know, where that comes into play is really the storm water management of the runoff. And that is, that is where using the State guidelines that Steve did, and, and is now working with DEEP, it comes into play, so that the receiving streams aren't impacted, wildlife isn't impact, fisheries aren't impacted by sediment and erosion, or temperature.

MR. SILVESTRI: All right. So again, I started with panels. By now I want to turn to basin. If you had your basins that were quite full, for whatever

reason it may be. Basins are out there in the hot sun, the basins are getting warm. Something happens again with precipitation that makes your basins either overflow or somehow discharge, what happens with that warmer water?

MR. SHAMAS: The, this is Jeff, again. Yes, the water is going to follow the path that we have. I think going from those basins they are going to be leaving in different directions following the natural path and mixing with the, the rainfall that is hitting, which is cooler than the stuff that is in the basin already and then enter and then discharging from those basins, going through the soils infiltrating where possible or continuing to runoff, being taken up by the other four soils on its path to the receiving waters. So, there is going to be that initial flush out and that path to the receiving waters is what is going to help temperate the water and modify the temperature.

MR. SILVESTRI: So in a case such as that, what would be the distance between, say, basin output and the nearest water body wetland or whatever it might be discharging to?

MR. SHAMAS: So, on the plans we have, at closest point, in particular, Stony Brook, is about 600 feet from the property line. It's probably, it's further

from the actual discharge point of the basins. And some of the basin paths to Stony Brook are meandering. So vertically, you may have a 600 foot path, but in reality by the time it gets there in some cases it could be 1,000, 1,100 feet. So the distances that we have in all of the literature talks about what is appropriate riparian buffers to protect against urban storm water runoff getting to these receiving waters. And it breaks it down to headwater streams, larger streams, and they all talk about minimum of 50 feet, if not 100 feet, which is, I really don't care for 50 feet. 100 feet is really what is kind of standard. Anything beyond that, is a benefit. And some of the guidelines and the documents, Niantic River Watershed, we worked in coordination with DEEP, have these standard design standards that they recommended and those design standards talked about 100 feet for larger streams, 50 feet of riparian buffer for the smaller headwater streams. So, we feel that the design is perfectly appropriate and meets the recommendations that have been studied through, not only Connecticut, but beyond in all really talking about 100 foot is an appropriate buffer for fisheries protection, wildlife habitat and the food chain.

MR. SILVESTRI: So you mentioned 600 feet for a

particular basin, but there is more than one basin on site, correct?

MR. SHAMAS: Yes, absolutely.

MR. SILVESTRI: What would be the impact from other basins, or distance for other basins.

MR. SHAMAS: The basin of 600 feet was what I was saying was closest to Stony Brook. The others are further away.

MR. SILVESTRI: From any other water body?

MR. SHAMAS: The one that is up to the north discharges to, not towards Stony Brook, but towards Oil Mill Brook through an unnamed tributary that goes down to the road.

MR. SILVESTRI: And do you know that distance offhand?

MR. SHAMAS: Steve, do you know that distance offhand? I can't recall.

MR. KOCHIS: The closest basin we have proposed onsite to Oil Mill Brook is approximately 3,000 feet away from Oil Mill Brook.

MR. SILVESTRI: Thank you. And the other ones, is there impact or potential impact with water bodies or the like?

MR. SHAMAS: No, sir.

MR. SILVESTRI: So I have a 600 and possibly a

3,000, is that correct?

MR. KOCHIS: That's correct. 600 is the closest to any proposed storm water basin, as a horizontal straight line from Stony Brook. And 3,000 is the closest the basin is to Oil Mill Brook.

MR. SILVESTRI: Okay. Thank you. All right. I think those are all the questions that I had, but in general, questions and answers kind of spur more questions. So I would like to go back to our Siting Analyst and our Siting Council members, just to see if anything else got spurred by the round of question that we had before we proceed to the Petitioner -- I am sorry, to the parties and interveners.

So Mr. Mercier, let me ask you first if you have any additional follow-ups at this time?

MR. MERCIER: Yes, I do have a couple of additional questions.

MR. SILVESTRI: Yes, please do.

MR. MERCIER: Okay. The first question has to do with the condition of the existing forest use from the storm water modeling that we discussed earlier. Now was the fair condition rating for the entire site specifically discussed with DEEP Storm Water Division in the general permit preapplication process?

MR. KOCHIS: The specific use of the existing land

cover was not discussed with CT DEEP.

MR. MERCIER: Okay. In your experience, does the DEEP Storm Water Division verify existing conditions data when the general permit applications are reviewed?

MR. KOCHIS: Yes, this is Steve. In my experience, they have absolutely commented upon the selection of land covers when they don't agree with the selection.

MR. MERCIER: Okay. Thank you. My second question has to do with Petition Exhibit H, that was environmental assessment. On page 10, there was a recommendation that all site clearing should occur between October 15th and March 1st to reduce potential impacts to wildlife. Now, would GRE be willing to adhere to this clearing time frame?

MR. LA MARCHE: I am sorry, I was on mute. I think that it a discussion that we can have. I would like to have input from Steve and Jeff on if that is, on their perspective of if that is needed or not, just to have that discussed. But even separate from that, it is definitely something that we can look at as we finalize our schedule, depending on the other aspects of it, as, you know, when we get, when or if the project is approved, the time frame for the reseeding. All of that, as well as the clearing, we can incorporate that into our schedule.

MR. MERCIER: Yes. I anticipated that there might be a discussion with DEEP Storm Water as to what would be a more appropriate time frame, if there was a restriction that might benefit wildlife at the site. So, thank you. I have no other questions.

MR. SILVESTRI: Thank you, Mr. Mercier. Mr. Morissette, did you have any follow-ups at this point?

MR. MORISSETTE: Yes. Thank you. We talked about certain criteria that needed to be met to categorize it either pervious or impervious, and you went through a laundry list of those criteria and how you met them. Is it possible to provide that in writing?

MR. KOCHIS: Yes, that can be provided in writing.

MR. MORISSETTE: That would be very helpful. That is the extent of my questions. Thank you.

MR. SILVESTRI: Thank you, Mr. Morissette. Mr. Harder, did you have any follow-ups at this point?

MR. HARDER: No, no follow-up questions.

MR. SILVESTRI: Thank you, Mr. Harder. Mr. Hannon, did you have any follow-ups at this point?

MR. HANNON: No, I am tapped out on that. But going back to what Mr. Morissette was asking, I believe that the information that you are looking for is attached to the statement that DEEP submitted comment on this project. So I think it is already in the file on

that. So you may want to check that. That is all.

MR. MORISSETTE: Very good. Thank you.

MR. SILVESTRI: Thank you, Mr. Hannon. Ms. Guliuzza, did you have any follow-ups at this point?

MS. GULIUZZA: No. Thank you, Mr. Silvestri.

MR. SILVESTRI: Thank you. I have one other one. There was some concern I saw from parties or interveners about potential nitrogen loading. Could you explain where nitrogen loading might come from from your proposed project?

MR. SHAMAS: Tis is Jeff. Well, nitrogen could come from, be present in atmospheric precipitation itself, and is present in runoff. And is usually quickly attenuated in basins through infiltration or at the discharge through soils. So, I don't know that there, I don't think there really should be a need or concern over nitrogen given the distances from our basins to receiving waters.

MR. SILVESTRI: Let me ask a quick follow-up, and I'll probably pose this question, as well, to parties or interveners, do you think there is a difference between nitrogen deposition on the property right now, compared to nitrogen deposition on your proposed project once it is finished?

MR. SHAMAS: This is Jeff. I would say that given

the condition of the site now and that having the management measures in place, without, you know, without doing a pre and post nitrogen modeling calculation, it would just be a guess, I think, for anyone. So, you know, the, that is for the amount coming from the site. So without the vegetation there, and I think, and post construction with the kind of the meadow grasses, if you will, that will be there. I think there could be more denitrification post development just from the standpoint of vegetation. I know that we are releasing trees, but the site will still be vegetated.

MR. SILVESTRI: Okay. Thank you. I have no further questions at this point. And I would like to continue cross-examination of the Petitioner by the town, Attorney Avena, are you ready to go?

MR. AVENA: Attorney Robert Avena for the Town of Waterford. Actually, I just have a couple of follow-up questions from, from today's cross-examination. So the first for Mr. Kochis, I believe. Could you explain to me a little more about the timeline and the idea that a growing season will be observed? So that I realize that you don't know the exact schedule, right now. But what is the period of time that once you grubbed and cleared the entire site, I believe, was one of the first steps and then hydro seeded, then is there an entire period of

waiting for that to grow in, is that how it works?

MR. KOCHIS: Yes. That was what was discussed. So the site will be cleared, stabilized, the erosion control measures will be put up and the entire site will be hydro seeded, and that will all take place prior to any development on the site. The idea, it has been discussed in interrogatories -- I don't know the specific numbers offhand -- but the idea was that a growing season would constitute of, for example, the spring or fall months where adequate periods of rain will allow for vegetation.

MR. AVENA: So it is not really calendar year, it is more, either the spring growing season or the fall growing season would have to pass after the hydro seeding completion and then some period of time to let it move into a growth pattern until you are ready to go ahead with each areas construction?

MR. KOCHIS: That is correct. That is the idea. Not necessarily a calendar year. We were looking at a season.

MR. AVENA: The other questions that came up today, in terms of your work right now that we would understand that you are busy designing or amending the site plan regarding the new road access, that whatever we are looking at right now is not applicable, that there would

be a new design with cuts and proposed drainage or whatever, I know there is quite a lot of proclivity out there. Is that something you are working on, will we be seeing that before the next, perhaps the next hearing?

MR. KOCHIS: Yes, the intent is to get, to file a revised site plan before the next hearing.

MR. AVENA: And so, that would include not just showing the main road now that goes through the wetland, it is going to show a whole design of how that is going to go up and around the wetland?

MR. KOCHIS: That is correct.

MR. AVENA: All right. And in regard to, and again, and I know this has to do with the DEEP eventually when you go to them, but is there some plan that you have regarding sedimentation basins versus the permanent basins, is there, the same location, and do they act the same, or is there a period of time when you have to kind of go through one and then plan to present the permanent basins?

MR. KOCHIS: The way the plans are designed today, are that the permanent basins will start as temporary basins and then will be left in place as permanent basins. So they will be constructed early in the project as temporary sediment traps and basins, and then be converted to permanent basins. Effectively, not

converted, they will be installed as they will be for the permanent measure up front.

MR. AVENA: So there would be a time period between those two, where they were inspected and then any, any flowage issues during construction, any debris would have to then be cleared out and getting ready for the final basin and then implementing a plan in some way that they will operate as a permanent basin and permanent filtration?

MR. KOCHIS: That's correct. So as part of the weekly inspections, a weekly inspector will be required to inform the project team when the sediment basins need to be cleaned of sediment of debris, in which case, they will need to be done, I believe, within three days per the general permit. And then we also have in the construction sequence that upon the completion of the construction and adequate vegetation, that all the basins will be cleaned prior to the Notice of Termination and will ensure that they will be acting as we have intended they will be acting for permanent features.

MR. AVENA: And all that that you just described, that is really part of what you would be presenting with your permit application and through the DEEP at some subsequent time in order to get that approval?

MR. KOCHIS: That is correct. All that information would be included in the CT DEEP Storm Water General Permit Application, as part of the (inaudible).

MR. AVENA: And you don't anticipate any applications for that, I think you were actually waiting for an approval of this procedure before you would hope to work on this application?

MR. KOCHIS: No, we have an ongoing Storm Water General Permit Application that is open with the CT DEEP.

MR. AVENA: And do you have any sense of when the permanent function of those basins would sort of be in place? In other words, would there be any transition period or would they both act as they are intended to all during this interim period.

MR. KOCHIS: It would be the latter. They would, they have been designed such that they meet both the criteria of size and design for temporary sediment traps and basins and permanent storm water quality features. So they will be installed once and that will have a dual purpose of temporary and permanent features.

MR. AVENA: And so, in the vegetation growth period in those, in plantings, those have to be scheduled out so that you are able to do it in the right season to get those up and growing to be permanent basins, sort of a

timing issue?

MR. KOCHIS: That is correct. I think, I am drawing off of what Jean-Paul had, how Jean-Paul had responded in that, the timing of the project, given COVID and the granting or not granting of this approval will have an effect on the timing of the construction and there are PPA requirements and other things in place, as well. So the timing will have to be reviewed, but that will all be a part of our CT DEEP Storm Water General Permit.

MR. AVENA: And then, lastly, from sort of the Town perspective, when you go through the EBET process, and, you know, we hate to think of the worse scenarios, but if there was some kind of blowout where you're basically, you know, running it down and you're threatening any, the two brooks or the estuary and the river, is that discussed, at all? Is there some plan where you would know how to get into those areas and, I don't know if you, if it would even exceed your property boundaries, what you could do in those instances?

MR. KOCHIS: Well, I do have experience working on two clean-up sites in the past that we were not design engineers of, but we were called in as part of the clean-up process. So what I can say to that is that there is no, there is no formula in place of how offsite

areas will be cleaned. However, you know, as part of the weekly inspection process, the inspector will have to be watching the offsite areas, the part where basins drain offsite and he will have to make the DEEP aware if there is erosion issue happening offsite, at which point the DEEP will probably tell, tell the Petitioner here to clean, assess those areas and clean them as needed. And furthermore, there is also a letter of credit that the Petitioner has to provide to CT DEEP, which serves as a surety that if the Petitioner is not willing to clean up these areas, that CT DEEP will step in and do so on their behalf with available funds.

MR. AVENA: Thank you. That is all the questions that we have right now. Thank you.

MR. SILVESTRI: Thank you Attorney Avena. I would like to continue the cross-examination of the Petitioner by Save the Rivers, Save the Hills. Attorney Gianquinto, you ready to go?

MS. GIANQUINTO: I am. Thank you, Mr. Silvestri.

MR. SILVESTRI: Thank you.

MS. GIANQUINTO: Can everyone hear me okay?

MR. SILVESTRI: Absolutely. Yes.

MS. GIANQUINTO: All right. Hopefully my dogs will be quiet. All right. I think I would like to stick with a few of the questions that Attorney Avena was just

asking, in terms of what happens if things do go wrong. I understand the letter of credit issue, and if I understand correctly Mr. Kochis, your testimony is that there is really no one right way to fix things once they go wrong, right?

MR. KOCHIS: That is correct. It would have to involve analysis of what went wrong and come up with a solution of how to fix it.

MS. GIANQUINTO: Okay. And you have been involved with remediating two different ground mounted solar array sites that went wrong in some way?

MR. KOCHIS: That's correct.

MS. GIANQUINTO: How long did the remediation process take for both of these sites?

MR. KOCHIS: I was on site at each of these sites for approximately four months.

MS. GIANQUINTO: And what was your role with respect to the remediation, were you part of a team, were you doing this on your own?

MR. KOCHIS: We were, VHB was hired as the qualified professional engineer to serve as a full time construction inspector during the remediation of the sites. So we were overseeing all of the clean up efforts, providing guidance as needed, but there, everyday watching the contractors fix the problems.

MS. GIANQUINTO: So my question, though, is specific to you. I understand VHB was hired. But, you know, it says on your resume that you were doing this. Were you part of a team, were you the lead, were you the only person doing this remediation design?

MR. KOCHIS: It was a combination of myself and Jeff Shamas working. Either me or another professional engineer was available on site each day. I probably was there 80 percent of the days doing it myself, personally.

MS. GIANQUINTO: Okay. And how about with respect to designing this site that we are here for today, I see this you're senior project engineer, does that mean that you were solely responsible for those plans, do you have a team of PE's that work with you, how does that process work?

MR. KOCHIS: No. We, I would be happy to share that with you. We have a fairly rigorous quality plan within VHB. I am the project manager from VHB for this project. I am also the lead design engineer. However, we have a team of seven or eight professional engineers on our land development staff and, you know, I have my supervisor who acted as my quality control professional on this project specifically.

MS. GIANQUINTO: So you have a supervisor who

reviews your work?

MR. KOCHIS: That's correct.

MS. GIANQUINTO: And you have been a PE for 10 years, right?

MR. KOCHIS: That is correct.

MS. GIANQUINTO: How long have you been at VHB? It looks the, from your resume, there was a lot of experience that was, that said that is kind of a qualifier prior to coming to VHB.

MR. KOCHIS: I have been at VHB for a little over three years.

MS. GIANQUINTO: And do you have any experience with low-impact design or development? Sorry.

MR. KOCHIS: I have designed low-impact development projects in the past, yes.

MS. GIANQUINTO: Is that during your time at VHB or before?

MR. KOCHIS: I would say before my time at VHB.

MS. GIANQUINTO: Did you incorporate any low-impact development elements into the design of this site?

MR. KOCHIS: No. Low-impact development was not considered in the storm water management design for this project, as it is not required by, in the State.

MS. GIANQUINTO: So you have qualified your answers a lot, in my mind, during this hearing by saying that

things are not required by the regulations or aren't required in the guidance. There are other sources for the obligations of a professional engineer, right? You have professional standards you need follow and you follow your professional judgement, as well, when designing a site, right?

MR. KOCHIS: That's correct. We consider it sound engineering practices, aside from the regulations.

MS. GIANQUINTO: Okay. So there were a couple of solar projects that were listed on your CV and one was in Simsbury. It looked like it said on your CV that you were responsible for the design layout and engineering of that project. Was that also as part of a team, or were you the lead on that, how did that work?

MR. KOCHIS: I was part of a team on that, as well, which consisted of environmental scientists. For that project, I was not the project manager, but I was the lead project engineer. So responsible for, you know, as noted, the layout, the grading, the design of the storm water management and erosion control.

MS. GIANQUINTO: Okay. And the site in Simsbury was that a sloping site or a flat site or maybe the better way to ask it is, was it as sloping as the site in Waterford?

MR. KOCHIS: I would classify that as generally

less slope. It was farm fields.

MS. GIANQUINTO: Okay. Were there any grades over 10 percent at that site?

MR. KOCHIS: There were some areas off of the farm fields that were in excess of 10 percent.

MS. GIANQUINTO: Okay. Were there solar panels being placed on slopes of 10 percent?

MR. KOCHIS: Yes. I am sorry, now that I am picturing one portion, one portion of the project did have farm fields in excess of 10 percent.

MS. GIANQUINTO: Okay. Were they in excess of 15?

MR. KOCHIS: There were, but they were regraded down to 15 percent to meet the construction tolerances of the racking.

MS. GIANQUINTO: Like what is happening with this site in Waterford, right?

MR. KOCHIS: That's correct.

MS. GIANQUINTO: Okay. And I thought there was another, another solar project that you were responsible for designing, and I don't have it in my notes. Was there another one that you were responsible for designing that was on your CV? Not a remediation project?

MR. KOCHIS: I was the, I am the lead project engineer and project manager for the Boombridge Solar

Project, which was just recently submitted for petition to Siting Council.

MS. GIANQUINTO: Is that the Elm Ridge?

MR. KOCHIS: Boombridge in North Stonington. I can get you the number for it.

MS. GIANQUINTO: In North Stonington. Okay. Okay. So to date then, the only project that you have been involved in the design of with respect to solar project that has been approved by the Siting Council is that one in Simsbury?

MR. KOCHIS: That's correct.

MS. GIANQUINTO: Okay. And so, you have this one and then North Stonington one pending?

MR. KOCHIS: Yes. These are the two active Siting Council petitions that I have going on right now.

MS. GIANQUINTO: Okay. And the North Stonington project, how are the slopes on that site compared to the ones on this site? Are there going to be panels that are on slopes in excess of 10 percent?

MR. KOCHIS: For that site, it is close. I do believe there are some slopes in excess of 10 percent. They are on the order of 10 to 15 percent for portions of that project.

MS. GIANQUINTO: Are there areas that are being regraded down from 15 percent or more than 15 percent,

to 15 percent?

MR. KOCHIS: Yes, there are.

MS. GIANQUINTO: Okay. With respect to the Pomfret solar project that you were involved in remediating, and just very generally, were the problems with that site that prompted VHB's involvement in it, was that a problem with the design, with the construction, what did you come to conclude on that?

MR. KOCHIS: Speaking generally, I would say that the conclusion we came to was that it was a little bit of a problem on all fronts. It was, I want to say it was slightly under designed, based on our review. The contractor could have taken extra measures to protect the site and I think there was also some deficiencies in the inspection, as we reviewed all the inspection reports. But I think it was on multiple fronts.

MS. GIANQUINTO: And you were also involved in remediating a solar project in Sprague, Connecticut, right?

MR. KOCHIS: That's correct.

MS. GIANQUINTO: And what was your role there, was it the same as your role with Pomfret, or you were more delayed?

MR. KOCHIS: I would say that I had the same role. The project was very similar. Our project team was very

similar.

MS. GIANQUINTO: And what was your conclusion with respect to the problems there, was it design, was it construction?

MR. KOCHIS: I would say it was the same situation as Pomfret in terms of, kind of, a lack, a deficiency in design, a deficiency in the inspection and a deficiency in the construction, as well. It was, that was also a combination of the three.

MS. GIANQUINTO: In both of these sites, was there a significant rainfall event that prompted the failure that lead to VHB being there, or was it something that happened over time?

MR. KOCHIS: I would say there was differences in that regard, between the two projects. I may be mixing the two up here, but, because it was a couple of years ago, but one of them was shut down due to repeated violations. And the other was shut down due to basically a single violation. You know, tied to a large rainfall event.

MS. GIANQUINTO: Okay. Did you have any involvement in the East Lyme solar site, the Empire Site, at any point?

MR. KOCHIS: Yes.

MS. GIANQUINTO: What was your role there?

MR. KOCHIS: Our role, VHB's role, and my role specifically, was to review the engineering and serve as the defense of the engineering in the court case.

MS. GIANQUINTO: Okay. So only with respect to the litigation?

MR. KOCHIS: That's correct. VHB was not involved in the design of that project, nor me personally.

MR. HOFFMAN: Mr. Silvestri?

MR. SILVESTRI: Sir.

MR. HOFFMAN: I am just wondering how much latitude we are going to give to talking about other solar projects that aren't the subject of this petition?

MR. SILVESTRI: No, understood, Mr. Hoffman. I didn't have a problem with everything going on beforehand because it was in his resume for his past work that he did. I thought it was kind of applicable as to what he might have done to design, et cetera. So we will keep an eye on that going forward. Again, he East Lyme wasn't part of anything, so I think we can kind of move on from there.

MR. HOFFMAN: Thank you, sir.

MS. GIANQUINTO: Understood. I did have one more question with respect to Easy Lyme, my apologies Mr. Silvestri.

Mr. Kochis, I was just curious, did you review

those plans in coming up with the design for this site, at all, because Greenskies owns both projects or develops both projects.

MR. KOCHIS: I wouldn't say those plans specifically were used as the basis for this design in any way. I would say I draw from all my experience in reviewing Siting Council Applications that have been, I have looked through, as well as my onsite experience and, you know, the design of Simsbury, as well.

MS. GIANQUINTO: Okay. Could you explain to me how in designing this site you took into account the proximity of Oil Mill and Stony Brook?

MR. KOCHIS: Sure. You know, as noted a couple of times previously, the site has been pulled back -- I'll start with Oil Mill Brook, specifically. The petition, Petition 1347 was rejected and the one portion of the project that drained directly to Oil Mill Brook in the far northern edge has been removed from the project. So, now, not a single portion of the development drains directly to Oil Mill Brook. It passes through the tributary, which goes along the back of the house that is on the east side of Oil Mill Road. And that's how we came to the conclusion that no portion of, no storm water basin is within 3,000 feet of Oil Mill Brook, tributary wise.

For Stony Brook, you know, we looked at the existing drainage patterns. We located the storm water basins in the areas where the drainage areas naturally channelize on the site. There is very little regrading in general across the site and there is none to, there is no regrading to redirect storm water outside of easements and swales to make sure that every bit of the development is treated through the sediment tracks. And we are providing at least 100 feet on the site and an additional minimum of 600 feet from the property line to Stony Brook at its closest point.

MS. GIANQUINTO: You would agree with me that those, protecting those are important, right?

MR. KOCHIS: I would agree that that part of the storm water management design is to protect all receiving water courses and wetlands.

MS. GIANQUINTO: You're familiar with the requirement in the storm water quality manual that down, certain downstream resources require additional attention and protection?

MR. KOCHIS: I am aware that that certain resources require additional measures, yes.

MS. GIANQUINTO: Okay. Including those resources that are designated as Class A water resources?

MR. KOCHIS: Yes.

MS. GIANQUINTO: All right. And you are aware that Stony Brook and Oil Mill Brook both are classified as Class A by DEEP, right?

MR. KOCHIS: I am aware of that.

MS. GIANQUINTO: Okay. All right. I would like to talk a little bit about the basins which have already been discussed today. So I will try to cut down some of my questions. But very generally, your plans propose three different kinds of basis, right? You have ponds, you have infiltration basins, and then you have sand filters?

MR. KOCHIS: That is correct. We have selected the type of storm water basin based upon the geotechnical findings.

MS. GIANQUINTO: Okay. And, I mean, the sand filters, are they actually basins? I mean, are sand filters different than basins?

MR. KOCHIS: I am using the term storm water management basins, that is kind of the engineering lingo for any, any design of storm water management feature, as a storm water management basin. And it is a basin of sorts, as it does collect water.

MS. GIANQUINTO: Okay. All right. So I understand the differences between these three storm water practices, ponds means that there is a permanent pool of

water, right?

MR. KOCHIS: That is correct.

MS. GIANQUINTO: Okay. And your proposing wet ponds, right?

MR. KOCHIS: That's correct.

MS. GIANQUINTO: All right. And so, then infiltration basins, the intent there is that they are, they are capturing this storm water and they are kind of filtering it down through, right?

MR. KOCHIS: That is correct.

MS. GIANQUINTO: And then sand filters, it seemed like in the response to the interrogatories, you might look at sand filters a little differently than Mr. Trinkaus. Do you consider sand filters to be infiltrative practices or not?

MR. KOCHIS: No, not as we have them designed. I think, I do understand the discrepancy, but these are, the sand filters that we proposed, were proposed in areas of shallow ledge where we were not anticipating getting infiltration into the native soil. So the sand filter is solely to serve as a water quality treatment measure.

MS. GIANQUINTO: Okay. And in response to some of the, in one of the interrogatories, this was mentioned earlier, you had mentioned there being pipes for the

sand filters, and I also didn't see that on the plans. Is there a specific sheet plan I should be looking at for the detailed design? Do all of the sand filters that you are proposing have pipes?

MR. KOCHIS: Yes. All of the sand filters have pipes. The pipe is shown on the detail in the detail page. I can find that specific sheet, if you would like me to.

MS. GIANQUINTO: Yes. Sorry to have you take the time, but I didn't see it anywhere.

MR. KOCHIS: It is shown on sheet C-6.2.

MS. GIANQUINTO: So which picture is it?

MR. KOCHIS: Permanent storm water basement detail on the left side of the sheet.

MS. GIANQUINTO: Okay. All right. Thank you. Okay. And so, they, you are not proposing to use any swales as water quality practices, right? They are solely intended to divert water into the basins on the site?

MR. KOCHIS: That's correct.

MS. GIANQUINTO: Okay. All right. The infiltration basins, I think you testified earlier that all of the basins you are proposing, so all 15, are going to be constructed early on in construction, right? And they will be used as temporary traps, and then

converted to permanent basins?

MR. KOCHIS: That is correct.

MS. GIANQUINTO: Okay. Does, have you read the recent DEEP letter that was submitted in this petition?

MR. KOCHIS: Do you have the date of that letter in reference?

MS. GIANQUINTO: That would probably help. Give me a second. What I am specifically going to ask you about is, there was a comment in that letter, and this might jog your memory a little, there is a comment in this letter about the best management practices being that infiltration basins should not be constructed until close to the end of construction and should not be used as temporary traps. Are you familiar with that general principle, at all?

MR. KOCHIS: I am familiar with the recommendation for that in the storm water management, yes.

MS. GIANQUINTO: Okay. Can you comment on why you are not doing that, you haven't proposed to do that?

MR. KOCHIS: The best answer I could give to that is, it is a standard in Connecticut that traditionally just hasn't been followed in, for decades, more or less. There are things you can do to -- essentially the recommendation comes in because they are concerned that it is going to get silted up during construction and it

is going to lose its infiltrating capabilities. So by measure of going in and cleaning out the silt and returning it to its native infiltration, we hope to return to it its infiltration capabilities for the permanent feature.

MS. GIANQUINTO: Okay. So the DEEP letter is dated June 22nd, and it does say in there that best management practices indicate that for any basins designed as infiltration basins they should not be used as temporary sediment basins during construction and should be roped off, or -- sorry -- should be constructed at or near the end of development. So you are saying that although DEEP wrote that in the letter, that is not actually a practice that is followed in Connecticut?

MR. KOCHIS: Not until very recently. I have seen this, you know, this came out about a month, less than a month ago and I have seen it coming up extremely recently. But as before a couple of months ago, that was not the case.

MS. GIANQUINTO: Okay. So since it came out recently, have you had the opportunity to talk with anyone at DEEP about it?

MR. KOCHIS: We have not conversed with CT DEEP since receiving this letter.

MS. GIANQUINTO: If that is something that DEEP

Storm Water personnel requires of GRE, how would that change the plans, or would it change the plans? I assume it could change the construction sequence, at least?

MR. KOCHIS: At a minimum it would definitely change the construction sequence. I think we would have to look into whether it would affect the permanent layout of panels to be able to accommodate the land for temporary sediment traps and basins together. That is a review we would have to go through.

MS. GIANQUINTO: Okay. So there is possibility that if you are required to install separate temporary sediment traps, rather er than using those basins, as you had intended during construction, that you might not be able to construct as many solar panels, you might have to change the site design, again, right?

MR. KOCHIS: That is a distinct possibility if we need to go that route.

MS. GIANQUINTO: In looking through the site plans, I only saw a plan for one temporary sediment trap that looks like it was labeled 13A. Is that the only one that is currently in the plans? Am I right on that?

MR. KOCHIS: That's correct. That's the only one that we have classified as a temporary basin, per se.

MS. GIANQUINTO: Okay. And you testified earlier

that that is at, kind of, a natural low point in that area, right?

MR. KOCHIS: That is correct.

MS. GIANQUINTO: Okay. Does the soil compaction or does soil compaction generally impact the infiltration capacity of basins?

MR. KOCHIS: Generally speaking, yes, it would.

MS. GIANQUINTO: Okay. And so how do you avoid the soil compaction during construction if you are going to construct those basins earlier in the construction?

MR. KOCHIS: Well, it is going to loosen up over time by virtue of the water sitting in it. However, we will just have to take measures to make sure that it is decompacted after the excavation takes place and also the vegetation that is installed will also serve to decompact the soil naturally.

MS. GIANQUINTO: And then, water table height impacts the design of infiltration basins, right?

MR. KOCHIS: That is correct.

MS. GIANQUINTO: And when I am just, in looking through the interrogatories, it, there was a response that said that GRE designed the infiltration and sand basins so that the bottoms of the basins would be above seasonal high ground water levels; is that right?

MR. KOCHIS: That is correct.

MS. GIANQUINTO: Okay. But then it seems that at least for basin five, you were conceding that the bottom of that basin is actually below the seasonable high ground water; is that right?

MR. KOCHIS: That's correct. We are potentially needing to revise that basin as part of our CT DEEP Storm Water General Permit Process application.

MS. GIANQUINTO: So is that basin going to move, is it going to change in size, how is that basin changing?

MR. KOCHIS: The extents aren't known at this time. But it is a relatively minor change, so I would say the location of the basin would probably not be moved. However the orientation and/or the depths of it would be modified to accomplish that.

MS. GIANQUINTO: Okay. And would that, would the grading around the basin also need to be adjusted.

MR. KOCHIS: It is possible in the redesign.

MS. GIANQUINTO: All right. And basin five is on the eastern end of the property, right?

MR. KOCHIS: That's correct.

MS. GIANQUINTO: And would you agree that there's a fairly steep rocky ledge on that end of the property?

MR. KOCHIS: Yes, I would agree with that assessment.

MS. GIANQUINTO: Is that, is the rocky ledge going

to limit your ability to move this basin around so that it functions as intended?

MR. KOCHIS: Well, the rocky ledge is quite a bit farther to the east from where the basins are proposed. So I mean, generally speaking the farther into the center of the site we go, we are going to get more overburdened and less, more depth to bed rock. So if anything, if we needed to relocate the basin, it would have to move to the west. Well, in all likelihood, and it is currently placed up against the 100-foot buffer outside of it, so we wouldn't really have the flexibility to go to the east without affecting that wetland.

MS. GIANQUINTO: Okay. So if that, to redesign that basin, it sounds like you are probably going to have to move it west, so therefore into where the solar panels are.

MR. KOCHIS: That is an option, however it may also be feasible to just change the orientation of the basin and extend it further to the north.

MS. GIANQUINTO: And is it possible that in changing the orientation that some of that grading would then extend into the 100 foot wetland buffer there?

MR. KOCHIS: I can say with confidence that any change we make to that basin if, or as needed, we would

not go into the 100-foot buffer to do so.

MS. GIANQUINTO: Okay. So in response to some of Save the River, Save the Hills interrogatories, it looks like there was an admission that the infiltration basins don't have pretreatment four bays, right, which is required by the storm water quality manual?

MR. HOFFMAN: Ms. Gianquinto, could you specify which interrogatory you are referring to?

MS. GIANQUINTO: Sure. It looks like it was question 21, so that would have been our first set of interrogatories. I think those responses would have been dated April 27th.

MR. KOCHIS: I have that in front of me and we have already comitted to revising the site plans to include pretreatment four bays upstream of the infiltration basin locations.

MS. GIANQUINTO: Okay. Do you know how far upstream those four bays are going to be from the basin?

MR. KOCHIS: I definitely don't know the specific distance at this time without doing the redesign, but I would think they would be fairly close.

MS. GIANQUINTO: Do you know how large they are going to be? Like what does a four bay look like?

MR. KOCHIS: Well, the other four bays that we had designed for the project are effectively not much

different than rain guards. They are shallow depressions that can capture and infiltrate runoff.

MS. GIANQUINTO: Is the size of the four bay dependent on how, on the size of the basin, so the bigger the basin, the bigger the four bay you would need for the pretreatment?

MR. KOCHIS: The size of the four bay is going to be governed by the required water quality volume tributary for that watershed.

MS. GIANQUINTO: Okay. Generally is the size of the basin, I mean, the size of the basin is also dependent on the water quality volume that is draining there, right?

MR. KOCHIS: In part, yes.

MS. GIANQUINTO: Okay. And so, and I know you are an engineer, you don't want to talk in generalities, but very generally, very big picture, the more water quality volume that is draining there, the bigger the basin is going to be, right?

MR. KOCHIS: I would so in more cases than less. What goes into the design of the storm water basin is the required water quality volumes, the peak rate of runoff attenuation and the stream channel protection criteria. So there are multiple things that govern the size and location of storm water basins. Water quality

is only one part of that. So I think you are right in saying that as an engineer I can't say it is directly related to the size of the basin, but it is one of the criteria.

MS. GIANQUINTO: Okay. So, but as of now, you don't know exactly where those four bays are going to go and you don't know exactly how big they are going to be, right?

MR. KOCHIS: That's correct. As of right now, we don't know that specifically.

MS. GIANQUINTO: So since you are submitting revised site plans with respect to the access roads, would the plan be to also include that design in there, so that we can all see the impact of those four bays on the site plans?

MR. KOCHIS: We can, yes, we can include those four bays on the revised site plan.

MS. GIANQUINTO: Okay. Do the four bays themselves require additional grading or anything like that, that would change the clearing limits or might impact the layout of the panels?

MR. KOCHIS: I would say, to answer the first part of your question, the design of the four bays will not affect the clearing limits, at all, because the four bays are all going to go upstream, up the water quality

treatment basins and not downstream where they would potentially be affecting clearing limits. However, it is all going to be tied to the redesign of the basin itself and the layout of the four bays. So I can't say with certainty whether we will be able to make it work without affecting the layout of the panels, but I don't suspect it is going to be a large change to the layout of the panel's, if any.

MS. GIANQUINTO: Sorry, some of my questions have already been addressed, so I am just trying to cut them down. Sand filter number, which is basin number 10, it looked like you agree in the interrogatories that pretreatment is required for that one, right? You had it for basins three and eight, but not for 10 for some reason.

MR. KOCHIS: I believe that is correct.

MS. GIANQUINTO: Okay. And so, is that something that you would also be including in the revised plans that are going to be submitted?

MR. KOCHIS: That can be included, as well, yes.

MS. GIANQUINTO: Okay. With respect to the ponds, so you agreed earlier that they are wet ponds, right? And so, they are going to have standing water in them, especially during the wet season, which is generally the spring.

MR. KOCHIS: That's correct. The selection of the wet ponds in those locations was chosen because those areas didn't exhibit shallow ledge, but they exhibited seasonable high ground water. Evidence of shallow seasonal high ground water.

MS. GIANQUINTO: Okay. All right. And none of those ponds are shaded, right? They are all going to be in the sun?

MR. KOCHIS: The most current iteration of the plan does not include shading for those ponds. Specifically for those ponds.

MS. GIANQUINTO: Okay. So that means that if water is sitting in those ponds and it is sunny, it is going to heat up, right?

MR. KOCHIS: In theory, yes.

MS. GIANQUINTO: There is a potential for that to happen.

MR. KOCHIS: Obviously shading is something that, that isn't preferred in the solar project, typically.

MS. GIANQUINTO: I understand that. Do you know how close ponds 11 and 12 are to that intermittent stream that is contained in the wetland there? I think that is wetland one.

MR. KOCHIS: I am just trying to pull that plan up. I can certainly get an exact number, if there's --

approximated at this time to be about --

MR. HOFFMAN: Steve, you cut out again.

MR. SILVESTRI: Yeah --

MS. GIANQUINTO: I'm sorry, you cut out.

MR. KOCHIS: Can you guys here me okay, now?

MR. SILVESTRI: Now we can, yes. Thank you.

MR. KOCHIS: I don't have the exact number. But based off of the review of the plan I would estimate --

MR. SILVESTRI: You cut out again.

MR. KOCHIS: Can you guys hear me, okay?

MR. SILVESTRI: Go ahead.

MR. KOCHIS: I would estimate that the distance to be about 400 feet.

MS. GIANQUINTO: Okay. Thank you. Okay. With respect to pollutants, does VHB believe that there is any risk of pollutants, and I am including nitrogen loads in there, running off the site, either from the panels or from the concrete pads?

MR. KOCHIS: Our belief and anticipation is that -- well, I could say with confidence that there is no particular chemical or suspended solid that we are concerned will run off the site. We are meeting all of the goals for the state for water quality protection and there is no specific concern there.

MS. GIANQUINTO: In creating the site plans for the

site, did you review the Niantic Watershed Protection Plan?

MR. KOCHIS: We did review that document.

MS. GIANQUINTO: Okay. And you were aware that what is in there, there was an analysis of certain, certain areas and the potential for development, impact of development on the nitrogen loads going into the Niantic River Watershed?

MR. KOCHIS: We did see some of that documentation, yes.

MS. GIANQUINTO: And did you do any kind of analysis or investigation as to where this particular site is in terms of the risk of development on this site and how it might impact the nitrogen load?

MR. KOCHIS: I believe this question has already been answered earlier today, but as noted, we don't have any specific concern about nitrogen leaving the project.

MS. GIANQUINTO: All right. So then there was no separate analysis because you are not concerned with that risk then, right?

MR. KOCHIS: There was no separate analysis for nitrogen, no.

MS. GIANQUINTO: Mr. Mercier asked you a couple of questions about vernal pools and the development within both the envelope and the critical, the critical

habitat. And I had some of the same questions and I think I know the answer now, but I just wanted to clarify this a little bit.

So in the original interrogatories that were responded to by GRE, and I know you weren't involved in the project at that point, but in the original interrogatories, the predevelopment numbers were incredibly low for both the vernal pool envelope and the critical terrestrial habitat like, I think the highest one was like four, something or six something. So, in response to the interrogatories in this petition, the predevelopment, developed numbers were much higher, so they were like in the 20s and even higher. So am I correct that it is likely that discrepancy is because you were considering the impact of the logging that has been done in the interim?

MR. KOCHIS: That's correct.

MS. GIANQUINTO: Okay. And so, sitting here right now, it sounds like, based on your answer to Mr. Mercier's questions, you can't tell us the actual percentage of any additional development that would be due to just this project, because you were including the logging within that larger number.

MR. KOCHIS: That's correct. But I believe we committed to getting those numbers to the Council.

MS. GIANQUINTO: Okay. Yes, I just wanted to make sure I understood that part, thanks.

And then Mr. Mercier also asked a couple of questions about the migratory habits of some of the amphibians and the possibility of the ponds in proximity being, acting as decoy pools. And it sounded like his questions are kind of aimed at asking for a commitment for post constructio monitoring to remedy any issues with decoy pools. If the project is designed with the ponds in, with the ponds further away from vernal pool three, that would also handle any issues with decoy pools, right? The further away those are, the less risks there is that those species are going to treat it as a decoy pool.

MR. SHAMAS: This Jeff Shamas, I will respond to that. That is not always the case because the dispersal distance of species can vary depending on the species that you are talking about. So frogs will be a lot further than salamanders.

MS. GIANQUINTO: Okay. You didn't do any surveys of the migratory habitats, right, so you don't know whether those species are coming from offsite or staying within the site or where -- basically, you don't know their patterns, right? You didn't study that?

MR. SHAMAS: When we did the surveys in the spring

there, we didn't do pitfall trappings around the sites. Around the vernal pools.

MS. GIANQUINTO: Okay. Thanks. All right. I have a couple of questions about bats. So I think, Mr. Shamas, that is probably you. You were asked, or I think it was you, you were asked a couple of questions about the Northern Long Eared Bat and Fish and Wildlife service. So if I understand correctly, Fish and Wildlife Service listed the Northern Long Eared Bat as something that could be on site but didn't list anything specific to the site that would indicate it was present; is that right?

MR. SHAMAS: Correct.

MS. GIANQUINTO: Okay. And because DEEP didn't list the Northern Long Eared Bat, VHB didn't conduct any bat surveys, is that right?

MR. SHAMAS: Yes, it was not a requirement to study the bats.

MS. GIANQUINTO: Okay. So that is despite the fact that the August 2018 DEEP letter did mention the lack of bat surveys.

MR. SHAMAS: With the new application and, submitted to Natural Diversity Database, we evaluated the information that they thought was important for the site.

MS. GIANQUINTO: Okay. Are you familiar with the Quinebaug Solar Project, also in Connecticut?

MR. SHAMAS: Yes. Yes.

MS. GIANQUINTO: All right. So --

MR. SHAMAS: Somewhat. I am not the environmental person on that, but I am aware of it.

MS. GIANQUINTO: Understood. I am just, I am asking about it, just as an example. So my understanding of what happened with that site with respect to bats is that a bat survey was done specifically for the Northern Long Eared Bat, and then they actually found two state protected species of bats, are you familiar with that, at all?

MR. SHAMAS: No.

MR. HOFFMAN: I am going to object to the questions, as to the relevance of it.

MR. SILVESTRI: Yeah, Attorney Gianquinto, I am not sure where you are going with that one, having no one involved on the panel being involved with that project, not sure where you are going.

MS. GIANQUINTO: I am asking him if he was aware of it, and he said no. So, got it. I will move on.

MR. SILVESTRI: Thank you.

MS. GIANQUINTO: You, so Mr. Shamas, you haven't conducted any bat surveys, so you don't actually know

sitting here, if there are bats that live on the site, or that exist on the site?

MR. SHAMAS: Correct. We know that it is not in a roosting area.

MS. GIANQUINTO: How do you know it is not in a roosting area, if you haven't done any bat survey?

MR. SHAMAS: The hibernacular, I should say, the mapping.

MS. GIANQUINTO: Okay. I am not sure who this should be addressed to, but I have questions about a fire code requirement. So the Town, in response to interrogatories from Save the Rivers, Save the Hills about fire safety issues, the Fire Marshal referenced a couple of specific fire prevention codes. And my reading of these codes indicates that the, that they were specific to ground mounted solar installations and that they require a noncombustible base around the panel. So there is not, to my understanding, vegetation would be potentially combustible. So I was wondering what GRE's response to that is. So I don't know who that should go to.

MR. LA MARCHE: Can you direct to the exact document that you are referring to?

MS. GIANQUINTO: Sure. So that is the Town's, the Town's response to our interrogatories which was

submitted -- sorry -- that was submitted on June 17th. And so, the fire marshal cites to a couple provisions of the Fire Prevention Code. And then if you actually go and look up that code, it refers to noncombustible base as being required around the solar arrays which are not present here.

MR. HOFFMAN: I am sorry, Ms. Gianquinto does that fire code say the grass is combustible?

MS. GIANQUINTO: No. No. No. It says, it says a noncombustible base must be provided, such as a gravel base or other noncombustible base. So I am asking if vegetation is noncombustible. Like I assumed GRE has had experience with this provision on different sites, as well. So I am trying to figure out how that portion of the fire code is going to be complied with.

MR. SILVESTRI: That might be a question better asked of the fire marshal, when we do have them.

MS. GIANQUINTO: Oh, but Mr. Silvestri, this goes to the design. So, like, if the code requires that there is a gravel or other noncombustible base, I would think that would go to the designers of the, of the site.

MR. SILVESTRI: Yes. The confusion I have is, if I don't know what noncombustible might mean, it might be hard to answer.

MS. GIANQUINTO: Okay. I guess I had been assuming that since GRE has done this before, they probably encountered it before, so I would --

MR. SILVESTRI: Well, we could ask that question. I not the sure if we could get an answer at this point without a good definition from the fire marshal.

MS. GIANQUINTO: All right. Sure. So I guess a more general question is, you guys have built, or at least you have gotten approval for sites in Connecticut, and has this come up before, how have you addressed it, has it never come up?

MR. LA MARCHE: This specific question has not come up before and has not been an issue in the past.

MS. GIANQUINTO: Okay. So you haven't faced any questions about this provision in the fire code, then?

MR. LA MARCHE: Correct.

MS. GIANQUINTO: Okay.

MR. KOCHIS: This is Steve, I would just add that, you know, following standard engineering practices, every solar facility, to my knowledge, that has been installed in the state to date, has used grass as the cover type under the panels.

MS. GIANQUINTO: Yeah, that is my understanding, too. That is why I was surprised to see that in there, and so I wanted to know how it is handled. Okay. I

guess we can leave that for the fire marshal.

Has GRE had experience with any fires at any of its installations to date?

MR. LA MARCHE: I cannot answer that 100 percent. I have not been with Greenskies for its entirety. I have not had any personal, I have not seen any fires on any of our sites at Greenskies to date. So that is all I know.

MS. GIANQUINTO: Okay. I mean, solar installations have experienced fires, though, before, right? You are aware of that, just generally in the industry?

MR. LA MARCHE: Sure.

MS. GIANQUINTO: It happens sometimes.

Okay. And so, if this happens on this site, where is the water source for putting the fire out, how does that work?

MR. LA MARCHE: I mean, my understanding is that it, that is another question for the, for the Town, for the fire marshal. We are, we are not providing a water source as part of this project.

MS. GIANQUINTO: Okay. And if a fire were to happen, some of those materials that you are talking about earlier that could be in the solar arrays, such as the lead or the PFAS, those could get into the environment and into the water supply if there was a

fire, right? Because although, I mean, they are encapsulated, so I understand generally they are not going to be in the atmosphere, but if something did go wrong, that could result in those materials leaching into the water supply, right?

MR. HOFFMAN: Mr. Silvestri, I object to the question. That calls for speculation the witnesses don't know, and they are being asked to speculate on something far afield from any of the witnesses' testimony --

MR. SILVESTRI: Attorney Hoffman, I only heard part of that, can you repeat it please?

MR. HOFFMAN: Certainly. I would like to object to that question to the extent that it calls for speculation. We are going fairly far afield for any of the witnesses' relevant expertise, as opposed, if you ruled, they can answer if they know. But it is a pretty speculative question.

MR. SILVESTRI: No, I do agree that it is speculative, and I would like to move on with that, because we really don't have an answer except for what ifs, and I don't know if the what ifs could be quantified.

MS. GIANQUINTO: So the objection is sustained, then?

MR. SILVESTRI: Yes.

MS. GIANQUINTO: Okay. Thank you. Okay. I would like to turn, I think, back to Mr. Kochis, sorry. I wanted to talk about Appendix One to the general permit, the proposed Appendix One a little bit.

MR. KOCHIS: Sorry. The Appendix I?

MS. GIANQUINTO: Oh, I. Yes. Sorry. It is getting late. Appendix I. All right. So I understand your testimony that your position is that this site complies with all of the criteria necessary for the solar panel to be considered pervious, right?

MR. KOCHIS: That's correct.

MS. GIANQUINTO: Okay. All right. So, if you look at 1C, you would agree that there are requirements for different slopes on the site, right?

MR. KOCHIS: That's correct.

MS. GIANQUINTO: Okay. So there are slopes on the site that are greater than five percent, but less than 10 percent, right? So, that fit into that second bullet point?

MR. KOCHIS: That's correct.

MS. GIANQUINTO: Okay. And so if we read that that provision it says, for slopes greater than five percent, but less than 10 percent, practices including, but not limited to, level spreaders, terraces or berms as

described in figure G below shall be used to ensure long term sheet flow conditions, right?

MR. KOCHIS: That's correct.

MS. GIANQUINTO: Okay. Where on the site plans are there level spreaders?

MR. KOCHIS: There are no level spreaders proposed inside the array. The sheet flow conditions will be maintained by use of the natural existing grading.

MS. GIANQUINTO: And where are there terraces?

MR. KOCHIS: Again, we are not proposing to regrade to, to create more disturbance to create terraces.

MS. GIANQUINTO: Okay. And there are no berms within the array, right? Only on the outer perimeter?

MR. KOCHIS: That's correct.

MS. GIANQUINTO: With -- all right. So if you look at Figure two that is referenced there. I think on, I think it is on the second to last page, it is when I printed out. So Figure two, depicts level spreaders or energy dissipaters under the drip line edge of the solar panels, right?

MR. KOCHIS: Yes.

MS. GIANQUINTO: And you don't have any of that in this site design, right?

MR. KOCHIS: The current site plans do not include the gravel drip edge, that is correct.

MS. GIANQUINTO: And so your testimony is that the site never, the site design nevertheless fits this provision because you are using the natural flow patterns of the site?

MR. KOCHIS: That's correct. There is no, the only, there are no spots inside the site where it channelizes flow. And by the reading of that, it is inclusive to have multiple types of measures. It doesn't have to be one of those types.

MS. GIANQUINTO: All right. But, so your testimony is that you are insuring the sheet flow conditions and that there will not be any channelized flow anywhere on the site based on your design.

MR. KOCHIS: We are ensuring long-term sheet flow conditions.

MS. GIANQUINTO: What about the channelization part?

MR. KOCHIS: It would be implied that we will not have channelized flow under the arrays.

MS. GIANQUINTO: So the solar panels are not proposed to -- they are facing south, right, for maximum sun exposure?

MR. KOCHIS: That's correct.

MS. GIANQUINTO: Okay. And the site doesn't slope south exclusively, right? There are places on, in this

design where the panels are actually going to be, I guess I would describe it, kind of as, flow perpendicular to the topography?

MR. KOCHIS: Yes. I would say the slope is angulating that, you know, the consideration to the orientation of the panels is another part of Appendix I, and there is no part of the site where it drains entirely to the east or to the west. We will get sheet flow under the panels as it goes partially north and south.

MS. GIANQUINTO: In your experience with the remediation work that you have done, was one of the issues that the flows become channelized and caused erosion?

MR. KOCHIS: The only instance where that was a case was from a utility trench, that was left open. It wasn't, it wasn't tied to the drip line edge.

MS. GIANQUINTO: What about the --

MR. SILVESTRI: I am sorry, Attorney Gianquinto, I was just going to mention, we are getting close to 5:00 o'clock. I don't know how much more you might have, if you need a couple of minutes to wrap up or another question, and then we continue to next time. How does it look on your side?

MS. GIANQUINTO: I probably have about another half

hour, I am sorry to say. So it is probably better to stop now.

MR. SILVESTRI: Are you at a good stopping point or did you have one more question related to drips and channelized flow.

MS. GIANQUINTO: No, that's -- I know, everyone is fascinated. So this is a fine stopping point. I can pick up just as easily there.

MR. SILVESTRI: Okay. That is appreciated, like I say.

All right, ladies and gentlemen, it is 4:59 on my clock. The Council will recess until 6:30 p.m., at which time we will commenced the public comment session of this remote public hearing, and I thank you all for your patience and participation. We will see you in about an hour and a half. Thank you.

(Whereupon the hearing ended at 4:59 p.m.)

STATE OF CONNECTICUT

I, THERESA BERGSTRAND, a Certified Professional Reporter/Commissioner within and for the State of Connecticut, do hereby certify that I took the proceeding of the Siting Council hearing via Zoom Meeting Teleconference on July 14, 2020.

I further certify that the within testimony was taken by me stenographically and reduced to typewritten form under my direction by means of computer assisted transcription; and I further certify that said deposition is a true record of the testimony given by said witness.

I further certify that I am neither counsel for, related to, nor employed by any of the parties to the action in which this deposition was taken; and further, that I am not a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of the action.

WITNESS my hand and seal the 21st day of July, 2020.

Theresa Bergstrand

Theresa Bergstrand, CSR.
My commission expires 3/31/2021